

# Economic Technology Book

## The Button Bubble

By **Anthony F. Matarazzo**  
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Looking for company start-ups based upon the information within the book that have excellent relaxed environments amongst friends. I am a very dedicated individual. I see my experience in all areas of the technology portion of the company.

## An Internet Computing Platform Vision Forward

Many research firms, academic institutions and corporate knowledge must be used to deliver the INET technology platform. From the technology plan described within the following chapters, global paths in cooperative economic endeavors can be traversed with delicate lovingness. The product line is vast, and will require establishing technology integration points with many foreign electronics engineering firms. Modern technology plans are not the risk of a single country. Technical relationships shall fruit VLISM name spaces and compatible products, room is provided for the future. Several oversight committees will be established as a result. Some groups include Database language, Visual rendering, Compiler Technology, Distributed Cloud Computing, Meta Tool User products, Language localization, Economic Engine Management and Application Software.

It is hoped that development projects attained through interpretation and language translation of this book will carry forth to create a model that is capable of global deployment. First, in document form to be agreed upon for architecture planning, scientific specification and development. There is a VLISM specification provided within this book as an example for computing scientists to start discussion. In turn, countries provided with the complete base model specification and binary streaming structure, will compete based upon the products described within this book. Advanced societies such as the United States of America, Russia, France, United Kingdom, Japan, China, Egypt and India may wish to develop their very own economic engines because of internal procedures related to governmental body practices. Initially, this is one reason a textual document format is better suited for international scientific studies than initial binary software delivery and hardware delivery. These economic engines will be the future of all balanced economic societies world wide. Mankind has an established system of economics to suite its needs and desires. Yet sometimes these systems fail to deliver to all and leave suffrage to be viewed as a flower. Populations are growing and a future for our children must be provided. In some cases, the economic engine will be instruction as well as an enabler to third world countries wishing to build again. Peace is often levied by full bellies and an income.

As a book composed from many locations within America, it makes an interesting read. Some dry humor exists but it is not overly excessive that it deludes from the main goal. The book is well suited for many types of individuals. There are a couple of technical articles that discuss algorithms, however most of the content can be easily digested by technology officers and business professionals. Please keep in mind that I do not have an editor, proof reader, or publisher. I gave it my best shot. Studying the economy from multiple perspectives was difficult. These are my suggestions to maintain and strengthen the economic future.

## Introduction

The portable computing platform is an important tool for computing users of modern day. Many portable platforms exist, some even as common as the cell phone are very sophisticated in its operation. However, none of these single devices ever seem to meet the user's total needs. So each consumer gathers devices that are specific for a purpose. But each device that a user accumulates adds another type of resource that they need to manage data for. Music, cell phone address books, books, documents, videos, games, photographs and websites addresses are among the many data. From use of these various devices a user gains an electronic persona that when combined paints a user portrait. One that portrays their many habits, financial wellness, learned knowledge, personal likes and wants about the user's self in the real world. While the industry may never tie together completely the electronic world persona to the physical one, it would please users more if their persistence were portable, portable between each device, securely protected and easily managed - this means centralizing the source using a cloud computing architecture.

To centralize the data source for a user would mean that their information is to be stored on a remote computer and be safe. The ability to access resources that are locked away in a closet, for example, adds a level of physical security. Many Internet storage sites exist today that allow users to store their files on a web server, however to use them properly, the user must download the entire file to operate, use or edit. The edit and use operation must be performed more precisely using a combination of intelligent client and web server buffering to allow a better use of network computing resources.

Centralization of the user data source should allow each device they have to manage every type of data file the user has, if it is within the device's potential and need. To accomplish this, a common drawing and command language that each device can use must be created. HTML and JavaScript are such technology languages but they are most suited for textual renderings. As well, the implementation of HTML as an ASCII (or UNICODE) mark-up language makes it a poor choice for network transmission as typically binary implementations reduce overhead on parsing and transmission requirements. A drawing language that while in management form on the server may be textual yet during transmission is pure compressed binary will provide a link to the next needed technological leap for the World Wide Internet network.

To accomplish this task will take the cooperation of many research companies. It involves making each device in existence compatible with INET Web Server technology. Connections to the web server can be made using Blue tooth, phone ADSL, modem, LAN or WIFI. The device composition and use will determine how the local storage system is utilized. That is, some devices such as compact digital cameras will just upload images while MP3 players/recorders will both download and upload audio.

Sometimes a completely wireless link may not be practical. For example, a device that facilitates the editing and creation of high definition audio and video will be better suited for an ADSL phone or LAN network connection. It is expected that when a user plugs this type of device at a data network sharing point that the user's data bank be accessed as a primary resource. This will occur by using the device identification and registration configuration information. Other options will also be provided to allow the user access to commercial publication banks or public domain banks available at the data network sharing point. The user must be able to quickly change play lists or download additional play lists to the device and go. The opportunity must exist for the purchase or rental directly from the device for high definition multimedia. INET Devices are equipped with secure finance processing.

### Electronic Banking

Transactions can be managed securely for the user because banking transaction communication is accomplished using the user's centralized storage. This allows the banking account information to be held private as it is never communicated by the local wireless device. Only a transaction confirmation is sent from the bank to the device. Using INET Web Server Transaction processing places the transaction security directly to the financial key hosting provider (electronic banker) and the user's current encryption/transport method.

Providing for the future potential of Electronic Tender is a focus of INET Devices. The future potential is that INET Devices contain an on board electronic wallet. This wallet is used to store and transfer electronic money without any financial institution communication. Electronic Tender is not readily available yet as a means of Legal Tender within the federal system by United States Treasury Department. So the actual format has not been determined. However the system will be planned to handle these monies with the appropriate low-level security implementation to prevent user copy and tampering.

When Electronic Tender becomes available to the public, a system will have to be in place to detect counterfeiting. The most comprehensive method for Electronic Tender authenticity checking is scanning the entire network for unregistered tender. This is a system much better in effective time to discovery than current methods. As well, Electronic Tender can be authenticated for authenticity during and after transfer if requested. During this request, the money signature and composition will be authenticated by the Treasury department for authenticity. It must be noted that Electronic Banking and Electronic Tender are completely different forms of technology implementations.

During any Electronic Banking transaction, the financial transaction itself will be authenticated real time from the client device when using electronic banking procedures. The INET Electronic Banking technology is the primary access protocol that connects to the user's banking institution. When a transaction request is being made, an authentication request is sent to the user's preferred device. The authentication request can be registered to a cell phone or an INET Transaction Authentication clothing button.



The INET Electronic Banking system provides time locked authentication to protect a valid transaction from being decrypted and the information being exposed. Using an advanced encryption algorithm to send the authentication enables a very secure transaction as well. The granularity and tinsel strength of the INET Encryption Algorithm is defined to be very secure within the computational stochastic domain. It uses very large keys stored within the device. Each INET device is manufactured to contain a unique ID. If a user spends on-line, it must be from a registered device. If the device is not registered on the user's account, the decryption algorithm will not function.

During an INET Electronic Banking transaction, when the banking institution gets the "yes" transmission, the methods of transaction processing fall within the realm of your service provider and the designated financial institution. So your device held within your hand is never involved in account processing. It is only used as an authenticator.

When a user buys an INET device, it is considered to be anonymous to Electronic banking. The user will still register the device within their INET Web OS provider. The important thing about the computing device being anonymous to your banking information will be a task of registering it at your banking institution directly. To the consumer, it will be an experience liken to getting a new credit card number at the counter, only this number is extremely large. It will be transferred to the device while being plugged in at the banking institution. The user will run a specialized program and be on the phone with the hosting provider to release the identity. The number cannot be gained without using forcible methods on the user's device itself, physical. Theft of the device can be compared to theft of a credit card and will be incorporated within the system using the consumer's durable response, a phone number is called to report a stolen item.

By law some hosting contract providers will not be responsible for stolen commerce devices. These institutions will rely on banking security to stop the theft of money. Some hosting contract providers with the appropriate security accountability will work with any banking security operations to stop the theft of money. The Web OS will have the ability to suspend device IDs by the device's description using system administration privileges. The service a user receives will be dependant upon their terms of service contract with the hosting contract provider.

The terms of service contract of INET Electronic Banking will be supported information-ally using identifiable iconic logos. This is so a common user can quickly identify the types of services and technology options are available at a hosting provider and financial institution using a pictorial information guide. A portion of registration classification of a hosting contract provider will be authentication of these certifications. That is, a hosting provider must prove they are worthy of such icons.

In the case of theft, the Web OS allows the geographic location of a device to be made aware. Finding it can be easier but includes the risk stumbling upon the thugs that now possess it - a matter for properly suited investigators. One must remember, its the device that is registered as a transaction capable member, not your operating system. To recall, this means the transaction processing occurs at your electronic banker. Their security system is in effect; it works and is trustworthy due to weapons. The encryption method will still be far superior in authentication than modern methods. That is, more secure for e-commerce spending than transmitting a credit card number, name, address, check number, ATM bank card number and a personal identification number.

## User Platform

The user's portable platform must be built to be as compact and energy efficient as possible. This can be accomplished by simplifying the client platform itself and offloading complex computing tasks to a host provider where electricity is abundant. By providing a robust, efficient rendering base model that facilitates the drawing of graphical type interfaces, input validation and 2d/3d vector graphics a user will be very happy with their experience.

Many methods of render and client interactivity will have to be available on the web server to allow this platform to operate within acceptable usability tolerances. Stream download times may vary depending on network traffic, a decision made at the server level. By using video compositing, text overlays, image compression, vector compression, numeric compression, textual rendering, audio compression, and CGI rendering compression the client and host computer will have a significant link that can provide an interactive experience that utilizes minimum network bandwidth and smooths spike requests. This is accomplished using the INET Internet Streaming Compiler.

## Internet Streaming Compiler

The soft generation of overlays by the web server that facilitate real time operation is essential for the user to gain the full use of the platform. This means that less coupling between objects is needed in the executable form of the application. For example, the drop down menus at the top of many applications are typically facilitated by a plethora of C++ code on Microsoft Windows or GTK (Linux). The INET compiler will automatically extract the menu system for streaming during compilation. This will include the code of the menu event, the final visual result, and the text information the menu is comprised from. Transmission of the menu will be the visual elements first. That is, how the menu draws itself when clicked. This includes colors and images translated to the common drawing language. The INET Internet Streaming Compiler does this for many visual GUI programming idioms. One of the most difficult and important factors the compiler system does is performing this functionality automatically when given a developer's software. This makes connections to many types of client computers transparent.

## Web Server

The connection between the client and the web server must be adaptable yet conforming. The laptop client must provide several logic and visual build up operations that can be performed when a different style of interface composition is needed. That is, application delivery state, host provider, connection speed and usability are considered during application usage.

## The Personal Mainframe

Using a mainframe for the hosting operation will reduce the cost of user management and allow cheaper laptops to exist. But this does not prohibit users from owning their own back end hardware. Perhaps a new kind of insulated environmental closet for keeping electronic hardware will become available in homes; the lullaby closet. Users will no longer wait for the clunky notebook PC hardware to do the tasks because they will have a huge elephant doing the job. And a viable upgrade path for the user will be adding new CPUs to their computing cluster by plug. The web server operating system has the capability of adjusting itself automatically for new hardware.

Mainframe network computing allows users to easily choose different operating systems, rent or purchase software from an on-line electronic library and have all their data stored in one place. The perfect GUI marriage of a small client platform and big power server.

## Operating System Providers

With this new system any company can host an operating system. So for specialized platforms like a Korg audio synthesizer their loop creation tools may be specific enough to facilitate a complete interface for music production. Professional quality rendering of the note information can be performed using their networked synthesis banks while the output is routed back and mixed real-time into the playing audio buffer. By providing the basic development tools with the INET Web OS, creative operating systems with specialized hardware on the back end or client device can exist. The INET Web OS base model will provide the tools for this to exist. This generally provides a compatibility layer for all hosting environments and client devices. Yet, depending upon the specific implementation, a compatible experience may not be live or perform well. This can be foreseen with audio synthesis and hardware video rendering technologies. The INET Web OS does provide a way for their use as this specialized processing is offloaded to the server. This means that the hosting provider must provide this compatibility layer.

## INET Embedded Device And Web Server Platform Components

New possibilities in hardware platform design are achieved within this project. The motherboard design of all device will be specific for its implementation purposes. This provides a most efficient design for processing power and raw output. Below are typical components of an INET Device.

### Local Storage

A standard hard drive should be used so that current technology can be implemented. The local hard drive of the computer will be used primarily to store the interface rendering information of the application screens and associated binary code. Each application screen will have an ID associated as well as a version time stamp (CRC) that is compared to the server's version. A directory file naming schema needs to be maintained that compares the versions of the rendering interface to the server's version so that cached versions are quickly located and displayed.

Alternatively, a persistent memory card could be used. For example, a CompactFlash card with a built in [SATA interface](#) can be used in place of a hard drive. A four or two gigabyte implementation may be sufficient. This will, in the end, only allow greater flexibility in power usage and hardware design. Potentially a [ThunderBolt interface](#) may exist for the persistent memory drive. Typically the magnetic hard drives uses much of the computer battery resources as motors spin a disk at high speeds.

## Keyboard

The INET Web OS Smart terminal has a keyboard as its main user input interface. The layout is a standard QWERTY keyboard. The INET Keyboard has tactile feedback to alert the user when a typing error has occurred in format. This will be especially useful in heads down data entry. The keyboard has Internet enabled features for easy browsing. Keys can finally be programmed for macros by the user. By application use. The keyboard speed and delay repeat time can also be set per application.

## Name space Locking Buttons

To persist network and user security as a definitive goal, new strides in electronics will arm the INET device with effective buttons. The input will be translated into read only ports. Some devices and set-ups will include locks with keys that change these ports' information in the same way as the buttons do. These advancements in BIOS system code and monitoring will benefit application security.

The technology is also used for low level and diagnostic installation access. Device drivers cannot be installed or changed without the function being turned on. This will prevent many types of security problems due to the short or sporadic usage time. VLISM Name space Locking technology integrated within the motherboard super structure will combine physical world actions with digital decision information more accurately and securely within the domain of user interfaces than modern in process objects do. That is, these buttons or locks are located and labeled as the function notes. For example, a device reset or operating system upgrade might be located out of the way in the back or under the computer.

## RAM

The speed of RAM must be effective as a shared resource among the new INET parallel processors. The ability for decompression to be used will also speed DMA transfers and block memory algorithms. The portion used by video subsystem will support lossless compression directly (RLE) to the DAC from video memory (A000). However the information stored may already be compressed using a lossy streaming format ( [LOD.PANITBT.NSM](#)). The memory management processor will support logical block operations even though the underlying data is compressed. To operate on a pixel or segment within the video buffer is desirable; not latch registers, not compressed data. New access operations will support two dimensional block access, transparent sprite management, segmented scrolling, circular based scrolling, page flipping, vertical block access, and horizontal operations.

- [ths8135](#)
- [Video and image processing design using FPGAs](#)

### Tracking Pointer Input (Mouse, Touch screen)

A standard mouse input is available to the platform laptop. The system will support in hardware color pointer location rendering. Either the touch pad style or the detachable USB mouse style can be incorporated.

### DMA Processor

The DMA processor will be a multi-channel DMA controller that allows independent access to various parts of the RAM. As well it should be implemented as an easily controlled device as many other processors on board will be utilizing it. Parallel processing will occur between several parts of the motherboard.

### Central Processing Unit

A standard Intel, AMD or RISC will be place. Various versions can be made available. The nature of threading model should be oriented within the basic hardware design. Therefore Stack, Registers, EIP, ESP and L2 instruction cache can be implemented in high speed processor cache. This will greatly speed context switching. Perhaps advancements in BUS technology could extended the memory usage to an alternate location like shared external memory.

### BIOS

The BIOS will contain the latest routines that enable the computer to operate in a shielded Internet capacity. It will protect itself from boot viruses. The BIOS will be expanded to work within modern object oriented GUI programming. This will enhance code space usage within applications. A prime example of rewrite is the keyboard and text printing routines to utilize the video processor. Disk access will also be expanded to work with security and quota management. BIOS engineers are asked to provide fully functional implementations of needed routines.

### Video Processor

The video processor is the main ingredient of the platform that smooths the interface rendering for a quality user experience. The card provides video acceleration of 2d and 3D drawings and animations. Some embedded device configurations only provide 2d capabilities. The specialized processor provides font rendering capabilities in the 2d graphics realm and supports vector based graphics with anti-aliasing for clear lines. The graphic card accepts drawing lists in a buffer that includes text (Unicode byte), pixel image data (2D and texture map), curves (NURB) and polygon triangle display lists (3D). Optionally for space each of the draw list components can be a memory address to shared ram for BLIT operations using DMA. The microprocessor will be freed from rendering fonts, lines and image data.

Parallel processing in video has a very popular demand. If users can afford higher resolution and faster 3D graphics, more video processors can be added to render specific areas of the screen from the tree. This design also allows innovative freedom within the defined pipeline instructions that are interpreted by the three dimensional processor.

Since parts of the interactive experience will be CGI video playback, a specialized research project needs to be accomplished that determines the likely hood of real-time CGI video over the web at sixty frames per second. This research project will prove that by abstracting light maps, gradients, and anti-aliasing information from the render stream and sending this information as a separate package will enable the bulk graphic portion of the image to be compressed with a higher ratio to decrease transmission bandwidth. Then to facilitate sixty (FPS) frames per second, which is the standard, a real-time frame change algorithm will need to be implemented. This will enable minimum 3D processing on board the client and rely on the host for most of the render.

The video processor or math processor must also be adept in video and image composite, stenciling, image resizing (bi-cubic, bilinear, smart), texture mapping transformations, convolution filter matrix operations and other advanced drawing commands. Advanced drawing commands will include smooth gradients, compressed image display and video rendering of various formats. Supported video and image format in line decompression include mp3, mp4, 3gp, jpeg, png, gif and tiff. Some of these features will never change, for example line drawing or smart resizing. The unique motherboard design supporting parallel processing should incorporate communication of data between the appropriate computing facilities to reduce redundant logic (new ASM instructions; CALL).

### Audio Processor

The Audio processor (DSP) will have mp3/mp4 capabilities and wav form playback capabilities. Music on the Internet is so wide spread that a hardware implementation of a compressor, limiter, EQ and other audio features is a INET Technology standard. It should support the normalization of audio to a specific DB so that audio never raises above a level that will damage ears. The audio component should allow sampling and real time encoding of mp4 audio using the compression processor for uploading and synchronization to the server.

### Compression Processor

A new compression processor will be designed to operate as an independent hardware object on compression and decompression of memory sources. Supporting Huffman compression, arithmetic coding, LZ, LZ77, LZW, LZMA, LZMA2, BWT, bZip2, PPMd, DEFLATE, audio uLaw, mp4 encoding, INET Shape Transform Compression and other advanced compression algorithms is the design goal.

The compression ratios seen in stream formats like [7z](#) by [Igor Pavlov](#) are impressive for many forms of data. The methodology of choosing good compression techniques for the current data-set is also a process that is included within the hardware design. There are many [archive formats](#) that will be supported by the file system. However, it should be noted the focus of the compression processor is a memory source. The specialized computing device will be able to work with ring buffers on input and output while maintaining state during external buffer consumption. Operating on high frequency and multiple channels (memory pointers), the processor will be used in low level network communications. Data should never be compressed multiple times, and signatures within the data will ensure single algorithm cycle.

- [Compression Algorithm](#)
- [PDF Format](#)
- [Guide to Compression Formats](#)
- [Dynamic Markov Compression](#)
- [Maximum Compression Charts](#)

## Encryption Processor

The encryption processor enables packages received in the communication pipeline to be efficiently encrypted and decrypted for upload and download. Because it will be a hardware resource, the strength of the cipher is greater than modern methods.

The system employs a bit level encryption algorithm that does not increase storage space considerably for most packages. The system also uses hidden keys. Companies like [ElcomSoft](#), a Russian held computer technology firm, specialize in unlocking encrypted sources. Hidden key segmentation uses each position of the identity for operating commands while gathering which parts of the key to use from the host. So each time a package is received, a new chain of algorithms will be used. A specialized Internet encryption method, each data package will yield electrical engineering hurdles for reversal analysts to solve. Packages that use Financial Encryption are time locked so that the usefulness of the contents is only for a short duration. Each package will be uniquely signed by a distinct order and group of algorithms to ensure complexity. Hidden keys will be difficult to impersonate, each identity containing about a million bytes.

- [Encryption](#)

- [ISDEF](#)
- [Computer Crimes](#)
- [FBI Cyber Crimes](#)
- [CyberCrime.gov](#)

### Internet Communication Processor

A new processor is added within the INET Smart Terminal design to perform the queuing of the high speed traffic on the connection lines. The Microprocessor operates as a TCP/IP stack operator. The INET Smart Terminal has the capability to boot from a URL that supports the INET Stream format. The new BIOS hardware provides this support natively. The user will add or type the information at prompt when starting.

### Memory Management Processor

A new hardware solution is included within the INET Smart Terminal to solve various memory management functionalities. Some of the functions include memory allocation, deallocation, shallow copy (clone), resizing, initialization, and block sorting for a large performance boost in memory intensive applications. The memory manager also supports identity block tracking for algorithms that allocated and deallocate within its internal iterations. These are common procedures implemented as performance boosts on virtual machine technology.

The functionality within the Memory Management Processor also includes searching algorithms and storage of data structures used in modern application design. This processor is designed as a parallel processor so that it can reduce user wait time and increase flexibility for CPU time. The memory processor also offers an advanced memory buffering and cache operation. The cache operation is connected directly to the BIOS (hard disk drive) to provide natural memory extension. The end result of the functionality will allow many applications to be loaded without ever shutting them down.

### Math Processor

A hardware solution that solves various math routines and decimal point issues is also included. Modern computation relies on the Arithmetic Logic Unit (ALU) within the processor. As well solving the MSB and LSB storage order for various platforms using hardware supported data types; conversion

### Bus Advancements for Server Home Base



The integration of a high speed communication system within the terminal will require forethought to allow limitless additions to the microcomputer bus architecture. Most likely, it can be incorporated in INET Server Technology for expansion use. Designs to include the technology within the user embedded device (INET Smart Terminal) may not be cost effective. The feasibility of including this feature is high for server technology while in tune with the cost technology curve. There are numerous patents pending for optical bus communication systems. As well, ThunderBolt technology performs well according to the metrics presented. Including a bus expansion technology will further the modularization of subsystems within the server providing for a very strong server computing fixed asset. The end result will be that systems can be plugged together.

See Related:

- [A Low-Cost, High-Performance Optical Bus](#)
- [Data Transmission Speed Comparison Chart](#)
- [Parallel fiber optical bus technology-a cost performance breakthrough](#)
- [Multiprocessor system with fiber optic interconnect for interprocessor communication](#)
- [Proposal of novel optical bus system using optical sheet bus technology](#)
- [Leveraging Optical Technology in Future Bus-based Chip Multiprocessors](#)
- [Optical Sheet Bus Technology for Board Level Interconnection.](#)
- [On-Chip Optical Technology in Future Bus-Based Multi-core Designs](#)

### Device Identification Tag

The device identification tag is used to identify the computer on the Internet as a unique device. As well, the information is used in the encryption algorithm. The ID Tag acts as an anonymous serial number that is registered in the user's Web server account. If the device is stolen, this ID can be quickly taken out of the INET Web OS Device Registration so that access to the user's data remains secure.

### Speakers

For multimedia use speakers, headphones and a microphone jack are available. All models will provide internal speakers. The quality of output will be determined by base features of the device. Some high quality speakers are available from Bose that are miniaturize for inclusion within a laptop chassis.

## Device Drivers

Device drivers that are used by the local rendering operating system (INET Smart Terminal) will be drawn from the Internet connection at the time of the new device installation. The system will check the local cache first before downloading. This allows the operating system vendor to be a different entity than the device driver provider. Device drivers will come from the INET Smart Terminal manufacture registration database. By using a new set of local functions stored, called IIOS, named after BIOS, device drivers will be quickly downloaded, compiled and installed. Overlay functionality may also be possible so that concurrent download and device use can take place. These device drivers work with the rendering base client.

## Connections

- USB - the USB interface will be the same as current except that the device driver will actually be loaded from the Internet database catalog for the computer. No more shipping disks for the device. The operating system will use the Identification of the device to find the driver in the database. This database is updated by the manufacturer.

- A new type of plug will be introduced with each device that is considered an INET Intelligent device. The plug will provide curved gliding into snap place and add robustness where necessary. Consider a wireless plug into this adapter to an external moving device such as a guitar. The very versatile plug can also expanded to enormous cable lengths using the INET Signal Amplifier. This plug uses USB, however is geared for daily robust use.

- LAN connection
- ADSL connection
- WIFI connection
- Satellite and GPS
- FlashMemory Memory Cards for Digital Cameras
- Blue tooth enabled
- ThunderBolt

See Also:

- [Access Science - Computing - general](#)

## From The Future

Absorbing the static void of the button bubble by clicking on the paint in Software Design and engineering is hard to do since you have so many strongly gifted individuals. These people understand that the key to writing a good technical document requires discipline; that which is unheard of in the mortal.

C++ code for example, does blister the eye of thousands when studying the details of the textual information. When programs are complete, the result is considered to be a highly crafted technical document. Writing C++ programs can be likened to balancing descriptive words in a sequentially flowing logic. The document is a lightly based English one as most authors use decent names. This forms a flowing logic document called source code. Like English, these documents have sections that can be compared to paragraphs called functions. These source code documents have to be almost perfect to work correctly. When they are, you can compile them. The term compile means that the textual information is translated into a binary form; one that a digital computer can easily read.

In reality, compiling only increases the size of the information as the microprocessor instructions that unfold are more detailed. Compilation produces subset documents called object code that contain machine code. Digital computers can only execute machine code and they usually do so with small steps. Moving memory, adding a series of numbers, performing a search in memory or comparing two items for value are examples of small operations. It is usually by the comparison of values that most programs make decisions. A series of two dimensional decisions, also called a decision tree, can perform additional mathematics, transfer control of the program execution to another portion of the code or any desired programmer instruction within the given set.

Stack operations are important to modern object oriented programming. They facilitate transmission of data, or parameters, from one section of the code to another. As well, they save states of items when a child iteration is completed. These sections of code are called routines. Routines are small chunks of logic that are given to a specific task and at most times have a generalized reuse quality associated with them. In a stack, items are placed on the bottom with a push operation, and taken off the bottom with a pop operation. The routine, or snippet of machine code actually uses the stack memory base address with an offset that points directly to the parameter data. The offset controls the which values are referenced within the stack. This is called the stack frame. When the machine code inside a routine requests a variable, the address of the parameter within the stack is given and thus is used for the memory operation. Now let us discuss how this relates to a network like the Internet.

Modern programming techniques use a hybrid approach. Some of the programs that users execute on the Web are not considered direct machine code. A program has to run that interprets the intermediate code. This program is commonly known as a PCODE engine or a virtual machine. These specialized PCODE engines, usually have the design of an object oriented central processing unit - a sort of step above in simplistic microprocessor mnemonics. Dot Net and Java are the leading examples of this technology. This soft model of a CPU allows greater robustness, platform independence, smaller instruction payload (program size) and an objected oriented flexibility that just does not exist on pure machine instruction models like INTEL.

Since software engineering can make more robust design leaps quicker than hardware design, that is *soft*, design patterns can be projected from the metaphorical imagination easier. Modern design tactics suggest that object oriented approaches provide better management of source code. This is proved by the complexity of modern software compared to yesterday's implementations. A developer chooses to reuse code based upon usefulness and quality.

Currently the two models for Internet PCODE machines are the Java Virtual Machine and the dot Net Virtual machine. Since the block is authored as an object, as well as PCODE based, the code is much smaller in comparison to raw machine code. This makes Virtual Machine code an ideal format for Internet transmission. PCODE machines and Virtual machines typically have a set of base routines that are accessed as application programming interfaces (APIs) or object methods. These routines are engineered to interface with the base operation system. They may also provide "*super work*" as a tool utility. That is, providing a window or tool bar within a GUI.

An expansion to the Java methodology offered as VLISM is the goal of this book. By expanding the instruction set for a softer model, applications written in many different programming languages can be managed easier for the entire platform. This means that each language will gain the benefit of high performance machine execution. The JVM uses ByteCodes that perform variable memory access - conversion, invocation of classes - methods, and some other items. The point that the base size is a byte (8 bits) means that size of the JVM instruction is small.

Other characteristics offered by VLISM includes the stream being sorted for Internet execution allowing for heavy use of overlays. The main purpose for the new format is a multi-programming language capable logic code that preserves space while offering high usability of transported applications. The program will be compiled to machine code locally on the terminal giving high performance. This translation will also occur for device drivers stored in a web server database by product model identification.

The future of computing has already been foreshadowed to be a networked and distributed processing resource. Users of the future will no longer have to carry around sophisticated and battery dependent equipment to do complex tasks. The heavy processing of the application can be off loaded to a server. However, network coverage and stability must rise to the occasion. Modern Internet reliability is very high.

The computer that modern users carry or have at home are very complex in nature, possessing many operating electronics. The mainframe computers of yesteryear are sometimes not as powerful when compared to them. Yet in reality, the user does not need such a sophisticated laptop device to modify data. The INET Smart terminal is specialized in graphic display, al la visual output and has the audio processing capabilities that are in modern PCs. Most of all, the terminal has a base operating system that includes a high performance virtual machine language compiler.

Resources:

- [PDF format](#)

- [VRML](#)
- [VRML players](#)
- [Play Station](#)
- [Nintendo](#)
- [Atari](#)
- [XBOX](#)
- [C99](#)
- [BOOST](#)

## Sequential Access User Interfaces Internet Streaming Compiler System Using VLISM

The implementation of a compiler system that is designed specifically for Internet execution and distribution should be flexible enough to adjust itself for user response time in proportion to the available connection speed. It will be a goal of the render client to accurately measure the download stream time and keep this information up to date and readily available. This information could be communicated as part of the protocol using an internal time stamp, by using statistics of gathered response metrics or by request means. Fully compiled applications, in machine code that is, are typically very large and therefore require time to download before they can be executed. Application designs that rely on PCODE invocation of base system API are much smaller but run slower. Using an overlay system and dynamic background loading during program start up in conjunction with the Very Large Instruction Set Model (VLISM) will facilitate the needed boost in speed that allows the user to quickly start working. The overlay functionality generation will be created (some times dynamically) by the Web Server and this will be a complex problem to engineer.

One architecture to explore would be to use a predetermined list of bit rates. Connect each bit rate to a series of overlay bank process through relation. The overlay processes contain the most important functionality first, even sorted by historic use. Visual information, state changes, validation logic is the likely order.

To anchor the generalization that is needed, template oriented overlays can be used during compilation. The functional requirements of an application user interface will include the editing control objects, image, sound, animation, textual data, numeric data, and super data types (dates, times, currency, web URL hyperlinks, etc.). Each of these objects will have a multiple flow path definition for stream production. Since the state of the client machine is known by the server, only the parts of the program that does not exist upon the client will be sent. The size of each of the object's assets thus including the binary object itself will be a stored value.

Within validation logic, key acceptance is one of the most important functions. A mask and parsing filter is present within the INET Smart Terminal that includes date, time, numeric and currency formats to solve this. The input filter is complete in its implementation focusing on event processing. Machine code can be placed within the filter pass that allows conditional key acceptance. The INET Smart Terminal features an on board feed back system for invalid user input that is appropriate for the user. Operational characteristics include tactile feedback upon the keyboard or a click sound. The Terminal also provides minuscule sound of a key press.

Overlay paths that arise where the complete VLISM foundation library is not present will be processed on the server using a completely different logic route. Machine identity, and software state is a known constant on machines that are registered as an INET Smart Terminal. The INET Smart Terminal emulator that runs on Microsoft Windows, Linux and Apple Mac, once fully installed, will measure software binary versions to communicate to the INET Web OS to make sure streams managed on server and local cache are compatible with the machine's configuration. In the use case, an unknown terminal emulator is used to connect to the INET Web OS, first time ever, appropriate measurements will be benchmarked that categorize the machine's abilities. Some characteristics include in operating system version, processing power, available memory, software components and hardware devices. Stream key encryption will not be private unless the device is registered with a Hosting Provider. Machine code (Dynamic Name space Engine or VLISM) will be produced that contains the necessary stream of native operating system API calls. These called routines will drive the operating system and their human input devices. Users of DOS, Linux, Mac OS X, Windows 3.1, 95, 98, ME, XP, Vista and current will be able to run the new software included in the Web Operating System.

The template overlays will expand or contract based on the specifics of the user interface requirements. The stream composite will provide first the basic rectangular, polygon coordinates, short object pointer of SoftSpot components within the user interface. The textual data will be associated with a screen object. The event machine code will be attached to events as a streamed source. The code bank process will allow change over from client code to server code based upon previous transmission history. The detailed screen image will be populated by a stream as well. The overlay banks would be switched dependent on the connection speed and therefore the only real noticeable artifact would be graphic image downloads and real-time audio playback quality. The audio mixing will be performed on the server of multiple channels so that a nice compact mp4 audio stream is available to the simple client.

Programs compiled using the system will allow the Web Server to query visual interface details ahead of time. If the program is document based, that will be a parameter of the query. This will be a service that runs under the web server category and will automatically be transparent to the users. Its job will be to store in a database all of the visual drawing language and start up overlay information. When execution of the program is requested by the client, it will be a fast SQL statement similar to " Select \* from UserPrograms where pid='WordPad.exe' and Document='ReadMe.doc'" call to the database management system.

The visual interface drawing command language is an XML dataset that describes the coordinates, color, fill type and other rendering functions associated with the visual appearance of the interface. There are many languages already available like the Microsoft RC file format, and HPGL. Perhaps some would even consider HTML to be one such language. However, VLISM contains a consolidated combination of these languages that is specifically designed for Internet transfer. A HTML document may compile to several text location commands, the textual data, and several text color changes, font changes or image position commands. These commands are natively supported by the VLISM engine. The VLISM is robust so that when time or space can be saved the appropriate functions are available.

An information request package that communicates hardware platform details including client display type, resolution, color depth, and media features available is handled by the client. This informs the host computer when preparing the VLISM stream information. This way many different client devices can connect to the same centrally stored user information but through a different version of the VLISM stream. One that is specific to the client device connected. One reason this is a great benefit, for example, is the resolutions available to Pocket PCs are completely different than laptops. So by creating a unique visual interface for each platform, the same code will execute on the server. This is a very important feature of program maintenance.

Dividing the interface drawing logic and product from the work logic at this level allows greater client portability. No matter what device they are currently using be it the cell phone, mp3 player, portable next generation laptop, or a pocket PC; an operating interface will be there for the device. While the cell phone interface would be completely different than the large real estate screen of a laptop version, the same connection point to the user's data can be utilized. The features available to the user are now increased many times because of the data interconnectivity between devices is an absolute. This interconnectivity would be purely a function of the operating system interface vendor to enable.

More research is needed but a viable solution can be provided within a web server environment and development environment that encapsulates all of the functionality mentioned. Adoption by the industry of a standard Internet stream multi-programming language will also have to be accomplished (VLISM). So that, for example, when a user buys a new cell phone they simply encode their personal URL or plug in the INET USB Security Key into the phone and all the software, interface and connection points are created by the INET Web OS on the host server.



## Internet Assembly Hardware Assisted Support

### Very Large Instruction Set Model For Reduced Transmission Overhead.

Historical computing methods have led computer scientists to craft a cornucopia of programming languages. Some examples are c, C++, Prolog, Ada, COBOL, Basic, Lisp, Python, TCL and Java. But there are more. Investigations of language interoperability and platform independence have led to the invention of virtual machine technology. [Java VM](#) and [.NET Framework](#) are the shining examples of this technology architecture in use. A public domain broad study of computing languages must be maintained to advance Internet Assembly. This study can be used to produce a symbol code that houses all structured logic, object oriented, media streaming and artificial intelligence goal seeking languages. Exploited methods are: [teleoperated assembly](#), [JVM](#), and [CP40](#). See [Virtual Machine](#)

The new symbol code or virtual machine assembler must be maintained as a open source standard of the computing industry to solve risk management issues. The Java VM has been released using the free and open source software, (FOSS), under the terms of the GNU General Public License (GPL). The industry must own this new architecture, designed for all computing languages, as a design implementation; a general public license agreement. The tokens of the library word space will be contained and explained in book form as its basic reference. This will allow several manufactures an implementation set choice with expansion capabilities known by application. The development tools and language parsers will support the translation of source text to the instruction set.

The Very Large Instruction Set Model is one of the most viable solutions to Internet stream programming. An important result of using this new virtual machine assembly design is the reduction of transmission bandwidth when comparing to binary compilation. VLISM web technology solves this issue by producing the most efficient in code space while considering the available name-spaces on the client. Compiling can optionally take place on the INET Stream compatible micro device or as binary output from the server direct to the device. The most preferred method will be compiling on the local device using the VLISM JIT. Some devices may not be capable of compiling, cell phones, digital cameras and click panels for example. Therefore, the process of transfer and compilation must be fault tolerant and capable of error recovery due to transmission problems.

A facet of performance that INET Web OS will improve is the memory management, memory population and buffering functionality with its object technology. Incorporating compiled machine code or VLISM instructions instead of using interpreter technology like JavaScript provides deeper analysis of the execution environment. For example, ahead of time memory allocation size and block operation population enables shortened CPU cycles the client. These features lead to better performance on type system management, garbage collection and GUI control field population because aspects of program operation is known about at the time of transmission. The packaged contents of a *data segment* as it is noted machine code, reduces redundant calls and erroneous operations.

For example, textual lists will be allocated once and be directly accessed by the user interface control memory areas via pointer operations. Modern methods rely on loop population logic and a large amount of message handling. The cache version of the list held within the client can be recorded as an incrementally updating entity within local storage. So if the textual list information is the result of a database query, and that portion of the database has not been modified, retransmission will not be necessary. If the database results have changed, only new items are sent and inserted.

Memory can be managed more effectively due to ahead of time memory size server calculations for a consolidated memory footprint. Internal data structures like linked lists and vector array buffer sizes can be calculated providing for block level data structure population. This is commonly known as loop unrolling. At times, this will reduce memory block gaps that is common with looped based population. This results in better [dynamic memory allocation](#). Since the conditional output of instruction set (machine code, VLISM, JavaByte code, .NET CLR, C++ Source to compile, or browser code ) is decided at the server level, components that use block operations as these will be safer. That is block filling side steps Object Oriented practices. JavaScript applications that make heavy use of strings for example, will benefit greatly in speed due to the nature of how type safe Unicode operations occur. Even managing the level of Unicode package formats can be tailored in machine code to perfect the performance based upon the language use of the terminal. ASCII 8 bit, Unicode 16 bit, or larger character index sizes when selected provides consolidated logic free from conditional logic during object operations.

### Common Programming Language Support

The Very Large Instruction Set Model (VLISM) includes all of the run-time libraries that are common to modern programming languages. VLISM contains a robust *virtual machine assembly* (compiler/JIT copiler) mounted for numerous programming languages. The robust instruction set does this without twisting design. VLISM provides file handling, database connectivity and open architecture dialog entry components. It is fashioned for business, data entry and getting information in the most efficient way. The local operating system maintains the correct balance of user state information with the server providing the most fail-safe operation by application design. Information will be safe even if the device loses power or network transmission errors occur.

### Widget Interface Components

Each of the interface components are object oriented in design. Some of the best oriented naming structure can be derived from the W3C; [Widgets](#) Examples of common INET interface components are: file locator, document locator, image locator, movie locator, audio locator, data locator (databases, record sets), visual diagramming, name fields, numeric, alphanumeric, paragraph text editor, credit card entry, checking, payment, email, phone, currency, shopping cart, catalog, spreadsheet, graph, reporting, number fields, address and identification. Some of the entry fields are derived from the base masked entry editing component. Yet the resulting interface object withstands interface internationalization thus conforming to the localization defaults. Specializations that extend the user interface components may sometimes require external communication for validity; payments, credit card verification, [Geocoding](#), etc. Localization server details are applicable to this logic as well.

All of the INET Widget controls have improved operation for usability and accessibility purposes compared to modern designs. Spell checking and grammar checking are built into the text editing components. The address entry fields support geocoding lookup. Interface components that support highlight and segment selection allows redo last selection state upon a friendly key state combination. This is important to someone that spends time highlighting a portion of text. Inadvertently, due to a stray mouse click or a keyboard error, the selection state is lost. With the new set of controls, to redo the last known selection state, the user would hold the keys CTRL, Shift and Z. This feature will also be very useful with lasso and rectangle selection schemes used in diagramming and graphic editing controls.

Multiple segment selection of textual information and box selection is supported within the paragraph text editor. Controls that support cut, copy and paste commands will be linked to the INET System Wide Transfer Collaboration Buffer. The INET System Wide Transfer Collaboration Buffer can be managed using strictly mouse and keyboard operations. The INET User Sphere Workspace also supports a graphical management panel of the buffer to allow historical views of previously transferred items and their source. The controls that allow copy and paste will be expanded compared to modern UI to include Tree views, List boxes, and other read only views. Other screen objects such as labels can be copied using hot key combination in conjunction with the mouse. As well, copying the image to link retransmission communication or print processes will be checked by security privileges.

Syntax highlighting is an important feature for some users such as software developers. Modern programs are large, and this information help disseminate which is developed from which text is language dependant. One of the most common forms that users will encounter is XML, HTML, and CSS. Several features are provided such as language documentation and code completion. Other features such as search and replace, keyboard macros, and other text editing facilities are provided. These options can be turned on or off dependant upon the implementation.

### Managed Output Views

Upon the operating client, application usage can be recorded visually. The captured information is a vector draw list. Including CGI animation will allow video capture of application usage. A single frame can be manipulated. Sound and voice over can be set upon the video segment. The video editor (*Film Fabricator*) supports variable frame type rendering for mixing multiple media package types in stream. Typically these functionalities within media system designs are called Codecs. This vector draw list format is realized within the INET Network Collaboration suite. In communication practices, an animated segment of an application's performance is better suited to vector draw lists due to their transmission characteristics. The common use of the captured form, as a modal communication method, can meet the demands of many curtailed views. The ad-hoc system of print screen or cut and paste is redefined for business standards and business communication for formal usability purposes. That is, information tracking can be a requirement when the information is downstream.

Within the transferred vector view, if the capturing process was configured for live data, fields will contain the latest live data when the object is reviewed. This package can be emailed or retransmitted. This will simplify creating a viewer application for many software packages. The operation works as an extended print screen facility for a user while the INET Web OS handles the complex engineering solution. This will work for many application interfaces.

## INET Data Snap Applications

The official technology name is INET Data Snap Applications. As the name implies the technology allows complete ease when transferring views of application data. Other configuration panels may be appropriate for these derived mini-applications. Items such as database login and security viewing privileges are necessary to track at times. Form building and generalized reporting is also an important feature that can be in place during the presentation. The user is allowed to configure what fields are shown and where. A basic painting application is provided with the UniGlue suite.

Software developers can reuse INET Data Snap Applications within other applications. This will provide an extensible framework to begin building advanced information systems that literally tie together. This is a common request within inner department and inner company business proceedings. User based UniGlue tools are provided to create robust experiences that can include the captured view, office applications, reports and other applications.

## Vector Draw List Capturing

The vector draw list interface capturing and rendering is a base technology feature that separates shading information from coordinate data. The high performance method is used for recording, playback and real-time streaming of application visual responses. The technology optimizes the visual output of application frames for network transfer as part of the architecture of the INET Visualization System +++ Octopus Controls.

Publishing views within a template database provide standardized formats for types of information. These publishing views are designed for subjects. Third parties can add their own or redefine existing templates. The publishing system allows the visual rendering of data using these template formats. The process matches an information format to the user's or business's desired visual communication policies and methods. These policies are configured within IIP Dialects. IIP Dialects are discussed later.

This publishing feature makes the ordinary seem more obvious in a friendly format that fits the eye of the beholder. If the object is a broadcast consumer task communication of a record set, and the information is a dyna-set view, the entire report including the details might include lacy graphic frame borders around the edges. These options are fully configurable during publishing but inherit security and base thematic appeal from the IIP Dialect. These rules can also be linked to a specific entity (person). Dyna-set view, an informal word, means here that the view is inclusive of the entire customer relationship. e.g. A sales slip will include the totals upon the screen as well as several other agreement paragraphs. Any INET application provides an interface for visual editing of published information as part of its base user interface.

Communication of ideas, tasks or errors can also be more precise, providing the clipped view of on screen information. The final published information is a censored broadcast using the IIP Dialect rule database. It is void of restricted information, unneeded information and unnecessary formatting. Management of any relationship will be solidified by the precise publishing output. As well, link copy protection sent within the distributed information allows a preview of restricted content. Yet it does not allow retransmission or duplication of the information. One example is the recording of a copy protected three dimensional model that was within the view. The output form provides user control with mouse or keyboard for view changes of the model. However, because model asset is copy protected, it cannot be reused.

## INET SpotOut

Some search and find applications to databases that are in-house or industry specific published information systems will use INET SpotOut Technology. INET SpotOut Technology, an information [Sanitization \(classified information\)](#) processing filter that is within the broadcast render pipeline, can be controlled using rule dictionaries ([IIP Dialect](#)). Data marked as classified that is stored within a file will track the file's copy status to prevent network transmission. Based upon the rule database, the file may not have the proper security to be copied. The destination of the copy may also play a major role within the permissions check. That is the file may be able to be copied to a place behind a firewall but not travel outside of it. Sanitization also refers to contents within a file such as a database record.

Since rendering management of a record, field or cell data is controlled IIP Dialect security rules, a high priority rule will suffice when a business just does not want a field to be published. Several methods of blocking these operations can be effective within the INET Web OS Publishing system. The system monitors compounded IIP Dialect security rules by order of priority. It flattens the processing stack upon duplicated associations for performance. As well, it makes intelligent decisions of which to use and what the priorities are. This form of security inheritance is a desirable feature businesses will enjoy.

The publishing facilities also includes covering the specialized requirements of the viewing device. The device may be considered to be a trusted information device or not. If the viewing device is not an INET trusted information device, as defined within the INET Web OS, certain items within a publication are removed before communication occurs. The implementation of this security is included in low level ODBC, file system, and database management APIs.

Within the object code that the compiler produces for the viewing application, use of secure data fields is managed in a virtual protected memory. The policy implementation of a machine that can use trusted information is defined by its ability to render the information but not retransmit it to an non-authenticated recipient. This type of machine is an INET trusted information device. Derivatives of the secure data are tracked using the virtual protected memory buffer. During retransmission to another user the server is notified of the activity before transmission takes place. This closes the security hole as the server tracks the field to the recipient. The recipient's machine characteristics and IIP Dialect are used to sanitize the information before transmission.

Through compiler design, secure data fields are tracked for their projection upon the screen. That area of the screen is flagged as private protected by the server. In properly handling the data, the client render operating system does not include it in screen captures transmitted to non secure equipment. This capability comes from using the virtual protected memory tracking information. If a field is derivative, the historical transfer list can be reviewed.

Data fields managed as secure are cataloged within an INET Web OS security database. In cataloging these items, a report can be produced that defines the boundary of a specific data field or object program output and its use within other applications, information systems or enterprise wide systems. Publishing control of the data can be stated from the report.

### Secure Database View Administration

Applications that utilize any of the Octopus Controls will be certified to make use of the technology. The publishing rights are also managed by linking application use to a security privilege database rule structure (IIP Dialect). Rules can be specific to a dialog, cell and field. Providing an administrator vast control over publication with ease making the complete operation secure. At the user interface level, this is accomplished with a right click contextual menu operation. New tracking security rules are distributed to all views and uses of a field column or data cell.

By centralizing the publishing rules into a database, publishing security can be cradled for many businesses. All secure data fields can be managed from a summary administration view. In the publishing of data, all associated data relationships of the field are considered. That is sibling and parent data fields are managed using a hierarchy of data access rights. As well, the selection, coping and pasting of these fields carry the security information to any application.

Typically, only business analysts know the true results of information exposure. The output of a formula that uses secure data as parameters may have significant meaning to the reader. That is, in some circumstances, only a business analyst is educated properly to determine what the deductive implications of a field or cell asset has by being published. This security feature is supported within all aspects of VLISM technology transparently as a base part of user interface.

In the operation of office software, the setting of security publishing should be tailored for a management audience. However, in most modern approaches, the best benefits are realized by using the base operating system security. These system functions are considered to be located *under the hood* for office software users. Therefore, configuration and management of them becomes a systems administrator's task. [File permissions](#) under Unix is set by the `chmod` command. Under Windows one might use the `ATTRIB` command. Database systems use an entirely different method and employ the use of [Data Control Language](#). Following the form of SQL, the DCL commands GRANT and REVOKE provide these features. Some applications have their very own model built in. Within the INET Web OS model, these security features are provided within an easy to use interface that is reflective of the audience making the decision. Control over the output and transmission of secure data is easily digested by users with ease using INET Technology.



Tying the security items into an application's interface for common use makes sense in usability because initially that is the access layer management will know of. The signed on user must have the correct privileges to manage an application's security group. When the logged in user has the necessary security privileges, a new option will show upon the system counter-top space. Clicking it provides the application's security console. Within this view, the application's settings and security attributes are displayed. The view and information contained within relate specifically to the given application. The integrated application component allows definition of specific named objects by a developer.

The functionality will also give designers and developers a way to define a primary set for an application that makes functional sense. For example, customer identity, payment history, or report printing are easily identified by users. As well, new traits can be added by users. These traits can be specific to a application output file, application communication transmission task, dialog view, an application field, database field access, application menu or application command button. This user interface concept provides a precise tool path to easily promote the proper security decisions being made by the right person.

A dictionary view exists to make some types of entry a bit more focused. For example, when initial definition occurs, perhaps a large set will be involved. This view provides masked selections and group selections for batch based security permission settings.

### Template Guides

The INET Application Usability model provides suitable starting places for application user interface structure. These application behaviors are stored within a template library for users using Web Publishing tools. Within the comprehensive user interface library of templates, several product sales web publishing templates exist. The category supplies users with templates that correspond user interface facilities designed for product database processing. Users also have the capability of designing user interface templates that support a variety of searching and data mining using the interface designer.

A very user friendly interface practice for database applications contains a list of abbreviated records while the major portion of the interface area is used for entry. The left panel contains a search field along with the abbreviated results. The interface designer is flexible in that an existing database can be used to create an entry interface. As well, databases can be created from the interface definition to store the data.

Supporting entry and editing capabilities of these interfaces might at first seem trivial. Yet each of the entry fields at an international level may be an operation specific to the region. Identification, address, and phone number entry are primary examples. Based on the location and preferences of the user (locale), standard use is guaranteed. The interface designer can be used to create international level interfaces and databases designed for commerce.

The VLISM name-space includes a robust library of mathematics that include digital signal processing. Likewise, [Hardware Abstraction Layer \(HAL\)](#) based designs for compression algorithms, encryption and image processing are accessible. VLISM includes objects for audio streaming and video streaming that are held within the context of the quality of service manager. Audio editing and Video editing are supported over a network as well.

VLISM includes objects and mnemonics for string operations, array management, searching, sorting, tuple spaces, grammar parsing, socket communication, http, ftp, mail, HTML, web scripting languages, web navigation hierarchy control, two dimensional animation, three dimensional animation, three dimensional modeling, natural language processing, optical character recognition, font typography, robotics, language translation, sales (transactions) functions, business object linking, artificial intelligence algorithms, digital data rights management (publishing) (DRM), threading, graphical interfaces, USB functions, Bluetooth functions, on board camera/image scanning, and three dimensional transformations (distributed balanced tree network scene-graph). Multi-user network collaboration is also within the domain.

The INET Client VLISM Spider JIT provides good performance balanced with transmission speed using incremental stream technology. While researching good formats, as a reference the Java Byte Code is an excellent resource for maintaining CPU independent model and has an object oriented byte code implementation. The INET Web OS platform incorporates Java Byte Code as a intrinsic application format but translates it to VLISM format.

The INET Web OS source code compiler collection directly supports the Java Language. The VLISM Java Source compiler gives the capability to produce more efficient code than a Java Byte Code translation. Supplying a secure operating system and client platform model for Java byte code and the entire Java JRE within the compilation and transmission schema strengthens industry compatibility. Common Intermediate Language is also a comprehensibly supported format that is supported like Java is. That is, both source and byte code format.

However, these virtual machine implementations lack the expressiveness that Internet applications must use for great usability. The VLISM format facilitates Internet streaming to a platform in that it supports interfaces, basic processing instructions, distributed processing and incremental overlay usage. VLISM also has platform IO that can be both distributed and incrementally enabled. Some of the VLISM stream format is a higher form of object assembly that supports distributed application interface usability. From the server the image of the user interface is shown.

The VLISM model also maintains a closer native relationship with the device by implementing a compiler and linker for high level routines on the client. Variable and data type selection, where applicable in computer language, are first type checked at the server level by the parsing compiler. In C++ or C#, this usually is seen as a warning. The type and conversion information is sent within the VLISM format. Compilation resulting in type errors do not occur at the client level, but at the server level. Some computing language syntax provide automatic type conversion. Most languages will receive a performance boost due to the VLISM client machine code compiler. That is, type checking and conversion is unrolled.



The parsing compiler upon the server is capable of many strict language translations. Support for Microsoft C++ platform Windows.h, AFX, and MFC specific code is supported. C++ code that includes Microsoft COM is also supported. Microsoft Visual Basic is supported by the parsing compiler. Microsoft dot net source code is also supported. Cobol and its many forms is supported. Support for Unix C++ source and Mac applications are also supported at the server level. HTML, CSS, JavaScript, XSL, XML are supported. Python source is supported. Adobe Shock wave source applications can also be parsed and translated to VLISM format. The parsing compiler uses source code analysis that does take more logic to process. However the performance benefits are an enticement for many computer scientists to see. Many audio and video streams are also supported.

- [Java byte code](#)
- [Java bytecode instruction listings](#)
- [ARM9E Processor](#)
- [Common Intermediate Language](#)
- [List of CIL instructions](#)
- [Common Language Infrastructure](#)
- [List of CLI languages](#)
- [Type system - Dynamic\\_typing](#)
- [Type system](#)
- [Common Type System](#)
- [Intel microprocessor](#)
- [RISC processor](#)
- [List of microprocessors](#)

## Handshake For Model

When the server and client handshake during initial connection, the product id and machine ID is used to find a mask. This mask defines what instructions are supported by the device. The information is used to design an experience that is compatible for the device. In some cases code may be stored within the database already for the device or actually stored locally upon the device. Other times, this information will be generated dynamically and then transmitted as well as placed into the database cache for later use.

The mask is used not only to determine what instructions the device will handle, but it is also reflective of the processing power available. For example some advanced mathematics routines will run on the server but the output will be sent back to the device when needed. Server side processing will output the most efficient stream the device can handle while considering the supported instruction name-spaces and general machine use. Users can imply their needs directly by using the stream residency widget. The stream residency widget, shows state of application connection as well as providing menu operations to refine the experience. The stream residency widget also controls render compatibility. This architecture provides backwards compatibility and allows existing application products an upgrade path in high performance distributed web computing. New stream segments (components) could add different hardware capabilities.

The VLISM name-space incorporates modern video format streams and audio stream with rendering filter support. Filtering of video content or audio content may take place upon the server or client device. In most cases, the content will be processed at the server level leaving some simple filter processing for the client. Controls such as brightness, saturation, hue and contrast are applicable logic targets. When these filters occur upon the client, before the render of a video frame to video memory, the filters are processed. Advanced options such as a comb filter, noise reduction, and sharpness convolution matrices are supported at the server. Using inheritance, the rendering cycle also includes user preferences by device as the last stage in the pipeline. That is, for one type of screen upon a user's device, they may wish to have brightness turned up ten percent. As well, the size is reduced or enlarged for the proper layout upon the terminal or terminal. The playback render-er supports quality of service automated buffering. As well, users may set manually the time window of the anti-skip QOS media buffer.

## Network Sandbox Security

The local device will provide a security layer for applications or rather individual operating systems. The security sandbox consisting of: protected memory access, protected code access, ring level services, window functions with context desktop, censorship protection (INET SpotOut), file system access, device driver compiler, VLISM compiler, object version manager, local quota management, program to program communication, Internet stream encryption/decryption, virus protection, locked VLISM name-spaces using a physical button and program/data recovery held at server side manages operating clients and applications. A limit on minute playback and rewind are possible paths to explore within mission critical environments. Protection methods of modern CPUs rely on masks that identify ring and access privileges during memory access. Instruction execution privilege also relate to ring and source.

The INET Smart Terminal hardware includes encryption, decryption of Internet streams so that the integrity of e-commerce can be maintained. That is, program data must be held in strict confidence in some circumstances. The banking e-commerce functionality of the IIOS is such as case. Cipher Key integrity must be maintained. The device driver that handles stream encryption/decryption, a driver registered for direct access to the new INET embedded processors, is secure.

Code blocks are considered successfully transferred by using data integrity checking algorithms like CRC or a better method. Protected memory access will keep programs from modifying non owned or non shared data. Protected code access will ensure that applications only access a code base secured for the Internet channel and application context. Quota management will allow applications to use storage capabilities of the device while not affecting security.

### Hardware Assisted JIT

The VLISM compatible device will contain hardware assisted unrolling of functions. This will provide an efficient environment for the Internet assembly engine. The hardware unroll assist includes a memory bank switching algorithm in conjunction with template processing. The routines will be quickly copied from specific ram locations to instruction cache ram using computed tables consisting of memory location offsets and code lengths. An essential performance enhancement made within the Memory Manager CPU will provide the necessary registers to contain the numeric array used for parameters.

The new Memory Manager CPU has a special memory operation that allows unrolling routines recursively. That is some, functions may depend upon others. Internally input or output of one function may be used within another. So the Memory Manager CPU will be able to quickly build buffers from several locations given a set of instructions, the computed tables. The copied code is expanded using template instructions during the time of memory to instruction cache transfer. Instruction banks are changed based on the operating system object being requested. The routine or method is unrolled in line providing for the fastest execution while saving memory. This expansion is independent of other memory transfers to provide the most transparent through put.

The advancement of Internet computing does rely on usability of the applications. VLISM enhances this by applying a new higher level API name space that reduces transfer load while tracking the model base on the machine. Speed is also increased by allowing the design of applications to be pure streams sorted according to use. So only the instructions needed are downloaded first. Users have to be impressed with speed while providing for the best distributed computing capabilities. New hardware instructions and a new computer design must be sought to magnify the process of compiling and executing applications consisting of VLISM virtual machine instructions to native CPU. In short, hardware support of these operations is essential to the Internet application performance of tomorrow.

References to consider:

- [Wine HQ](#)

- [Java Processor](#)
- [International Components for Unicode](#)
- [Type System](#)
- [LLVM](#)
- [Access](#)
- Internet transfer of device drivers, compilation and installation within the system.
- Internet Input and output system comparable to BIOS for local hardware. IIOS routines will give the basic functionality to the entire platform for Internet usage at the interrupt level.
- The device should be able to boot up and install device drivers from the Internet. This can be considered a smart start from the Internet.

## Core Client Implementation INET Affects

### Distributed Interface Rendering Language

Several benefits can be gained by the implementation of a distributed network system such as INET Web OS. By isolating the interface rendering logic from the operating system and application using a streaming object command system such as suggested by the INET platform, multiple code bases can be combined together thus further reducing the cost of maintenance internally at many software firms. Developers will be able to be competently ensured that their application programs will run on any platform, be capable of Internet distribution, real-time Internet streaming execution and being served on a modern desktop personal computer.

It has always been a desire of the public to use a fast, smooth and slick visual interface on computer systems. In fact it has been the main attraction to the Personal Computer as the adopted platform. Color screens are a good argument for fact. By implementing such a system, it gives developers the ability to reorganize the graphic name space.

The graphic vector output structure will exist initially in three dimensions. The INET Web OS Provides a model editor implementation for designing GUI elements. Using fast direct video memory access at the application GUI frame interval provides tight pixel control. Large area changes are placed into video memory quickly. The fluidity of image magnification has a very snappy performance because of included image processing routines upon the client. The user is able to dynamically increase the size of the entire view port or objects within the view port individually. As a usability feature, the centroid of magnification is based upon the presentation state of the user interface. Users typically re-size or magnify based upon information they are viewing to read clearly or enhance the definition images to seek details better. The application and inner frame area that the mouse is over will take precedence during re-size and remain stationary. This helps with usability for many persons.

The object oriented graphical control construction kit that the INET Web OS provides gives focus to fields in the desired order. The object's methods provides easy visual state modifications by container (object) name using an animated visual queue. These animations are triggered primarily by user interface device input using an event and super event system. Some responses are generally derived from the user interface theme often referred to as skin. However, the event can be overridden to offer situation specific animation event handling. This gives the developer real time control with quick response time. Using high speed and high definition imagery for interface views are appealing for the user. Using robust mainframe technology for a rendering pipeline to show images on consumer grade electronics is accomplished using the INET streaming object oriented design.

A total artistic composition of graphical user interfaces is not completely implemented in modern user interfaces. Other aspects of CGI include stage dramatics, lighting, and crafted CGI artwork. Using the technology completely for dynamic interface rendering is new to the medium of computer applications. Most often the technology is implemented on specialized multimedia applications. People want ray traced images to view because they are more accurate for the eye. This is what the eyes naturally are designed for - photographic images. Ray tracing can provide visual materials more accurately including: glass, plastic, metals, gold or any material really describable within scene graph technology. However, the technology is currently computationally expensive. INET solves this issue with distributed processing.

Rendering the typeface of fonts at the server is necessary for some devices. However, a dynamic font system will be necessary on the client for robust functionality. Therefore the font system will adapt to utilize calculated data from the host or perform internally these functions. This functionally is a management procedure of the server to inform the client, ensuring the proper fonts are cached locally for rendering. Anti aliasing information can be associated in structure with the data sent to the device. Typically with information of this geometry type, vector streams best describe the character representations in a draw list format.

By detaching the graphic user interface rendering system from the application event handling into distinct processing cycles; a streaming architecture can be utilized. The stream management will consist of a display list, a dynamic display list with state logic, data dictionary objects and user interface device hardware communication object. Again, this information may be stored locally within the cache.

### Distributed State Management

One aspect of INET VLISM architecture is the management of user interface rendering details, supporting state logic and response validation (HID). As well, the system provides a state manager for user input; mouse click or keyboard entry. Using stored cache renders upon the local device storage speeds the visual response time on the second use. This cache operation creates a record in a database. By grouping the drawing command structures and (VLISM) machine code logic associated with a dialog and visual interface operation to be a consolidated structured stream, the INET VLISM Stream format excels in performance, buffering and cache storage.

When users are logged onto the system, a pool of record connections will be maintained for a given directory / file state. Database connections will also be held within a pool. This provides robust ahead of time computed information for browsing, summary, and application start up stream formatted for their device. Something that is not typical of non distributed systems. One click and data is sent. One could argue the case for File Allocation Tables in memory simply enough. However, users need contextual based information summaries and random access browsing data more than bland numeric statistics. These items are prepared as part of the INET Web OS to accomplish ease of usability. This is a network device and user response is a primary function.

The INET Web Server Operating System is more robust than a personal computer operating system as it provides interface publishing for numerous devices in native format. Remote Internet devices and local wireless devices will be authenticated for user connection. Users can have their own centralized computing center equipped with the INET Web OS at their home or central office. Additionally the entire system can be run on a single small laptop version with excellent security. Since the queue, user data, program data, and Internet overlay stream for the device have been precompiled, encryption can occur at time of transmission request. Depending upon the type of encryption employed, some types may be stored ahead of time. That is, some encryption methods may operate using a dynamic algorithm. This is dependent on the device and base operating system of the connection.

In short, the INET system is designed as a system with completely independent processes. This means that can run on its own microprocessor and as networked base system functioning on a mainframe. As well, it can function on a robust personal computer platform such as ones existing today. The Internet distribution of operating system components, and application components, does enable cross platform computing. HTML web browsers currently are advanced enough to support good user interface applications and can be utilize. Java by itself, is not a complete implementation of this system but can be used as a client device. The distributed interface rendering model allows more flexibility and faster performance than currently available.

#### Available Technical references

- [X Window System](#)
- [Quartz](#)
- [x Org Foundation](#)
- [Terminal Services](#)
- [SigGraph for real this time](#)

## Compatibility With Current Technology Trends

### Web Browsers, Hidden Costs And Investments In Upgrade

The ability for the INET Web OS to project interfaces to multiple versions of existing thin clients is well planned and supported. This only strengthens the ability of world wide support for the INET Web Operating System and its applications. One must consider security functions within each of these environments for application and operating system function is relevant. Where necessary, encryption transport will be desired. Yet in default circumstances, the advanced encryption cannot be supported.

Currently, the most widely distributed interface method comes with an Operating System or generalized application. Internet Browsing precedes the Web OS interface cast (VLISM Spider JIT) or projection in its modern raw form using a HTML HTTP browser. Windows Explorer, Google Chrome, Firefox and Safari are the leading web browsers. Technically with these interface technologies, top entry points to user interface display with validation and response are JavaScript, HTML, and CSS. The INET Web OS will support this interface cast allowing configuration of the compiler output to this form. Interfaces can be built more precisely using heavier graphic output loads. While other compiler output configurations for browser technology will lead to light streams.

Most Internet browsers also support a version of the JRE for Java applets. The complete Java application framework may be available upon the machine allowing for a more directed application experience. The INET Web OS will support both the Applet and full Java Application model for interface cast. Java byte codes will be directed as the compiler output is configured for the application experience. Adobe Shockwave is also a largely distributed streaming engine that will be supported. Mobile devices typically use the Java Micro Edition and the Andriod OS. Each of these engines will be supported by the INET Web OS, allowing any distributed application to function flawlessly.

A best experience attitude is adopted by the interface cast detection logic during log in. The user also has the ability to modify the projection face plate style to suit their preferences, hopefully from within the sandbox. These are presented within a selection list that notes availability.

If a Windows Operating System face plate is selected, operations may vary based upon the historical use of the machine. A committed transitional user interface technology point is the distribution of the VLISM Spider JIT. In its form is as an Active X COM component it can operate within a selected browsing application. The format between browser applications is different but the stream format will be common for the INET Web OS. The communication port in use must be selected correctly (HTTP or VLISM).

Only the necessary, least amount of download must spawn the usage of an INET Web OS. The ability to support fluid synchronization of an interface rendering and logic operations will be easier with this creative technology. This facet provide more interest to everyday mobile users. The COM component will be important to quantifying migration points of INET Technology within the user's lifestyle.



Consider the versatility involved within the main entry points of the INET Web OS. The first use of an INET Web OS application may draw most of its operation by directly using the Microsoft Windows API library. This will undeniably provide the absolute minimum install operation to view a bitmap image, for example, since the base API has several functions to facilitate.

Further transmission and use by the second will fan the internally expanding macro microcode space VLISM Spider JIT to utilize INET Web OS Specific Technologies such as image display ( [LOD.PANITBT.NSM](#)), font technology (vector 3D), instruction compression (OOP algorithms), device management (quota management, synchronization, cache, security, tracking), memory management (allocation, union, garbage, clean), multiple JIT compilation levels (a,b,c...), game mechanics engine and other libraries. This technology also provides a selectable cohesiveness to the user's current operating model fashioned securely in place. Ultimately this will control how applications are executed. Features of each of the technologies may later be added to incorporate more localized operation and configuration storage.

The transition between qualities should be verifiable by the install and make purposeful sense to activities. The bottom line will be the best machine performance; Games for example. [Steam](#) by Valve Corporation provides a technology to load game sets from its game catalog management. The newly designed OS Client such as INET Client Sandbox will make these features more granular to create user response first.

Secondly, but important in its function, is that the install INET Client Sandbox choice will coexist on a bookable partition, providing a boot strap for the INET Web OS. This bootable image may also persist upon a USB key to directly tie the power on function with a remote computing resource. The motivation will be drawn directly together to encompass the VLISM Spider JIT within an autonomous personal computing operating system to provide optimum performance and security for multiple types of machines based upon use.

There are features of an operating system that some applications rely upon to operate. It is hoped that even the kernel and running state cycle can be tuned and monitored to be most effective. Relying on the major contributions of Linux as a reference base, booting the OS will retrieve last memory states from both the local and remote device. A secondary boot strap can start a specific on the go desktop that has known order. Capturing the user's common communication and application use based upon history, the desktop starts in a snap to allow quick use. This bootable image is user managed.

Device driver management will be accomplished using secure Internet technology when details do not exist within the image. This operating system disk will provide users a complete change over experience as seen in other operating systems. Some facets of the installation logic will provide conversion of document and data. This information is stored upon an alternate partition while the new image is prepared. The INET Web OS and INET Client Rendering Sandbox is marketed on USB/CD/DVD/BluRay for modern personal computing devices, INET Smart Terminals and trusted information devices. The branded items of distributed will include the level of encryption and security certification.

There is a performance gain by using a system that deploys distributed applications and distributed operating systems. First, the machine will not be over burdened. Modern operating systems do allow one to select which components to install, and they do not allow a foot print image control as granular as the VLISM Spider JIT. Some distribution methods dealt by the INET Web OS Distribution service will require Linux kernel compiling. This system architecture provides the best experience available to older hardware also. The INET Client Rendering Sandbox Operating system is distributed as a precise block version for the precise machine and computer use.

The light model of the INET Web OS Client (Smart Terminal Emulator), will unlock the machines potential and base Operating System by not placing unneeded application and OS components into process queue and memory. The machine will be there to run applications while the server will be used for all of the intensive data tasks.

The minimalist face plate implementation can be taken upon initial use of the INET Web OS. JavaScript and HTML as a thin layer entrance to provide fluffy web content is a usable feature some users may not vary from. Compression of HTML elements will be a first migration point; JavaScript variable and name-space alias included within script. Transmission of binary HTML tokens can reduce in transmission types and be formed by the initial use of the JavaScript document model operations. As well, a rendering and validation engine written in JavaScript can increase performance well for applications.

Within the scope, to fully consider the platform support for the browser and the make does affect render operation and performance. Render operations will be managed for HTML as an object persistence, modelling the W3C version of the Document Object Model on the server. Second, the render layer will consider the browser specific implementations of the fluid platform components and technologies. This will increase the flexibility and performance of the user experience. This means that more concise JavaScript s published. As well, the JavaScript language version will be necessary to support as a distinct Web OS entity. A library of available objects within the sandbox is also very potent to interface delivery. Microsoft Internet Explorer includes a plethora of JavaScript network safe COM pastries: Image Effects, Direct X, Direct Sound, Direct 3D, and Data Access Objects that can be used during the transition.

Poor benefits can be achieved while using older hardware due to the nature of the COM architecture and its use within the browser. As well, some user interface content, fully drilled, can be too large for the platform memory. Using too many layers as a means of placing information into the browser can cause user wait time and jerkiness during use. Some COM technologies applied with older hardware can cause periods where the interface locks. Issues with consuming too much memory, overuse of memory management tasks, overuse of the processor, searching, and token searching can be experienced. This is overcome with a code space tighter in cohesion to the performance nature of the machine duty cycle. After all, these technologies (GUID identity) make development of software easier but not ran better within the user space. These aspects of client management are considered within the INET Web OS server to client management architecture.

The icloud OS, a competing technology platform, is effective because it increases the logical access quantity of the small foot print device to a larger magnitude. One tera-byte storage capacity on an iPhone is an amazing feature. The team at [icloud](#) provides an on-line desktop to facilitate this need. The desktop is attractive and extensive. The system includes several applications. The development process includes new compilers that use pure textual web input and output. There are even apps that can be downloaded into smart phones to provide information synchronization between multiple devices and operating systems. In some cases, the email system these phones incorporate is used for transfer. Users can manage multimedia for multiple portable devices. The user's data is stored on icloud's drive where synchronization centrally takes place. There is an application that users can employ to upload all of their files at once (Windows, MAC). icloud's product fills usefully a technology gap for many users.

One of the drawbacks of using browser technologies is that VLISM and machine code can not be directly executed on the client from the server. Configuration of an INET Web OS Faceplate emitter to use JRE or Java ME will have better performance for many computer languages (also applications). The Shockwave SWF presentation engine can also provide a very effective experience for the user also. In conclusion, the best performance and security operation of the INET Web OS on a third party client will be the INET VLISM Spider JIT. The INET VLISM Spider JIT's library cache can persist on a USB drive, allowing for less download between multiple computing devices. A version of the JIT will be designed for Windows, Unix, Linux, and Apple Mac OS. However, the INET Web OS provides multiple interface casts making it useful to many users.

- [Web Desktop](#)
- [EyeOS](#)
- [icloud](#)
- [Java](#)
- [Java ME](#)
- [LWuit](#)
- [qooxdoo](#)
- [FreeDesktop.org](#)

## Ray Tracing And Web Server Applications

LCD and computer monitors of today are capable of displaying photographic materials in captivating detail. The application side of the presentation lacks the broadcast quality that mass media demands. By including ray tracing of solid three-dimensional models with the appropriate scene graph held server side, photo-realism can be achieved on the desktop and in applications. Batch processing will be essential and produce amazing results. Server processing and ahead of time batch processing is used because ray tracing is a computationally intensive task. Graphic based objects that are made for Internet network usage, called Octopus controls, provide the logical integration between client and host. They link asset rendering, network stream display and local cache display. The objects deliver a robust development experience that is comparable to modern OOP controls. A feature provides that graphic assets are delivered using a new streaming method while a shadow box resides within the current view. The method provides the quickest usable interface to the client device. Octopus controls are consumers of the web stream relying upon the parts of the stream that are intended for their respective display area.

Currently modern graphical user interface (GUI) applications operate in a visual draft mode. Most of the visual output seen within GUI applications is the result of real time drawing algorithms that use two dimensional vectors. Some advanced techniques of the controls support gradient shading. Also, some applications display graphic images in the background. By using ray tracing on the server side, a higher quality output can be achieved and save local central processing unit (CPU) time for users. This will save CPU and memory resources for the user because displaying the output is a bit-boundary block transfer. A bit-boundary block transfer may also referred to as a Bit BLIT. It is known that these routines can be specifically designed for the image being copied thus saving time to the display buffer. And most of all, the quality of output will be much better than modern methods.

INET Web OS Server streaming applications are different than executable programs like that of windows applications. In the real time execution of a windows application, the controls and background visual output all occur as part of the execution of graphic primitives. These graphic primitives rely on the CPU to calculate, draw and page buffer render to the video card. Most of these graphic primitive functions operate within the context of a video buffer or an off screen buffer. The functions that draw lines, points, arcs, circles, and bit-boundary block transfer operate logically one algorithm cycle at a time. Meaning that within the composition of a dialog, these routines are invoked numerous times by the control objects. Most of the control areas are covered with a rectangle area that is filled. This gives the output a flat quality. That is almost no shading is used to relieve the continuous space of the display. In INET Web OS applications, once the rendering portions are completed, they are stored in a compressed cache. A program can then simply reference the dialog and the entire image or draw list is transferred to the rendering engine.

Windows applications must be installed on the machine that is being used, most of them by default design do not load in a stream. During initialization the application executable must load its initial layer and allocate memory blocks to support later logic within the program. INET stream applications already have a VLISM compatible platform engine installed on the computer being used as part of the operating system. This does make the application program much smaller. INET Stream applications also have several pre-compiled visual renderings to boost user response time regardless of the transmission medium. The transmission medium may be a hard drive, solid state drive, twisted pair, wireless connection, satellite or USB key. The system is designed so that the transmission medium is interchangeable and upgradeable for future use.

By application design, a scene graph is created from the database table that stores the drawing information. The server side visualization system creates controls that are composed of high definition textured polygons, triangles, NURBS and 2D vector functions. The scene graph data structures are populated by interpreting the dialog description. Projecting this graph onto a plane using standard 4x4 matrix transformations a window view is built. The plane is representative of a window background and GUI controls. The window background and control areas can be augmented to include bevels, insets, smooth depressed spots, light maps, bitmaps and also bump maps. INET Octopus Controls greatly enhance performance on the client due to the nature of this batch process. The output possibilities are endlessly refined thus integrating creativity, computer art, logic, and math.

A pipeline process becomes apparent to employ when implementing this Ray Tracing technology upon a server. It can be likened to the graphic production studio to include lighting, texturing, layer compositing layer, and layer blending. Rendering processing instructions may be set within a sequence and also operate in parallel when compositing images. These process queues can affect the entire dialog, an individual control and sub areas of a control using object oriented methods. It is envisioned that new usability features can be created due to these new output capabilities by third party technologist. Because of this technology, any business will be able to deliver their very own platform or application using a very precise output quality in high definition color. This allows complete utilization of the display area in any capacity that is secured for the application view window.

This next generation of business asset production is more valuable than a company's current holdings due to the longevity of the resolution independent design and premium output quality. This increases the success of consumer attraction. It enhances the user's experience by allowing the business to project interfaces that are dedicated to their business appeal and processes. In short, a more distinct and direct branding approach is available within INET Web OS interfaces through three-dimensional animation modeling and ray tracing.

## Level Of Detail With Polygon Area Network Image Tree Balance Transfer

### An Image File Format For The Networked Synchronization Of Magnification

Please note, that the algorithm, viewer, level of detail operations and network transfer mechanism are referenced as **LOD.PANITBT.NSM** to include entire system concept reference within a small space. Computing scientists should accept this descriptive form as shown below of the system (**LOD.PANITBT.NSM**) as creative input to consolidate working features, functions, and operational characteristics desired for the necessary display technology. This is how the technology is envisioned to function within server storage capacity, server computing facility, client codec, and client viewer.

Many improvements of screen real estate are comprehended by incorporating the new **LOD.PANITBT.NSM** image file format on a thin layer software window. Even providing some hardware acceleration of functions can be available. The **LOD.PANITBT.NSM** file format incorporates the use of lossey compression, lossless compression, resizing level of detail (cache or algorithm), morphing size blender, multiple animation aesthetics emphasizing usability, and a sequentially sorted stream visually keyed upon render quality to project on the client display device. The technology is significant and is an integral part of the INET technology platform. Once development of the CODEC and Viewer is complete it will be available for re-license as open source. This product provides near lossless compression given complete transmission.

The **LOD.PANITBT.NSM** image format uses a multidimensional file storage mechanism; much like directory based ones are designed today. This allows high performance access to block detail information and resizing information stored and sorted for sequential Internet stream transfer using random access methods. The end result enhances the usage of LCD in modern day, giving artists and consumers full range at server level while providing balanced high performance views.

By creating a smooth transition between lossless and lossy similar to [jpeg - DCT](#) (jPeg compression technologies or [a select filter type](#)) less information is sent initially creating a stream of intelligible visual output for the client first in pure stream form. When an interface is magnified using the proper human interface device controls, a morphing size blending algorithm enhances visual output while any additional information is loaded from the network image. This provides the client with a request method to view a specific area of an image in great detail while offering a preview quickly. Because the image tree is managed in a cache mode, memory requirements are reduced.

[Level of detail](#) is important to track when large images are present for view. When artists use a fine grain, the subsequent data store is vast. Level of detail in this case provides a subset data store to reduce bandwidth usage for a view. The original high definition image will still be maintained for other use. Perhaps the image will be bought and placed upon a eight by three feet canvas for example.

Other architecture elements of the INET [LOD.PANITBT.NSM](#) file format encompasses LOD change data transmission, storage, and prediction. The computer language implementations of the component (viewer) includes automation of zooming with numeric speed sets if the options are set internally. That is, the feature may not be wanted for items transmitted like controls. However, this feature is important for users that wish to view a very large image at a specific level of detail without interaction to change the view. During the automated animation, the view will move automatically in the configured direction: left to right or top to bottom. Thus enabling direction, quadrant changes and panning to easily occur is a great viewing component software feature of the component.

One parameter of the LOD file format is the upper and lower resolution bounds of the absolute pixel storage to establish a range. Another will be the unit resolution separation, that is the distance between one real image resolution and the next. One form of compression occurs because of the storage of less resolution and less data.

[Morphing](#) and [blending](#) the LOD images on the client side using a high frame rate interpolation algorithm greatly benefits [Document Imaging](#) and [Medical Imaging](#). This provides a more natural visual response to motor functions when the user is managing the view.

Image processing using LOD is essential to the reduction of data to transmit. Speed of the User Interface is not affected because of additional image resolution details that appear later upon reception. These changes occur smoothly within the window in an asynchronous thread. The file format is designed to persist as a memory structure capable of adding information real time, either compression loss information or resolution enhancements. This is a major winning factor in usability that allows reduction of visual response time while network operations occur.

By measuring the quality of service, response time can be a controlled variable of compression quality and detail requested. It should be noted that LOD compression and Jpeg's compression quality are distinct. This LOD compression distinction is very important to discern as it enables the INET web server operating system to deliver content quickly while increasing details later.

The file format, as an image container for as image frame data will be the basic unit of the INET video file format and also CGI animation video format. This file format is capable of storing other related video items of varying dimensions than the parent as individual objects to maintain object encapsulation. For example, one frame may be a large image of a graphic user interface while child elements store related animations to play within areas of the interface. This gives the format the capability of storing multiple elements or event dialogs with distinct animations.



For the user, this multiteir LOD storage facility provides a better click response or an enhanced mouse over to be available; animated. For the developer it provides a concise structured visual presentation hierarchy that is separated from event logic. Multiple files and segments within the file can persist for different devices. The code base that maintains event processing will be managed as a single implementation. This makes interoperability for multiple devices much easier to design. For the business owner, the file format provides absolute freedom of choice for asset compilation. The business owner can choose from several distinct skinning operations, or for precise delivery of the entire pixel domain. The server is able to attain this video information in a random access format for precise stream production. If for example, the user clicks the OK button before all video LOD package information is downloaded, precise image details of the OK button video stream will be sent immediately along with the next related item.

### Measurements To Actual Size

The viewer client component has the ability to configure itself to real world measurements considering display technology. Input of the measurement information may come from a specialized camera that takes measurements using a laser, from optical recognition of the item with a ruler, a background mat with grid lines conforming to a standard measurement (input or defined), or more typically from user input using the metric or English system. When a request is made for accurate display metrics the image is shown as the real size. This is very helpful for retailers and engineers when a client wants precise details. The details of the actual size will vary from device to device. A great example is matching cloth patterns or a button from a catalog. The customer may simply display the item in real size mode, and then eye ball the dimensions by using their hand held phone. The technology can also be significant for remote control toys, automotive parts and many other worldly items.

As an image file format, the storage directory schema also supports multiple views of an item. The front, back, side, top and full rotation information can be stored within the LOD image file. If enough views exist, INET's image processing algorithms can produce interpolations for between frames when necessary for full rotation. The file format is also capable for storing alpha transparency channel information as some videos and CGI animation frames need [alpha compositing](#) during playback.

### Compressing The Raw Data

The idea behind raw image data compression is simple. Just reduce the amount of variance or describe the variance in a smaller space. Some discoveries have led scientists to reorder data using algorithms that can be reversed. One method is called the [Burrows-Wheeler Transform](#). The BWT is a specific data algorithm that works well with English words. The BWT algorithm offers a new stream order that can be compressed using RLE. By reversing the operations on the data positions the original package format can be rendered. Numerical Compression is also a very useful compression algorithm that performs well on some types of data. The algorithm used to compress raw image data will be chosen based upon algorithm performance. This compressed image data is sent during the Polygon Area Network Image Tree Balance Transfer process.



### Triangles, Rectangles, Spheres and Three Dimensional Cubes

Modern technology demands that limited resources be conserved to provide dependable use, higher throughput and future growth of the resource. Therefore creating a generalized bit compression for storage and transmission of any data is a key goal of the INET Technology path. Effective data compression implementations provide cost effective use of resources and will provide better quality for users. That is better sound, video, or image detail. Or the algorithm may be used in such a way that it increases usability by decreasing network transmission time.

The assumption that *when shapes are used in bit compression to reduce data, because of the additional transform operations derived from forming a shape of data, data may be reduced* is the intent of this research. To form geometric shapes is the first function of this compression technology. This can be accomplished in many creative ways.

To start simply, the data can be formed as a base shape to be serialized into that may provide two or more separate dimension inputs for compression parameters. An example of this is forming a rectangle of the binary data and then using triangles addressed at equally distributed coordinates for transform. The process will note each rectangle of size n that works best with the triangle surface area's bit pattern. The relationship is circularly dependent. The size of the rectangle directly controls the position and neighboring relationships of each triangle. Because it is necessary to compute these optimum attributes of triangles using an established size of a rectangle, they are dependent. These sizes will vary and thus the measurements must be recorded in the decoder area. It is important that the decoder area be monitored to produce effective results.

Each shape research may have transformations associated. The formation of a rectangle of size n can have a transformation upon the data logically by row or column. Thus representing column, row or sub subdivision movement blocks, the data can be transformed by pushing bits in a circular form for predictability during decoding. The intent is data positioned for a cooperative compression transform chain. That is a run of bits or a bit pattern. These attributes increase the capability of statistical compression as well.

The secondary controller, as with the basic form of a triangle, provides the ability to rotate a three bit triangle. The bit information from the bottom introduces a possibility of a transformation that can result in compression due to the original population position of its data. That is, the data is from a distant portion within the stream due to winding and the rectangle size. The rotation specified can be a one or a zero which details a clock wise or counter clock wise. The operations that might be performed are creating patterns in a row. It is not limited to one direction however. The storage mechanics will specify the bit rotation in one bit while recording the two bit pattern within the output. The original information will be negated from the output as represented by the storage mechanics. Information that was previously formed but not in the pattern will be integrated with data below or neighboring area. Therefore, after the rotation pattern operation is complete, depending upon run length, a savings may be projected. This is an example of one type of bit serialized shape compression using three bits.

When the triangle is enlarged to seven bits, other operations can be added to transform the information. Note that with seven bits, six bits are along the edge while the middle of the triangle contains one bit. This information can be used to classify triangles after a bit operation for example. Consider that four distinct transformations can occur using two bits within the decoder log which raises the probability of data duplication in the log. Using [recursion](#) will be of great benefit to an optimal design pattern. For example, using recursion for sub division of triangular data until the minimum of three bits provides a well coded implementation.

Other research paths will include forms of triangles that are larger than seven bits yet are equilateral triangles upon the bit plane source input. Each vertex of the two dimensional form is connected with data neighboring by shape. Thus, based upon data density, the sum or weight of one serialized triangle may be modified to fall within a range. This means that rules for interpreting the new information for numerical encoding by position would be part of the encoder data log (see [Floating point](#) for more information).

The large bit triangle can be redefined in several ways. By uniformly swapping position bit positions, by sub division operations or by changing the size. This information will be stored within the decoder manifest. Another transform that can be applied here is changing the winding order or bit serialization of the triangle to match neighboring line segment patterns. That is, point A and point B which creates line segment AB of triangle t1 may be redistributed to match a corresponding component of t2. The possibility of transforming these imposed triangles on the binary data to match multiple data from neighbors is an abstraction within the set. Changing the dimensions of one triangle can decrease the size of another. Thus describing an algebraic relationship first by numeric representation and then by dimension may provide data reduction by simple factoring. All of these transformations must be recorded in the decoder manifest. As imagined, these transformations can be accomplished in several creative ways.

Creating larger macro operations such as object cutting can also be an important function if the cutting object is a triangle. When the object is redefined, the generated size and position of the cutting plane should be represented within the decoder manifest. The cutting operation may result in the formation of two or three triangles by describing a central point. This process is used to balance numerical or lossless summary information.

Creating a bit square while searching for segment matches along a path from the center to an edge can be very functional. Multiple squares are computed for matches based upon a run of binary patterns. When several patterns are found, the data is extracted. Thereby the squares are re-calibrated.

Algebraic sub division balancing is a useful tool that may be used for moving data. Consider the dimensions of two or more rectangles within a perfect square of binary information. The dimensions of the rectangles may vary to arrive at a targeted greatest common divisor. As with any shape serialized with binary data, the fill order or numerical representation of the data can be reconfigured. After the information is nearly balanced, the factor is subtracted from the sub division objects and placed within the decoder manifest. The process of GCD factoring can be used upon any shape and path within the objects. The remainder may be reformed and processed again.

To creatively decompose wave based data such as sound or other sequential signal based information, co-data sample occurrence may be used upon the base storage format as waves typically exhibit this pattern. That is, the data represented should be decompressed if it is compressed. The algorithm would seek out repetitions and patterns while considering the signal format. The algorithm's assumption is that several points along a linear path will exist to compare for repetitions. The compressor must find these patterns through globular comparison. LCD again may be used on large sequences of sample information. The goal would be to compress audio data on [CD ROM](#) or other input medium without loss by describing patterns found within the data using multiple composites of sample data. The same types of patterns also exists within stored structured program data.

These algorithms use path assignments based upon several iterative values which can be stored in short hand indexing within the decoder manifest. Consider a sphere for example. A sphere undefined initially in its diameter. After data is serialized within the object, a sphere may be queried for multiple path data sets using the radius to a point upon the edge. These sets may be sorted and scanned for packing or multiple matches. Ultimately this provides an encapsulation of data that can be variable in diameter. By providing multiple objects from within the data stream, natural rhythms and structures of the data can be abstracted. It may be useful to operate upon the data in this case one sample at a time. That is, typically a sixteen bit signed numeric is used for CD and even twenty for bit signed numerics are used for more professional audio signals.

Other basic data transformations may include binary bitwise operations to reduce data. By creating a sparse two dimensional bit mask patterns using a seeded uniform random number generator, the values that generated the mask should be stored within the decoder manifest. The bit pattern can be xORed with select samples.

Prime numbers may also be used since these numbers can be generated, recorded within the data segment as a look up table and referenced in short hand in the decoder manifest. A compression model will work well by balancing the decoder output to be in logical companionship with the compressed data. This makes the decoder correction record an easy indefinable sequence of ones which is also a bit compression target later within the compression algorithm change. That is, the step after the current compression completes.

The expense of the operation lies within finding the optimum permutation that details shapes, order of operations and types of operations to perform on data. Limiting the recursion depth will also be relevant. Thus all of the moving parts, integrating to arrive at an efficient sequence of operations, I feel is an expensive computation task. Decoding can be conceived to be more linear and faster. This is typically the necessary direction according to the resource chains involved in Internet computing.

In final, many aspects of the permutation performance calculation is beyond my education. As a primary example of how permutation transformations can be used in such algorithmic needs, I thought that using the Inverse Permutation during the formation of the Record Reconstruction table of the memory TR Database model described by C.K. Date in “Go Faster” was fantastic. Next, by easily transforming the process to other disked enhanced paths quickly served deeply rooted mathematical formulation processes I do not possess at this time. The end goal of finding a permutation formation algorithm that operates efficiently, if it is possible, is best served by individuals with more education. There is a straight forward approach that can be used to find the near optimum permutation using sequential iterative logic as this is my first avenue. Yet, in both cases the decompressor would be efficiently respondent to the stream. It is my opinion that Lossless Bit Shape Transform Compression techniques will work well on dense data, which will become the last algorithm within the compressor chain used in large Internet data streams of the future.

### Modern Compression Of Image Attributes

Methods have been developed by World Scientists that reduce nearest similar colors with that seem to consider visual observation attributes. Such finely crafted algorithm enables the Huffman compression algorithm to gain performance due to less complexity within the data. [DCT](#) is used within the selection algorithm that chooses the new colors and depth for a given block area, usually a 16x16 area. That is, the DCT formula reduces color variance inside a given macro block. The DCT selection is used within the JPEG and MPEG products. The result does show square artifacts within the image if viewed in low resolutions. However, the structure does not allow details to be later populated. During compression the information is discarded giving it the label Lossy Compression. A well, level of detail information is not considered. Finally, the network bandwidth is never taken into account during transmission, and the user must wait for the contents of a frame to be transmitted before render can happen. The Polygon Area Network Image Tree Balance Transfer (PANITBT) is designed to handle these other aspects of image rendering.

### Polygon Area Network Image Tree Balance Transfer

The Polygon Area Network Image Tree Balance Transfer is a new method rooted in statistical analysis of polygon areas, color range plotting and edge detection that is more effective for network usability. The algorithm uses natural polygon shapes to compare with macro blocks of Jpeg because images are composed more often of them. That is, people take images of order and coherent items. Natural groupings and shaped are found by the new algorithm. As well, the new image algorithm considers usability in that it produces visual results quickest that is likened to the final result during its lossy rendering cycle. The data structures within the codec allow details to be later transferred and integrated into the view without noticeable visual artifacts. How much information is added at one time is determined by quality of service. While where the most details are added within the view is accomplished by statistics stored within the server image file.

The image format provides the basis for a color tree structure to exist and accounts for a network stream of render commands to add to this tree. It is given that initially the color tree is empty on the client while the tree is populated on server. To solve the tree balance - display - one tree must be equal to the other as configured by the quality parameter. If the end result of the tree balance is to be lossey, the streaming mechanism will still function to provide details quicker while the detail information is progressively added to the client tree if need be. The accumulative size of the stream is managed to consolidate transfer for a specific package size. That is, total transfer time is logically balanced for usability.

To visually cause a change that takes into account the major viewing area, transmission of the major background colors using polygon areas along with their colors is the first visual requirement. A render will occur at that time of this basic polygon information when it is transferred. Next, the *detail data* within the polygon will be transmitted within the stream. This *detail data* will be computed from what was missing from the previous transmission by level of visual importance. This information will be compressed in two forms. First by reducing the color variance (data complexity) and secondly by using one of the data compression algorithms (INET Shape Bit Transform, Huffman, or Numerical). The viewer also takes into account the amount of data to send at once as a proportional relationship of the point to point network time.

Color variance or data complexity is one of the complex issues that the DCT selection algorithm solves. Because it can be tuned for quality, it makes it a good choice for inner polygon (importance) work. The loss information resulting from the standard jPeg DCT should be maintained for later transmission if required by the request configuration. It is unknown if another algorithm can be used in place of the square macro block color reduction and selection. Polygon macro blocks seems to be a natural choice for inner polygon transmission. That is, organics are not square.

Proposal that inside the important polygon structure that macro block color reduction can take place using statistical neighbor relations may be of great benefit within many photographic materials and CGI content is the desired research goal. The color differences may be described for a given area using a relative color index, a nibble or a two bit sequence for example. This method is similar to uLaw within lossless Audio and works well since signals are analog wave forms. As well, a fill pattern as a drawing primitive may also be a beneficial choice. However this type of compression algorithm will be much more complex than DCT because of recursive polygon searching.

The Inner macro block color reduction technique that the **LOD.PANITBT.NSM** codec employs may sort the stream to reduce network data using the pixel's weight. By statistically inspecting color, neighbor relations and position of importance within the image, each pixel will be assigned a weight. This allows neighbor colors to be described by bit change statuses (2, 4, 8, 10 or 12 bits) which are relative colors within the download stream (defined polygon). This allows the related small color changes to be described in less space. This is an artifact highly noticeable and enabled in many high color definition images. That is, many forms of gradients occur naturally and in CGI productions because of lighting and shadow. These bits will signify the closest color match within the current palette context. It is used as a color offset. Multiple polygons are formed from the tree using color edge detection described by the previous statistics making the algorithm's search recursive. The major colors are used as the polygon's edge while the bit change statues are used to describe the smaller change.

The major polygon (important) structure is populated and filled within the tree as a specified color. This polygon package populates the tree using a draw command resulting from the polygon's coordinates and color definition within the image. Within the client tree structure, suited for dynamic growth, if the leaf is not there during search (a quadrant collision to match for color index), the color bit status is used to set the render color to a numeric domain allowing a nearest color to be computed. The search or polygon population algorithm within the server stream compression (or planning) ensures that duplicate paths do not exist within the stream. Subsequent updates of color occur upon decreasing weight (increase of detail) values to provide the sorting order. Therefore, the network image compression quality or the balancing of the two trees occurs according to the neighbor's color relationship which is proportional to the entire image.

A node tree will be formed in memory from the color bytes. These data nodes will branch out to other relating neighbors using position, color and luminescence to form their link. The origin will be calculated as the [centroid](#) considering overall area luminescence. This origin is the first information within the display stream. Information tangent will be described the same way but only occurring later in the stream. The codec uses this stream data to flatten the results into a display tree. The stream is stored as the basic image frame within the overall file format.

To solve the display, compression and LOD issue more concisely will require storage of these aspects ahead of time. Such that the variance or *detail data* between the two trees will be held within the server file, computed ahead of time. When the image is needed as a stream sorted for quality of service as per request, the file format's strength easily allows preparation of the tree packages to be sent. This provides for quicker request service and thus higher performance on the server. The algorithm and storage schema takes into account that most images when viewed by a user will be displayed lossy at the specific device resolution unless specified full. So, the image file contains cached versions for many types of devices.

The real time rendering will be more pleasing to the eye during network transfer because the user will get the abstract first. Details and quality will be later transferred and blended. The product will be that visual response time is drastically increased while quality is based upon network speed. The consequent video codec will factor in network timing information for real time performance, thus automatically compensating for network latency.

The basic frame of the **LOD.PANITBT.NSM** file format will relate itself to LOD neighbors to allow for quick indexed accessed before transmission. Devices will only show the appropriate size for their display area. By applying this technology as a high fidelity image compression algorithm, document imaging technologies, cataloging systems and image services, the viewing of network image media will be much improved for everyone. As well, providing the intrinsic support of this compression on the INET device allows the transfer of CGI content such as the desktop asset images to arrive quicker.

**LOD.PANITBT.NSM** and many formats of compression will be a server only operation due to the complexity of building the relational data structures and computation tasks. However, the resulting **LOD.PANITBT.NSM** package will give artists full range, allowing the user to select the level of detail and magnification of any image source. This will be installed as a major component within the INET Smart Computing Terminal.



## Compatibility And Format Translation

For pixel based formats many codecs for stream playback are already in existence. Some code bases have better performance qualities but lost in the market usability due to burdened security testing. However, the mathematics behind these compression algorithms is still very relevant to explore within the realm of handling legacy stream formats. For example, a large driving name for video playback used to be the [Indeo](#) codec. Codecs like these have certain performance characteristics that make them well suited for high frame-rate and high quality playback. In modern day, some aspects of technology such as color depth have transcended these stream formats. Supporting these stream formats will be an exercise of server processing.

## Open Source Display Format And Technology

The display component provides real time algorithms exposed as OOP methods to resize and clip images during playback of animations. Other real time features are also supported such as vector based masking and image compositing. These methods are typically invoked through stream command structures. The purpose of these real time routines is to allow for animation reuse when multiple controls are on a GUI screen that are similar. These traits are typically used by the INET Web OS compiler. The functionality will not be limited to data entry objects only. Any visual image can store clipping, stencil and mask information. These methods are generalized image and display list methods.

The integration of this format within major modeling applications and base operating systems must be accomplished. Truespace, Maya, Autodesk, and Blender are the industry's leading commercial packages. Each of these modeling programs can be expanded to serve as a UI designer and control designer with the open format. Finally, web browsers can use the format to provide very large image handling.

See Also:

- [The JPEG committee](#)
- [Wikipedia - JPEG](#)
- [Wikipedia - Moving Picture Experts Group](#)
- [MPEG Home Page](#)
- [SVG format](#)
- [The Box Hardware](#)
- [Source Code OpenJPEG](#)

- [USE IMAGE STREAMING TECHNOLOGIES TO PRESENT HIGH RESOLUTION IMAGES ON THE INTERNET](#)

- [List of Codecs](#)



## An Advancement Of Efficiency In Web Browsing Using Binary Entities

### Plotting Enhanced Font Text And Colored Geometric Forms From HTML

Commercial web browsers such as Microsoft Internet Explorer, Safari, and Foxfire are used by many users of computer systems to explore the realm of vast information stored on the web. To accomplish this feat the web browsers utilize two protocols named TCP (Telecommunication Protocol) and IP (Internet Protocol). They are commonly known together as TCP/IP. TCP/IP is a unified communication system that provides a reliable way to send and receive data on the Internet.

Web Servers and web browsers communicate using a protocol format named HTTP, which is an abbreviation for hyper text transmission protocol. Many complex things are indeed hidden from users as they peruse the Internet's information. By decreasing the amount of data sent to browsers using compression in addition to pre-formatting the HTML information for easier parsing using binary entities, users will experience a tremendous speed boost when using the Internet.

The INET Web Browser will transcend these methods by incorporating the needed information to plot the digital data using coordinates. The format will include coordinates, color, font vector data, vectors, triangles and geometric model forms. Large payload data that is used by web OOP components will be clipped by view-port into stream form (Shockwave, Media Player, Quicktime, etc.). The data within the stream will be sorted to deliver impressionistic qualities visually to achieve the highest bandwidth performance.

The browsing communication to other web servers, a [HTTP Request](#), will be ran upon the server while the interface runs on the client. Technically this makes the web browser upon the INET Web OS a distributed application. However, the functionality will be more responsive than modern platforms. The interface of the web browser will vary based upon the device screen size and requirement.

Logically implemented as an API set to allow third-party development of browsing interfaces, the code base will unify web textual programming, data with translation needs, Octopus interface controls, OOP and compilation methodologies. The API will also provide intelligent translation of web pages that are geared for specific web browsers to native form. This method of interoperability will follow forth into the third-party web server deployment strategy to strengthen compatibility with all web browsers. HTML and its accouterments are source documents to be accounted for in many forms. The primary w3C standard will be the main adopted form.

The INET Client VLISM Spider JIT (Web Browser) command stream interface is tuned to handle many granular forms of transmission command blocks. This will provide the capabilities for installing components real-time while seeing image results first. This simulation experience is developed by the INET Web Source API set. The system maintains the balance between HTML, script and associated data with the terminal and the host. Video games are a highly flexible genre of software that communicate rapid speed stories. Titles like these may see great benefit from this feature. Three dimensional models are not malicious.

A window that displays text such as an HTML browser needs special attention during interface magnification. One must consider that text and its usage for reading is practiced by usability, individual preference and device capability. To consider the single frame as a two dimensional vector view-port will strengthen the association with the items as a display list. Including two dimensional images and textual information as a stream package will provide a breezy calculation upon re-size using scaling transformations. Realizing boundaries and implementing word-wrap, after touch modifications, links, and glow will be associated with data structures within the scenegraph. An operation that needs careful attention using C++ or ASM.

Providing these rendering capabilities for any application will show the system to be a better platform architecture. The performance increases are noticeable immediately. The operating loop cycle of the application interface architecture has a tighter call stack to facilitate a web browser or application interface. This broadcast grade application platform punctuates the display area using layout templates and logic events defined by the web page directly from the stream. Even working more productively by polygon area while using a network image balanced tree transfer for images and video benefits the experience. The **LOD.PANITBT.NSM** stream format will provide bitmap image data using the server stream while providing ultimate quality upon a lazy basis. Intelligent Level of detail is a user and artist friendly feature included within the codec. When frame rate consumption is too high during video playback, the data transmission layer format will adjust itself to operate within a tolerance.

## Squeaky Clean Compression

Decreasing the amount of data sent to browsers using compression is a key factor in reducing bandwidth usage. Many dial-up providers use compression methods now to allow users faster Internet usage. Characteristics describing the type of information being sent will be sensed within the INET Web Source API technology to determine the best compression algorithm to use. Limiting the information with a view port clip first will also strengthen the display speed. These technologies are used within INET Web OS Publishing suite to achieve prefabricated data content yet still maintain its open source use of HTML. Historic use intelligently balances the server work for device usage. The system still uses the transformation process to send non cached data first.

The Huffman algorithm is commonly used for textual and dictionary data. The algorithm first calculates the frequency of all the character data or repetitions of characters in the package. Then by representing the information in a binary tree, the most frequent letters or pCodes are represented by the least amount of bits, the bit stream is constructed. Typically for standard text documents a 30:1 compression ratio is achieved. So that means transmission time of the standard HTML will happen ten times faster. Other algorithms are even better such as LZW, and LZMA.

Another useful compression process uses dictionaries. When the dictionary is pre-built, stored on the target machine, indexes are sent in the stream to denote the word or phrase. Planning to use the centralized source of the spell checking dictionary will introduce new design aspects that affect the database interface and search. That is, the spelling dictionary may be useful. The design with the extra columns in the data structure will speed the index search during decompression. The column will be a transform of the dictionary compression; an assignment.

### HTML Tag Atomization, View-port Clipping And Threading

Formatting the HTML tags to be known stream structures using binary entities (tags) will enable a web browser to quickly display a web page because the parsing will already be accomplished. These can be considered instructions with payload data. Using the optimum C++ union structure provides quick tracking. HTML compression can occur by assigning each HTML tag a unique bit sequence numeric. A small reduction of the data-set will occur but more importantly this will enable a binary file format.

The binary stream is structured for identity and payload to provide direct stream consumption by the browser. Ultimately this will spindle flowering invocations of VLISM instructions. The structure of this binary stream format simply loads into the Document Object Model (DOM) of the browser directly from the web server. Most of the time, if web pages do not use scripting excessively, the DOM can be partially filled or excluded from creation during the session; a display only scenario. This information will need sensing and communication of it to the translator, compressor and compiler pipeline. The information will be sorted so that the display takes place in order of importance. And not all of the HTML information has to be sent to the user when it is not in view; font vectors; layout block instructions, compressed instructions, and data.

The streaming qualities of the HTML format should not be tampered with as this is an important feature of the Internet. The W3C group maintains a high quality standard, yet others often argue differently. The INET Web OS system plans to compress data before transmission using binary structures that implement the desires of HTML document view as well as the fluid application dynamics associated with high frame rate applications. It plans to increase the throughput of the stream. By including broadcast application interface pixels or vector data with associated event response logic in VLISM mnemonic stream format, the computing form will be illustrated flicker free and with almost native performance for INET applications that are within a web page. The browser will support protected data queue processing for upload and download in asynchronous mode clarifying the data capturing instrument necessity. INET Octopus controls will possess polygon areas of the scrolling view port.

Within the conceptual context of web applications, asynchronous threading models are often poorly handled as the user's workspace grows with more document tabs or work. Ineffective use of related core technologies and architecture transform into the gigabyte memory usage easily within modern browsing applications; on one machine. The INET Web browser plans to make better use of resources.

HTML and all of its functionality will not be easy to manage. A heavy client implementation of HTML parsing is not necessary to instruct the client drawing facilities in a complete page render. Other forms of HTML are abstracts in use by some cell phones. [WML](#) is such a train of thought but is a directly correlated to a markup language proper and not data structure oriented; [c\\_struct](#). The [WML DTD](#) is quite trim and will be supported as well.

### Unicode Through And Through

Unicode is the international standard method for representing international textual data. These symbol capabilities of display and JavaScript processing will be supported. Unicode is a four byte standard for character symbol representation ([see Wikipedia: Unicode](#)). Researching will find that GB18030 is included as well to support Chinese applications and information. [GB18030](#) is the Chinese government's standard. The [Unicode Compression](#) described here is the method that is recommended for native use, storing and transmitting.

The Operating System's and its APIs capacity to operate upon this data effectively must be primed first and logically transparent. When considering software adaptation to the INET Web OS platform model, some reference operations that are absolute byte addressing will require modification. String operation logic for internationalization must be more generalized, a practice adopted by the developer. The INET System will provide this functionality automatically as Java does. As well, by including a library of Unicode String operations, native (managed) processing language programmers will have a standard working set. These issues do effect the entire design of the INET Web Operating System, the underlying C++ compiler, the meta languages and VLISM Spider JIT compiler. Microsoft dot NET and Java implement these information technologies to solicit international use effectively.

Maintaining solid UNICODE use during international team work of development projects and user application sharing is beneficial because of language sharing issues. Chinese for example, consumes less space per word and thought than English does. Comments and string literals within program source must be handled properly during translation (machine or human). When two developers from different continents or languages create, modify, view or compile a source project, literals are extracted and placed into a distinct data space managed by code page language within the object code, VLISM Stream or Language Resource Table. The support for UNICODE continues throughout INET Web OS program editors, text editors and file handling technology.

The INET Web OS and its web browser will continue the support of pure textual web development and include user editing tools as a base product. Users must be able to manage content from the basic syntax structure and have access to tied documentation about the form (reference, book and example). These tools will support language translation and information sphere building. Integrated as a textual editing component to support spell check and grammar, the tools will be very useful. Database operations that are sometimes available to browsers using specific language syntax will also be supported. Another tool will provide the capability to enable page editing and layout tasks without HTML in the forefront.

### Remote Application Support Directly From The Browser

The Web Browser will have its own process stack. Applications can be launched from within the frame that become a web process entity as so understood by the INET Web OS security model. Controlling security risk instruction set availabilities by application type, owner, license and location attributes is a function of the INET Web OS and its communication to the terminal running the browsing interface logic. If applications are formally installed, they can be granted an amount of trust which is different than alternate sources.

Web pages and web applications have a distinctive mask that subtract potentially intrusive operations. Because the encompassing system is implemented as a high performance JIT, little noticeable speed differences will be realized when the user changes from local to remote applications. As well, more trust can be placed in the transmission format due to the encryption and cache methods. Remote applications may take time to download into cache but include the additional user interface benefits available for the terminal. Providing quota and storage management functionality will be a function of the security mask interpretation.

### Mixing Technologies Seamlessly

Web browsers of modern day include the Java facilities but lose cohesion when many different technologies must be used together. Providing good user interface operations using current technology and future technology, regardless of ownership competition, is a mission critical goal of the INET Web OS System. Doing so will enhance the user's experience and allow for a more robust user interface to be presented to the user. Some competitor products block the input of information and hamper its execution upon the platform because of competition. The JavaScript language, being object oriented, does provide adequate hooks for the operation of control objects as an integrated experience of the web page. However, when mixing systems, the coding scope and user experience become unsteady.

By modifying the web browser to allow standard operation of tab keys from one field to the next, more advanced user interfaces than are currently available would be within grasp to many platforms. Integrating the complete functionality of copy, cut and paste within the system is a success story. Covering Digital Media Rights Managements security within this context is relevant. Dynamic screen resizing is also an important factor with Java Applets. If the information has to be full screen based, or fit within an HTML table column, integration works seamlessly. The layout must flow evenly. The information must be readable and utilize the screen resolutions of the client machine effectively. Providing a seamless interface aesthetically and functionally by allowing matching output properties of HTML, Java, JavaScript, Shockwave SWF, Silverlight, .NET, and any other web stream technologies is quite beneficial. Enhancing the Java paint target algorithm to include transparent and polygon applet shapes will increase its dynamic usage within web pages. Targeting a method of unifying these technologies as they use server database and file tasks is essential for usefulness, maintenance plans, and industry development.

### Beautiful Text And Really Exotic Text

The flexibility for HTML view to operate as a textual markup language that is used to render multimedia is broadly distributed among all INET application technologies. HTML formatting is included in Reporting, Database Processing - XML/XSL, and even HTML in games is support. As well, these applications will be web enabled after compilation. Adding the functionality to expand upon the description of the font should be an INET only experience; 3D fonts.

Example pseudo code prototypes:

```
•Printf(int iCanvas, int x, int y, char *rsString);
```

```
•PrintfHTML(int iCanvas, float x, float y, float z, char *rsString);
```

```
•ScrollHTMLViewport2D(int iCanvas, int xDir, int yDir, RECT rcBounds, char
```

```
*rsString);
```

•ScrollHTMLViewport3D(int iCanvas, float xDir, float yDir, float zDir, RECT3D

rcBounds, char \*rsString);

•PrintfRegexHTML2D(int iCanvas, float x, float y, float z, char \*rsString, char

\*szInput, char \*szReplace, ...);

•PrintfRegexHTML3D(int iCanvas, float x, float y, float z, char \*rsString, char

\*szInput, char \*szReplace, ...);

•MagnifyViewport(int iCanvas, RECT rcSize, RECT rcBounds, void

\*aniCallback);

### The Total Surf Experience

Users of INET Web OS will experience higher speed in all Internet application interfaces produced by INET Internet publishing suite applications while offering to the third-party market a compatible experience when desired by the publisher. The INET Web Browser will be a trusted information viewer (consider copyrighted materials) to allow robust and higher quality content; individuals that are paid are devoted. Trusted content viewed by third-party market browsers may require account management preceding view. Providing open source of the binary transmission format (VLISM) is as necessary as the HTML consortium itself. The result will achieve more professional communication activities and actual multitasking operation. The view port stream clipping algorithm will handle display of many forms of application data and event logic. Some parts of the view will operate from a cache structure for optimum efficiency.

In summary, by using compression and a binary file format together, web users can experience a faster Internet. By using the existing compression techniques, bandwidth requirements will also be reduced. This spread world-wide will allow more effective cost management of the global Internet resource. That is preserving the resource: bandwidth. Multiple client web technology integration is a goal of the INET Web OS. As well, the INET Web OS provides application delivery and usage directly from web pages securely. Just as Alchemy is relevant within science, the INET stream format will provide on-demand, disease free experiences.

See Also:

- [Transmission Control Protocol](#)
- [HTTP](#)
- [Document Object Model](#)
- [W3C](#)
- [Gazelle](#)
- [Web Accelerator By Google](#)
- [Huffman algorithm](#)
- [LZW algorithm](#)
- [Unicode Compression](#)
- [Just in time compilation](#)

### Browser Usability

- Context application buttons
- A counter-top space available for easy interface encapsulation.
- URL location refinement



- Predictable parsing for usability and name resolution
- Location wafers
- Phone memory and radio memory of URL transmissions
- People places transferred in person for example will be identifiable as a catalog operation; IR Bluetooth.
  - location storage
  - Centralized upload to OS interface
  - Coupons
  - Using Contextually Based Cataloging of Pertinent Information
  - INET Feeder Applications
- Car cast
- Integrated mouse over definition.

## Title Boards, Dynamic Fonts And Image Generation

Creating billboards, headlines and titles with beautiful artistic appeal is an excellent method used to catch an audience's eye. [ImageMagick](#) is an amazing collection of scientific image processing routines. There are many tools that utilize the code for product expansion. A web component that utilizes standard ASCII commands stored in files will provide the easy maintenance that is in demand. This component will allow easy title creation, type setting, dynamic image creation and vector **LOD.PANITBT.NSM** file creation at the server side. Imagine being able to, through just changing the ASCII text on a web page, kick off an miraculous render of title text; the kind you can only achieve with hours of editing using a graphic editor. This component will enhance applications, web publishing and websites due to the dynamic generation of high quality graphic images. It will increase productivity, maintainability and re-usability of valuable marketing assets.

This INET Server component will be efficient because rendering of the material will occur once for many users. This is accomplished by comparing the time stamp of the image file to the time stamp stored noting the last invocation of the render commands. For ease of distribution and implementation, the technology can be invoked from most modern web server languages as well as INET Web publishing technology. An example of its use within a HTML file would enclose itself directly in the src parameter by using PHP as follows:

```

```

This operation will query the time stamps and at most times return the image file located within the server cache. DIMG Images can also be configured to return their entire file format as a base 64 string. The default will use the file system for its cache storage. Glows on text and alpha blending with the layer with other color graphics, are extremely detailed and precise. Text can also be textured from either a two or three dimensional perspective. The shape of letters, words or phrases can be augmented with geometric forms. The baseline of a phrase can be set to follow a two dimensional or three dimensional path. Logically, the path object can act as a solid object where the letters are “magnetically” connected. Multiple layer compositing using color blending is easily provided.

People spend a lot of time making something look perfect for a reason. Yet sometimes, some graphic elements or layers might change depending on business mood or personal mood. Implementation use of the component via an ASCII text language is accomplished using a BISON/YACC parser. Therefore, editing these files is easily accomplished because of source format. Typical image editors store their data as a binary stream. Because the major focus of the language is rendering text with effects, the actual message being rendered can be easily modified. The language incorporates use of external graphic assets that can be stored in many formats.

## Typesetting Language And Graphical Effects

The graphic and typesetting language is well defined schematically. This allows ease of usage and propagation within the market as a standard tool. The language is designed so that it has connection with many user's knowledge bases. For example, the ability to create a button engraved with text while having a great bevel is about two lines of DIMG source. A light source can also be created that makes it look more three dimensional. The DIMG language uses an object oriented paradigm to provide reuse of previously created content.

The DIMG language by using object oriented as its nature, allows reuse of external texturing and shader object definitions. For example, to get a certain type of glow effect, some authors may already have the artistic knowledge of the language to define a nice one, so it should be a name space include of the file. Allowing users to include the glow object definition allows ease of implementation and re-market of title board source. This type of system will fit nicely within the confines of the HTML page, or external files due to the textual nature of web source. A complete reference implementation of the language must include vector graphics, color controls, tool operations, layering, texturing, three dimensional geometric form build up, network source modeling ray trace (model reuse), model skeleton animation (Both embedded AI and complex index), bump mapping, lighting, stenciling, masking and include a robust library of effects. The language structure should support version for backwards compiler compatibility and allow version mix where appropriate. Internet discovery of objects and name spaces during compilation can be a nice feature yet this raises issues of security. Allowing for a file dependency hierarchy within the YACC graphic rendering language will also promote maintainability.

## Scene And Asset Layer Compiler

Creating a compiler that produces VLISM code for the title board asset build while maintaining a parameter based input will speed build performance. Likened to incremental linking and compilation, parts of the asset can be maintained within a known working directory on the server to increase throughput even more. To reduce code redundancy, libraries will support the VLISM draw list. The user should be able to adjust textual information of the message as well as parameters to the effects. The resulting program executable should rely on textual and parameter input from a file that is easily modified within the constraints of web source.

The compiler should optionally build an editing application for the title board parameters and provide feedback as the GUI input changes. The application should use the interface glue object architecture. A panel notebook interface or a tree list with a property panel view is appropriate. Security for this asset maintenance tool is essential. Some aspects of the draw list may not be effectively managed through this interface. A detailed line drawing for example. These image characteristics will be left up to the INET Title Board illustrator application. The focus of the editing application must not be forsaken. It is a tool for a web administrator or Sales/Promotion Analyst to modify text output, font, style, texture, layer order, and effect chain parameters, not the underlying vector line drawing. With the application they should be able to modify the coordinates of a specific layer. The title board source must always match. Editing the image directly will result in it eventually getting overwritten.

Website maintainability is increased due to the reuse of information and by allowing aesthetic based changes to occur easily. Most importantly, the main message can be easily modified. For example if the user wants to just change the logo text on the third line, a text edit will suffice. Or if a specific graphic layer is dependent on output of another program, this can be a function call or parameter. In all cases, the parameters for generating the item will be stored in the source file rather than a flattened image file. A combination of server side photo editing, and ImageMagick is a viable market. Both should conform to a specification of the dimg graphic rendering language.

### INET 2D/3D Vector Font System

The underlying font system of the INET Web Server OS will be intrinsically vector based. Providing symbol definition through lines, function curves and ellipse. At most times, the font system is used to display two dimensional renderings of characters. Yet providing methods to populate a plane within a scene graph must be readily available. The geometry within the characters themselves, that is the surface face of the font, must be variable. Several augmentations may apply including bevels, spheres, jagged rock, clay sculpture, wax spikes, and hairy geometric forms. Of course texture, lighting and animation apply after.

There are two uses of the font system: 3d or 2d. The 2d vector output should be translated for the best fit for the device stream: a font palette. The 2d vector fonts will be the most used. Anti-alias and LCD edge color correction information should be included within the palette. This information will define sensitive areas where curves exist. During the render of the symbol display list, this information will become an alpha composite instruction that smooths sensitive spots thus improving readability.

### Increased Font And Typesetting Control

The dynamic font system should support variable property configuration of face specifics. The amount of change should be measured proportional to the pixel space usage and font mold. Notice the sharp spikes on the "M" character. Being able to project the Baseline of a font to a desired vector or curve within a geometric volume is necessary. As well, the ability to define a morph target or geometric shape augmentation mesh will expand the artist's palette. The following list includes the most common terms used to describe font characters and symbols, object representation will be necessary. [Ligature](#), [Letter-spacing](#), [Kerning](#), [Majuscule](#), [Minuscule](#), [Small caps](#), [Initial](#), [x-height](#), [Baseline](#), [Median](#), [Cap height](#), [Ascender](#), [Descender](#), [Diacritics](#), [Counter](#), [Text figures](#), [Subscript and superscript](#), [Dingbat](#), and [Glyph](#).

The title board technology should be available for installation as a web component or any web server. Target platforms include Unix, Apple and Microsoft operating systems. Yet the main integration target is the INET web server. This does not decrease the profitability because the program that creates the dimg graphic file would be marketable as a stand alone application. Perhaps a market for dimg objects will be created as well. Because the technology will be standardized and open format, many web authoring tools will employ this imagining technology, The system should include ray tracing as an option. In short, this addition to web technology will deliver richer content to users and allow web masters easy access to maintenance aspects.

- [Computer Fonts](#)
  - [Typography](#)
  - [Digital typography](#)
- A transition between quick fonts and detailed needs to be developed so that display is more readable quicker.
  - Reducing the transfer of the information that describes the font palette table in the initial data stream will allow the first display of the textual information to be displayed quicker. Transfer only the necessary vector information that describes the font.

## The Open System Architecture Of Application Streaming On INET

Designing a database that houses all of the capabilities contained within ROM, CPU, and Hardware Resources of yesteryear platforms will bring many application benefits to the INET Web OS. The database is filled on a function basis so that native application translation to VLISM can occur. The goal of this important subsystem fulfills a life time benefit to business design and procedures of the entire digital industry worldwide. There are many applications that were written yesterday that will need to run tomorrow.

Because these ROM and hardware capabilities come from a group of knowledgeable software developers, the database can be considered to be an expert knowledge system. Most attempts at emulation are from the token aspect and they require real time performance consideration. Translation in the INET web server will be a background batch task since users register devices. Hence the applications will run faster due to native performance. As well, since many application technologies will be distributed processing web enabled, access and security to these older business systems (generalized applications) will be more flexible.

Good production tools developed by the appropriate companies along with scientific resource procurement, global distribution technology, and global education are key factors for competition within the modern application market. The change from a command line compiling to an Integrated Development Environment (IDE) made software development much easier because editing source code, debugging object code and operating the compiler were menu user interface driven; less had to be learned initially. Borland Turbo Pascal/C++/Basic/Prolog during the late eighties was a leap ahead in technology not because the hardware technology of the time could not perform the function, but simply because the creator sought a new design. Other companies quickly followed suit and even expanded on the user interface technology. The INET Web OS will also use this platform technology for application development and application translation.

One of the most difficult problems that computer scientists working on the INET project need to start thinking about is "What is the most efficient case of web server programming with streaming overlays to an embedded device with time constraints for server access, encryption, transport, decryption, render, embedded state?" . Another problem is what should the server send first. And how to get that information.

By using a high performance database design for compilation on the web server while structuring the application development tasks for stream production, the user will experience quicker application startup. Exposing the interface objects by categorizing them by functional purpose will provide necessary logic routes for subsequent accesses. Labeling in the application database that menu items within a dialog are menu items for a certain access level. The access level is derived from user application access. That is the first route of the application interface will include the top level menu and the most used menu items. The database record will also contain an order tree numeric that will be used by the stream service. Permutations of a menu state are sought by function state thus altering the visual menu for purposeful distinction. The database records that compose the visual rendering are stored by compiler design. List population and other related database entry population for each field are stored logically within the application database. Control states and rendering characteristics are also stored within the database.

The INET web server will compile the application code to the database to produce simple, complex, render command list, ray traced image picture, animations, language machine translations, VLISM version target, testing, and machine code records. This will occur in batch. If the device connected is a simple dumb terminal or a high speed INET embedded terminal the appropriate stream will be available for access quickly. The user data and underlying object code will remain in a separate table from the visual application stream.

Depending on server settings arrived at by usual connection characteristics, the output stream that is created for the device(s) will provide the most effective "use" proportional to bandwidth measurement while considering response time. For example, the data in the first network package (stream) not contain the entire string array for a given control object. Yet it will contain the most effective description of the visual rendering along with a partial string list that fits into the buffer composite. The buffer composite will be built real time by mixing the appropriate tables for the device to reduce redundant data storage. Because INET Octopus controls are flicker free, down stream population will not affect visual renderings. Usually the most note able problem is the number of items needs to be computed so that the scroll bars are proportioned correctly.

The INET Web Server OS also provides the wonderful feature of binary executable image compilation. The binary executable can be an an all in one integrated experience. This image format is desirable for a turn key system that will not be updated often. During the build step, the administrator can request that the base system prevent any software from being installed. Another important feature of this type of build is that applications of several legacy platform can be integrated together. This provides the user with the capability of remote storage with the updated security.

### Balanced Work Load

By balancing the computing payload between the embedded device and the server, the web server operating system will solve the distribution problem, take better advantage of modern hardware and provide competition given a good ethical business model worldwide. Because the INET Web OS is a very complex stream service engine, several components should be available for resale to other vendors. Some efforts of software development would make these targets open source and free but the research and development time needs appropriate profit. The VLISM Compiling Web Server platform, Device Driver Database, and Digital Data Protection Transfer Service should be available for resale to Web OS vendors. This does not mean that there could not be competing VLISM compiler engines with unique designs, in fact competition is desired within the market. For example, the Sony Corporation creates a new computing cluster available to home users. The device is distinct and unique in design so that it has specific hardware. Yet because of the object oriented design, a specific VLISM platform compiler is needed. That is the platform has database specific hardware for faster storage and retrieval. An object oriented design of this nature will allow competition within the Web Operating System Market to provide the necessary desktop features in addition to their layer. This will allow any country, any company to be a provider of a desktop operating system.

User data should always be transferable to other systems without transmission flaw. User data, the result of programs and human device input should be easily condensed to atomic state but retain memory of the original source. This is the XML XSL argument for editing and typesetting. Compiled code that is VLISM stream compatible will be stored in a database table. All of these forms of data structuring provide a leap in to the user's future transmission of their data to alternate server forms. The server operating system will balance the amount of data held local on the device allowing for storage of compiled code, dialogs, and user data depending on the type of device connected with their preferences.

### Legacy System Support

Second is how to incorporate older systems into the conversion process that will need to take place. Take for example the Timex Sinclair ROM. An [emulator](#) or binary reader will load the exact system, port identifications and hardware resource identifiers with a relating database of capabilities. These capabilities will be associated with a usage so that conversion may take place. Even going so far as to place a relationship network of capable code is imagined. Then loading a standard Z80 BASIC program will be queried for output and input necessities while detailing the logic in a historical tree structure for later inspection. There are so many valuable programs already written that reuse will be effective for users. Even providing math routines of TI ROM will be nice.

Allowing for modern storage capabilities will be an excellent opportunity to define and implement for these platforms. See operating systems in [www.wikipedia.org](http://www.wikipedia.org) for a detailed list. The final destination will be reuse of software that was not available to most users before. Calculators, pocket computers, game systems, windows applications, cell phone software, and other embedded devices could be managed within the system. Any software engineer appreciates the time it takes to deliver an application or software system. Each device will have a distinct name space within VLISM so that many systems can be managed within the server operating system. This will allow for new forms of streams to be registered for transmission as well. Adoption of older systems may be useful depending on how old they are. That will be a decision of product release, yet incorporating the concept in the INET web server operating system will be essential once the ball is rolling with millions of people using the embedded devices for their applications, videos, pictures, music - all centrally stored; safe.

See Also:

- [Alien Menace](#)
- [The Sony Play Station](#)



## The First Overlay Stream

The first overlay stream of the INET system will be the basic line drawing information (or control identifications if installed) and the textual information of the edit screen. This will include vector coordinates of both the text, and rectangles (controls). The user can begin editing immediately to allow excellent user response. The client operating system will handle the editing, transmission, and rendering of the Internet connection in multitask allowing for the greatest seamless performance.

In most cases, the controls that are necessary for operation will already be installed on the device. The code base that is installed will be part of the world standard. In the case when they are not installed, it is important that the overlay process take place. This will allow greater dynamic range of the device itself and give flexibility to the hosting provider. An interesting point will be the visual transition between the basic data entry screen sent within the first packet, to the fully detailed version. This aspect will have to be tested for usability to find what the best method will be. A fade in will do nicely but remember this is only for the use case that the controls and dialog screens are not stored in cache.

One important aspect of the web server operating system is the information storage and retrieval system held in a logical drive server side. By application design, most program information will be ready for the user's device in a database table or linked file for quick transmission. When users add new devices, their applications and interfaces are collected from the manufacture and stored on the server. Using a relational database design; the engine can also link to a file on disk when desired; as the basic storage system, further refining program logic concepts and objects will yield a one to many information transfer. That is for one application, there will be many types of streams and versions of the application that can get transmitted. Yet for the user's context there will perhaps be at most ten versions. Or precisely, the number of devices times the number of users allowed on their account. Visited here is application licensing, now being able to prevent more pirating by tracking number of users according to uses at the server side.

When comparing INET Web OS to modern technology many improvements will be made in the distribution of computing resources. When a user state is being held in the server computer for example, a pooled context of the user's known applications will be in the memory array waiting for transmission. Memory and disk speed alone can account for this. Client connections will be provided with a quality of service agreement that is appropriate for the bandwidth pipe. Administrator privileges can modify the group or individual client.

Robust linking of information using machine reading comprehension could be furthered by using a specialized cataloging system and recent advancements in Artificial Intelligence. Users will have access through hyperlink every topic within a document using on-line resources. Definitions of words should be a seamless interface along with other relevant information. Most times users want a specific type of information that relates yet is in a different media form. This can also be achieved using cooperation with media publishers and cataloging, an already on going effort. Manual methods of sorting can be enhanced using visual recognition trained for noun object recognition. Typically these algorithms do require an exhaustive computing effort compared to desktop performance, yet the gathered characteristics summary is simple enough that searching can take place by textual descriptions. This type of linking is typically only performed on servers anyway. Providing these capabilities are possible with INET web technology.

See Also:

- [THE SECOND COMING - A MANIFESTO](#)

## INET Universal Data Object Storage And Retrieval

The high performance multi-tier data access and free format file system the INET Web OS offers includes buffered ASCII, Flat File, high-level file access of application data, Unicode, multiple language edit control, random access byte oriented, random access fixed structure, cross platform variable record access, hierarchical, keyed, hashed, segmented, sequential, historical, change data, format versioning, secure access XML, language translation, object database and relational database access (VLDM) in one unified model with source target chaining. The data access layer supports URL based requests robustly. Enabling server based parsing for reference access to any formatted data on an authenticated server. Utilizing keyword, id, numeric GUID, with direct server based indexing of information will provide businesses the knowledge (formula, conversion, report, field, data typed value, text, INET SoftSpot) they need for completing publications. The ability for publishers and consumers to manage a list of URL requests for public domain reference or paid lease while incorporating publishing laws will enable more precise data to be shared upon the Internet. Providing a local streamed performance cache algorithm will provide the necessary performance for multiple requests to the data set. A necessary sport of the high-level file access is that it include application, audio, video, sign, report and image formats. Translation formats. The system is a syntax light object data pipe once operating source is defined. The output can be anyone of the objects within the INET Universal Data Domain, a breathing entity.

- [WordPerfect SDK documents](#)
- [libwpd, WordPerfect documents](#)
- [PDF](#)
- [Document Formats](#)
- [Sound and Music](#)
- [Video](#)
- [Graphics](#)
- [Archive and Compressed](#)
- [Financial Records](#)
- [\(all known\)](#)
- [Universal Disk Format](#)

## Machine Translation Within The INET Web OS

By centralizing applications to be distributed over the Internet, as described by the INET vision, a new era of global application sharing is enabled. Most developers of business applications, or any type of application for that matter, do not themselves have the resources to produce international language applications. These skills are quite rare in the market. However, with Machine Translation, the language barrier is broken. Machine Translation is an algorithmic process that uses stored word phrases to translate a source language to a destination language. During the processing, the source language and destination grammar rules are used to form the output. Because of the differences in contextual meaning and sentence structure between languages, the accuracy is not one hundred percent. However, the less complex the phrase is, the more accurate the output becomes.

User interfaces, because their use of language is proportionally much less than that of what is incorporated in pure text documents, are easier to translate accurately. Most of the words used in an interface do not appear in a sentence structure, rather the most important items for comprehension appear within a one or two word phrase. For example, typically application menu systems use phrases such as “File”, “Save”, “Open”, “Close”, “Print”, “Edit”, “View”, and “Help”. Also, typical application dialogs appear with an “OK” and “Cancel” button. These short word phrases are easily translated while longer sentence structures are more difficult for the machine translation algorithm to handle accurately. In some cases, especially if clichés, catchy word smith language, metaphors or abstract symbols are used within the text, the translated text will be entirely incorrect in its derived conceptual meaning. The INET Machine Translation system provides a specific database that is used specifically for user interfaces to speed the translation process and achieve a high rate of accuracy. The INET Machine Translation system also incorporates a more generalized algorithm such as is in the leading field of artificial intelligence for texts that are more complex.

Modern methods of software development offer string tables as a solution. To use them, the developer must identify all strings within the source code, user interface definitions, information messages, and status bar text. The developer then makes a short identifier name for each string. Each of these identifiers along with the corresponding string is entered into a resource file. The source code then is altered to contain the resource identifier references for each textual string along with an API call to retrieve the information when it is needed. For each language that the application will support, a separate resource file is made for it. During compilation, the appropriate resource file is used within the compilation step. Within the resulting executables, each contain a distinct language resource table as a data segment. There are also algorithms to perform this dynamically at run time. An example of such a form in use is embodied within the application Note Pad Plus Plus which uses external XML files for its multi-language interface.

Within the INET development workspace, strings of that will need translation will be identified automatically and tagged as translatable text. An important point is that in most cases changes to the source code do not have to occur for international language deployment. In using the modern method of resource string tables, each time a string is sought, it first must be gathered using an API call along with its corresponding resource identifier. Within the INET system, the translated string literals are placed in the same data block segments within the executable as any literal would be. The INET executable references them normally using memory pointers. The INET method makes application source code more readable as string literals appear naturally within the logic. In turn, this also makes application maintenance easier. The international deployment of any INET application is an intrinsic operation of application deployment that is accomplished during the build process.

The most used INET Machine Translation feature operates upon the string literal found within program source code. The new string literals are added to the data block segment automatically after translation. The INET Machine Translation system scans the phrase database for matches described by using the language local. Typically this may expand some size attributes of the binary code, however the expansion is simple enough that any logic changes are negotiated during compilation. In reference to these logic changes, typically “hard coded” string operations may need modification which the system does handle. The typical recommendation on such practices of using “hard coded” parameters is that string indexing should be dynamically calculated rather than hard coded. There are several types of programming logic structures that support this functionality inherently by design. Most computing languages offer a data formatting functionality using meta tags. For example, “-O###”, “User Name: %s”, “mm-dd-yyyy” are typical implementations which solve the use of “hard coded” string indexes.

There are other types of translation that need to occur for an application to operate correctly in many different languages. Entry fields such as names, addresses, phone numbers and currency amounts are at the top of the internationalization requirements. As a result, user input and field validation logic are also distinctly different depending on language. One architecture solution the INET Web OS provides to solve this issue is accomplished by providing multiple GUI panels and accompanying validation logic necessary to localize these entry fields. These GUI panels change automatically to fit the language requirements of the user interface. The storage of their data is mapped to a neutral database field types that are present within INET's DBMS. When a GUI is not employed but rather the interface rendered uses a text only based solution, INET supplies functionality for these interfaces that is likened to their GUI field equivalents. To account for all of the language scenarios, an artificial intelligence database is maintained that describes each of the cases and the respected code solution. During application deployment, the translation process offers matching results to complete the stream for binary executable storage.

The last type of machine translation operates on data from input API or to output API. For example, a file being read that is in the French language needs to be translated to English before processing and inserting results into a database. Integrating the translation functionality at this level architecturally provides more seamless and available coverage when designers and end users need the functionality. Typically, INET IO Machine Translation is not enabled automatically within applications as the functionality is for specific types of input and output. However, applications can easily employ standard interfaces for activating it within their graphical user interface that are common to the user.

As an example, a typical business application will use the INET Universal Data Object Storage and Retrieval API to read a file stored on disk. Before the translation process is activated, the user must select the translate input option within the menu. During the translation process, only portions of the input are modified while other aspects of the input remain the same. Such is the case for delimited files. Other types of binary file IO can also employ translation functionality using Object Oriented methods.

When using the file input API, a configuration setting informs the system of the source language of the data being read. In some cases the source language can be automatically ascertained by scanning the input for language matches. When data that is being read appears to be in another language, a nonabrasive status is reflected within the GUI that informs the user of foreign language input. In accordance with the logical operation of IO routines, the INET IO Machine Translation feature must be enabled for it to actually process. The INET IO Machine Translation system is also suited for output API. Both the input and output processing library include texts, numerics, dates, currency, binary file formatting and the many other requirements for internationalization. The coverage of the technology is within many IO systems of the INET Web OS and accompanying Applications. These technologies include: INET Web Publishing, Database Object API, Buffered Streaming IO (Internet, network), Print Media Manager, Sensitive Data Systems, INET Goods Retail Store Business System, User Sphere Explorer, and the INET Universal Data Object Storage and Retrieval system. By implementation, this feature can be turned off in the interface deployed and logic as some application implementations may not require it or deem it inoperable according to the native storage format. However, if required the translation class can be inherited to provide implementations of a native binary formatter using INET Machine Translation.

In scenarios where the hard storage of translated data occurs, the original input can be stored as related for later retrieval. This can be a file solution or a database solution. This may be important where a two stage translation process is enacted within information systems. During the initial input, for expediency, machine translation is used in such a information flow. However, at a later time, the machine translated information will be readdressed using manual translation by a third party.

The INET application user interfaces store their translated literals easily within the executable. The INET compiler makes automatic translation possible for applications. Business rules also apply to localization cases. The INET Machine Translation system is robust and covers many aspects of internationalization including date, time, numeric and currency formats. The INET Development system offers developers and business analyst the ability to easily manage multiple data input flows based upon local ID. The system is easily integrated within the Application User interface for international information exchange. These features can be selected to work with only the natively composed one, a selected list of languages or every languages supported by the INET Web OS. In summary, by enabling the compiled web server applications of INET to tightly integrate with machine translation, broad spectrum global data processing is easy and a reality.

- [Machine Translation](#)
- [Moses](#)

- [Apertium](#)
- [Internationalization of applications](#)
- [End to End Internationalization of applications](#)
- [Ring \(computer security\)](#)
- [UNICODE](#)

## Internationalization Of INET Web Operating System

Employing machine translation will benefit application deployment to many nations. GUI elements like field names on entry screens, menus, and some pop up messages will be a target for the machine translation engine. With INET's International control library, that is an adherence to the international consortium for GUI usability, fields like name and address are directly transferable between two or more languages. Yet the output of a machine translator does need fine tuning in conceptual understanding and complete accuracy in some circumstances. Therefore a direct language translation editing system is also provided that can be used with all INET Web OS Publications. A publication is a broad technology term that includes: books, documents, letters, electronic mail, printable labels, bill board marketing materials, signs, pamphlets, web sites, composed musical tracks, film audio voice overs, film subtitles, application user interfaces, etc.

The technology consists of two major application interfaces: the INET Translation Application and the INET Media Translation Editor. The INET Translation Application is a secure communication application that enables full depth language translation of all INET digital data publication formats. It is a base feature included in every distribution of INET Web OS Clients. The system supports submitting single instance and project based language publications for translation. For interface simplicity, the INET Translation Application, a client request module, provides a two path translation routes: machine or human. This section describes the human route as machine translation is discussed elsewhere.

INET Media Translation Editor is a user interface that is typically used by a translation consultant. The user interface operation is tailored for the work flow of performing several translations at once. The tool seamlessly integrates common editing tools like spell checking, machine translation, version tracking and other specific tools that the translation arena uses.

During project based translations, scheduling is an important feature that is measured. The metrics are based upon time projections made by the translation consultant firm and updated automatically by the system as progress is made within their work flow. These time projections are based upon available resources as the translation firm may have a steady stream of requests to account for.

An other important feature of the translation system scheduling is support for near real time translation. For example, a company may select a block portion of time to be used in near real time communication. This method allows a translation company to commit for a turn around time that is based upon a number of minutes or hours. It should be noted that collaborative communication translation such as conversational meetings is distinctly different than what is expected to be translated here. Items that a company may want to be translated are packets of information that will be stored within a product or final presentation for multiple uses.



The estimated time projection for near real-time translation is calibrated between the two parties as the work queue is processed. Typical uses of this mode of operation are specific to the needs of some group meetings, collaboration periods where official products are produced and where generalized multilingual output of complex media is required. The number of output languages can be configured and prioritized. When work of this nature is deployed, a single translator or group of translators can be expected to work for a given duration with the same customer. This allows the context of the media content to be held during the work. It is to be expected that parallel work may be performed as some reediting of previously translated content will occur. Modifications on previously translated material is easily located by the language consultant. Such time periods are less than a day where immediate feedback is required. It is possible to use this mode for many type of media, including books by paragraph, legal documents, end user applications by dialog, film voice overs by scene, vocalists for music, or voice overs for multimedia applications.

The complete billing cycle can be configured using many solutions for payment. Typical cases are that payment is based on a hourly fee. Larger projects require a longer term commitment so the entire project schedule billing can use ceiling limit, quarterly, monthly, bi-weekly or weekly accounting methods. Within each cycle of billing, the business manager can view the project time line to compare historical and future project translation costs. The multimedia editing application used in translation records metrics of the consultant's progress so that accurate estimates may be calculated. Some translation consultant firms may offer use of retainer fees for well established relationships. Each of the type of billing and payment solution is managed using the INET Point to Point Secure communication system and the INET Contractual Agreements Server.

Payment can be made using several methods. A credit card payments is the most common method. A single user may pay for an accurate translation of a specific publication. A payment can also be made by check or direct wire transfer as is common within business to business accounting principles. Another possible payment option is no charge. Pen pals may know some friends that can read and write in another language. As a favor, these friends perform the translation as a favor at no cost. With this payment option, there may be requirements that the data come from a home user.

During the project submittal phase, a project can be appraised for its translation costs. This will inform the user of a cost estimate. The cost estimate can be manually entered or automatically calculated. A translation company can deploy a language translation cost estimate algorithm. This script can incorporate the use of text summary statistical algorithms such as character count, word count, sentence count, sentence length, common word use, abstract word use, characters per word, and a [flesch kincaid test](#) numeric. The INET Translation Application includes a series of "standardized test media" to be used in testing the accuracy of the numerical output of the script. Historical actual costs can be a part of the calculation. This cost estimate can also be based upon availability and individual rate metrics of a skill set within the organization.

The result of the company deployed cost estimate algorithm will be an immediate translation cost estimate calculation that informs web users. It is foreseen that many people will take a gander at the costs of deploying their publications so this will save time for a translation company during high volume requests. This cost estimate is not an official contractual agreement but merely informs the user of a close price. The system is purposefully designed this way to allow several companies and individuals to compete for business within the translation market. There can be a time stamp associated with the cost estimate given for it to be considered an open offer. Once a price is agreed upon for translation, the project is submitted and therefore the mutually agreed upon price will be contractual.

## Application Audience

The audience of the INET Media Translation Editor is continually assessed to fulfill the globally unique market space it requires. This application is the forefront provider of INET Web OS's multilingual communication feature. Many types of application interfaces, publications, and media are handled with absolute integrity for the data transmitted. The target audience for the initial interface is thought to be a non technical group whose main skill is creative writing and literary instantiation. During the use of this application, the user interface conforms to the type of data being translated. Yet each mode of the interface unifies the process of language translation.

In document and publicized information mode, a heads down interface is deployed with the translation application. This mode primarily consists of editing textual information that is formed in paragraphs or small phrases. Some items within the publication such as index tables and table of contents are generated by summarizing portions of the headings and unique words. These are non editable within the interface. The current translation position is tracked visually and recorded. The application is designed using very strict security standards. The application design maintains current state of editing and view to account for device and communication failure.

In some office workspace environments, users feel more productive with an upright clipboard showing a print out. The translator uses this print out while the interface is keyboard driven allowing entry of the new language. The INET Clipboard with built in line scanner automates the process of clipboard focus bar advancement and page feeding. The clipboard focus bar is typical of such clipboards as it is a small transparent piece of colored plastic that extends across the page horizontally. The application provides for the capability to use a completely electronic solution, as well, using dual displays. An INET Click Panel may replace the clip board while the major editing is displayed on the main monitor or LCD. In this dual view, information upon the INET Click Panel is reduced in color as the translation progresses. The line being translated is highlighted to draw the user's focus quickly. A third option of data input allows entry of the new language within the line below rather than a split heads down view. Each line of the original documentation is double spaced with entry blanks right below them.

There are several uses for the heads down view. It is plainly selected from the main menu. The content being translated is shown on top in a split view but it is not editable. The position of the item in translation focus is shown within the interface by highlighting it for easy eye tracking. The interface is easy use for left to right readers, or other languages when direction of information is being changed.

The translator must be comfortable with the digital work environment and the INET Media Translation Editor provides. The application interface is configurable allowing a user to move and resize interface components. The tool panels and information editors can be manipulated with a mouse gesture or keyboard combination that includes the use of directional arrow keys. The configuration of these interface attributes can be saved and locked as the default for the type of information being edited or for that specific project. All of the editor modes, including textual documentation, audio, and video have these configuration capabilities. The allowable editing of the media information does not extend beyond a logical boundary. For example, color balancing, shadow processing or adjustments in brightness/contrast are not a well suited focus of a language translation editing tool. The INET Media Translation Editor has a configurable interface that focuses upon the content that requires language translation while providing a review of it. The application is responsive to user keyboard input while the review is secondary. That is, some users are armed with quick trigger fingers.

For application interface translation projects, the INET Media Translation Editor provides previews of dialog windows as they are being translated. The list of resource strings is shown in a heads down columnar list by default. The left side contains the original while the right side contains the line editor. Optionally a column can be added to this list that shows the program internal symbol resource name. The user interface information can also be changed directly within the dialog preview. An important facet of showing a dialog preview is elevated by the resulting translation's impact upon the layout of the interface. The editing interface allows control objects and their measurements to be adjusted.

Each component of the original source documentation or media is locatable by a numeric label for precise collaboration. That is, location references such as the forth page, third paragraph, second word, first letter, or a particular line number may be used. Application dialogs and their fields can be located in a similar manner using symbolic names. Symbolic names are also used within resource string tables which can be used in locating an item. These location features are present for group collaboration sessions. Segments of audio and video can be located by labeling time with a numeric value or symbolic name. Video subtitles can be located in much the same way as document references are used. This feature will help the consultant, proof reviewer and customer interact precisely when necessary.

The INET Translation Application provides a user friendly workspace that manages many tasks associated with a translation. The ability to mark original content that has been translated is provided. The consultant may be compelled based upon the complexity of the translation to annotate some sentences, media segment or include their thoughts on the material. Proof reading may be an integral part of the translation process for some translation companies. Within a consultant's work flow where other team members may play a part, the scheduling operation is maintained.

Accuracy directly affects a translation firm's shown rating. For some projects, it may be the most important criteria used in the user's selection of a language resource. This rating is shown in summary as a user receives multiple cost estimates for a project. Translators and proof readers that perform the work are tracked within the system. These historical events are used in the verification of a firm's rating. Dependant upon the content type, the translation process may be integrated with a legal contacting system. That is, some document forms may require a specific firm rating noting trust.

The translation process may have to include legal contract processing before deployment of publicized content occurs. This process confirmation may be needed when negative liability has to be established. For example, if a firm's translated document changes meaning because of the translation process, the resulting damages must be proven to be caused by intentional or unintentional errors. Having a backup proof reader for legal documentation as part of the process is an acceptable stage that can be added within the translation project plan.

In legal document cases, a specialized proof reading service company may exist. This company can manage the facets of the translation with the original translator. The proof reading service can be selected to be an independent one, the same company, or even a specialized individual. These specialized proof reading fees are also solidified within the cost estimate script. The progress and project time line are managed accurately for the end user to evaluate by including these steps.

Version control is maintained between milestone digital data releases for some types of translatable projects. Milestone releases are simply a bundled set of features or changes that are scheduled to be released on a certain date. Typically software is released using this approach. Therefore the language additions created by the consultant are accumulated until the release. As well, any modifications that apply to already translated materials are communicated back to the language consultant. If dependent changes were made, only those changes needed are highlighted and managed within the translation request post.

Software development projects typically use a source repository and database engines for data storage. This language translation process should not conflict (break the build) with ongoing development projects but maintain a stable state. The deployment of translation is one that allows a conscious integration within the project. User documents or seminars, will simply be a database update and rebuild of the seminar stream being served. So the submission of the translated digital data will cause notification events and will support a background automation event. This will inform the user that there is translated data available.

### Important In Any Script

The results of a translation is stored in a database model that incorporates version tracking, historical references and hierarchical storage methods. The INET Media Translation Editor and INET Translation Application are designed to work using a live network connection or intermittent connection; both of which use secure communication. These application can also store their results within a queue locally when a network connection is not available.

Some facets of the translation may require collaborative communication using voice, fax, email or video phone. Contact information is maintained within the project database for easy interactive or scheduled collaboration sessions. The user email system and VOIP communication suite of their choice can be seamlessly integrated to provide an efficient workspace. A complete log is maintained by the project coordination event system which affects scheduling, compiler processing, linking, rendering. Each applicable trait of these processes is used when calculating the project time line estimates. In appropriate cases where large (detailed) project management is not needed, these tracking items are hidden from the consultant and customer relationship. This reduces information complexity which increases user friendliness.

Considering that the INET Translation applications are project based, it integrates into the appropriate target data repository within the customer's data warehouse solution. This is the functional case whether it is a software development project, presentation, seminar, user document, text to voice over for film production, multimedia project, digital office data or other output. Changes are not committed into publications by the post procedure but only recorded. The customer will receive a notification of the data's arrival, once. Official submission for publication rendering requires the project administrator (user or customer) to initiate. Acceptance of the translation is also in some contractual agreement scenarios an agreement to release funds. A process trigger which initiates payment processing.

### Marketing And Associating Language Translation Groups

Some translations need secure proof reading for accuracy; government materials for example. Keep in mind that some translation companies may only work with a type of data or project. A locked setup of translation resources would be beneficial in this scenarios. And finally, some translations must be privately handled within the confines of a secure network environment that is inside a network firewall perimeter; an inner office group solution like the United Nations will need. The INET Media Translation Editor and INET Translation Application provide this functionality in a form during configuration by a system administrator. Their digital data is important and must be protected.

The translation application technologies must tie home users, businesses, government, developers and translators into a community. It must enable effective translation project management, provide digital collaboration, use secure translation of content when needed and execute proof reading of digital data. The application interface technology maintains a general user audience geared for writers and end users. It provides good choices for translation resources based upon the configuration and user's need. In doing so, the INET language translation interfaces offer no confusion to its users. The translated application or publication is properly deployed and served from the application server to the INET device in the default selected language. The language choice is easily modified on any INET application using the language tool bar. In conclusion, the INET Translation application and INET Media Translation Editor are a well designed approach to solving nation to nation communication and business processing using user friendly interfaces.

See Also:

- [Hulian Translation](#) - Localization Using Chinese Resources



## Information Systems And Multimedia Applications Deployment Strategy

Methods of modern software engineering have been derived through the improvement and progressive integration of work flows associated with team oriented software development. However, one of the biggest hurdles a development team has to overcome is quality analysis. Integrating a suite of object oriented testing tools that are API based, that can be utilized in polymorphism by third party tools if desired, within the development environment of the INET platform web operating system is a key goal. This will provide a quality stable application environment for consumers and business that was not available before by including integrated testing tools. That is, bugs will be found more often before the process of quality analysis starts.

The development tools associated with the INET platform will incorporate all modern methods of software production and modeling. Some aspects include: source repository control, installation management, deployment, usage terms (free, licensing, rental, trial), help/support system, unit testing, and quality analysis. Within quality analysis and unit testing; major focuses are error recovery state, resource allotment tracking, code coverage, use cases (combinatorial testing), multiple user load testing, business defect detection, logic defect detection, stochastic use stability, repetition use stability, user interface standards and high load stability. Other factors such as interface usability and requirements meeting design implementation are decisions for humans but will be part of the tracking environment integrated. Defect tracking will be a standard application programming interface and designed within the interface to capture by the individual testing. Because defect tracking is integrated within an application interface during deployment, reproducing and capturing error details will be a snap for developers.

One aspect of quality analysis within software engineering is source code analysis. The VLISM compiler establishes a database of information through its language parser collection. This information allows the INET Source Project Analyzer to build statistical views of routines and their weight. Objects can be relocated, and large changes can be tested within a growing dynamic environment that maintains change record history for source level integration. Objects and routines within them can be individually tested using stored Unit tests. These tests ensure the correct output of data input. Whether it should be a processing result or an error output. Input parameters defined within a method can be formed as formal inputs or the routine may draws its data from other internal sources. These parameters are tested for range numeric input (negative and positive), character string range input, null input, and special characters.

The INET system encompasses all computer languages through the VLISM model. Therefore the quality analysis system, help/support system, data modeling, software modeling, defect tracking, source repository control, and installation management is built so that any Integrated Development Environment developed for the INET Web OS platform will have access to these objects. That is, the creation of or use of associated assets will posses these capabilities. This major direction, typically not handled by modern vendors in a cohesive form, will benefit INET platform users because developed applications will be held in the spot light for comprehensiveness, completeness, and errors. As a result of completing multiple rigorous tests more often, applications will be more effective, robust, secure and stable for distribution and deployment. Typically the process of quality analysis is a longer cycle to defect correction than unit testing. Therefore, the software development life cycle will be reduced some.

If a study were done on all of the deployments in history of computer software, the first major issue customers complain about is that application design does not always meet their requirements. Second, but not least, are operating bugs and glitches that occur during software use. Bugs are the worm of the industry. Since the INET Web OS system includes testing and tracking tools for any IDE or meta tool, employing any language, vendors will be able to make leaps and strides quickly providing the most productive environments tailored for the project type. This will allow the design of specialized IDEs specific for the company and type of software. Software development environments are complex to design and engineer. Programming language products and meta tools can rely upon standard debugging and testing techniques included within the INET Web OS. Application definition, application performance, stability, and usability are major focuses inherent within the INET Developer Platform. The INET Developer Platform will manage these aspects of software development as part of its own software development life cycle providing a growth pattern to exist for most development projects. That is when new debugging technology is released, the functionality is present in all subsequently derived IDEs. As a result, all applications developed for the INET Web OS will possess many astounding qualities that make software great for users.

See Also

- [Test Automation](#)
- [Software Quality Analyst](#)
- [Software Quality Assurance](#)
- [Software testing](#)
- [Installation computer programs](#)
- [Online Help Systems](#)
- [Static Program Analysis](#)
- [Code Audit](#)
- [Dynamic Program Analysis](#)



## Asynchronous Application And Language Architectures

### Rabbits Always Cross The Line First

Reducing the operational attributes and language implementation of asynchronous applications by incorporating the port based model H Dispatch as a language feature will optimize threading issues on distributed applications and provide ease of use to developers. INET's Multi-core Server Model using the fiber optic bus will only be a handshake to the object oriented application architecture. This will enhance the distributed model to many forms of hardware design and provide high performance while reducing the overall message communication.

- Multi-threading
- Programming Language Structure
- Message Queue Transaction Processing
- Load Balancing
- [H Dispatch Program Architecture](#)
- [Linda Coordination Language](#)
- [Twisted](#)
- [Message Broker](#)
- [Swarm Programming Language](#)

## The Ray Tracing Visualization Component

A very attractive feature of the INET Web Server Operating System is its broadcast quality output. Incorporating production studio [ray tracing engines](#) such as [Indigo](#), [Photo Realistic RenderMan](#) or [YafRay](#) will be effective at delivery combined with the high quality font output system. However to truly be competitive in the market the INET Web Server OS provides a well designed robust OOP component that encompasses all visual needs of user interfaces. The component accommodates multiple rendering algorithms and multiple input methods for platform extensibility.

Imagine the dynamic output of a program that produces a bar chart, for example. Since the image is produced from numeric computations that vary based on input, high quality batch enabled ray tracing may not be effective for a quick view. Texturing, lighting, and many other characteristics of the image will be managed using a less computing intensive algorithm. Real time data acquisition needed by input formulas may affect the view as well requiring a intermittent refresh rate for the graph view. Therefore [scan line](#) rendering implementation will be more faster in process to generate the animation. Optionally the user can wait by preference for the highest quality output, a ray trace. The comparison of draft quality scan line and high quality ray trace is not effective because the quality measurement depends on the amount of details the scene has. Scan line rendering can be very effective in many cases.

## APIs Directly Call The Central Visual Brain

The INET Ray Tracing Visualization Component, the central visual brain, is flexible enough to accept many forms of output control. Sometimes, a direct call implementation using an application programming interface (API library) with object oriented methods is the input an application uses. The compiler system will adjust the parameter information by IDL definition within object output and memory allocation to provide interoperability between languages. This will even allow scripting languages and pure C++ compiled machine code applications use of these visual APIs. The syntactical use will be the same for most languages.

Programs that compose a scene graph, application or entertainment, might also incorporate the use of two dimensional vector graphics on any flat X,Y, Z rectangular area. These applications can function with high performance because of the vector compilation within scene graph. The process will setup and use a single flattened buffer achieving output while transforming to the rectangular area last. This makes image processing in layers possible providing the capability for layered output samples. The image output pipeline refers to a stack of objects that are used to produce final flattened output. The visual pipeline object stack, or vector array, will process while the last step of the scene graph rendering functions is to format for a specific device. The pipeline may also contain objects that perform contrast or sharpness filtering depending on user settings. Masking is yet another operation that is considered within the visual pipeline object stack.

## XML Records Inform The Ray-tracer

Another form of control the INET Ray Tracing Visualization Component provides can be formatted as an XML record set with instructions in its payload. This record set may be the output of a program yet most likely a database table. The XML schema, well defined, is simple enough to allow users to enter the information by hand as they may desire. Providing high level drawing commands within the record set makes it easier for developers to produce the record set. This flexibility also enables the input to be a network transaction. This makes application installation easier due to the necessary batch operations.

## A Semantic Language Draws The Scene

Another flexible method of input is manifested as a pure textual input designed as a semantic language source file. Processing the file will craft image output using the object oriented rendering language. The language includes advanced cross language communication capabilities that allows dynamic linking with other API calls for parameter input. The language is designed to provide module level encapsulation giving object oriented creations the capability for distribution reuse.

The language is robust enough to support many drawing capabilities associated with interface rendering as well as accompanying aesthetics. Including high and low level animation commands is an important feature. The language includes textual output links using the INET Font System language. This component simplifies the creation of interface objects like windows, borders (beveled, inset, fancy, rounded), drop down menus, tool bars, push buttons, grids, boxes and basic primitives. Most of the super drawing models are objects composed of primitive drawing commands. For example, drawing a text box with a plastic piece covering the textual input is a common task. As is common with INET Technology, the input file can be an already parsed binary file of the language. These binary files are typically within a cache automatically and transparently used by the program.

## Modern Screen Definition Formats

Microsoft has a format that is commonly referred to during development with C++ named Resource File or RC file for short. A conversion filter is supplied for use within any INET Web OS IDE. The RC file format was propagated within the development strategies of other compiler systems such as Borland's C++ compiler. As well, many other C++ compiler systems employ the use of it. But the file format and usage is not specific to C++. Another popular programming tool used by corporate programmers is named Visual Basic. Visual Basic has a specialized format that is different from the standard RC file format. This format is also supported. The most current version of these dialog definition file formats are included within the Microsoft dot net technology. Since these technologies compile the source code with the RC file attached, the dialog information is structured within the resulting executable. The ability to generate dialogs by parsing a Windows executable file is also maintained. Other formats exists such as CICS, a mainframe technology, are included within the conversion filter. The conversion filter provides asset reuse to previous designs of data dialogs. User interface design is a laborious task and carefully considered by the INET platform.

## Multiple Input Formats Of Geometric Forms

All control methods of the Visualization component uses a unified model that enables [polygon mesh](#) and [NURB](#) creation to occur. Most of the time this is done in three dimensions using resolution independent floating point numbers. Some methods for building solids use primitive shapes and perform geometric transforms upon the model using methods that add or subtract other geometric forms.

Additionally a modeling tool that integrates with a development environment is included when shapes get to complex. Modeling will most likely be the ultimate choice for many. Yet no compromise is made within the tool set that forgoes the manual input method. The scene graph produced also may link to external data acquisition functions allowing variable real time input.

## The Visual Broadcast Pipeline

The INET Ray Tracing Visualization Component has a production pipeline that supports masks, layers, lighting, image processing, multi-texturing, bump maps, reflections, effects, and alpha channel composites. This allows the dynamic image builds to be as effective and precise as the creator desires. Textual rendering is also important task within the component as the information needs to blend onto the layers where appropriate.

For example, a stage light exists that projects in a forty five degree angle and its presence covers in variation about seventy five percent of the viewing area. It is a significant source of light, yet its power of illumination decreases about the last third of its projection area. Text placed into this area, if textured and beveled must effected by the light source. Therefore the pipeline processing will have to compute appropriately. This ray tracing process is inclusive of assets included within the object pipeline. Changing the order of the text object within the pipeline will remove the specific light source.

Yet some effects may only affect the output of a single or group of layers depending upon configuration. The chain item or stack command order is important. Relationship of the nodes to siblings is important as well. A relationship may be established to form a grouped object pipeline process that details several functions that only apply to a textual rendering. All of the associated lighting definitions within this object stack does not affect any images outside of the group definition.

A software developer will quickly see the object oriented development practices implemented here. The high definition capabilities of the INET Web Server Visualization System will be the leading edge for a long time to come. The production tool set and durability of the output image file format is effective for wide audience of users. Glittering, sparkling, and shooting stars will be available making interface assets that are dependable for years to come.

The output format and the granularity used for reducing transmission overhead will be greatly varying. The output format will change from a streaming vector format to a compressed raster graphic output. The compression granularity and complexity of the output may also change due to bandwidth restrictions. That is, some lighting characteristics of an image, or texture maps can be extracted for later transmission. Ray tracing technology is typically used within a batch process for data cache storage. In cases where textual data and other models may change as the result of input, only the layers that can be finalized are stored while the real-time layers are left not computed. Output quality between these forms of image render may use different rendering technology in the essence of time and then composited. By managing a scene graph through an accompanying object model, compression of complex interface presentations can occur.

See Also:

- [ray tracing engines](#)
- [Indigo](#),
- [PhotoRealisticRenderMan](#) or
- [YafRay](#)

New GUIs and Modeling Applications:

- [Ray-traced GUIs for audio effect plug-ins](#)
- [Luxology](#)
- [Autodesk Maya](#)
- [Truespace](#)
- [3D modeling applications](#)

## INET Information Integrity Portal Platform

### Metadata, Cybercrimes And Sensitive Data Computing

Cybercrimes are becoming common using modern technology platforms. The INET Web OS intends to solve some of these issues for unsuspecting users by incorporating a new type monitoring system that is managed within the server side as well as filter processing upon the smart terminal. The system accomplishes this by searching a rule database during data capture and while any remote transfer process is taking place. The INET Information Integrity Portal Platform component is a needed new age technology that will safe guard many facets of a user's identity. It is also a component that will safe users from committing and being a victim of cyber crimes.

A user's personal information and location must be only given or revealed during the appropriate circumstances. Several methods of obtaining this information exists today that many users are unaware of. Even consider the manufacturer of the device and the software engineers new to some of the entry points. Hackers are always coming up with new methods; that is their job. Crimes varying in many forms of severity and dysfunction arise due to digital information tracking techniques that hone in upon a user's identity traits and location. Yet a user identity will exist for most forms of digital data. Therefore identifying, tracking and controlling the release of primary and secondary forms, that information obtained from deductive reasoning, of identity must be protected.

Identity within the context of digital computing and digital information has several facets of purposeful meaning. A digital Identity can include attributes such as three dimensional position or information about individual's person. To an untrained eye, these real life traits can seem difficult to compute or process. Keeping safe a person's known paths of travel is also very important. An individual's vehicle color, make, model, license tag number, VIN, and other operational necessities of the automobile's up keep are very important facets of human persistence to track. Even where the individual buys their gasoline can be gathered with the proper tracking information. Last but not least, regard the ever lasting characteristics of the user's self: their physical appearance, their life endeavors, their material possessions and their consumer desires.

Digital pictures captured by some models of cameras is a target for digital hunters. In modern headlines, [Geotagging](#) is a feature that captures location information and automatically attaches the coordinates to the resulting digital picture. This Geotagging information can be used to easily reveal the location a photograph was taken from. To circumvent this from occurring, the user simply turns off the feature making the feature non operational. Sometimes, geotagging does have an interesting catalog feature that makes it useful. For example if an individual were to take pictures cross country, snapping photos at leisure, several thousand photos would result. The Geotagging information can be used to sort the photographs and place the information upon a map. So with Geotagging information, the INET Information Integrity Portal Platform decides when to publish the information making the feature still available for use upon the digital camera but hides the information from the public eye.

Other aspects of personal identity information can be haphazardly released due to the security level of a channel during a textual writing session. Text entry is a basic function that is used in chat rooms, cell phone texting, email, and database collaboration applications. For example, an individual may tell of their geographic location and approximate arrival time to an event using FaceBook. FaceBook is an open air domain. The use of such social networking sites, a known information technology term that sparks recognition of a purposeful role even in broadband media, must be monitored yet not hampered. Entry, collection of the data to transmit, viewing, searching and summary are the primary data functions of such systems. The intent of these database systems is not deluded by the INET IIP system. The information placed upon them is monitored to exclude personal identity characteristics if the user chooses so. As well, the INET Software includes socialization software that will protect user identity.

Modern social networking sites are a known prowling arena for some types of burglars. By using simple deduction, a burglar can be armed with a time table of when you are away and when you are at your residence, in the office or driving your automobile. This does not make social networking sites themselves an insecure medium in its functional implementation. It is the user's decision to release private information (named or deductive) that is the security problem. They may do this accidentally without thinking, but the problem is there. The INET Web OS system will monitor for such information leaks using advanced parsing, database, and artificial intelligence to warn the user when this occurs. As well, it does contextually considering people you are chatting with. That is, some individuals may be a close friend while other individuals are new to you. Therefore the INET Information Integrity Portal Platform ascertains the transmission audience to provide secure freedom.

The INET Web OS will provide blended digital censorship on all forms of transmission media where re-servicing content is necessary. Example, the user does not want any pictures of their face, home or automobile on-line. In cases where photographs are to be release yet contain important information that divulge location or personal identity traits, these attributes will be blotted out. Censorship and the amount of impact it has in this context is dependent upon the media type. Textual media when censored will be void of the information. Visual information can either be rejected for transmission or have some areas of the image blurred to block recognition.

### User Identity Protection

The INET Web OS platform will spend distributed processing time to warn the user when scenarios of personal identity leaks are occurring. As well, the multiplex query and update of many information services that are used to access the Internet is a propelling effort. When information is placed upon the web that can be found using search engine technology, the underlying digital data will be reformed to the necessary content specification. The necessary content specification is derived and activated by information law enforcement. That is the information law enforcement is invoked through rules established within the INET Information Integrity Portal Platform database. Sites like [PeopleFinder.com](http://PeopleFinder.com), [People Yahoo](http://People Yahoo), and [ZabaSearch](http://ZabaSearch) are search engines that provide anyone with addresses where a person is living or has lived at in the past. Sites like these will be managed to be void of this information if desired.

Privatized services providing authenticated and investigative partnerships, may exist for certain kinds of data. Digital cameras are a popular electronic that anyone can use to snap a photo and publish it upon the web. Users may wish to cultivate their tarnished identity projections to a more beneficial reflection using a fee based service. Some rules noted by information law that appropriate direct modification of digital data may not be precise enough to warrant the needed inspection requested by a user. For example, a user gets too many emails and would like the situation examined. Or another example may be that a couple from Paris, France came over and snapped a shot of you wearing an awful outfit. The INET IIP system will manage the removal of your persona from Internet images, modify the likeness or modify specific attributes such as clothing to fulfill the private identity desire. Providing visual search capabilities of this nature is a complex server task. The search will be tuned to the likeness of a user.

The INET Web OS Server has a cooperative publishing system that will impound data created by any user or program that leads to unwanted illumination if the appropriate rules are activated. This technology is encapsulated within the INET Collaboration API, the file system and the publishing API. This decision will occur for every INET User automatically for all of their devices for ultimate protection because the process is part of the centralized operating system.

Providing this functionality is contextually based upon rules established for a textual conversation within INET IIP. The application or media being used is inspected for its transmission and output characteristics. If the application is known to be a collaboration application such as a chat program or a video conference application, the system uses the recipient of the transmission as a search key to access the rule database. The information is parsed to analyze potential identity information leaks. The process will require high performance routines installed within the common use editing objects. The device and location of the device the user is using to capture information is also an important characteristic of the conversation the INET IIP system uses during scanning. Upon a road trip several facts can be established about the user's position and their identity. These high performance routines will operate using patterns and logic populated from the results of the contextual database query; the INET IIP rule database.

This endeavor will succeed modern information technology security concepts due to the new informative real time nature of the technology. The system will provide this functionality before complete transmission occurs thus retaining the highest form of identity concealment. The goal of the system is no secure information leaks. Implementation of such functionality operates both upon server and client logic bases to supply a robust, intelligent and efficient data gathering and sensing interface.

The INET Information Integrity Portal Platform is a design feature implemented within the entire data entry capturing process. This includes quick link INET SoftSpot components that process photography, audio, music clips, three dimensional video and INET 3D Fonts. The additional component logic increases professional secure productivity for many users of social networking and Internet communication. Authenticity of the multiple connecting persona is a concrete requirement. The user must be able to assume multiple types of identities based upon contextual use. These states are easily selectable within user interfaces. And if they are anonymous, the state must be known.



The INET Web OS platform is designed to be cooperative with official investigative units such as the Cybercrime divisions of the American FBI, Interpol and other world authoritative bodies. The INET Web OS manufacturer proves this by releasing the encryption methods and storage access facilities with a supreme privilege access suite (INET SPAS). The INET SPAS is a distinctly unique hardware and software setup that requires guards and restricted area protocol to fulfill the global information law certification. In striving countries, a known level of censorship and protection will be advertised that describe an agency's proficiency and operating attributes. A trust worthy relationship and team model should exist in any country the system is distributed. The meta tools provide the team of investigators an information access architecture that is identifiable by Law.

Using the United States code of search and seizure, users will know when they are being scanned. A court summons may also be enacted electronically to provide the same functionality. The design of such features will need further refinement during planning and design, yet make undeniable sense to include for most people. That is, most people do not intend to use a computer for crime. Providing the opportunity for one to protect themselves from infringement and investigation is cooperative with platform design also. That is, data can be erased to a certified level that is not retrievable with modern emergency retrieval methods ([Data erasure](#)) by using a specialized erase method.

The historical tree describing a digital data object for INET Web OS clients contain tracking information that describes where a file was copied or cloned to. The tree traversal logic during the secure erase procedure will include branching if the object is a source data object. This will include erasing from the location the digital data object was copied to. Locations can include a USB key drive for example or if the object was sent within an email as an attachment. During secure descendant erasure using the historical information, logical actions are readily available within the user interface to appropriate the functionality.

### Cut, Copy And Paste Tracking

The system also includes random access to elements that were duplicated, moved, or cloned from a data object. Including cut and paste features within this granular context is difficult yet not impossible to employ. The system provides a powerful archival database for specifically this purpose. The archival system can also be regulated and cleaned. Upon confirmation, all historical records associated with a particular data object can be removed securely from a system.

All INET Web OS clients will track the copy and erasure of a descendant file. The results are propagated back to the logical owner source. Therefore tracking also includes ownership rights. Tracking the individual copy and transfer of a digital data object sub components during editing using appropriate user interface logic provides an intended perfect history tree for analysis during the data sanitation action. Software emulating this control upon third party operating systems is a desire. However, the embedded smart terminal provides this feature natively.

The INET Information Integrity Portal (IIP) platform feature is designed to steer and warn users of inappropriate or unwanted behavior during communication and use of it. The assimilation of IIP encompasses a broad range of operating system architectures, making it a system wide feature. Typically, modern operating systems employ such technologies as add on features making them outside the designed security protocol. Therefore breaching the security of such third party systems is easier. Breeding upon a new base operating system architecture, the integration points of IIP are inspected to decrease inherent security risks associated with functionality of this nature.

### Home Automation, Environmental Sensors And Robotic Path Logging Held Private

Information that is gathered and stored about the home automation system is secure and protected under this system. As part of the component design, limited access to the automation functions and associated devices are established. Environmental Sensors used by home automation and robotic systems are held in private as well. For example, a score of environmental sensors may be installed within a typical home environment. Therefore, releasing interior images captured by these sensors is to be for specific parties and applications only. Securing the Robotic Path Log for tamper proof is also necessary for future investigations. It must be known if a robot was programmed to destroy and by who.

### Financial Identity Security

The ubiquitous implementation effects of IIP are broad. Including interface control objects, information search and retrieval functions (remote and local) and backward application compatibility support for older application frameworks is a large umbrella to undertake. Yet the system also includes protecting financial processing and finance identity.

Older framework support makes GUI applications and HTML forms that use financial processing more secure as a result. The system provides automatic recognition of these high security fields. These fields may include items such as name, home address, business address, phone number, social security number and credit card number. Financial entry forms requiring identity can be recognized at most times within a user interface by their labels. The recognition of them is used to trigger a processing path specific to the matching user privileges defined within the User Financial Security database.

In cases where these identity GUI elements are used, the system will use INET Web OS's secure interface controls instead of the relaxed, non-adhesive controls. In places where the automatic recognition is circumvented, the transmission security policy process will prevent the leak. That is, web sites that use mock up forms requiring a user to enter personal identity information are still filtered. The system will ensure the integrity of all GUI and web applications requiring financial processing as being a viable business or personal relationship. The system accomplishes this by querying the dynamic spoof and fraud database.

Worldly scenarios that may require alternate financial identities to be used at a specific terminal are handled discretely by policies set by the system coordinator. An example of this would be someone else trying to make a purchase at your terminal. Depending upon the policy rules set, this can be an enabled function or not.

Financial processing can also be protected by the account type. The protection policy can name a terminal or group of terminals. For example, if the terminal being used is at a place of business, only credit cards belonging to the corporation can be used in financial transactions. As well as providing protection, these types of rules can increase the productivity of employees. That is no on-line shopping for the home decorations. The main task of the feature will be monitoring financial transactions upon a business owned network.

Some system plans may block the use of the computer terminal or user from financial transactions completely. Terminals that have the capability turned on can also be monitored specifically using live video recording during the entry. This may be used to track the possibility of fraud by an individual.

Other complex rules can be established for financial processing that protect a user's account by using multiple types of authentication during expenditures. For example, if the identity is foreign to a terminal and it used on a home machine important behavior of the user interface will percolate into being. The recipient of the charge may also play a role within the security monitor. A purely consumer related expenditure may raise a flag.

The IIP system embedded within the smart terminal also includes protecting residue financial information. Residue financial information in this regard pertains to a guest that used the terminal with a their own credit card. When the transaction is complete, the individual can be confident that their personal identity information is erased. Typically, an individual does not want their credit card number floating around upon multiple terminals they may have used as a guest. Recording the characteristics of these events within the transaction database maybe useful during an investigation.

The business, business location, type of business requesting payment and type of service being paid for during the execution of a financial agreement is a natural trait that INET IIP can track. User's or system administrators can select what types of businesses they expect a terminal to operate with on a regular basis. If purchases are expected to be at an Internet store, then only a certain few web sites may be allowed to charge to the card. For example, you might allow your children to buy from [Google Play](#) services, but not from other Internet stores. While your counter part may be allowed to buy anything they want from [Amazon.com](#). Instantiation of these rules not only protects from theft when someone happens to get your credit card number but also can limit the transaction amounts.

Rules can also be programmed that allow transactions at specific time periods and days of the week by location. Some users may find themselves very happy only buying groceries from [Smith's Grocery Store](#). The calendar day of week can also be used to lock transactions. That is, typical for some clients, they buy their main stock of food from the grocery every other Saturday in which the bill is not expected to exceed three hundred dollars. Yet, they may find that two or three times a week they need to get milk and eggs.

The INET IIP system's finance rules can be intelligently linked with the output of other software. A pattern of expenditure may be based upon family members completing their favorite meal, or snack list before the main trip to the grocery store for example. Or a diet program set forth by a nutritionist or personal trainer must be reviewed before it becomes a part of the shopping list. Even the scheduled car maintenance that appears upon your calendar for a specific date can be part of a transaction lock. Logically the oil change must take place before charges can be applied by an auto repair shop.

Another specific finance security rule provided allows the geographic location of the terminal to be used as a means of protection. Users can lock their accounts using location in multiple forms. An account lock may state that only financial payments can be initiated from within a certain mile radius.

The INET IIP system provides a training mode for deducing these spending habits. During this period, memory of the transaction events are recorded to provide contextual learning. This is an important feature as most users may feel hampered with a completely locked down financial account. This may ease the stress of using an Intelligent Financial Protection System. The training may result in a very detailed rule set as every characteristic of transactions are recorded and securely stored. The system also provides a specific interface that allows the user to edit all of these rules at once. In short, the INET IIP system provides a secure natural interface link to electronic commerce using standard interface concepts.

### Geographic Location Of INET Computing Device

Because of the way INET compatible embedded computing devices work; they will be located easily within the domain of a geographic area of any place in the world due to network operating procedures. This makes a lost or stolen device easily locatable. As well, remember that user data is stored in a mainframe computer or one located at their chosen establishment. If a loss occurs, the INET system administration can be called and the device's access privilege is removed. At this time the device is placed into a lost and found mode or stolen mode. The system provides location information to local detectives that may try to find the items. As well, the location information can be reviewed by the owner.

Location technologies are not new. For example, the [Traceroute command](#) will show all of the network routers that are used for the transfer of the information. Network routers are located through out the entire united states and globe that can be identified. Most of the major information is collected into URL names. This information has to be known about so that a quality telecommunication conversation can take place. It is unknown at this point with wireless router technology increasing in distance if the signal strength can also help to identify a tighter spherical region. In short, location knowledge using the properties of the physical network layer ([the L1 layer](#)) is essential for this feature to work.

A system as this proves that the best way to protect your data assets is by using a cheaper device for remote connectivity; the INET Smart Terminal. The LCD and electronic technology that technological giants such as China and Japan can manufacture is beneficial in many ways to its cost effectiveness. Incorporating the INET network technologies within the device itself allows easier distribution within many different devices. This off loads main computing tasks to a host mainframe computing device. Nevertheless, one of the many benefits are tracking of the device. Most users do not intend to commit crimes or be a victim of a crime while they are using computing terminals. However, without safeguards in place, the ability for a modern terminal to be used in crime or to facilitate yet another cyber victim has a lot to do with the authenticity of the running software and the transaction. An open space to roam has no boundaries.

See also:

- [Traceroute](#)
- [Internet Protocol Suite](#)
- [Link Layer](#)
- [Address Resolution Protocol](#)
- [WebDetect](#)
- [LocatePC](#)

### Common Sense Data Transfer Amount

There are some developers that work diligently to undermine communication tasks of web servers by flooding a target web-server with invalid page requests. Use of an INET Web OS terminal for such purposes will be monitored and restricted. There is a difference in use; software development requires this during a testing duty cycle and sometimes this may be necessary for large scale promotions. Home users most likely to not require such powers. As well, there are software methods that commit true communication crime on boundless systems. Moving the operation of high volume digital data flooding to be an electrical engineering task separate from the INET Platform will further insure the device's compliance within information law making it a friendly tool. Ensuring the bounds of the device to be a non military computing grade platform through common sense restriction (hardware and software) will specialize methods of formal communication disruption ([Cyber warfare](#)). A warning to restrict the terminal's use to send a large amount of information to an array of foreign servers is a necessary monitor also. A movie publisher or a writer may do this for promotion. But most likely, a home user would not do this. Recording these events into a database will be important to information investigation.

SPAM results from the desire to advertise in a high volume form upon the Internet medium. Given an array of email recipients, information can be duplicated and sent automatically to each address. However, there is a difference between using communication for the right reasons and the wrong reasons. Ultimately such endeavors can lead the recipients to inarticulate and unethical business experiences and practices. The INET terminal will limit logically the use of such technology features.

The INET Web OS will be integrated with a database of known Internet scams to filter electronic mail. This database, a repository that is regulated based upon the standards of information law, will contain many definitions that spawn user interface selections upon the client device. Identifying known sensitive web pages, illegal content, information scams, security leaks, and other Cybercrime related issues; the system will house industry knowledge of such crimes. [ScamBusters.org](http://ScamBusters.org), [Top 10 Internet Scams](#), and [FBI - Internet Fraud](#) are reading materials related to such frauds.

Since the INET Email system will catalog information known to be typed by hand verses a generated message, identifying personal targeted mail is easier. The mimic of such instrumentation record is a security risk to inspect. The generation source is an information attribute to be protected. This will be accomplished using the package format.

### Copyrighted Materials

Some usage laws of copyrighted materials may change to be more accurate with the intentions of the medium, the publisher and the maker. Specifically within the music industry, when a new song has a great composition that listeners like, the song can be recommended by people easily; making them a personal coordinator of this musical piece and artist. Simply click and send the song to a friend.

All types of digital media may be marketed using the friend approach effectively. Typically when a true relationship is established there is a need there for the digital media. As well, typically along with the selling proposal may be other personal connection details that an ordinary marketing plan could never employ. Books and software marketed and shared current methods rely on a demonstration copy. However to really empower the number of users that perform such tasks in a meaningful way, the reward system needs appropriate attention in its design.

The INET Web OS will identify the song as an owned copyrighted material and pass this information along to the other user. Global tracking of this item is accomplished by the INET Web OS Technology. By recording the efforts of the personal coordinator marketeer, an award can be given. Integrating a reward system with complex media publishing is a healthy boon that relates the potential of financial gain to personalized marketing practice where individuals have a relationship. The end user will not receive infinite play rights of the audio file. This feature actually works in favor of advertising, eventually making the user buy the song to listen further.



Rental of Video movies over the web is becoming common a playback feature. As most films are marketed by showing a preview that summarizes the story or aspects of the story telling, the INET system plans on strengthening the salesmanship power of a customer. With video, a particular segment of it may spark a laughing relationship between two friends. The sharing of a limited time segment of a movie in addition to offering the showing the film preview will entice further discussion between them. This gives a stronger probability for a sale or rental. That is, customers that buy are made one at a time.

By managing the link, with quality, number of playbacks and frequency of use, the implementation reduces illegal use of content while not damaging the consumer relationship. The software rules of temporary license may vary based upon the medium and the product specifics. Some digital data objects may not allow any transfer or sample at all.

### Business Persona Protection

Businesses that own networks of computing terminals must be able to effectively monitor and administer the Web OS IIP feature. Monitoring the use of computing time for personal verses business time processing will give information auditors the much needed statistics during the calculation of profit margin. Monitoring all communication to be fluid within a specific style of business conversation is also very important to retaining the professional identity of a business. Two people may use an unofficial friendly tone during an email. The email also contains a payload of valuable concepts. During formal review, the friendly conversation attributes would be deemed inappropriate and most likely an embarrassment to the open party. The INET Web OS system will be a good business partner by warning the employee of the undesirable clutter during editing and before transmission.

Other aspects of a business's persona and their practice within the global information consortium may require specific rules of conduct to be defined. Rules of conduct can apply to legal terms, specialized medical formats, formal business functions, or even company management desires. Functionality for these standards of practice will include their necessary page layout. A header and footer may be required before transmission and should be incorporated within the editing interface for preview. Some companies use logos and business signatures upon communication as a standard. The rule based engine will incorporate document template formatting as well. Providing an in-line retrieval of the interface standard to match the document transmission can be accomplished several ways within the user interface mechanics. Selection lists, or context sensitive keyword built within the compose portion of the email system is a user friendly feature.

## Information Sanitization

Providing dynamic parse data rules for [information sanitation](#) that relate to business intelligence will reduce security leaks. A corporation has a custom inventory database. There are two columns within that define price. One price is wholesale while the other is a consumer grade price. Passing incorrect price quotes is inconsistent with the company's sales procedure. Before transmission, and during editing, sensing this information through cross reference, drag drop functionality or paste functionality is very important to the security of a business. Another type of rule can be defined that distinguishes access privilege by the communication recipients. That is, some people may not be privy to such a database report.

Building a linked system to the company's business persona (projection) can remove imprecision during critical thinking time by its customers. Business and analysts are invited to create an information standard platform of their information systems and business knowledge during the definition and configuration of the INET IIP. The conclusion that these rules must be manageable by a business must not impede the flexibility of the system and the user interface. The rule database will also be the subject target of hackers and must be a secure access information store. System functionality for business and consumer processing must include tracking compliance within the [Sarbanes-Oxley Act SOX \(American\)](#). Modern systems of this nature are identified as Enterprise Content Management and are facilitated as the server based processing components.

## IIP Dialects

Providing an IIP dialect, that is packaged as a rule database along with any other of its dependencies, can be a prefabricated intelligence system created by industry experts. This information package is identifiable as a system administration choice and as a security entry point. The system is object oriented in nature providing for the feature override and inheritance of rules within its searching algorithms. The capabilities of software installation and use control the searching context within the rules of conduct. Software installation can create new rules of interactivity and use guidelines for application and operating system use. A common distribution combination will be with INET User Sphere (desktop or workspace) deployment. For example, a user wishes to refine some information standards for their home policies.

Transfer or retransmission of a user's desktop operation (remote access) to a public terminal using a password key must inherit the rules of conduct the terminal publishes. System administrators may wish to limit the search and retrieval of entire noun and synonym domains. Or limit access to a specific list of web addresses. In modern system design, third party tools provide this in a poorly designed user interface experience. A user requests the information and waits for the server to respond. The IIP system will reduce this cycle to user interface operations without a large amount of server processing.

Entry and management of the IIP dialect can be provided based upon varying levels of scope; granularity. These rules can be linked to system wide use, a formal user profile or user group profile. Common dialects will be included with the INET Web OS that portray an equal division of use properties; public terminal use only, safe Internet filtering, business communication, personal communication, age group communication, game top and educational communication.



The monitor of these events (rules of conduct) and their consequence upon the user interface will vary greatly. In some scenarios, blocking operations and functionality all together while in others the logic will provide a warning with links to legal ease. Censorship contexts may be defined consisting of textual properties, image analysis, and audio analysis. Information views of digital data objects will be censored of the inadvisable components. As well, the system will allow hand modified censorship digital replacements to be used in-place if the digital data objects are authentic and owned. For example, to filter professionally an audio source of slang can function within the artistic range.

Specific use of hardware and its functional operation can be affected by these rules. For example, blocking all audio playback, recording of audio, picture taking or viewing video content is relevant to some system administrators. Letting audio and video be streamed only from named resources is another instance. The granular control over hardware and information censorship will be one of fine grain to allow complete description and optimization of the desires of the host computing resource. Useful and feature filled experiences during terminal use can also be more secure than modern operating system use. Typically, most intuitions block the entire process of software installation and use. It is invalid to identify all software as invalid resource.

Rules of conduct as implemented in IIP will indeed brighten culture barriers. Softening the rights of access to offensive material, user tolerances can be defined to reduce the emotional impact. Rule definition can be based upon gender, age and user preferences. The use of the intended media broadcast attribute tags will be a primary source of the search parameter query. For example, these tags can be used during search of the rules of conduct to provide copy protection of textual data. If the textual data has a copyright protection invoked the interface will not allow cut and paste without tracking using an MLA format. These rules of conduct are extremely flexible in their interpretation characteristics. The format provides a syntax for Boolean logic operations that refine the formation of inclusion set and exclusionary set information relationships.

Providing the necessary format for common business operations must not impede business productivity. The target goal of using an IIP dialect should improve business performance. The many resulting facets of digital communication can be difficult to measure, yet must be accountable on the bottom line. Providing IIP dialects for small businesses will be specialized. For example, an IIP dialect will exist for a restaurant, a small store, or an medical facility. Each dialect will start implementation use void of any user input. It is expected that the individuals heavily modify and enhance the rules of digital data conduct. Yet, giving a template that is a starter kit will help with deployment. This does not detract from the completeness of the shipped dialect however, a fully puffed model. Even a specialized consultant position will spring into existence requiring legal finesse as well as knowledge of the INET Information Integrity Portal (IIP) platform component.

Providing a safety-net for unsuspecting users is very important because the crimes that result are important legal issues. However, most judges are shrewd enough to determine if a Cybercrime is professional and intentional. The INET Web OS Information Integrity Portal (IIP) is designed to prevent unintentional crimes while controlling the access to intentional crime paths. IIP is also designed to censor communication information and access privileges. The system provides a highly granular filter that restricts the use of inappropriate language and imagery. Nevertheless, the image filter is not fault tolerant as some forms of work can be manipulated to pass through. With an on board info-structure in place to handle Cybercrime and the investigation of such crimes, resolution and new searching techniques will be a viable partnership to explore with the appropriate information specialists. In conclusion, the INET Web OS will provide an interface for publishing data that allows control over user identity reflections when necessary to protect users from Cybercrime, crime planning and inappropriate content.

- [ConnectSafely.org](#)
- [Geotagging](#)
- [Moblog](#)
- [Cybercrime](#)
- [Spam](#)
- [Cyber Command](#)
- [Censorship](#)
- [FaceBook](#)
- [Twitter](#)
- [Social network service](#)
- [Anti-piracy](#)
- [Intellectual property](#)
- [Copyright infringement](#)
- [DeepDyve.com](#)

- [Counterfeit](#)
- [Identity theft](#)
- [Data remanence](#)
- [Gutmann method](#)
- [Secure erase](#)
- [Undeletion](#)
- [Berne Convention](#)
- [Indecs Content Model](#)
- [WIPO Copyright Treaty](#)
- [Sanitization \(classified information\)](#)
- [HDDerase](#)

## Sensitive Data Systems For National Intelligences

In modern day, the hacker is ever prowling within the realms of secret government data. There are many forms of hackers that create many types of disruptions. Most of the time these individuals are nuisances compared to the true intelligence work of a terrorist. The work of terrorists using secure data must be thwarted. Because most of the leak problems are internal with any intelligence agency, the only way to truly drive spies out of a system such as these is to change every operating system, computing hardware, and all encryption methods.

There are corporations, some even with military security clearances, that would stand to earn large amounts of money from such a prospect. After all, to consider every national employee of every country is a large group. The development efforts would at first seem daunting without some prospect of rapid application and OS development. My best advice is to use a virtual machine, web network technology, and all internal development teams. Developing some form of a virtual machine like the Java VM. However, Java does not support all of the critical runtime that a secure data facility will need. Therefore, the best alternative is to use a macro mnemonic virtual machine design like VLISM.

A machine such as VLISM is designed as a self sustained engine capable of running on any modern hardware with high performance. A self sustaining engine is one that can be adapted for new language technology. Facilities must use hardware provided by Intel or Motorola for best industry supports. The VLISM technology supports current hardware assets owned by many facilities that will minimize initial transition costs while allowing staged migration. Providing a robust web service can still use the tried and true UNIX and Linux environments to support user friendly graphical user interfaces. This is the one way a national employee can be sure that secure data is safe. And secure data will be safe without the hindrances of outside corporate developers already ridden with foreign intelligence agents unknown. A system that is developed internally will not have published security holes that are widely known about. To truly propel the efforts of multiple levels of cooperative data management, VLISM is a fat model to expand upon and secure. Within this book, numerous examples can be found of how rapid application development can occur. Providing a bullet proof high performance macro mnemonic virtual machine will ensure the highest success and longevity of failsafe operation for many generations to come; the best investment of resources.

## Sensitive File Management

The INET Web OS provides a specialized file attribute for sensitive data. This file attribute allows an administrator to specify options that facilitate secure document and application handling for security professionals. The file attribute conceals the related catalog search information from generalized searching by placing the index information into a separate database. The operating system allows centralized management of this data file attribute placing the contents of the file as harder to view. There are several configurations available for the management of sensitive data. These configuration options provide different capabilities that are reliant upon the user's security rights. The sensitive data attribute option works naturally with applications, data, encryption and pass-codes due to its inclusion within the INET Web OS file system. In any instance, the recipient of such a file or object will need prior configuration within the user access rights database managed for the network.

Several configuration patterns are available that are installed as a grouped set of base options. The system provides each of these functions in a cohesive entity form while the underlying feature rich functional control is distributed within many subsystems. This offers fine granular control to the security system administrator during configuration. The Sensitive File system is integrated within INET IIP to ensure low level protection. It should be realized architecturally that INET IIP is a compiler related function as well as installed within terminal services of the INET Web OS. To assist with typical internal regulations and names that many secure organizations use, several features and functions can be grouped together under a security super set implemented as a named security privilege. For example, the United States Marine Corps, a department of the US Navy, has extensive policies for physical security. Each security component is labeled and named as a code (see [Marine Corps Physical Security Program Manual](#)). An organization such as this will need to use their own names for each type of security access privilege. The INET Web OS provides this capability within the INET Sensitive Data Administrator Console.

One configuration option of the sensitive file support does not allow the information to be copied at all. The actual data resides upon the server in its original format at all times. The file cannot be renamed or moved. The low level disk manager also protects access to the physical location or disk clusters. The INET Web OS server ensures this. The file can only be read while the owner source computer is within network focus according to the client terminal. When a sensitive file of this configuration is sent through any service such as email, or directly copied, only an access pointer is made to the object. In its functional implementation, a pointer link describing the access location, access method and encryption technology used is created. The clone file link can be copied as permitted to multiple locations within the network as a cloned resource. A client may even use USB key drives if the configuration permits. The protected resource can be configured so that it cannot be accessed outside of the secure network, even with the clone file.

The sensitive data option works with all software naturally because of its intelligent integration within the file system. Alterations that a user may make to files can be distributed in two ways. The first configuration option is provided by using a random access edit format. The format provides the locations and changes that the user accomplished during an editing task. Using the random access edit privilege requires that the source file located upon the centralized network be locked. This does not prevent others from viewing the current source in read only. That is, only one person can modify the file. Changes are stored upon the client device using encryption. When the computer is connected within the secure network where the source file is located, the changes are applied.

Another option for edit provides real time updating of the file over the network. If the sensitive options are set properly, the modifications are checked in using the remote network connection. Only the change data is sent using the random access edit format. This real time merge facility uses encryption during transmission to complete the modifications. If multiple users check in changes to a file at the same time and collisions are encountered, the collisions are marked for manual merge and the two parties are notified. Any computer terminal that is using software to render the contents of the file will be notified of view pipe line changes. That is subsequent, buffer segmentations will automatically include the changes if the access to the file is appropriated through a sensitive clone link.

Functionally this provides an easy and secure interface for sensitive data file management. Less data leaks will occur while using this technique over time than the ad hoc technique provided by modern operating systems because of the focus. This is important to intelligence organizations that use sensitive data files numerous times repeatedly. Ultimately this ensures less errors are made during general use. One of the main risks when using the INET Sensitive Data facility is making sure proper settings are maintained using the INET Sensitive Data Administrator Console. The sensitive file attribute can also include read only and read write capabilities.

When any attempt is made to open a file of this type, a pass-code may be required first. The INET User Security Management facility and the INET Sensitive Data Administrator Console are used to configure specific terminals or user accounts for use of the data object. Program dependency trees can also be configured so that only certain software can access the sensitive data. When a file is labeled as sensitive data and a secure erase takes place by the file administrator, automatic erasure will be scheduled for any existence of the cloned file link automatically. As well, information copied from the document to other documents will be automatically managed. The INET Sensitive Link Manager will remove all hyper links that any documents within the network contain to this file.

If a user cloned copied the sensitive information to a USB key drive, the next time the USB key drive is placed into a drive within the secure network facility, automatic erasure will occur. Access to the sensitive file using the USB key drive outside the network will cause an erasure of the clone file link when a user tries to open the file.

The sensitive file can be configured to not allow any information to be copied to an alternate location by any software running upon the machine. This includes cut and paste of the document's contents. As well, IIP can be configured to scan textual information that is typed to limit the text to only new information not related to the in view document. IIP also generates protected memory access codes to ensure that only a named application uses the data. IIP makes sure the data does not travel outside the bounds of the sensitive data facility during named pipe operations, channel communications, local terminal disk activity, or API calls. In the case where the data is locked by another machine for update, the software will only allow the information to be viewed. IIP ensures that sensitive information cannot be printed. The only way information can be copied is by taking a picture of the video screen or writing it down.

Another risk that is managed effectively is for the professional is when they have to travel with sensitive data. During this use case, information can be copied or sent only to their device. The information is encrypted and requires a password for access when any program tries to access the data. The information cannot be copied to another location apart from the device that the individual is using. Optionally, accesses to the file can be tracked using a network verification. When this option is turned on, the file cannot be accessed without passing a network verification while the information resides locally upon the device. This is a good feature for remote work.

Sensitive data can also be released using a live person confirmation. That is, the operating system provides a queue operation for an administrator. Before access rights are granted, several documentation facets may be required for logging. The actual data file still resides upon the server. While using this system option, release of a file or a folder is dependent upon an official owner or manager. Before permission is given, a policy may dictate that the official owner must be contacted by the administrator. During which the several hard facts about the terminal and user may be required. This information is readily gathered in real time. Extended operations may also be required such as providing a video phone interview that clarifies relationship parameters. The call can be recorded and placed into the access log database. While waiting in queue, the sensitive data administrator either releases the information or denies the request based upon the results of the official owner interview. In some cases, depending upon the availability of the parties involved, the process may take considerable time. This feature allows an organization to build a process around certain types of sensitive data that is aided electronically. Depending upon the amount of resources available, the system can operate like a library resource thus depending upon a queue managed by the INET Sensitive Data Administrator Console.

The sensitive file system provides critical logging of all access and associated transaction data to a sensitive file. Before any data is revealed, specialized encryption occurs that is specific to the registered device. The system maintains the capability of real time review using biometric readings direct from the terminal. As well, current technologies like the [Smart cards](#) are also supported with encryption using an optional reader.

### Sensitive Database Management

Sensitive database access is an elevated technology that is in cohesive form within the INET Sensitive Data Suite. To provide easy to use functionality, sensitive databases are managed within the Sensitive Data Center Management facility. In technology terms and interface comprehension, databases are handled almost the same as sensitive files are. For the intelligence facility, this strengthens the process of access management. That is, features and options of both data storage mechanisms operate using the same protective principles and technology terms.

The underlying sensitive database technology for database access is implemented within the SQL drivers installed at the client and server machine. The SQL drivers implement encryption on a per database privilege that is configured using the management facility. These drivers are protected to ensure that they are the only technology that can access the database. This protection is ensured by using INET Sensitive Registered Device Drivers. During initialization and periodically throughout general use of the INET Sensitive Registered Device Driver, the state is managed to ensure authentication. The terminal, the driver, and the accessing application dependency tree must be identified at the server level to use the sensitive database properly.

The sensitive data implementation for relational databases is proliferated within the primary SQL commands. The *ALTER*, *CREATE*, *DROP*, *RENAME* and *TRUNCATE* statements are used to modify a relational database schema. These commands are usually only used by administrators or application setup procedures. If an application uses them to dynamically modify relational database schemas, then the application must be registered within the Sensitive Data Center Management to allow it.

The SQL statements: *CALL*, *DELETE*, *DO*, *HANDLER*, *INSERT*, *LOAD DATA INFILE*, *REPLACE*, *SELECT Subquery*, and *UPDATE* are protected for each database, table and record within an INET sensitive database. Users can be configured to not be allowed view of particular records. For example, if an application is used to display all of the employees of a particular department, some employee records may not be visible to some. The administrator can set these privileges using several methods. The first is by using a standard SQL user security statement to exclude information by user or user group. However, most features of this sort are established by a column within a database by application design. By using the column value (value, range or set), records can be included or not included within the result set.

Procedures for record elimination or record inclusion may also be instantiated as a range list. In which case, the administrator will receive a file describing the access privileges given to a user. These instructions can be easily scheduled and run from the management facility. Alternatively, the administrator can exclude rows from operating contexts by using the raw database browser within the management facility to mark the rows as visible or invisible. This security information is linked to the user and perhaps client machine identity. These security attributes can be named as a group that can also be related to other sensitive database operating parameters. For example, some tables or records may be only visible when the terminal is within the operating bound of the secure network. Data invisibility is defined within the INET sensitive data suite as non existent as far as applications are concerned. This functionality is implemented for all of the primary commands native to relational database usage.

Each of the commands during execution is logged and available for roll back when using the INET database technology. If an application or user goes haywire, the damage can be repaired easily. SQL injection attacks, if they occur, can also be sensed, tracked and negated. Network attacks such as denial of service can be monitored, investigated and corrected within a native reporting system. Typically rules of access are established as part of an application setup procedure, however these rules can also be managed from within the sensitive management facility when necessary. Each rule established is plainly shown within view within the sensitive management console.

Rights of access can be established for a user based upon the location of the user's computing device. Software that uses sensitive database access can even work off-line when outside of the secure network. This is a common practice for applications that generate a lot of database records based upon data entry of new records. This protective option means that new records are never sent across an open network connection yet the application is still operable.



When using the configuration of access granted by terminal location, it is important to consider application specific database requirements. Some applications may require that certain tables be present when an application is working off-line. For example, populated information within combo box controls are likely candidates for database queries. The Sensitive Data Center Management provides configuration options on a record, table and database level based upon the user's device location. This enables remote field applications to be used with sensitive data. The information entered during use of such applications is stored upon the client device in encrypted form. The data is synchronized when the machine comes within focus of the secure network facility. If data is marked within a database as sensitive and not allowed outside the secure network, the data will be erased immediately when the sensitive data terminal is turned on or moves outside the range of the secure network. Database records can also be updated real time from the field using encryption. The applications operate normally as expected with multi-tier and client server applications.

### Sensitive Application And User Support Management

Applications for the intelligence field may vary greatly in functional implementation according to computing needs. That is, through the process of analyzing data and data mining many new algorithms and procedures are introduced and implemented within subsequent programming logic. The ability for multiple intelligence organizations to manage a library of qualified applications deemed appropriate for a specific user base is very important. Without applications, computing hardware is useless. The INET Sensitive Data Management facility allows multiple administrators to set policies that manage the allowable software footprint within the machine. Each user can be unique. Each user may only be qualified for select applications. As well, tight regulations may be a focus that restricts the application selection to only those within the sensitive application library and nothing external. It is a known issue that external applications can introduce unknown side affects.

The Sensitive Application Management facility within the administrator console provides specific software functions that promote stable, healthy and productive computing environments. For example, new terminals can be configured in parallel for multiple user types. Another important feature - multiple existing machines can be set to a specific state. This state is ensured. Most importantly, the system provides the ability to manage these tasks as an item within a workflow life cycle. If terminal machines are not connected, the state may be forced upon next connection. All automation routines and processes are logged for later review when necessary.

Other options provide application support routing for individual users and applications. When software bugs occur, correction and distribution can be critical for the success of the organization. The bug report and subsequent software change can be applied through the route directly to the user's machine. The system uses the built in software management features of the INET Web OS to manage these tasks securely. Software assistance can be guided through secure remote terminal collaboration also. Software assistance and user help can be scheduled using a work queue.

To provide a data center operation facility for a multitude of data, users and terminals is a primary function of the sensitive data suite. The data center suite provides the ability to manage users and terminals from a centralized location with ease. Most of the distributed functions can be scheduled and operate from a queue. Within the facility, each software footprint running upon every terminal can be inspected and corrected to ensure proper state. This applies to individual applications as well as the entire software footprint. To facilitate a system that can become an integral part of standard operating procedures within an intelligence organization, the system allows the distribution of work flows. That is, the system provides integration with project management and time line plotting applications for management of a queue. This provides the ability to supervise a team that may handles multiple services for sensitive data management.

Several reporting facilities are available to the defined administrator within the INET Sensitive Data Management application. For example, an administrator can query all hardware that is allowed access to the network. This is important if a series of machines is deemed inappropriate for access; obsolete and insecure equipment. The administrator also has control to secure erase files within a device. Terminals can be scheduled for destruction if they include INET Acid Chips. Other statistics such as number of users inside and outside of the secure network are also important. For example, consider that a database design is updated to include very secure information that is not allowed to be viewed outside of the secure network firewall. From the console, the system administrator can apply the new classification as well as schedule the secure erasure of this information from any device. These services provide appropriate secure communication to users when necessary.

The INET Web OS provides the ability to configure encryption algorithms or a chain of encryption algorithms by data object, database or folder basis. These traits are managed effectively from the administrator console. The ability to provide encryption algorithms dynamically ensures multiple institutions using the sensitive platform options can effectively utilize their own resources. Ultimately as a center stage developed product, the INET Web OS can be effective for increasing productivity within the sensitive department because it is the base product. That is, their own development team will supply a specific encryption algorithm or group of algorithms that the INET Web OS uses.

Many functions can be associated with complex encryption algorithms. Typically the best practices of such systems operate using stochastic data as a key. These access keys can be assigned per file or folder tying the data objects themselves to an algorithm and private key. Access keys can also be assigned to databases, tables and even records from this facility. These keys can be stored separate from the objects themselves in another location. Internally, three user access privileges will need instantiation for correct operation. Access rights to the file or database, access rights to the private key record and terminal access rights to the network. The administrator management provides ease of configuration for each of these items within the user's profile. The highest risk for penetration is an illegal user having terminal access rights.

Terminal access rights are handled by the embedded device as an IIOS function separate from any running software or operating system component. The communication logic runs within its own ring and protected memory. These aspects of device operation are natively handled within hardware functions to provide a secure foundation for the VLISM rendering client. This is the primary subsystem of the device that handles TCP/IP and network communications. The layer is protected from any application and operating system component as these systems operate on top of a hardware private key encrypted TCP/IP stack.

### INET Sensitive Data Terminal

To reduce risk of terminal access rights being granted illegally, the system offers the institution of multiple methods to turn on the terminal. It should be noted that this type of terminal is based upon the INET Smart computing terminal, however other functions are stored within the BIOS ROM that provide secure terminal access. The secure data ROM USB key drive method offers the functionality that the key must be present in the slot for the device to operate. The USB key drive can be removed from the device providing a portable but physical security consideration. Removing the USB Key makes the terminal inoperable for any function.

The second method is using a physical key. The specialized lock interface is designed to limit picking. If any attempt is made to pick the lock without the precise key, the system will not function and will require professional maintenance to boot again. Optionally, the system can also include chips that automatically release an acid upon their interior that dissolves the important silicon components when tampering occurs. No maintenance is permitted upon the INET Sensitive Data Terminals that includes INET Acid Chips as part of the product package design.

A version of the INET Sensitive Data Terminal is designed in a form molded material that does not allow entry. The chassis must be cracked and pried open for entry. Forced entry upon units that include INET Acid Chips automatically release the dissolving liquid. The chassis also protects from environmental changes such as freezing temperatures, electromagnetic fields or other disruptive technologies that may be employed for tampering purposes to negate the effect of INET Acid Chips and intrusion detection. The INET Sensitive Data Terminal can also be set to activate the optional INET Acid Chips if the terminal is taken out of a given location radius. The INET Acid Chip terminal destruction process ensures that all technology and data will be in a nonrecoverable state within seconds. The destruction process ensures that the major terminal components cannot be reversed engineered.

Another method provided for terminal security is biometric identification. Biometric identification is incorporated within the IIOS subsystem to provide low level uninterrupted operation. Before the secure computing terminal device can be engaged, a finger print reading must be established. Alternatively, retina scans can be utilized. As a separate, password input device, the user places the cup over their eye. The INET Retina Scanner is a device that is integrated within the INET device. It is not a plug and play device. Once the input from the INET Retina Scanner passes by comparing the data stored in the device using BIOS, the device can be used. Perhaps in the future, a DNA sample can similarly be use to analyze authentication.

Last but not least is the common method of requiring a pass-code before the terminal can be used. An uncommon feature of this pass-code entry is present within the INET Sensitive Data terminal. The specialized pass-code entry routine provides measurement of the amount of time each segment of the pass-code is entered in. For example, during login, the first part of the pass-code can be expected to be entered within ten seconds. Then the user must wait for a range between ten to fifteen seconds to enter the last portion of the code. Within the implementation, no results are shown until the final keystroke of enter is received. The INET Sensitive Data Terminal can be configured to halt operation and use if timing tolerances are not met. As well, the pass-code length and strength are designed to be significant as strong pass-codes require. The option of BIOS configuration incorporates the use of INET Acid Chips with pass-codes authentication.

## INET Location Wafers For All

Printing full page documents will be a thing of the past. However difficult to overcome is the simplicity of walking up face to face to a friend, stranger or coworker and handing them a slip of computer printout. Email is the typical interoffice medium used. The INET terminal and operating system will introduce the use of location wafers. A location wafer is a small slip of disposable and recyclable paper that has an URL encoded within a small space. The location wafer can point to any digital resource INET Web Servers disseminate.

The location wafer will be read quickly and accurately by the location wafer lens; perhaps a bar code reader, radio wave receptor or digital camera. It is not known at this time what sensor configuration will be the most cost effective and within the realm of hardware user interface requirements. It is suggested that the optic medium be used. Two dimensional barcodes are a good choice. QR Codes are the modern deployment method. The INET location wafer will contain many forms of information transmitted.

Known as an object, the INET location wafer provides a business with URL communication in many formats that integrate more profoundly with art. A comprehensive look at the field of fashion can imply specific needs that make designs useful with technology devices. Perhaps the most astounding proposition is the ability to solidify brand names that provide multiple ways for clothing to be linked with identity information upon the web. The most consolidated interface with a consumer will provide unification and dictation of technology outputs (display and audio) such that it shows a long term marketing approach to art as it stands. This will make the process of scanning neighbor's clothing a common place practice. Art used within clothing designs shows that many experience emotions due to its presence on tee shirts and artifact clothing which is excellent for marketing.

As an example, picture an abstract rendering of vampire face upon a black tee shirt with the web URL encoded within the fangs. With this new technology friends can be linked to a selection of digital data favorites from the body wearing the cotton. This information will activate an interface portal upon a cell phone where videos can be played to characterize or emotionalize clothing with personalized options. The digital media will contain properly regulated copyrighted music. This implies that through design, a tee shirt can become a speaking entity with menu options. This technology intends to offer more graceful and funny methods of marketing and personal introduction. The application database system must provide configuration of output rules and offer a small portion of the screen real estate to be used for commercialization. Shirts without commercialization may cost more in digital add on features.

Business suits can transmit URL encoded information within the tweed patterns to entice the wearer to believe it is business body armor that represents a company profile. Other types of business identities can be transmitted for employees that work within the public eye. The work shirts of employees can offer a precise identity profile if need be.

Other functional units may use this functionality to advertise on the spot with posters, bill boards, manikins, statues and large costumes. In all of the use cases of this technology, the Location Wafer will be present to transmit URL data which is set to broadcast the publisher's desires. The system also offers intelligent marketing analysis that show historical accesses.

Some communication aspects of modern society lend itself towards using domain specific words in conjunction with art to obscure the brand name identity. To augment this visual and textual labeling with an identity code that is given real time can offer the capability of providing in the moment communication. One can say the word "Love" for example, and the acquaintance can hear or view the many emotions that tie digital data to that word for them. Some may choose numeric s for example "L1" ... Together, a given URL code and soft spoken word entry or voice recognition of a word phrase, used to produce an information portal is a very powerful communication instrument. Simplifying the matching probabilities of the voice recognition to the limited list programmed by the clothing wearer will ease mass deployment.

The INET Art Social Identity Server provides a business with the capability to offer cross marketing items to customers. The server component comes with many types of shape and image recognition software to make this feasible. A marketing agent using the system can offer secure on the spot electronic commerce to promote tangible goods such as baseball caps, clothing, or digital media. Large clothing manufactures may plan to integrate this functionality within their textiles.

For the consumer, an advanced phone applet is used for image capture. Perhaps entry of a reference phrase or numeric occurs and then the portal is shown. To solidify accurate recognition, the label will have to be plainly visible within the OCR software. The opportunity exists to use probabilistic matching which narrows the match using a centralized server to a specific clothing manufacturer's portal domain. The best case is when the website address encoded within the QR Code is recognized then navigation to a main portal can occur. The design of the label be constructed in many ways. First QR Codes, can be sequenced to offset some payload data for textual branding. That is, the code appears to be broken into two parts while text is in the center.

The INET Art Scatter Encoder provides the artist with a mask that is identifiable as an abstract shape. The shape of the encoded data can be modified to suit a specific metaphor. This configuration value must be stored for reference later to be used by recognition algorithms upon the business server. Shapes as these provide the same effective use of a QR Code, however, they adapt based upon a key code which the shirt wearer will know. The key code is used to tune the recognition of binary data within the art.

The location wafer as a means of advertising will allow inexpensive distribution of full motion video, applications, music and other materials to consumers. A location wafer could point to a secure location that must be released to a named party. Example, a new client is registering at the library for a new membership card and the form needs to be filled out. The location wafer can be integrated with the product being sold; a cup or candy wrapper for example. Printing these items for distribution on a standard 8x11 paper must not be a foreign task either. This gives optimum redirection and cost effective advertising capabilities to a seller. Even providing a lottery of sorts would be a fanciful game to play by using location wafers on disposable morning coffee cups. In short, the INET Location Wafer and INET Art Social Identity Server can be a newly felt kiss on the lips from the lady of your dreams, the new song from the metal band, an entire newspaper or the business card from the billionaire.

- [Barcode](#)
- [PDF417](#)
- [Aztec Code](#)
- [MaxiCode](#)
- [ShotCode](#)

## Optical Character Recognition For Data Entry

Optical character recognition is a field of computer science that is well established. Typically there are two distinct groups of recognition that categorize algorithm complexity and algorithm accuracy. Typeset and hand written, hand written being the most difficult because of the variance. Both will be included with the OCR algorithm package as it is necessary for the everyday use.

OCR and its integration with operating systems is typically that of a specialized application. The process of OCR takes on a task centric focus which for some very useful needs detracts from the technology. Some systems require image input and rely on external programs to perform the scanning device reading and image storage. A typical OCR application will produce standard text files after recognition and then the user can edit the information with another program. The entire process requires three or four distinct operations making OCR difficult to use for data entry purposes.

The INET Web OS model plans on including OCR as a means of data entry for applications. Imagine the system of shipping and receiving, a physical and electronic domain. Orders are placed onto trucks where they are driven to customers. When it arrives, the business owner signs the receivables slip after careful examination; a piece of paper.

The customer must then update their inventory system to match the order exactly. If they differ, a hand written number, note or scratch off may be there. With the INET Web OS, shipping slips can be used as a direct interface of data entry for the inventory system or what ever application might be in place. The INET Web OS OCR model provides facilities to set repetitious and multiple segment entry based upon page layout and row/column arrangements; automatic iteration.

### Single Line Or Batch Of Papers

The integration of OCR as a data entry facility must not be cumbersome nor intrusive for the single time use, the multiple field dialog or the long term repetitious (also sparse) usage. For the single field, a preview image temporarily overlays the user interface allowing the user to draw a rectangular area selection of the needed contents. Row by row iteration allows columns to be set for each instance. Upon confirmation, the next row is entered into a new dialog. In other circumstances, document layouts that span a page require field to area mapping. Page by page confirmation will allow a good entry flow for users. The system also provides for cases where two or more pages are used to collate entry of information.



The memory of the document layout, row and column assignments are contextually tied to the data entry screen, Invoking the memory map, if desired by the user, is accomplished by using quick access buttons upon the countertop. The user clicks the button and an image overlays the viewing area denoting the mapped field information. If minor space adjustments need to be made, the keyboard and mouse can relate the map more precisely. As well, intelligent location assessment can be an automatic operation. Its adjustment of the individual field mapping, row, column and page document field mapping positions are facilitated by previous use data and recognition of white space that is typical of such paper reports.

Document field mapping can also be set by parsing the data after recognition has taken place. Such variable document formats are present in American State Identifications (bar code information). In this case, the user can use field description keywords, assign logical pixel space and detect upon a maximum ASCII text length. A scripting interface is also present for advanced users to provide logic for parsing, translation and regrouping.

### EBooks And Copyrights

OCR on the INET Web OS will allow creation of eBooks that are stored within the user's electronic library easier. The creation of eBooks allows line drawings, illustrations and photographs to be stored accurately. As an integrated task, users can enjoy books from any location without the need to carry the heavy weight of a paper book or hard back. Creating an eBook does require that the user own a copy unless it is considered public domain. The digital media rights management system will provide the necessary links to publishers to ensure copyright infringements are not grossly violated. Optionally the user can buy the rights to store a book electronically. A service that will be integrated with the digital media rights management facilities and the publishing house. The funds will be processed for the author as they should be.

### OCR In Interface Practices

Optical character recognition during the process of the Hidden Markov algorithm develops a fuzzy numeric that represents the probable character (task's) accuracy. This information is important to ensure the integrity and accuracy of the translation. It may be reflected within the user interface using textual color. Moving the text caret over a word and pressing a system hot key presents a percentage graph with an alternatives list. Moving the mouse over the word produces an equivalent functionality. Lighter colors reflect high probability of an accurate matche in character or word. This is especially important in handwriting where recognition errors are more likely. INET Textual fields have spell checking as an intrinsic feature and this does aid in the process of OCR (alternatives list). Other special purpose entry components such as date, numeric and financial amounts rely upon internal self checking format verifications for entry.

## Unsupervised Cataloging

It may be favorable to have the output of optical character recognition be transferable automatically to an associated application upon scanning. The INET Web OS system includes contextually based cataloging of pertinent information using selected text (INET Wiggle) as the main entry point. For example, the contextually based cataloging process will show a list of applications that store names and addresses; contacts when a name and address are Wiggled within the web browser. Some books that are image only such as is the case for public domain materials would be well suited to have a definition appear for. These on-line image books will be converted to textual data and published within the library to allow catalog and search operations. It is desirable to have OCR function within this capacity, yet structuring the presentation interface will be different from that used within application data entry use.

Consider the times when needs of this kind may occur; drop some notes off at your desk or home desk, they should be entered into the appropriate database catalog. It is even seen to have an INET Robot Paper mate that will handle the chore of placing it for scan. Most of the time, while scanning multiple pocket items, the slips of paper will be related. A stack of business cards for example. The cards or note slips can be placed spread in oddly rotated positions. The system will offer a stream line process to scan items in batch as well as a list of appropriate target applications. Upon the list, the Note Taker, Calendar, Web Links, Bookmarks, Contacts and Formula calculator should be readily available.

As a stand up and walk away feature, the system will make use of the response time window effectively. If no items are selected, that is the person just dropped the items off at the basket, the default input application will be selected at a specified time expiration. Grouping the items within one entry segment, perhaps cataloged within the calendar by time of entry will be beneficial for access. Since the task was communicated to the device in a non interactive format, the processing status results will be iconic. A basket of chores the computer has accomplished while you were away would be appropriate.

## Picture And Live Video OCR

The OCR engine that the INET Web OS provides is one of the most versatile on the market. The OCR engine enables live video to be used for recognizing various forms of disbursed information within an image or video. The additional text information is stored within the captured video file or image file noted by coordinates. Book type faces, compact disc, and other consumer product labeling type faces are supported for easy input. Many users will use these features for resale and catalog building. A user will simply point the camera for input of the text. The orientation and number of items is accurately handled so that information is rotated is needed.

Using a live video feed from a camera is an extravagant feature to research. The most likely target use will be still frame photograph oriented but not exclude video stream. Imagine going around the town with a camera, video camera rolling. There are lots of words, phrases, pictographs, and ideograms that can be mapped using OCR. In the scene, these items will be cluttered by the common masks of the environment. The best practice will allow complete processing of the entire clip(s) as an off-line batch process. The algorithm will relate the textual data within the video clip file. The textual data will be linked to the frame by the bounding polygon coordinates.

It might be pleasurable to search this data by text keyword to find film segments that possess the text: Street or restaurant name for example. If the integrated map system supports a spell checking search, the words, store names, and street names can be corrected after the formal OCR process. Using the Geo-tag information will be important to localizing the spell check domain.

Long periods of motion are continuously processed as riding in a car with a mounted camera system provides. The most likely use of a small camera device for this purpose will be outside the car window as it is pointed directly at a large section of textual information as an introduction. Like a word that is spelled with very few lights abstractly. Many street names are fictitious and are not official dictionary words. Providing an interface of the data as a spell check extension dictionary will require some modifications by the map system provider. The retail market will be enticed with heuristic models that relate their inventory database information to the location of a store's goods that are recognized.

Providing the capability of searching multiple video clips as a single search domain will strengthen the server features. Several people may wish to tie several videos together that are in a general area. The use of Geo-tagging will be advantageous for cataloging in this circumstance. As well, the technology does not have to be public domain access to be used. The Optical character recognition will be integrated with the cataloging operations of an individual's home or a private system. This will allow private use of Geo-tags that are not broadcast within the public eye as a protection of personal identity. Optical character recognition from a binocular stereo camera will also function within this capacity as the algorithm accepts three dimensional image formats.

All government vehicles will utilize the OCR technology for recognizing license plates of all cars surrounding the vehicle. This information will be used to record with historical indexes, the owner, position, route direction, and speed of vehicle. As well, indexing current status of insurance, registration and emission tests will benefit targeting unsafe and dangerous drivers. By placing a reference of spherical information on the cruiser's dash for previous intoxicated driver offenses within the found car, repeat offenders will be less likely to drive on the roads very long. Maybe one day, location wafers will be inscribed on all license plates for easier recognition. The INET OCR Technology has specific recognition rule sets that are designed for vehicles and their license plates.

The INET Web OS document management system will also offer the use of location wafers that link to on-line sources of the information, an option upon the printed material or separate card. In both cases, data entry will be managed effectively for the client as an integrated user interface operation. In conclusion, the interface for OCR as an integrated data entry component within user interface spaces will increase productivity and accuracy for many computer users world wide. The user will have to have a scanner or a camera for image input.

- [Optical character recognition](#)
- [Free OCR.com](#)
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- [Segmentation Free Bangla OCR using HMM: Training and Recognition](#)
- [Address Extraction Using Hidden Markov Models](#)
- [HMM Based On-Line Handwriting Recognition](#)

## Relational Database Management And Reporting Object System

There are several types of storage facilities that can hold structured data such as a flat file, an ISAM file, a relational database and an object oriented database. All of which can be used for the same general purpose. Each of these forms contain attributes either located within the interior of the unit or exterior within a program used to access them. Some attributes are field data type, precision, keyed indexes, server stored procedures, SQL and relational design specifications. The INET Web OS will deliver access to all of these facilities in a multi-language form. However, the main technology of interest is INET's formal RDBMS engine. It can be used by the file system api transparently, a Data Access Object API and by embedded SQL within any programming language. The RDBMS facilities also include functional applications such as Database Management, Database Transfer, Database Translation, Database Entry, and Data Reporting.

The ability to create database connections, manage databases, transfer databases, translate databases, pass database tables through email links, and generate multi-user data entry applications is a focus of the INET Relational Database Management and Reporting Object System. As many developers are acquainted with relational database technology, in short it can be a complex subject. All of the INET RDBMS technology implementation is functionally equivalent to modern database systems such as Oracle, Microsoft SQL Server, DB/2 and Sybase. Discussed here are new technologies implemented.

The database system allows connectionless editing of database entries for times when no Internet connection is available. This is accomplished by saving the data locally upon the device. A commitment of information is performed intelligently when a connection becomes available. Conversion routines may be applied to some data before it is updated, deleted or inserted. The most common conversion will be applied to the primary key used within a record.

In most data architectures, when a new record is added to a database, a primary key is assigned a unique ID. This ID can be anything that is unique but typically is an integer or a GUID. When a numeric is used, sequence conflicts can occur resulting from off line time. Therefore it has to be modified to be unique within the database. When a GUID is used, the conversion will not have to take place. Most database models employ the use of integers as a primary key because of indexing and search performance.

Another typical conversion example would consist of a list values that are identified by an identification number. A common data architecture used for such scenarios is that an ID is stored within a record while a secondary list contains the same ID and a long description phrase in another table. A conversion will take place if the list identification numbers were changed while off line editing occurred.

Such conversions are common and typically programs or stored procedures are written to update all of the records within a given database. The INET Database Management System provides a chain object architecture specifically for record conversion that can be executed upon a record during synchronization. So if multiple ID translations, column additions, or structural storage changes take place while the client is off-line, based upon the schema version that the DBMS holds internally, several conversion processes can be applied before the information is committed to the database.

The INET RDBMS plans to support web application technology better than any modern engines do in several ways. First with performance enhancements built for network and web applications. Secondly by incorporating RDBMS functionality in common user applications such as User Sphere Explorer using UniGlue. Third by providing the ability for everyday users to create very usable data entry interfaces for multiple devices. Forth, by accommodating several output formats for system interoperability such as ODBC, XML, JSON, YAML and HTML. And finally, by providing support for multimedia data such as audio and video within the RDBMS for storage and direct streaming. Any developer will recognize the importance of these additions.

Within the client dialog population and access code, field names and values are matched to byte locations within the stream. The retrieval of data at a byte position takes place as a result of compiling the VLISM code to match the data model. These properties are commonly communicated by the SQL driver using the SQLDA data structure. For value updates of a column, type safe objects as well as binary storage of data within the database chunk are used to properly store data. As database systems are typically designed, these work items are placed into a transmission queue upon the client before offloading the management of them to the server. Once at the server, another queue is typically used. These logical features provide a quicker response and visual reaction time upon the client. At times of bulk database processing, direct record level processing may be more appropriate than using a work queue on the server and client to achieve appropriate performance.

Quick data access to storage is located at the base layer using VLISM. It is accomplished using pre-calculated location descriptor values within an index. The client side values are matched to the internal server index in a way that decreases network bandwidth. The beneficial speed gained in access is solved at the server level using numeric values representing the absolute disk storage location. The retrieval and update will be one of the fastest on the market; a driver pass. The database engine includes its own buffered IO system for performance.

The enhancement is based upon the assumption that most data existing on disk must be considered to be inscribed – unchanged - on the magnetic platter for long term consumable periods. This allows a performance enhancement within the indexing algorithm to occur. As well, the fact that file systems rarely relocate data after it is stored allows a further refinement in the number of indirect indexes used to access the data. That is, when a query is performed upon an index for a key, the index may contain multiple location descriptions. If the direct disk access location descriptor is valid, it will be used. Index search performance is a major focus of the INET RDBMS. Implemented algorithms include the Binary Search, and Extendible Hashing Table.

Once a match is found within an index, the associated location descriptors may be used in several different ways. This is directly related to the access API used in writing or retrieval of the linked data. A location descriptor maybe the actual parameters needed to pass to the disk device driver which circumvents the file system logic. That is type of call uses the hardware more directly. A location descriptor may also be the byte offset within the database blob which can be accessed using the random access file API. As well, the location descriptor may be representative of a logical index that is used as a variable in a formula that computes the byte location within the database blob. Logical indexes are the typical storage format for most modern database engines. It may be a record number which is multiplied by the record size if the database records are of a fixed length. There are many creative ways they are used in a segmented blob format as well.

These location descriptor numeric values are not actually communicated to a client as they may be a large size in bytes. Rather, they are mapped to a smaller numerical precision boundary as clients will not use the information directly but symbolically. Depending upon the number of fields, they may be represented in small spaces such as a nibble or byte. This saves some network bandwidth. These identifiers actually become both the symbolic name for the field as well as the representation of the location on the server through the indirect index held by the INET RDBMS. When the client requests the data for read only purposes, the location descriptor cache and subsequent logic is not performed.

During the update of a data field, the dead space within a record will remain after it occurs if presented with a smaller or equal sized value. Relocation of data within the database blob file occurs when data within a field grows immensely. The INET DBMS system provides an extra data descriptor block for cases where the data does not grow very much, or the number of edits to the original data are few. The decision for using this storage feature is maintained appropriately considering performance.

The extra data descriptor block can be employed to store the delta change commands made to the original data. The delta state commands are stored within it before it is written out. It should be the only disk update. When the database is queried for these results, if it is not in the record cache memory already, the delta state commands stored within the extra data descriptor block are applied before it is returned.

If the delta state information reflects changes to the original data that are definitive of a lower disk access time, the delta change commands are applied directly to the field storage area on disk. This skips using the extra data descriptor block for that field. This is the normal case for most storage engines.

The delta state information arrives within the same position that the corresponding column value would within the SQLDA data structure. The contents of this field is formatted as a delta state command structure. This package is maintained by functionality associated with the GUI control's work memory during user editing. Changes to database fields that are accomplished algorithmically by using string processing functions or other API methods can provide the same performance enhancement using a common DBMS support object method on the client before data commitment occurs. This performance enhancement is very transparent to a developer while processing the field data.

Delta state information gathered by GUI control data can include additions, insertions, and deletions for multiple areas pertaining to the original data. Each delta state function is maintained for performance oriented gains within processing. That is, performance is increased by executing the least amount of disk activity. For example, if only one character is inserted within a five kilobyte blob, the extra data descriptor block will contain its insertion point and character while the default data storage area remains unchanged. It is a case where the extra data descriptor block need only be written.

The network throughput is increased due to using delta state information when data already exists within a record's column. The INET Octopus Controls provide this functionality by OOP inheritance. The control object base contains a set of routines that record edits. During the request of such data, the data is flattened to provide the smallest stack of change edits. As well, for system interoperability, the format of the delta state information is transposed to a required transmission form and database field storage format. A standardized object exists for the storage and unwinding of this information which operates as a reused object both within the INET DBMS and client network data commitment transmission phase.

Key indexing operations, the mainstay used during a search, occur at appropriate times for optimum performance. The database indexes are maintained using a dirty memory buffer algorithm whose modifications are queued for output. When one type of location descriptor becomes invalid, an attribute is changed within the index to reflect this. For bulk operations, indexing is typically turned off and then back on after processing.

At an intelligent time, a server side DBMS process may flatten the extra data descriptor blocks to apply the delta change commands to the default field data. Other functions such as reorganizing field data storage and indexing of keys are also applied. Slip lists used in textual searching that many websites employ are also a supported field index type pertaining to textual data which may be computed at this time.

A query language phrase used by a client often has many repeating syntactical elements which are communicated during network transmission. The SQL string is also parsed repeatedly. The INET DBMS will communicate with the INET Database Management System client driver when these situations occur. In that, only the changing information such as "where" clause data is communicated in the future. Thus a vector array of queries develops upon the server which is invoked by an ID and change data by the client. This performance technique is particularly useful in programs where the client is driving a batch SQL process upon the server.

Many of these performance enhancements will be useful in the indicative use of web server applications or distributed GUI applications by multiple users. Utilization of them does require some extra storage bytes however the delta state transmission of field edits requires less transmission bandwidth, a much slower resource. The implications can be great as large text blocks maintained by network oriented content management systems are commonly modified in this way.



The INET DBMS operates in similar manner compared with other database engines during a programming language's use of embedded SQL. Typically any SQL relational database driver uses two data structures to communicate with the database server from a client commonly named SQL Communications Area (SQLCA) and SQL Descriptor Area (SQLDA). It should be noted here that each version of these data structures is based upon the SQL driver and the database server type. Therefore one database type is not compatible with the other. The INET DBMS provides the same standard operation in that low level communication is accomplished by using SQLCA and SQLDA. As well, all versions of ODBC API levels are supported.

### Modern Object And Processing Supported

The implementation of stored procedure technology and SQL processing is efficient in that it achieves native execution speed by using the VLISM JIT. Since the VLISM JIT caches code already compiled once, multiple invocations execute without recompiling a program or SQL statement. The INET Stored Procedures may be composed of any language supported using VLISM and the programming language parsers. Without modifying the natural form of SQL, the same processing capabilities are available to in-line SQL statements and stored procedures mentioned in the following sections. The properties of any object can be used in queries efficiently.

The INET RDBMS provides support typically found only in object databases and third party tools for multimedia. This is accomplished using internal tables associated with the media object. The system supports streaming video and audio in any given format. Typically these files are large blobs and are therefore placed into a database system directory with a transparent file link embedded within the record's column. When SQL clients query this information, client APIs can name the column source directly to instantiate streaming of the media. Since the object is actually a file blob, the contents can be transferred using the blob SQL reading facilities for any type of process such as downloading.

Other features of the embedded media system provide transformation of the media to select types. Transformation of the video content and filter processing are supported as inherited by the INET Audio and Video subsystem. Image storage and processing is a common application request needed in many web applications which is supplied. The ability for RDBMS to classify images and perform image processing using filters upon a given data source is coupled with the platform's immense image processing API. Each of these technologies are supported within stored procedures through object oriented inclusion. Multiple types of media supported within the INET OS such as 3d Models, document formats that may be processed using stored procedures.

Most RDBMS do not support object formats. Therefore a network application must perform this transform. For example, a typical PHP server program will gather a result set from a database and transmit it as a JavaScript object to a client using it through Ajax. This is accomplished using the PHP API named `json_encode`.

The INET RDBMS is efficient in that data can be output as JSON at the proper software execution point. The INET RDBMS supplies common object notation and communication formats that include ODBC, XML, JSON, XSL/XML, HTML, and YAML as a base feature. The INET platform provides an extensible and efficient method for data formatting using an object oriented approach. It is extensible in that other formats can be added at the same architecture point where all other formatting transforms are executed. As a result, an object notation transform occurs only once at the data retrieval layer and thus saves server processing power.

The INET RDBMS makes available web document parsing (HTML, CSS, JavaScript) within its stored procedures. Many database systems lack support for this common input that developers need. When XML is used within a column, the standardized XPATH language can be used for searching and injecting value changes within it using stored procedures and even within adhoc SQL statements. A standard XML DOM for document traversal is available for data processing. Other object description formats such as JSON, YAML and developer implemented formats are supported as native language objects within stored procedures and SQL. The APIs included offer robust methods of data extraction, formatting, and document hierarchy control of web documents through use of the standard w3c Document Object Model.

### Browsing Databases In Common Interface

Browsing databases on the INET platform in raw state will be easier. Consider for example the generations of Microsoft Internet Explorer. First being a stand alone web browser and then becoming a main user interface ingredient of the file system browser. With a web browser's ability to place items into columns, change fonts and display images; it becomes an excellent information layout utility. Likewise, the INET Web OS User Sphere Explorer will provide this interface beautification and instantiation using the same type of technology but only faster in its CPU instruction execution; VLISM.

The source of the code may be a browser language based solution at the server level, yet stream instantiation will use the VLISM format platform technology. The VLISM based layout facilities will be used to provide rendering of flowing data with multiple formatting and visual characteristics applied.

As a common data object browsing portable, INET User Sphere Explorer provides an interface that compels and focuses on data objects and the information within them. User Sphere Explorer will host the editing interaction of information that also includes information stored within a database. The INET Web OS User Sphere Explorer provides a program architecture that does not interfere with a developer's ability to glue multiple data viewers and editors together to form a package. This package is obviously related closely with a data object format and their storage medium. Hence a data viewer and editor are two distinct interface formats. That is, one is a summary viewer and search mechanism while the other facilitates preview and editing of the contents.

Users or developers can store an interface object for a database table or view using the INET RDBMS. As well, the columns within the INET RDBMS can be related to an object oriented Octopus GUI element. The INET RDBMS can develop an UniGlue application from these stored objects. If such objects are not defined, the database schema is used logically to create an interface. At times such generated packages lack all the desires a publisher wants. The INET RDBMS compensates by allowing soft settings to exist that control the generation of the UniGlue component which are easily edited. The field labels are formed from the field description or column names. Transposition of the underlying name occurs to beautify the label with title text processing. Field types are used to correlate the instantiation of Octopus controls by the data type. Setting which control and entry validation parameters can be saved within the INET RDBMS column definition. These generation settings can be disseminated using standard SQL or the user friendly INET DBMS GUI builder. Because of the user friendliness and reuse of the feature packed INET Sphere Explorer, browsing previews, document editing, and a standardized look will appeal to users.

The INET RDBMS provides automatic application generation using the INET standard Publishing API. Therefore, web applications that can be used within thin clients such as a web browser are easily created. All of the features available within INET Publishing technology are also available to the INET RDBMS. Publishing data viewers and data entry flows to multiple devices are easily accomplished. Electronic commerce is coherently supported. In modern platform implementations, these technology integration points often incorporate a large amount project planning, time, cost and corporations to achieve the same results. The INET RDBMS can achieve these results automatically by data definitions. The INET RDBMS GUI builder is a robust tool that provides publishing custom interfaces that incorporate the use of INET RDBMS. This tool allows a user to customize the look and feel of a publication that was automatically generated by the INET RDBMS.

### Interface Projecting And Office Suite Data Linking

Users when preparing live data publications or seminars for web publishing must be able to include database links within their project. The ability to present a User Interface grid for data entry is a quick process. Consider for example this use case scenario; the manager of operations at the shipping department of an ink manufacturer needs the customer information to place on labels for packaging. The sticker will go on the outside of the fifty gallon barrel and of course they must be accurate. The manager must make a database table containing Ink Color Batch Name, Customer Name, Street Address 1, Street Address 2, City, State, and Zip code. The customer, whom the plant made the ink for, must decide what ink goes to which address. There are two hundred thirty fifty gallon barrels of Ink total to ship, including finishing varnishes.

Creating a database table must be quite easy, entering a name and data type. The manager will enter all of the ink color batch names first into the database table. It is an import from a COBOL program. This field will not be available for modification by the customer, so user rights must be authenticated properly. However it will still display. Do not forget the end goal: to allow the customer to easily decide where barrels of ink are going. So the database table is made. The manager has two options at this point: send an email that has a database table user interface link or allow the customer to sign on to the web publication for entry. Consider that the email link is an anonymous authentication while the web publication has defined credentials.

The customer gets the email containing the database table link. The customer has a spreadsheet containing all of the addresses of plants that ordered. Almost all ordered red Ink, seventy five percent ordered blue Ink, all order varnish and there are some odd balls. Using a drag and drop interface for entry, sorting, multiple selection and minor amounts of data entry, the task is complete. The customer clicks the done button and the plant manager is notified. So for the end user, the database publishing/entry system must be well defined and easy to use yet robust in implementation. The system must account for multiple users, database field types, data translation, import/export functions, grid entry and guided user interface. Import and export functions should be extensible as they will be downloaded and compiled by the client machine depending on the criteria. And do not forget that the customer actually goes back once to the email and makes a correction, clicking the done button should not cause confusion to the manager; just highlight the changes that were made.

### Database Conversion, Translation And Transfer

Data format and symbolic name recognition is a leap ahead from the drag and drop method of import. It is a system with a light parsing engine that will recognize similarity in field names of the source and target and provide matches. This will be enabled in all productivity suite software. Translation of data format hierarchy is an advanced transfer property that will be accounted for. Upgrading and transferring databases of earlier technologies will be accomplished using one of three methods. First method is a binary file reading system that parses the data file. The second method will be accomplished by using a native connection to the data storage engine of the data populated model. The third method, and newest method in technology, will be accomplished through the data storage and reading objects within the software application itself.

### Reporting Facilities Of The INET Web OS

The reporting functionality built into the INET WEB Operating System will be based upon a set of OOP API objects. The ability to create dynamic, near real time, and readable page layouts for screen and paper is the focus of the subsystem. Most reporting packages of modern day rely on the final paper cut for the medium. However remember the INET platform, being Internet centric, will perform these operations for secure Internet viewing. Report readers typically use header and footer information, while the middle of the page is saved for detail data. The detail information located in columns and rows in the middle of the page. The summary information is located in the front or the back of the pages. Applications called report viewers display the information. Users may highlight a couple of lines for reference. As well some readers cross index the information to other data. There are most likely more use cases for physical paper report handling.

The INET Web OS Reporting API object system will advance production reporting streams technology to provide a firm screen layout, use the 3D WEB OS vector font system, provide high definition color output, allow ray traced animation, allow user highlighting/cross reference, easy motion magnification and scrolling within the viewer. Applications such as office products, multimedia, and third party will be easily tied in using INET UniGlue technology. Report format translation will be a focus of the Reporting API system. Formats will include modern Crystal Reports as a main import translator. These functionalities will be provided first in API form then in Application Form.

### Many Database File Formats Supported

The supported database binary and engine model import is a large set. As well, since most data warehouses challenge change for security and stability purposes, it is a mission critical project function to integrate yesteryear and modern database engines.

- [Database](#)
- [Relational Database](#)
- [Object Database](#)
- [NoSQL](#)
- [Data Type](#)
- [Flat File](#)
- [Berkeley Database](#)
- [Mysql](#)
- [Oracle Database](#)
- [Microsoft SQL Server](#)
- [Sybase SQL Server](#)
- [IBM DB2](#)
- [DBASE](#)

- [ants](#)

## Print Media Manager

With Internet distribution, printing is sometimes an archaic practice when compared to the green planet benefits of using on-line display. Yet, you cannot escape the physical medium when nothing else will suffice. A method that includes selection of specialized canvases, clothing and custom frames for printed goods through a geographic destination will be installed in the INET platform printing process. Imagine being able to print at the corner print shop directly from your computer. Many business supply printing such as [Westside Print Center](#) does. The business accepts PDF files by email for printing and handles customer relations in person, by email or over the phone. The INET printing user interface will supply many advanced printing features while managing a customer relationship in interface design for the consumer. This is accomplished by an additional entry within the print menu of all INET software enabled for printing functionality.

The INET printing technology manages contact details, customer billing information, print packaging details and the scheduling of output. This option allows users to view available printers successfully advertised by local printing businesses sorted by printing needs and location. Some printing needs may require extra materials or packaging that service the print itself other than just selecting parchment. An inner application dialog facilitates selection of these items for the user. The user may be able to choose the type of frame as wood, plastic, or metal. Sub categories or branching within selections may also exist for a product offering. For example, specific types of bevels that are made using a lathe will vary the style of the wooden frames causing many selectable items. As well, the frames may be painted and have a specific varnish applied. Normal glass or Plexiglas may be offered by the shop.

The INET Print Media Manager provides the printing business owner with facilities that manage retail of their products and services to consumers. This management includes various forms of communication and information. The primary interface customers will have directly relates to the primary service being used such as printing. Users can select the paper type for example. Secondary services such as product add ons (Frames, matting, embedded blue tooth devices, etc) are correctly listed within user's application. The selection and grouping of these items are categorized for easy selection within the user's printing interface when they are considering using a particular printing business. Cost estimates are produced in real time that consider the total cost of production. This estimate includes labor and materials. The INET Print Media Manager provides an interface to enter and group these items for a business owner. The business application also provides an input of the cost estimate parameters. The system handles the transmission of digital data from the customer's application to the business printing and job server. Because of the technology's integration at the user application level, control of digital format can be exact the first time.

The benefits to the user are many. At the time of printing preview, a preview is built that includes all of the final product's composition. This print preview may be viewed, scaled and rotated to ensure approval before submission. That is, advancements in three dimensional image scanning and printing may allow specialty prints that duplicate palette knife depth. During the projection of a printing preview, lighting correction will show the artifacts of a varnish finish upon a frame, and the properties of the other materials used in composition.



INET consumer software will react appropriately with the vendor's services to respect the entirety of the medium. The user can adjust the page format to fit the available formats. For example, imagine that the corner shop has stickers that can be printed in oval and rectangular forms. However, the maximum size that can be printed is six inches by four inches. When the customer selects a format shape employed by a printing business during the creation of an item, the real size characteristics of the editor adjusts according to the output medium to monitor space utilization of the image.

These features are provided for the selling of art prints and photographs that a private person may have on display. That is, while walking upon some sidewalks in Manhattan NY, one will see an artist with their works shown for common view. The artist may sell the original or a high resolution digital copy. A customer may wish to frame a particular image for their abode. The artist provides a digital ownership transmission using their very own INET cell phone of the print to the customer. A recommended frame may exist selected by the original artist. The customer may then have the package delivered to their home at a later time. During this process of digital retail, the customer is instilled with confidence in the transaction.

Other types of products offered by local printing businesses may include signs that have electronics inside for radio wave broadcasts and illumination. Specifically within the realm of visual radiance: color light bulbs, animation, liquid crystal or LED are modeled in view to match specifically the sign model being sold. The INET Print Media Manager offers an extensible way that a business may be inventive in their product offerings. The technology ties the customer and the business owner together to make the production possible very easily.

The INET Print Media Manager is integrated with the INET Dialect Business system. That is, inventory levels and orders may change the available services selectable by a business within a customer's print menu within the application. Inventory levels are processed during production of the item. Cost estimates shown to the user are also tracked from inventory but may be overridden within the Print Media Manager. Payments are posted within the accounting system. And finally wireless receipts are posted to the INET Wireless Receipts server after payment.

The system also manages employee scheduling as a function of INET Dialect Business system. When the work queue requires more time, employers can provide the services. However when a total capacity limit has been reached according to orders, user's may not find the business listed within their print dialog. Later, this may save the identity of a business as one that services quickly. Specialized productions may require the talents of a specific employee or may be outsourced to the INET Employment system.

Details of the extras are left up to the packaging business provider, allowing for the highest yield in competition. Printing contractors in cooperation with users are able to schedule jobs, process payment options, and allow custom features easily. Services that offers delivery of the items to their door are also provided for in software and tracked for the customer. The **LOD.PANITBT.NSM** image file format allows artists to track their works by signature. That is when a customer buys a print, it is copyrighted and protected media. The customer may choose to use the image several times, however each use supplies payments to the art seller. The printing contractor's software must collaborate with copyright laws. Artists will be able to market prints this way and get the money they deserve for their imagination and content.



- [Computer Printer](#)
- [Canvas](#)
- [Paintings](#)
- [Printer Publisher](#)
- [Picture Frames](#)
- [Fillet](#)
- [Mat](#)
- [Diasec](#)
- [Embossing](#)
- [Engraving](#)
- [Thermographic printing](#)

## Electronic Mail Direct To Device

Users can receive email sent directly to their INET computer account. This is different than modern operating systems as they do not include an IMAP, SMTP or POP3 server by default. The messages go to a separate host first and then mail clients access the message box using SMTP. When using the INET Electronic Mail system, users can be confident to know that friends, associates or business partners got the message. The unique world-wide identity and automated verification provides tracing information that can be used for authenticity. Captcha code generators are used in some electronic mail systems for this purpose. These codes are also used to make sure that an actual person is sending the email, not a web-bot.

By expanding the email address criterion, the same way a physical mailbox address works, an email can be attached to a physical address or a specific device (personal identity) for formal purposes. An alias can be registered for the address as well. Using an alias is the most likely use case. That is, people do like pet names. However, when the cuteness wear offs, a new alias can be started while having some email forwarded from the old alias. Thus, having a backup email address or secondary name rather than using the primary fully qualified name all the time provides multiple levels of awareness during contact. The INET Email system provides sorting and routing capabilities based upon the type of messages an email address would receive. For example, a business partner, a friend, a stranger or an old family acquaintance may have different email addresses that all route to your main account.

Tracking and verifying the sender's identity is accomplished easier by INET Web OS server software. Physical addresses typically take three or four lines to describe. Only one person can have a unique address but several people may live at that address which may be another reason for aliases. By allowing an electronic email address to be as unique, email and web publishing will be more direct to a verified location. The system allows an email address to be certified for a physical address; an INET Certified Email Address. This email address classification can increase the ability to receive formal business correspondence.

The primary email address can be blocked from other consumers when an alias is used. In the case where it needs to be discovered according to information law, the INET system provides this capability to authorities. Recipients of such emails are aware of the address's hidden properties within the email client interface. In general a proper business entity will have to disclose their email address. Some individuals may wish to keep their primary email secret during the communication with other private citizens or a business. Some recipients may also require the releasing of a primary email before accepting communication such as government facilities.

One of the major issues in modern day is receiving too much email for reading. Emails with electronic coupons in them (purchase power) can be separated from other needed mail by the server. Some email systems employ text processing algorithms that scan for irreverent content. The technology is called a Spam filter. This does reduce the overall exposure, yet does not totally provide effective categorization. The INET Email Server offers a summary of emails according to the historical use pattern. When email from an address is arriving that was previously ignored, it will be placed into the Spam folder.

The INET Email Server uses the collaboration history database to grade content to derive a Spam probability value by searching indexes that reference textual information, color saturation levels, geometrical attributes, email addresses, HMM based audio samples, content labels, and historical use. The information disposition will also be sent back to the originator letting them know of the plight of their materials. This is useful for marketers. At that time, if it is important enough, they can try to contact you through another method. Finally, some types of email cannot be ignored and is placed automatically within the Inbox folder. These would be messages related to governmental bodies that should be reviewed. The INET eGov Ready Mail is the classification name.

The INET mail client records the source entry characteristics of a message or publication. That is, an INET server can detect if the message being sent is one that was type by hand. This is also important for reducing Spam. The feature ensures the integrity of the classification that a person developed the text or multimedia presented. If the message was copied and pasted or if it was a resent text body, the mail client records this important attribute. INET Web OS by default tracks these traits within the INET Smart Terminal, the VLISM Client, and INET Web OS. The INET Technology target goals lead into tracking sources of the document's content very robustly. Some tracked attributes include machine identity and geographic location. The end goal is to design a system that is non-tolerant to spoofing content and originators. In short, the system is designed to provide an electronic mail facility that connects two parties in honest technology terms.

Part of the web server and new electronic mail format will be the labeling of the data object for a specific subject or target within the user's information domain. Currently there is only a priority attached. A data mine example should produce a list of about eight to ten subjects or categories for easy management. Incoming mail will have the label of General, Business, Education, Alert, Bills, Media, Home, Advertisement, Friends.

New methods of information law practice will protect a label so that information sent will be restricted contextually and syntactically for the channel. By allowing dynamic categories to be added under these main categories, further refinement of the mail can be made, thus allowing advertisers to effectively place content such as video, sound, coupons or user interfaces within the Advertisement category. The mail client and server provide the user with functions to subscribe or ignore these channels of information.

Classifying email may seem to initially block a business from the straight into an Inbox approach. However, by reducing Spam, intelligence of the communication participants is increased. This will actually open the market for businesses that advertise to provide direct relationships with their customers. The customer must be so enticed to receive a valuable email as the same is true for reviewing it modern systems. The system also gives freedom a business's creativity to be more effective than a simple email. That is, true multimedia and applications can be used without potential harm. Current systems achieve multimedia with the [Multipurpose Internet Mail Extensions](#) (MIME). INET will expand upon these format extensions. If multiple advertisements are received from one business, all related content and coupons are pruned by date expiration. Within the interface, each mail from the one business is related within the interface to reduce information complexity. Electronic correspondence will be more direct by classification of it. It will have more meaning to a customer that actually wants it. Finally, it will reduce the overall amount of advertisement messages to a feasible one.

Customers are likely to find the time later. Typically the major focus at the time of email inbox reading is searching for any problems or urgent information they need to react to. This is a psychological implication of the medium and its common use. However, if the approach were to allow storage of items they may be interested in the proper category. At a later time, when the moments have arrive for their contemplation, being able to easily find and use them is made a beneficial feature in the INET Email Sever. It will be like having a direct to habitual marketing route for them. A personal bargain bin.

The system is constructed so that the user does not experience stress when reviewing email. A modern reason why users just delete email is known in technology terms as [Email bankruptcy](#). When consumers use modern systems, advertisements are typically deleted with very little review so that they can consolidate the important emails into a small list. And within graphical interface terms, they may have to review these items several times. By having less items in the list, they are comforted in finding the useful or important emails quickly. The selection process uses a list view style control during deletion. At most times users will select a range of them by using a combination of the shift key with the left mouse button. Then after, the delete function is quickly invoked while pressing the yes button. It is very likely all of the items, including some they would enjoy, are advertisements which they erroneously categorize as Spam. This wastes the effect of broadcasting advertisements because during information management times; stress may be induced.

INET Electronic Mail may contain digital coupons that can to be used at the time of purchase. Customers that receive them can easily share their digital coupons with friends. For a coupon to be sharable, the feature must be enabled by the business. The settings allow for transferring it or requesting a new one to be sent to their friend. When coupons expire, the original message and digital coupon can be automatically deleted. Technology that is self preserving is easier to use.

Digital coupons offer the ability to be used easily by matching the good described to items within a personal shopping list or other personal information software. Digital coupons are maintained by the email server as an indexed resource for such purposes. Several terms are recorded about them that allow a potential customer to review it easier than the modern paper method. Some customers may like “buy one get one free” deals exclusively. A digital coupon is also evaluated independently by server software for its approximate value within a geographic area. INET Digital coupons can only be sent by a valid business. A soft limit on the number of coupons a business can send is also in place.

Electronic Tickets to movie theaters, music concerts or other events that use electronic tickets can be exchanged through the INET Email system. There can be only one copy of the ticket for a valid reservation system to work and the INET System ensure this. When a coupon is sent to another party, the copy existing upon the local computer is erased. The most likely way the data will arrive is from a friend. That is, typically electronic tickets are bought through the Digital Data retail store and not through email.

When two or more persons are communicating, they may wish to hold the contents in a secret form that requires a password to access. Albeit INET Technology operates in this fashion already, the INET platform provides an additional level of security within the mail system. Encrypted emails can be sent from one terminal to another specific terminal. When the recipient receives the message, they can use either their own password communicated before hand, an INET Knitted password, or an INET USB Password Key.

Some document forms such as legal documents, financial contracts, traffic tickets, legal warrants, court summons or banking agreements will require absolute authenticity of the recipient. Authenticity is provided at the server level between two machines. In addition, the originator may hold a digital signature upon the document using the INET Confidential Agreements server. That is, a specialized server holds the document with a digital signature before it can be viewed. The machine identity must match before the document is released. This adds an extra layer of tracking as a server maintains cooperation between the two parties. Within an INET Confidential Agreements server, some document signing and processing requirements may have priority over future instantiations of an agreement with the recipient. That is when a civil judge issues a court ordered warrant, a hold may be placed on other agreements. Some terms may apply that are geographically related to such documents. For example, jurisdiction can be set for such state or county documents as an emulation of law.

The INET Electronic Mail facility provides these features so that formal legal documents can be sent and returned signed by the recipient. That is, some forms of communication must solicit a digital response such as document signing. Within the operation of this technology, the machine identity, fully qualified email name and the user's identity are used to develop the digital signature for the return. This information is also communicated with the INET Confidential Agreements server such that a historical record exists. In addition, before a document can be signed, some steps of event or task oriented software roles within the email may need to be completed before the digital signature is applied. That is, a dependency can be established for a server process. This process can include many steps such as financial transactions. At any time, the two parties may review the terms and details of an INET Confidential Agreements document.

These Confidential Agreement documents can have an operating time period. Once sent, the time in which it is active within the INET Confidential Agreements server may be set. This is the time when it has not been reviewed by the recipient but is within the queue. When such a time period expires, the agreement can be closed while this status is also sent to the recipient and they cannot interact with the document. A time period can be set as well for when the customer receives and views the email. That is, the document must be completed and returned within a certain time period after receipt. There are at the last minute interactions that can occur which may optionally extend this period. For example, if actions within the document require more time to complete such as research and it is foreseen that this may be accomplished within a durable time period, an extension may be requested. Extensions are requested using tracked collaboration. It may require monitored voice or video communication. In such cases, the portions that are completed, are sent however the document is not in a complete state as under the penalty of information law. These properties are set by the document's writer before sending it.

Registered electronic mail can also be sent in which the originator receives a notification during view. A live connection, phone, VIOP or text, can be established when an email of this type is being examined automatically. For example, a customer places an order with a related inquiry. The transaction process is dependent upon the customer and business establishing a connection to each other before funds can be released. Receipts can be generated as a product of the transaction that link to the customer's wireless receipts. The availability of funds will be validated prior to this. The customer simply wants to make sure the item is of their tastes and quality. It is known that the customer wants to make a purchase of the item that is generally described. Registered electronic mail can be used for multiple purposes that require immediate notification at the time when the item is reviewed.

There are several distinct differences between Confidential Agreements and Registered electronic mail. Confidential Agreements are not actually sent to the client until they are ready to view it. They use a formal server process. Confidential agreements also have a time period associated with them and require a digital signature upon acceptance of the terms. Finally, confidential agreements may be tracked throughout the life time set within the terms. On the other hand, registered electronic mail is directly sent to the client's email server. Registered email may automatically invoke video or live phone for communication. These message types are typically the result of a financial transaction in which acceptance and authorization is required. Finally, registered electronic emails do not expire and are not tracked.

Answering an INET Registered Email using a live view is simple; click and the user enters the waiting queue on the business's server using INET Live Collaboration. Options of the INET Registered Mail feature allows users to define a proper window of time when they will be available. You ordered today, but want to talk to them in two hours after dinner is made. The INET Registered Mail auto answer option allows a default message to be sent back or forward it to another source. The answer can be intelligently formed based upon textual content of the message. Users can view their answer projection time while waiting in the queue. This time can be shown on any device as they may want to move around using the cell phone while countdown continues.

The INET Web OS Electronic Mail system has the ability, as the client is formed with OOP API, to direct input and output to any database connection. When an application implementation defines data requirements in electronic mail, the API will allow easy management of the data entry facility. A form set with data entry fields can be set or allow the plain entry of response text as the email client provides. This feature makes it a good office communication product to integrate with custom billing and accounting practices. The INET Dialect Business system provides this collection method output format. In general, the advanced email system and client allows third party vendors to include secure communication within their applications whose output can be directed to databases.

Allowing the software vendor to govern the storage database points, connection with INET information systems, loaded forms, valid surveys or other SoftSpot components, integration with secure information systems can be accomplished easier through email. The INET information systems support provides very powerful tools for a business to utilize. INET Employment, INET Dialect Business system, and common office software can provide robust application interfaces seamlessly within the INET Electronic Mail client's interface. The INET Indexing service provides search contexts and results for electronic mail.

The GUI portion of the mail system allows tailoring of application specific domains. This can be set for a group of email addresses, an individual email account, or an entire email classification category. This is employed for logical reasons of security. For example, consider a good security rule for the system to be that no financial payments are processed unless it is related to a Confidential Agreement or a Registered Email type. Another type of rule may allow or deny the invocation of application interfaces, and database storage. Multimedia may be present that can be filtered based upon media format and size. Or only allow images but not sound and video. Email may also be limited to be received from a specific origin geographically. Email can also be limited to be of a certain size. And last, on the main channel of input, the email server may be set to only use textual information. These security attributes can be instantiated in several ways that are practical for modern users.

In conclusion, the INET Electronic mail system provides the next generation communication capabilities to users making the form more valuable and usable. The system can be accessed using any device. Business functions are increased to please users such as receipt of electronic tickets and coupons. Within the system, identity is traced more profoundly to ensure an honest technology implementation. The system intends to decrease Spam while increasing the intelligence of advertising emails received.

- [Message Format](#)
- [SMTP](#)
- [Extended SMTP](#)
- [POP](#)
- [IMAP](#)

## Information Architecture And Usability

### Application Start User Interface

Recently with the invention of large storage hardware for personal computers and stabilization of the software platform itself, users can now install more applications on their system. But doing so leads to usability issues in modern menu systems. Some Desktop Environments such as Xubuntu do provide some of these features currently but the INET platform will extend these features. By applying the science of Information Architecture to workspace icons, application identity, application startup menus as well as a more refined use of images, users will be able to effectively manage their many applications easier.

An installation is a task that is typically performed once and a while for a given application. However, the user is going to use the application more than once, hopefully. It should be the design of the menu system to organize the application names according to its purpose on the user's system and user's life style settings within its display structure. Simply placing a name under 'programs' does not effectively grow with user's needs. To solve this problem, software designers should identify their application(s) from a standard list, in many distinct and descriptive ways. With more information about the program's usage communicated by attributes on the installation, an automated or semi-automated classification system can become a reality.

Many applications are also overly named, that is, there is too much information in the name itself. For example, "Microsoft Word", "Microsoft Excel", and "Microsoft Access" all contain the word Microsoft. Each user, after several accesses of the program, quickly learns that information. However, it does not take that amount of information for the user to retain what the application is used for. Some names are not reflective of the actual function of the application. As an example of appropriately named menu items, Writer, Spreadsheet, and Database might be more friendly.

Spread Sheet, Document Editor, Statistical Graphing, Music Player, Music Maker, Audio Editor, Painting, Publishing, Web Surfing are some examples where third partie software would be labeled with their unique names. The system will allow defined purposes to link relationally to third party names. The effects of nonspecific names upon culture would be reduced and provide effective competition among vendors for the SoftSpot.

Excessive text does complicate the field of view upon the monitor when such a classification system is not practiced. The system allows the use of short names, ones that exclude the word the software provider from the name. Short names should be facilitated as part of the installation process by the software developer so that implementation is open. Its usage and implementation should be based on the start menu panel so that the users can control uses.



As well, after several accesses of an application, the user will remember the general position of an item within the menu system. As a secondary focus, the seek operation performed by the skilled eye for an object within a given rectangle confines should not be a relationship that is broken when new items are added to the menu. That is, the placement of the item would be sorted to be in the same position if the user is used to it being there. This affords the user the same quick motor skill activation of applications they are used to.

Screen real estate is important when it comes to usability and pictures communicate more effectively when it comes to space. Most icons in GUI systems are poor at communication because they also rely on words and the vendor's imagination to communicate. These icons at most times are instantiations not relating to function but more often to vendor. Sometimes their projections are merely a beautification of the application interface. By allowing pictures to do what they do best - communicate - on a stand alone basis, more screen real estate can be saved. Within the INET Platform, function will be used as the icon image and not aesthetic appeal. INET achieves this by including system icons that are common to all platforms. This is implemented on the desktop as well as on the start menu. When multiple types of applications exist for one type of function, the icons will be representative of the uniqueness of the application while still communicating function.

In modern menu systems, items that are accessed most are within the "Programs" folder. INET will not use the term program but the word Software because Program is a technical word. The Web Server OS market has a chance to further refine names for general usage for all ages if more precise, easier and real world terms were selected. This information can become a selection of user mode as well, thus taking into account the user's age and perhaps education experience. Another example is the term Control Panel which does not really communicate the entirety of the folder contents. Also it is a technical term. Much research has been placed into this area by modern GUI designers. In most cases an outside consultant familiar with general audience attitudes, appeals and usage should be utilized for this purpose; not a technical person.

Some users may even want a total visual implementation or a hybrid combination of pictorial and text interface. The hybrid labeling and major trunk pictorial method is accomplished by placing more pictorial usage emphasis on items in the start menu that are located at main branches and accessed more frequently; to the left of the hierarchy. Items that are the main stay of the system, like the main menu button itself, "Programs" Folder, and all the items on the main trunk might be total image display. Then when a branch is chosen that has several items in it that are specific and not group image labels, word labels may be used. The INET system uses ray traced images for category.

The classification system must be both manual and automatic in its functionality. It is a complex task to facilitate a usable system that maintains its interface coherency over a long duration of time. Users come to expect things to be in a certain place while other items that they rarely use may go into the dust bin so to speak. One thing that needs to be decided, if it is going to be semi automatic, is at what point do branches occur and how to facilitate the configuration in user interface terms. If items that are rarely used are placed into a dust bin, how many days does it take and as well users may want to turn this feature off for specific programs will have to be answered? This feature also ties into a system recommendation of cleanup. That is, programs that are never used, could be slated for removal or cold storage.

In short, the stabilization of standalone GUI desktop operating systems has enabled users to install many applications on their system. Managing this many applications for average users is a difficult and time consuming task. A system should be enabled that allows the operating system to manage its list of applications easier by implementing a form of Information Architecture. As well, the user interface of the start menu could be further refined by depending more on pictures.

See Also

- [Information Architecture](#)
- [Audience Awareness](#)
- [Wikipedia on User Interface Design](#)
- [Wikipedia on Readability Formulas](#)

## The INET Web OS User Sphere Workspace

### Long Ago, In A Distant Galaxy

[Norton Commander](#) was an excellent product that allowed complete drive management for [PC DOS](#) and [MS DOS](#) based systems. The pure pixel oriented graphical desktop space front ends were first commercialized on the Apple Macintosh OS in 1984. Microsoft released Windows as an extension of DOS in 1985.

Architecturally, the interface that spawned forth from the creator's dream were primarily accesses to hardware located within the User's base CPU and applications consisting of desktop publishing paradigms. A fast computer of the time, the [IBM XT](#) operated using an Intel 8088 microprocessor clocking at 4.77 MHz. The system blazed during the painting of an interface consisting of content from the hefty ten megabyte hard drive and 128k dual sided floppy drives. An application named [File manager](#) consolidated at least ten functions (Copy, rename, delete, find, print, etc.) associated with hard drive management. But that was long ago.

### Desktop Space, Table Space And Counter Top Space

The INET Web OS User Sphere workspace is the most versatile, feature packed, and visually compelling workspace known to modern form computing. The User Sphere workspace will provide suitable work environments for consumers based on feature need using advanced objected oriented components and the highest detailed pixel renderer. High color definition animation and still frames will be shipped to the video card using the best techniques to impress speed, frame depth, art and multitasking performance.

To provide versatile user spheres one must ponder the noun range within the computer information boundary. Within hardware terms these can be finite. Within the pleasure realm and at play more words are entered into the group. Within an office department select words are transferred. Within a home environment still more is listed. The entire noun domain used within the interface will be critiqued for each user group. Age, gender, culture background and language capabilities can paint an initial interesting use. Considering the financial awareness, personal interests, and hobbies is of great benefit for each layout design. The system will provide freedom for the user to incorporate many information portal designs (components) into super form at will.

Users buy something first to use then to learn. The user sphere workspace will deliver an effective visual interface for the audience, their mood, life style and age by rendering an appropriate layout from the relational data structure. The relational data structure will be derived from many sources: database, expert systems, current settings and on-line information.

By using a synonym database containing a the entire domain, sphere designers will relate these nouns, adjectives and verbs to objects within a sphere desktop environment. The database provides hierarchical records of these items that include icons, task meaning, task relation, and complexity rating. The super tasks where these hierarchical records make a parent of, provide component based interaction within a user sphere. Documentation and in task video help may be presented based upon the skill and comprehension level of the user. That is, as a function of age, gender and historical use the interface will evolve. As an example, imagine that one hierarchical path of a desktop operation may present items that contain less details, relate typical application, have larger fonts, use words from a specific dictionary, or present applications that can be ran in a grid. Behavior wise, the invocation of an application may require less window resizing and manipulation of title bars that normally is used to facilitate multitasking. One program may run at a time and use the entire screen.

Incorporating the formal use of audience must not betray the usage intent within the design. In addition, the INET Web OS User Sphere workspace has the ability to accept a high degree of secure branding resulting from market focused commercialization. As an object package that gives a designer the capability to paint, package and deploy User Sphere environments, a user sphere may be subject focused for an array of users. The users may wish for certain products and work flows or the focus may be service oriented to cater business products. A painting tool persists the functionality in providing access to system level and application SoftSpot components. Interface designs and behavior rules can be established using this interface tool for creating the perfect form fitting environment. Several user spheres designs will be provided with the base system.

The user spheres that are part of the base will make the computer useful for students of all ages, adult life management, home business, shopping, inexperienced technology persons, the elderly and entertainment. The user spheres are deep desktops that include applications for class room work that may be used while attending elementary, middle, or high school. This set will adjust to the student's curriculum by providing adequate software, precise tools and directed learning information with intentional localized focus. The student must enjoy their time of interaction and find easy to use collaboration with their school and classmates. Rewarding students with digital gifts and sincere congratulations not found easily can supply the necessary emotional. The sphere is one that considers information safety. A sphere will exist to aid parents in monitoring all responsibilities of parenting. Additional user spheres will exist that entertain, relate with adults and also cover legacy desktop models.

Imagine the scenario where a group of guests arrives at a bachelor's home. Within the guests arriving are three children and one is too young to play outside. Cathy is a two year old girl. So the bachelor flicks on the kid's entertainment user sphere where she is locked out of all of his stock portfolio management software and is enticed by several forms of entertainment suited for her age and gender. As part of the initial process of booting the user sphere, personal information may be gathered such as a photograph, voice sample, short reading test, name, age and toy likes she may have. This kind of sphere is intelligent and also uses skin color to colorize primary and secondary characters within the environment. Alternatively, the information may already be recognized by the user sphere using facial and voice recognition.

A new experience is generated for Cathy that is different than the other times she may have used it but also includes some commonality. Fireworks with applicable sound offer the choicest background animation looping while keyboard and mouse operations are very basic at controlling the interface. She can be immediately at the process of play. As each key is pressed, an unseen musical instrument activates during its job of producing sound.

The kid entertainment user sphere offers a selection of what already exists locally that is applicable. As well, a dynamically managed Internet fed picture based menu notes a kid's favorite list. Interactive movies from Disney may cost, so an allotment of funds is displayed in terms a kid can understand. One of the biggest problems is that typically entertainment for children is so often also mixed with learning activities that one might forget that it is her day off from kindergarten and only fun is allowed because it is Saturday morning. At times she may be challenged beyond her current limits while having a grand time most of the time. Marketing value is established by using identifiable iconic toys within the media. The desire can be communicated to the adult with the "I want it most button" as a practical software embodiment. That is, the agent character, may offer a selectable digital prize for interactivity. When she receives the physical toy matching the spontaneous acting she reviewed earlier, the entire experience can be identified as a swell time. Finance, time and usage count based tracking for user spheres is essential for commercialization of some products.

Home users are able to adjust items within the user sphere for their own stylish purposes with plenty of beauty globs from many sources. Functionality of the interface designer incorporates enough control to deliver INET User Sphere environments to elementary schools, middle schools, high schools, and colleges that create easy to use interfaces for the home and in class. Information domains delivered within the user sphere environment can limit communication a select group of persons or business entities. The scenario of an inner classroom user sphere would limit collaboration to the presiding instructor. Or communication can be geographically limited such as only pertaining to the local neighborhood, local city, or state.

Several instances occur everyday where a configurable workspace environment of this versatility is necessary. In an office meeting, the desktop must not be crude but show a business attitude during a wall projector screen presentation or on the LCD monitor while someone is looking over your shoulder. The view may contain all the items within the work folder for example. The interface may be driven through use of a simple decorated button map. The useful applications that are suited for a business meeting are also shown. Another type of desktop may be appropriate for entertaining guests. The desktop is designed for a two person entertainer night; it will be movies, popcorn, music and video chat with local friends watching titles synchronously. The desktop allows each member to live in the moment with one another.

User Sphere Software is built so that it adapts under the control of the user sphere and user's characteristics. A software program will inherit this functionality using the OOP INET User Sphere object base. The most powerful trait, age, directly effects complexity for most applications. In some applications, information summary details may lessen or grow based upon age. As well, application navigation may be shortened from point to point. The number of tool-bar buttons may shrink to contain only the very basic functions. Finally, menu systems may operate differently.

User sphere environments can be located and activated easily from a master console mode. Some system configurations may only have one locked user sphere. The spheres can be previewed in a scrollable grid consisting of large iconic images. INET User Spheres can be locked as active using a password. Multiple spheres can be active at one time if the system configuration provides. This means multiprocessing will be also task focused based. Data may be shared between them such as copy, cut and paste yet the feature should not be used very often as the design is to incorporate all tools necessary within a sphere. Another productivity benefit is that information may reside within a particular pattern and position as the usage of screen real estate is offered entirely to the user sphere. Users can quickly operate the software as windows reside within a known location.

Providing roll out of turn key systems that secures what services a machine will operate with such as an INET Employment server or an INET Economic Server is also essential. Turn key systems of this nature depend on reliability, long up times and demand software integrity. Therefore the INET deployment strategy for high security turn key systems will provide complete tailoring of a bulk install combination package. Systems installed with such desktops are typically managed different and do not allow generalized software upon the machine. This gives the desktop designer the ability to think in the long term for a type of business model. Thus enabling the building of a complete system software and application footprint tailored for multiple businesses within a single production line. It is an image that can be reused. The footprint will consist only of binaries and data associated with the life cycle of the service which does increase performance throughput in most cases. Management of the system and software maintenance will be agreed upon by the customer and provider. Updates to the software can occur remotely or by local media depending upon the desktop setup.

Other engineering fields such as software development require many tools that are complex to learn, manage and investigate. A robust engineering desktop may provide project management for multiple programming projects. An audio creation and mixing studio is a special beast altogether, requiring audio software, multiple digital signal processing applications and audio mixing applications. A college student going to class may require a specialized note taking, video and voice recording workspace that is designed as a calendar. Even turning in their homework, classwork and tests can be electronic. This desktop environment provides specialized review of information that is academically focused that can include MLA and highlight annotation mechanisms. Live rock performances that require hardware configuration management for their show equipment can deploy their own branded interface designed for simplicity of use. That is, anyone on their team will be able to initialize devices.

The ability to install or learn new Spheres through the Internet or other device media is a major feature of the INET Web OS. This is accomplished in conjunction with system security. Separate rules may exist that limit where Internet Spheres can arrive from at the terminal BIOS settings level. As well, only allowing USB keys or DVDs from a manufacturer to be used for installation procedures.

User spheres and their current state may be backed up on multiple medium formats. This backup can be booted to install its footprint on a select group of machines. In some cases an Internet connection may be necessary when transferring the user sphere to different hardware configurations. A password prompt may exist to ensure the data integrity. Data and settings made after the initial sphere invocation can be backed up and restored as a separate from the entire sphere image. These backup solutions can be provided incrementally to save processing time while exercising regular use. A limited undo feature is also provided that can effect the user data or encompass the entire user sphere's state. User spheres can transfer their live data storage location(s) to another storage mechanism. Some user spheres may not be able to reside upon two or more machines simultaneously according to digital media rights of the license.

Conceptualize that these user spheres are multidimensional transfers of an expert's processes and information. Say the research team at PBS Financial has a great retirement savings plan desktop for distribution. The desktop package can include financial software, a banking account plug-in manager, account plug-ins to your current 401k, live collaboration connectivity, and investment training courses. As a desktop entity, a range of selectable visual styles consisting of graphic assets, multimedia, layout functions and behavior may be contained within the package. These assets allow the user to select a skin for the user sphere. Movies titles directly related to the desktop can be tracked and played within the sphere as an intrinsic library.

Software spots or portals can exist for advanced management functions beyond the features included within the base user sphere. For example, continuing of an investment portfolio and stock purchasing, business research or a diagnostic tool that allows review of contract partner's authenticity may be functions added to the desktop at a later time. The designer can build a desktop framework that is suited for growth in specific areas of the interface presentation, structure and information flow. Additions for a desktop framework may be developed by another related party that is sphere compatible for example.

The INET Web OS User Sphere workspace will enable flow of staged multiple complex editing tasks and provide control for the related data objects. Data management may include a centralized repository combined with the user host provider's facilities. Data management may also require multiuser library functions such as check in, check out and merge facilities. Distributed data update tasks may also need functionality for synchronization control. A goal management infrastructure may abide within a specific use case of a user sphere that implements tracking of tasks. A drilled down view may allow the user to embark upon examining instructional media or use collaboration software configured for the involved party. Some functionality of the desktop framework may offer review of report summaries that show project readiness or project time estimates.

The INET Web OS User Sphere provides software retail management facilities that include all of INET Web OS's base features such as purchase or rental. The scope may be set for software management functions as to limit selection to a set of software accouterments. The interface for the management facility can be configured appropriately to be as narrow as only a iconic picture gram list. Key search-able by alphabetic name. Software marketers can promote software products by first identifying itself with a user sphere function and compatibility domain. A user sphere can have an open blank feature set where multiple products can fulfill the need. For example, a spot can be linked to a video editor, sound editor, normal text editor or fancy text editor.

The INET Web OS User Sphere provides this functionality so that the study of complex information or operation of super procedures can be a consolidated and focused experience. By applying the results of an expert or group of experts during the creation of a sphere framework, knowledge is disseminated in form that provides room for broad coverage while maintaining subject cohesion. As a result more productivity can be gained as well as providing a higher yield of retention. As if it were a new form of book that also enables digital processing, INET User Spheres will create the new age field juggernaut of tomorrow.

### Hollywood Film Studios In A Box

A sphere developer could make a workspace that include all of the tasks associated with making a film. Each genre may have accompanying graphic, multimedia, behavior and applications that are related. A major object of these desktops could be the software included. Imagine a product where costumes, set templates, cardboard artwork, and technology can be bundled as a present for the film making enthusiast. Therefore the focus would be integrated within the desktop behavior to guide the user in successfully creating that type of film. Making costumes that identify easily with the included configured video processing software can add specific animated qualities to professionally designed special effects produced within the final frames. Therefore the usability of the professionally designed effects is increased to enable transference from an expert. And most importantly it is within the producing stage. Several configurations of the special effects may be shipped.

People - especially kids, love creativity with themselves as a photographic identity. The INET Hoopla Magician Film product line will provide kid stories using scripts written by professional teachers. A gift idea with long lasting fun. Kids will play together to watch their own versions of stories and action play out upon magnificent sets. [Dinosaurs](#), insects, planets, beach fronts, mars landscapes, rich homes, and other fine novelty ideas that professionally creative people think up can abound within the information sphere. To enliven the capable artistic imagination within an information network to produce an animated feature, action video, will be a fun experience to investigate for youngsters. The act of expert transference provides years of experience to younger people with less.

A special effects studio can even design video processing hardware that encompasses controlling and visually capturing movements of robotics. The purchased user sphere provides use of these remote resources. The ability to control camera position, camera angles, and close ups within the desktop will magnify capabilities. Scene aesthetics and live acting could also be rented and composited for the final frame output. That is there are actors out there that want to be in a queue. The robotics are controlled over the Internet while bounds and operating parameters are locked on the studio side.



At most times the creation of professional movie sets are very expensive. It would be important to include lighting information that directly relate to positions upon the stage. Indoor and outdoor scenes will apply. Some users may want to modify the set some. Providing the necessary development and deployment of technology so objects can be moved or excluded from a processed image will be reliant upon measurement and identification by the studio. Video input from the user to be a composited must be masked appropriately. The lighting information can be used to augment objects fitted within the scene. Users want to make a professional film and make it quickly. The depth of sphere content must be graded to provide excellent educational experiences. Typical movie information strides may teach story boarding. plot development, themes, acting skills, vocal skills, and visual expressions.

The same deployment paradigm can be used for many professions. Interactive guides for song writing, musical production, photography, or cooking lessons can be a working product rather than a list of instructions on paper. Establishing a working relationship with the user can be part of product development.

The INET Web OS User Sphere workspace will streamline modern business desktop deployment and provide a stronger foothold for supporting complex information projects because of its audience directness and tooled design. The public education system, home school audience and distance learning community will finally be able to design comprehensive usable interfaces suited for an age group while being assured of tracking input data, progress and time. The ability for purchased components to integrate within other spheres will be a common feature that is used. As well, some software components my be configured to only work within a user sphere and its behavior. That is, a software package can be fully functional but operate within a data boundary. Common functionality components that integrate search and preview may be included within frameworks as a base feature. In short, the INET Web OS User Sphere workspace marks a new era in distributed computing information systems and will provide a better teaching space.

- [The Lifestreams Software Architecture by Eric Thomas Freeman](#)
- [Life Streams](#)

## Categorization Of User Information

Providing a dynamic and self maintaining indexing mechanism that also holds cataloged previews for the user to use within search contexts is an INET Web OS Feature. The search index system is used within the search panel and INET User Sphere Explorer. Preview information is used during browsing and application interface initialization. The INET User Sphere Explorer is an object and file system browser application that a user invokes to manage their files and data objects. The indexing service utilizes multiple indexing algorithms while also storing statistical characteristics of a data object within a private datafile. Multiple attributes of the data object are used to provide some of the new ease of use features inherit within browsing list displays of object browsers. The process of categorization is automatic for users while it executes upon the host environment.

When a new file is added to the file system, the indexing service chooses a file format reader to begin its indexing process. A file is a generalized term used to describe multiple types of data. Indexing multiple file types is a must in modern computing and each type offers a different set of attributes. Types of data indexed by the INET Indexer includes textual documents, images, three dimensional graphics, video, audio, binary application files and compressed archive files. Any meta tags and self imposed tags are used. Based on the data type, algorithms are chosen to develop search attributes that relate specifically to the information. A list of most file types and their respective formats can be found at [wikipedia: List of File Formats](#). The list is extensive and the INET Web OS plans to incorporate support for most of them.

### Textual Classification

The Textual document data type covers a broad range of formats that include Unicode, ASCII, Office Word Processing and programming language source code. When building a [concordance](#) from the document's contents, the amount of text and format of the syntax also delegate the capabilities to provide a more in depth analysis. That is, to differentiate one content form from another, the amount and syntax of the text may be used to classify texts as a form such as notes, list of items, small text, draft or a book. Natural language processing is performed on small texts and books. A statistics of the text and status of hyper-links is also performed.

When hyper-links exist within a text body being indexed, a categorization of the resource pointed to is performed. If the address is a URL directed to the initial or index page, the categorization is a summarization of the entire website. In order to classify the validity of the content, a representing entity is ascertained. Websites may be a corporate business, a professional person such as a phd, or a private individual. Other traits that describe a website are stored within the catalog such as business entity, mission statement, number of employees, primary contact information, and geographic headquarters.

When the hyper-link points to a resource that is a document link other types of information are categorized that are useful as pertaining to the document. For example, the author, the document date, document title, and abstract are stored within the catalog making the index specific to the resource. A full text index is not processed by default as the document is an indirect text.

The hyper-link filter processes the contents of any type of resource as the URL addressing scheme is designed to point to any type of media. The rest of the object types are processed with the matching INET index filter. The depth is set to normally traverse one level but this can be configured. As a hyper-link is considered a secondary link from the primary resource being indexed, the amount of information cataloged about the resource is less.

The indexing of hyper-links that point to network resources are first negotiated for their storage within cache. The INET Web Index cache is queried to see if prior indexing has occurred for an object resource. The INET Web Index cache is a global resource that maintains the index for public content. The system uses replication by geographic location access of a resource. The system operates concurrently from the user's host provider. Users do not submit web sites to it for indexing as with a search engine like Google, rather it is used primarily by the INET Web OS and its users.

When topic trees exist for a discovered subject within a text being indexed, a [Faceted classification](#) of the information can also be stored along with the full text index information to increase find-ability. A Faceted classification provides better relevant order to search results when a topic search is performed. The topic tree used by the indexer to classify can also be used to supply external information references. The INET Indexer API provides a rank and order to result sets based upon the search command and found matches. The list below describes the many traits applicable to texts that is derived by the text indexing algorithms. Each of these items are exposed through OOP properties when using the INET Indexer API.

- Container form
  - Notes
  - List
  - Small text
  - Draft document
  - Book
  - Video subtitle
  - Comma delimited data
- programming language
  - lint
  - comments
  - string literals
  - related objects
  - source code analysis
- Abstract
  - a summary of the contents of a book, article, or formal speech.
- Thesis
  - a statement or theory that is put forward as a premise to be maintained or proved.
- Titles
  - the name of a book, composition, or other artistic work.
- Misspelled
  - spell (a word) incorrectly.
- Related news articles

- Related magazine articles
- opinions from group
  - a view or judgment formed about something, not necessarily based on fact or knowledge.
- source references
  - describes the original location and author of a selected sentence or quote. It is usually written in the MLA format however multiple source reference formats are supported.
- encyclopedic references for subjects
- dictionary references for items not in the controlled vocabulary list
- hyper-links
- broken hyper-links
- outdated hyper-links
- street addresses
- phone numbers
  - Voice line
  - fax number
  - pager number
- Email addresses
- Formulas
- Financial amounts
- numbers
- Algorithms
- Processes
- flow charts
- Pictures
- Tables
- Figures
- Mime content
- improper English
- related subjects
- opposing arguments
- literary category
- author
- author's others
- author's website
- syntax
- Language
  - describes the language
- usage count
- user knowledge relevance
  - The floating point numeric from 0.0 to 1.0 that describes how relevant the material is when given user's contact's, email subjects, current document storage, the subject of self edited materials, and Internet search contexts.
- table of contents
  - A table of contents that may be navigated for a document
- Index
  - A word index of terms

- character count
  - Number of characters
- white space
  - Number of white spaces
- number of words
- number of sentences
- number of paragraphs
- [flesch kincaid test](#)
- educational history of author
- ISBN number
- DOI number
- publishing house
- library of congress control number
- copyright year
- Revision
- Dedication
- Preface
- chapter summaries
- number of printed pages
- Editor
- Production Editor
- Production Services
- Copyeditor
- Proofreader
- Indexer
- Cover Designer
- Interior Designer
- Illustrator
- Printing History
- Appendixes
- Front Cover
- Back Cover

### Image Classification

Images can reside within numerous forms of stored binary data. Typical attributes inherent of the medium is recorded within the index datafile. Width, height, aspect ratio, color depth, color saturation, color saturation center, and luminosity are values that are calculated for index storage. The INET Indexer also provides content analysis of the image to deduce other search keys such as geometric classification. Multiple forms may exist within a image that are classified. The indexer depends upon a database for matching these items. There are too many to list here, however the most important ones are named.

- Width
- Height
- Aspect ratio
- Color depth
- Saturated color
- Saturated color center
- Luminosity
- Form
  - Human
    - Head
    - Face
    - Hand
    - Fingers
    - Toes
    - Hair
    - Eyes
    - Clothing
    - Etc.
  - Outside of house
  - Inside of house
  - Electronics
  - Household Goods

### Three Dimensional Graphics

Three dimensional graphics are also index and categorized by the INET Indexer. Categorization takes the form of describing the number of shape components within the model. 3D Models are typically stored in the form of a tree structure. At each branch there may be a label that describes the underlying sibling geometric form. This artist definable text is stored and used within the classification of it. Titles, author, description, web source, and date may also be meta tags within these formats that are indexed. Three dimensional graphics very often include references to textures. The related texture information is also indexed. Model formats also include material surface characteristics that describe their reaction to light when it is reflected. Surface materials are designed often to mimic the luminosity characteristics of a worldly material. For example, the material types glass, mirror, metal (including several types of named metal), and plastic are typical descriptions. The associated material results and name will be calculated for indexing. That is, a search request for all models that contain gold and plastic is possible.

Video has several inherent traits that may be easily indexed as the container stores both audio and moving images. Attributes such as duration, width, height, aspect ratio, and frames per second can be used to describe the moving image data. The container format also supplies meta tags while the stream format emanates information such as encoding algorithm, package format, bit rate, title, quality (HD, etc), genre and size that will be indexed. The audio track of a video can be described in various ways such as language, Dolby, surround sound, and quality. When multiple sound tracks exists within a video, language and quality contain more details. As well, a subtitle file may be related which is a purely textual format. The components of the video stream: image, and audio are processed with the appropriate indexing filter to provide greater depth indexes.

The video index filter also supplies logic for storing indexing information of related subtitles. One form of a video subtitle file is stored as a plain Unicode format. It contains a sequence of subtitle text records. There is also a binary form of the subtitle file. Each record within the subtitle file consists of a sequencing integer, a start time, a stop time and text of the occurring voice dialog. The binary format also includes a hexadecimal location referencing the image block unit within the stream. The subtitle indexing filter uses the same powerful full text indexing and NLP processing that the document filter does. However, the index stored is a sequential time based format one that can be searched to randomly access individual frames. The implementation provides a user with functionality that enables searching for voice dialog within a film by text. Subtitle files on legacy DVDs, Blue-ray DVDs and Internet purchased movies are very common and will be very useful at times to consumers.

The video index filter also provides a generalized associated file format that invokes the same format as a subtitle file does. This accounts for the future possibility that other types of information can be related to a sequence of video frames. Imagine that a summarized description of a scene or story segment would be useful and therefore created. As well, the constitution of the image gathering process can be taught at that moment.

The first line of this file is tokenized to deduce the relationship with the movie as a pure name. This name is used when storing these possible secondary indexes that are also associated with a video. An example of a robust video index would include subtitles, scene description, book page reference, storyboard card, musical score reference, and sound effect reference that are all related to time periods within the associated video. References can be commercialized to directly link to digital media for purchase. Even clothing articles, scene artifacts and goods seen within a movie can be expounded upon for commercialization as identity desires do emanate from these creative works of art. A consumer may love the entire outfit that an actor is wearing when they die and they want to buy it right away – fatal wear. These extra marketing features are available only to consumers using INET technology to watch their movie.

The classification of Videos may rely upon meta tags within the video stream as well as content analysis. Classification of videos may be described by terms such as Locally Made Movie, Consumer Movie, Consumer Movie Preview, Commercial Advertisement, Movie Clip, Music Video, Television Show, Cartoon, CGI Animation, Academic Video, or Adult Video. This index key is the primary order used when the object browser is operating. The value may also be used in a search command to narrow results.

Deduction rules may apply to probable classification labels given to video clips. Each type of video classification may differentiate from another according to duration, video content, and audio content. That is Consumer Movies have a running length longer than an hour while most Music Videos are less than fifteen minutes. Cartoons, as shown on modern television programming on Saturday morning, typically have a running length of about twenty five minutes. A Consumer Movie Preview may last for only three minutes. These deduction rules possess a weight that describes the accuracy of the underlying assumption.

A classification and title may be discovered at times by the file name, meta tags within the stream or by using OCR on a selected time ranges within the stream. Virtually all Commercial Advertisements have a running preview declaration within the first ten seconds. In America, the background of such films is either green, blue or red and contains a white text message. Commercial movies communicate the work title at different time positions but almost always within the first five minutes. Another useful trait of a of commercial movie is they all possess scrolling credits at the end which consists of textual information.

Architecturally, some of the algorithms implemented for Digital Media Rights Management (DMRM) can be reapplied during the classification process when the initial assumptions are not reliable. During DMRM, a series of image and audio identifications are calculated by image and audio analysis algorithms that can be used in a fuzzy search. This result set is used to search against a distributed web database that contains the same series of image identifications defined for multiple movies. The distributed web database also contains multiple attributes associated with production.

Once an official title of the work is established other attributes can be reliably associated with the video's index record. Using a distributed web cross reference database and the title can provide the other index information needed by the new INET media browsing interface. Comprehensive sites such as IMDB provide a remarkable amount of data that can be used. A list of possible index keys associated with a video is listed below:

- Title
- Abstract
- Classification
  - Amateur
  - Movie
  - Preview
  - Advertisement
  - Clip
  - Music
  - Television
  - Cartoon
  - Animation
  - Academic
  - Adult
- Movies
  - Producer



- Director
- Rating
- Screen play writer
- Screen play
- Book
- Storyboard
- Actors
- Set Designer
- Set Staff
- Subtitles
- Music
- Sound Effects
- Network Syndicate
- Genre
  - Action
  - Adventure
  - Animation
  - Biography
  - Comedy
  - Crime
  - Documentary
  - Drama
  - Family
  - Fantasy
  - Game-Show
  - History
  - Horror
  - Music
  - Musical
  - Mystery
  - News
  - Reality-TV
  - Romance
  - Sci-Fi
  - Sitcom
  - Sport
  - Talk-Show
  - Thriller
  - War
  - Western
- Duration
- Width
- Height
- aspect ratio
- frames per second

See also:

- [Genre](#)
- [Apple App Store](#)

### Audio Classification

Audio is a media type that can be dissected using several indexing traits associated with time and signal properties. As a function of time sequence and period, attributes may include Decibel level and frequency range. Given as a summarization value related to the entire data set, properties such as encoding algorithm, bit-rate, normalization offset, mono, stereo, Dolby, surround sound, frequency range distribution, and decibel level distribution is stored within the catalog. Advanced characteristics may be deduced such as labeling where human voices are used. Musical elements, genre, tempo, beats per minute, key, and instruments used are indexed. Lyric files also exist for audio music that will allow time based labeling of samples that may be used during searches to randomly access a clip. Like the video indexer reapplies the DMRM sample identifications to discover identification from a distributed database, the audio indexer also instantiates the same use. The meta tagging data consisting of textual information associated with audio files is also entered into the index manifest.

### Binary File Classification

Binary files are typically private formats that an application uses to store data. Often the writing of a binary formats is optionally offered by applications that can store data as text. The INET Indexer supplies an OOP model that allows third party application engineers to write a reader filter for the INET Indexer to use. All of the INET Family Software products provide a reader filter for the indexing service to use as a base line feature. This is true of all office software, publisher software, and programming IDE.

Binary files are also used directly by operating systems such as the executable format. There are several traits that may be gained that describe an application executable. The COFF format, a Microsoft Windows form, can be dissected to describe embedded resources. These resources may include string literals, image data, and references to external libraries the the program uses during execution. The base attributes of the format often includes information such as publisher, author, version and copyright information.

Executable files within the INET Web OS have classification information within them. As well, other executable formats such as COFF can be evaluated using a distributed web database that contains a list of know software which is structured by a CRC or similar value that can be used to index other related information. The classification of software is a large field. Wikipedia contains several resources on the topic.

See also:

- [Category: Application Software](#)
- [List of Software Categories](#)
- [Video Game Genre](#)
- [List of Video Game Genres](#)

At times data may be compressed in an archive format. The INET Indexer provides filters for many types of archive formats. 7Z, zip, cab, and tar files are the most common archive types. The archive filter set provides the capability of relating, as a leaf within a directory tree, each unit stored within an archive. Each unit will be processed by the associated index filter type. That is, documentation contained within an archive may be indexed as text while being related to the archive record within the private index datafile.

### Driving Interfaces And Sales

Extending the INET Indexer categorization dataset through distributed network database provides marketing value based upon digital media the user owns. Within the interface, marketing materials are provided using a non obtrusive but invited method. A prime example of how this can be invoked appears as the user is searching their video library. As if it is a personalized dynamic jukebox, when a search is performed on film genre, a tabbed view will exist within the displayed that interrelates the genre titles shown with purchasable or rent-able similar movies. This match selection can be accomplished on attributes that the consumer is sure of that made it a great film to watch. In particular, the director or main actor may have caused an exuberant like of the film. If the film was derived from a book, then the author that introduced the story to the world may function as a search key to find related works.

The relationships and attributes of data objects to other ones are many. It is likely that modern users do not execute advanced indirect searching because the link between data objects is not easily attainable. By making the link to them interface driven, the search path can be directed easily. The INET Indexer makes the operation fast and simple. The search results are dynamic as the cataloging of new marketing materials is based upon web server databases maintained by marketers reselling content. As a function to normalize data, there is limit within the depth of such cataloged relationships. That is, a few choices are offered to ensure the user is not over exposed to too much information. However, the given path of a search may be traversed further as a hyper-link that invokes a browser is nestled naturally within the tabbed view.

The INET Indexer is a host process that does not affect the performance of the user's experience as it is working. That is, such advanced attributes are typically not possible in today's operating system architectures. The collection of reading filters is robust covering many formats. The technology is accessed through a base API in User Sphere Explorer and other INET Software. Third party applications can index their own data as well as incorporate displaying the results as a function of the search panel. The ordering of data, attributes of summary and preview storage is a primary source for many useful features the INET Web OS provides to consumers. That is, not only is the INET Indexer used for searching, but also to drive interfaces so that information is displayed coherently. Providing the index as also a hybrid catalog allows quick access to the streaming data the client device needs. The end result is pleasing consumers with usability and performance. In short, the INET Indexer is an integral component of the INET Web OS that provides the capability for an interfaces to be intelligent and a friend to the user.

- [Search Engine Index](#)

- [Document classification](#)
- [File Format](#)
- [Naive Bayes classifier](#)
- [tf-idf](#)
- [Artificial neural network](#)

## INET User Sphere Explorer

One of the most common tasks a typical computer user executes is finding a data object that was recently created. By tailoring INET User Sphere Explorer to present data objects by category, time attributes, and scheduled appointment times, items are within reach easier when they need to be. Operationally, this occurs naturally within the desktop interface. Integrated within the INET User Sphere Workspace, contextual panels are pronounced at the top. The default location of these panels can be set by user preference. These panels are named Table Tops.

A Table Top exists listing recently used, modified or created data objects within the view. The data objects are concise, pointing out the objects or applications that were accessed by hand. Depending upon the object type, activating it quickly shows a document preview within the workspace area. Mail, social media, web sites, books, files, reports, pictures or download completions are commonly connected. The document preview can become the full application facility if desired. This preview facility provides the quickest method to review a context of the user's last work.

### Search Panel

A search panel also exists within the Table Top. The search facility is one such context panel. The search panel contains three normal search modes and one that is application specific. A single line, advanced category listing and advanced syntax provides extensive search capabilities that is linked to the application within focus. Single line view is the easiest, enter the keyword and press the find button. The advanced category panel gives an application within the workspace area context to list categories that refine search credentials. The advanced syntax panel offers interface options to build complex query strings. Depending upon the application context, these options will vary. That is, from SQL data view mode to file listing mode, many search modifiers are distinct.

Activation of the search panel is accomplished for each application using the same user interface operation. The search results that are the product of the query is displayed in the associated application window. When the user changes the application focus window, the search panel retains previous settings and defaults for ease of use. All of these panels (Sphere Explorer, Search, System, etc.) can be snapped into the desktop interface, hidden/activated, or transparent on top. The INET System provides integration points within the application architecture to fully utilize the interface capabilities of these panels. As well, the capabilities of the indexing system, search panel, and other system related tools are exposed within the OOP application architecture for easy integrated application building. The Table Top idiom provides an effective deployment methodology within graphical user interface design. Users easily retain the experience and use of these panels within the context of the application.

## Table Top Application Buttons

Another intrinsic feature of the table top area is a row of application buttons. The INET Web OS associates folders and files with the application no matter where the file or folder resides. When a user is browsing information within a viewer application, these buttons change context to note the association of the detail data object. This is an expected application setup for systems that are document based.

Modern methods of information propagation are centric upon the data objects themselves rather than the contents. To place an emphasis upon content is the key goal of the INET Table Top browsing interface. The user will at an instance peruse contents in a read only fashion. Functions upon the table top derive their usage from a rule based relational data structure while relying upon discovery for application object specific methods. Opening a data object for view or editing will unfold new tabs and place new items within counter top space. It is important to keep the area simple and useful. The usefulness of application functions may also be necessary to relate directly to the user by application. The Table Top browsing interface offers three modes of the application work buttons using a simple tristate control to suite.

## Keyboard Usage

An interesting facet of user interface operation that the INET User Sphere workspace orchestrates more promptly, actively, and functionally than modern desktop operating systems do is the incorporation keyboard control. Extended keys such as Menu, Ctrl and Alt functions provide quick access to many application features within the Table Top area. Dutifully, keyboard operations command the interface strictly for on hands approach. Graphical user interfaces of modern often rely too heavily upon the pointing device, which slows application usage.

## Data Object Browsing In Preview Mode

Data objects within the INET User Sphere Explorer include objects local or remote and whose type includes database, multimedia and the many forms of textual materials. One of the major forces behind the useful User Sphere Explorer is that the integration of preview materials is the result of offline application specific renders. This information will be gathered by a system service that maintains the indexing and catalog database. These catalog and index functions are exposed by the INET OOP application design. To provide exceeding preview performance using direct video memory access is the goal. Users want to browse and search for information quickly.

User Sphere Explorer offers a pagination view where large amounts of data is summarized without activation of the application. Within the pagination document view, the specific page can be accessed randomly during the activation of the document application. Several pagination functions are provided that allow the user to configure the view for optimum work: side by side, magnification, split views etc. The preview information is a consolidated package (draw list) suited for transmission over many communication mediums. The package does contain useful information that can be utilized by the application if it is activated. That is, it comes alive, switching from preview to execution mode.

Using the data object catalog, views are built that classify information using nouns and adjectives. The display hierarchy will expand and contract based upon number of objects and browsing context. The purpose is to allow easy navigation within an information or media specific portal. For example, a user that is looking at movies stored within their information access domain will be pleased when the information is categorized by genre. In turn, this gives the user a chance in maintaining a large number of objects for browsing.

To provide this facility, the catalog system uses media specific classifications to build the view order. So the data object catalog system will maintain a tree structure that resembles directory states yet when the classification system is the serving object container, more concise attributes of the data objects are shown to the user. This simplifies reading, browsing and eye scans. Content monitoring is in place as a function of security. A user might not want those password files showing up in a meeting.

The classification object hierarchy will be built using grammar rules that apply to the data specific needs. These rules may change the appearance and order based upon the category within its group. The appearance can be affected by these sibling relationships. Offering a very natural and usable order to browsing order. For example, one hundred videos exist within the user sphere. Twenty are comedy under the PG 13 rating. Thirty videos are drama while thirty are action. Of the are thirty action videos, fifteen are rated R, ten are PG 13, three are PG and two are G rated. A typical straight forward approach that modern browsing interfaces apply is a directory listing of all the files. The user can apply sorting based upon extended attributed listing within the columns. However, this is not the best choice.

Best usability practices are applied by refining the browsing view according to media type. In the example, film genre will be the primary sort order. To reduce the amount of columns listed and refine the browsing interface is the goal. So, the INET User Sphere Explorer, reduces the column spread by building a tree classification denoting genre. Other attributes gathered by the classification system are shown and applied to the sort order within the view according to importance. Rating, running length, ownership license, and audio attributes are some of the media specific classifications. When the user wishes to change the context of the classification tree, a new search method can be invoked using the search panel. The search remains within context allowing the user to refine within previous results or request a new result list. For example, a user wishes to find all the movies that are in storage that include [Steven Seagal and Sean Connery](#) as actors.

A classification system as applies to users that have large terabyte drives strictly for media. The media system also allows tracking of removable media which is the typical case of modern day users. Entry of removable media is streamlined by using the ordinary scanner and UPC code. The UPC code (or INET Tag) is automatically cross indexed with the appropriate media catalog information system on-line. Sites that maintain vast databases of information such as IMDB are selectable within the entry process.

Music is the applicable target for most user's home drive. Alternatively, the user can package their entire DVD and blue Ray disk collection and ship it to one of many third party services. These services provide real time on-line streaming using INET's Media Server technology to any device. A user establishes a private account and can then view any of their materials as a drive resource. Within the INET User Sphere Explorer, these services are integrated as part of the file system, search catalog and indexing system. Rebroadcast restrictions may apply when users do not have a direct relationship with the license holder of the media content after content has been spliced. Users may be permitted to loan materials according to the Digital Media Rights Management policies set within the INET Web OS license manager.

### Frequency Distribution, Statistics And Rating

The data object catalog will also modify the tree based upon frequency distribution within the superset compared to the subset. Order of the tree may change as well. Groups with more files should be displayed first if the view is thumbnail for example. Other times the listing may be strict alphabetical when that is the best fit. Hidden from observation are the file security attributes which typical of browser behavior when using a file system. That is, system and hidden files are not shown.

Statistics may also change the behavior, appearance and order of the display. Frequency of use, time of view, segments played within the file, frequency of views within a given time are statistical values captured that are important.

### Advanced Media Features Made Easy

Content continuation is an important factor to sort order as most videos on the web are segmented to multiple file objects, that is the name is alphanumeric; the sequence numeric trails. In this case special sorting methods are required. To further the effort of grouping files, continuation can be detected by image recognition or using a field similarity check on the beginning and ending frames. The algorithm will include a small splice time variance as a tolerance.

Data objects when identified as a media type have several characteristics that users recognize first: title, rating, genre, related fictional characters, actors, script text content, etc. In these cases, movies can be group together to form a relationship between one item and the next. Undoubtedly music has interesting characteristics and fine grain variations that can be used for identity; title, album, content, rhythm, genre, source, artist, instruments, musicians, singer, writer, production studio, lyrics, etc. The classification system handles all of these cases using database cross references.

### Media Play-list List Management

The ability to group data objects together within a list file format is important for media management. The user must be able to quickly create a M3U file with a button bounce upon the counter top. Packaging several files or data objects together for transfer to another machine, user or state (archive) is a common procedure. Processing several video files into one, a click burn operation, or click zap to mp3 player are functions users should not be hampered from doing.



Leasing and rental terms for content is integrated seamlessly allowing artists to gain a foothold within the market due to relationships. User clicks on SciFi Group and sees 'It Came from Outer Space'. That is, related movies from that time period could show because the film is known to be old. An detail option providing continuation provides this for the user to see other related content on-line within the browsing window without losing interface coherence. Other contextual information categorizations also apply. For example, the user clicks on SciFi Group and sees they currently own a copy of 'Alien'. Within a nearby area within the window, titles Alien 2 and Alien 3 are not far beyond view.

### Batch Operations In Line

Other batch oriented operations may affect a file when it is rendered real time or in some cases permanent. The ability to apply a filter or DSP algorithm to a group of audio files, video files or both is useful for many users. Users could let the band equalizer adjust music based upon speaker manufacture or perform a normalization with a soft limit on DB to provide appropriate volume levels throughout their jukebox when playing. The system supports filters in a render chain, rule based auto-sensing and permanent changes to files.

### Editing The Catalog Information

Common dialogs will make use of the system but allow application specific category locking. The architecture of building applications may involve propagation of tagging and catalog information. Providing common dialogs that integrate with cataloging is included. The user has the ability to override and set the tags (ID3 Tag) of a file within the classification object system; that is the group. The User Sphere Explorer will support modifications of classification both internal and external to the file. Advanced information attained through recognition and cross referencing is editable as well. Users will be happier to know their files are found easily.

### Common Browsing Interface

The INET User Sphere Explorer is an extensible application providing an OOP Link between Data Objects and Applications. Typical uses will find many to one relationships, that is more objects are to be found than a single object emitter. The ability for User Sphere Explorer to host applications as a blanket viewer is integrated within language source and INET Application Architecture. Programs that utilize the interface unity of INET User Sphere Explorer to accept data objects, provide cache operations, manage repository and provide multi-user object locking include the necessary OOP protocols within their design. Using databases, database tables and application specific file formats within the browser automatically manage the appropriate objects and resources.

The INET OPP User Sphere Application Architecture API layer provides the necessary tools for a hosting application within the User Sphere Explorer. If an application that makes use of Sphere Explorer as an interface component is started, interleaving the loading function with catalog gathered renders will allow quick presentation of the GUI screen. That is, building previews and catalog information is handled automatically by the application architecture. For example, start the Media Player and user explorer is already in frame. Operating rules of the data object may add the burn button to the Counter Top when a file is associated with the media application.

The rendering portion of User Sphere Explorer is very flexible especially the portion that renders to the data object pane. Appearance, colors, odd even rows, background, columns, column widths, fonts, multi-font, subtitle rows (genre heading), fly out over information panel colors and fonts are well established. Object name-spaces are well formed for current set and future expansion giving developers a solid base for development. The memory and CPU weight of User Sphere Explorer is dependent upon loaded and associated features making it an obvious choice for many developers. Finally, there is the ultimate listing control.

INET User Sphere Explorer is a data object manager that provides all related applications including the INET OPP User Sphere Application Architecture API a portal container. Users will have a welcome mat they know to make sure the object is the object they want. The plethora of features found within base INET Web OS User Sphere Explorer applications will be readily available making the user interface comfortable. In short, the data object catalog will bring new smiles to users who just want to use a computer without having to remember where all the objects went to.

## Contextually Based Cataloging Of Pertinent Information

### Save Dates, Make Time And Love Good Quotes

The flexibility of digital information is infinite because it comes from a natural creator. For example, materials attained from network transmission sources can contain many forms of super types. Dates, times, financial amounts, pictures, good quotes, memorabilia, songs, movies, schedule appointments, confirmation numbers for on-line orders, job listings, rental listing, classified items for sale, formulas, algorithms, academic reference texts for use with MLA citation, graphs, and hyperlinks are some conceptual containers that users identify with, but there are more dependant upon the user. To provide a way of using the human mind as a decision maker in the catalog of soft, dynamic and hard linked information, the INET Web OS will provide an extensible framework for parsing selected data and shipping it to a related application for memory storage.

The framework conceptually contains four operational characteristics: an INET feeder application, parsed recognition grammar traits, recognized grammar match relating application automation, and historical source tracking. Examples of INET Feeder applications are an Address Book, Phone Book, Dictionary, Thesaurus, Machine Translation, Photographs, Appointment Scheduler, Spread Sheet, Calculator or Relational Database. INET Feeder Applications derive their data transfer linking protocol from well defined OOP APIs. INET feeder application protocol will be an object interface supported by major platform components and applications. The system will give significant might, usability and data gathering capabilities to the web and digital information consumer.

Imagine going to a web page that contains a table of information. Varying upon the information within the columns, a list of good memory storage matches (INET feeder application) are made. The array feeder invocation interface is executed (e.g right click context menu) to summarize options available. Clicking database will provide entry into a new table or existing tables as historical and real-time fan out occurs. Identifying the underlying data format and column names will create better databases and providing better catalog performance. The page will be linked and have the availability for a routine synchronization with event processing.

Supporting parsed recognition grammar traits will allow third parties to develop their own software easier. Recognized grammar matches that relate application storage protocol will provide contextually smart operations that fill data objects of applications. The information storage can take place behind the scenes or prompted validation for submission. Example, on a web page a business is listed along with its phone number, email and website. The user draws an encompassing rectangle around the information and presses CTRL while right clicking the mouse. The information logically could be placed in a number of places within the users information sphere. The system should list best candidates in a pull down menu or other UI implementation. Add to Phone-book, Search on Map, Write a Letter, Send a Business Email, Related Articles, and Contact by Phone should be in the list. However if the user had only highlighted the phone number, Dial Phone Number and Add to Phone-book, or Fax Paper should be in the list. The grammar parsing is smart enough to inspect the surrounding areas to locate associated content specific to the storage application. So if the user only highlights the phone number but chooses Add to Phone-book, the possible business name and address will be populated in the appropriate fields. The Relational Database Feeder application will be the most dynamic. By allowing the user to create at will form, structure and utilize grammar rules for relational database storage will give dynamic tailored storage memory to the user. Creating reports, searching, and linking will give a tailored flow that benefits usability.

Historical source tracking is important for users who wish to backtrack where something came from. Optionally on selected cases information can be stored locally or logical remote (cache local). When items are stored in a remote location, the opportunity for dynamic reevaluation of the contents can be automatic. However, this kind of automatic feature might be cumbersome for the user since the data and relationships to the sibling products can vary greatly. When items change, the user may need to make house keeping modifications to maintain validity and coherency of document flow. So the automation of data object revaluation will need excellent planning within the structure of the graphical user interface and provide safe usability measures.

The use of the keyboard combined with mouse operations, mouse over and mouse click, should be configurable with ease and tie alphabetically with useful functions. Remember the nice old DOS days when terminate and stay resident programs became available; Borland Sidekick. These programs remained in memory after loading. By hooking within the chain of the keyboard interrupt, keystrokes could be scanned for matches. The useful dictionary became quick to use as the program just popped up. Technology and operating system design has changed in so many ways since then.

As an information consumer of textual information, the formal dictionary is a necessity. However, its integration within modern desktop operating systems is poor. The best way to create a more steady flow of reading and comprehension is by using INET Hot Mouse Keys in conjunction with INET Feeder Applications. INET Hot Mouse Keys are configurable within the bounds of the INET User Sphere Workspace. The most useful would be the Windows Menu Key, the shift key, and D and a mouse over operation. Upon mouse over of a word, with a half second delay after mouse steady, would show an alpha composite layer that has definition and pronunciation. Future AI practices may extend the first definition in the list to be contextually related: noun, adjective, first definition or second definition. While the keys are held tight, the window may be scrollable and provide navigation. Clicking on the title will may it sticky, that is not disappear after the release of the INET Hot Mouse Key.

Another useful INET Hot Mouse Key user interface operation is the INET Wiggle Selection; a soft selection for INET Hot Mouse Keys that includes long segments. In this soft selection operation, the user wiggles the mouse over several words and then leaves the mouse cursor at rest upon the soft selection indicator. The function is activated.

The INET Instaphone Applet will allow information selected upon the terminal to be transferred to a users cell phone device as a two device naturalized synchronization. As an input for dialing upon the INET compatible cell phone, it provides the user with calling capability easily. This activation of communication with other INET Desktop, INET Laptop or INET Smart Terminal is a design function of the INET Web OS. It is a mode setting by the user upon their small device while information selected as a valid phone number is presented for dialing.

The system is intended to be installed as part of the INET Web OS experience. Therefore the relationships grammar and feeder applications will be set as a default feature of the operating system. The system will be active for any application within the scope of the User Sphere Workspace since it is commanded active by the user using the CTRL and Right Click interface combination. The cataloging system will provide OOP structure for third party advancement based upon the directional purpose; no sense in allowing confusion to enter usability. When the contextual grammar parser is filled properly with super data type recognition, new forms of productivity can be had and understood by the user.

- [Parser](#)
- [Borland Sidekick](#)

## INET SoftSpot Components

### Improving Software Quality Through Diversity With Competition.

The control of the basic API syntax and the effects of them upon applications that come with the INET OS for reference of original implementation will be available as an INET SoftSpot Object. INET SoftSpot Objects allow replacement, multi-version management and rollback of individual applications and pieces of application workspaces at user will.

Imagine a physical implementation analogy such as a grocery store. They sell Strawberry Twinkies, Raspberry Twinkies, and extra Vanilla Twinkies. The store should not block the inventor and provider of the Raspberry Twinkie. Therefore tools such as the User Sphere Explorer, what was used to create them is implemented as a INET SoftSpot component, INET Application, a UniGlue Object or OPP API.

INET Software Spots will provide real-time usage of components and trials. But for the entire market to function freely, compliance in digital data format and object description format must be maintained as a licensing and testing agreement. So if a user wants to try a new video editor that has snazzy ray traced effects it will not cause errors in future operation. If the user wants to use the product of the video editor, but not keep the editor as the default one, a rollback operation can be executed with two taps; double tap roll. INET Software INET SoftSpots have an implemented (OOP) translation interface with the INET Format Translator. Hosting applications that wishes to query multiple INET SoftSpot versions will ask for their list of native format. Text, Image, Video, Numeric are large domains and most applications can host a variant. INET SoftSpot objects will also support Automation.

Variable solution server side instruction reduction is an integrated architecture within INET SoftSpots. Some implementations may not only require overlay process but also memory consolidation and performance operations for footprint operations. Imagine a client device in which each function of an operating client must be in place without future change to instruction logic. The INET Web OS is expected deliver this.

## Object Component Technology

### User Interface Glue And Object Architecture

Software development efforts of the past have first sought to deliver a working product. As platform technology expanded, application development only got complex. That can be understood from comparing MS DOS programs to Modern Windows programs. While there are more features, specifically relating to usability, most of the misunderstood development tasks relate to integrating with the core platform. Developers and System Analysts know the core language, business logic and their tasks in usability. When problems occur they can be debugged.

After the company has spent years developing a software application, most of it is thrown to the wind because it is incompatible with the latest and greatest. Yet the core logic never changed and the core language did not change. The INET development environment, a technology platform of Internet streaming, plans to embark upon a more ethical relationship with developers and businesses. By focusing on methods that allow the developed technology to be integrated within other products easier, the company's software holdings will have higher fixed asset value over a given duration.

A facet of deployment is integration with other software packages. Well thought out methods of open source data sharing such as the Microsoft technologies OLE and Active X are of good benefit. Yet the user cannot make the decision of what to tie together because there are intelligent interfaces for developers only. Integrating complete applications together within the Microsoft platform is a task that requires finesse in some circles. Message sending using the Windows Message Queue and window message capturing is one route, yet the data is still not integrated.

### UniGlue And The Makers Of Metal

It is the plan of the INET system to further the sharing technology by allowing developers and users to glue applications together if needed. Seamless user interface integration and data sharing is a goal feature; Uniglue. Menus, toolbars, application fields, calculations methods, inner application frames and of course complete windows will be suited for a drag and drop glue. Linking two fields together using a data clone method, will make one field read only thus depending upon the parent for the data. The relationship can be broken using an option upon the associated contextual menu. In effect this ties to two applications together relying upon code execution to produce the value. Circumstances may require additional setup, controlled again by interface and automation; e.g. primary or secondary application log-in. There should be no limit to the chaining of these items. For example one application uses a field that displays a calculated result. A secondary application uses this value, produced by a series of database operations, to arrive at a new product. The new product is used again in a third application for view. To derive the final result, if only the third application is summoned forth, multiple code bases will need to be tied together.

Consider for example an application that does inventory control, a restaurant menu, a purchase order system, and a time clock employee time keeper. The difficult tasks in allowing integration will be in developing a platform object system that maintains a catalog of field input/view data items that relate to screen input. Once combined together at the server to create the stream, performance will not be affected. Other aspects of an application that need to be instance based because of file access storage can be handled by storing the information within the database. File handling APIs will connect normally through the existing application logic.

Users will have access to this feature in all applications since the INET framework will support Uniglu objects. This includes base applications, reporting/publishing and third party developed software. Of course applications that are written specifically for the platform, by conversion or new development will have greater support. This feature will be served within the development languages themselves. The feature will be available to applications that are transferred without magnificent translation, but on these applications there might be limitations on data sharing. To the user, converted applications will respond and allow glue objects appearing normal.

### Component Deployment

Benefits of reusable technology better known as object technology are its ability to speed development and deployment. The reuse qualities lie within the development arena and its purpose has little to do with the end user. Automation will be built into the objects which will enhance usefulness. To the user it is simply a common program library that applications use. Deployment strategies of modern component technology integrates binary version tracking of the library and alias names. The underlying architecture of the INET object system will be robust enough to handle partial transfer of logic and visual rendering lists to provide flexibility during overlay processing.

### Dependencies

The underlying object management system for both visual and logic objects of the INET web server technology will include version tracking. A major benefit of stream service will be tighter integration of object messaging, parameter passing, method realization and method invocation. The format of the binary object will include a dependency tree for each property, method, instance variable and code path, making the object storage size on the server larger. Other metrics about the code path will include CPU requirements, object dependencies, memory requirements, special hardware requirements, and graphical user interface response blocks. This information must exist for the code path, method and entire object. The information will be used by the web server to make intelligent decisions about application execution over the duration of the device registration and use life cycle. This will allow incremental library updates for application specific requirements. Example, one object uses a library routine with a string parameter. After further use, an application is installed that uses the same library routine yet uses a string and a numeric parameter. The portions of code change will be applied to the first block to morph a suitable dual routine. As well, the compiler system must include a block tagging system that will identify the code as server oriented or client oriented. Artificial recognition means do lead to productive cycles however several cases arise when the developer will make a better decision.



The dependency tree will be used to calculate order and instruction content for the stream. Consider for example an application input screen designed with the spreadsheet application. In this form, the user can input a series of numbers and several formulas update automatically. As well, graphs are available and the information is uploaded to a database. Graphs will be rendered from the server while the formulas will be processed on the local machine. In this example, the benefit of INET Object Technology will be the formula update performance and VLISM code realized. Most formula processors work by first parsing an input string that defines the complete calculation, Hungarian notation or postfix stack. But in an input only template, the complete formula processor and associated math library will not be needed. So a concise version of the user formula will be executed on the client. This will the developer and user higher effective use of the on-board processor by reducing instruction space.

The web server will compute a near optimum implementation for the connected device while retaining the many benefits of object discovery within the development process. Most of the realized advantages of object oriented programming are within source code text, not execution.

### Granular Instruction And Function Cache Management

VLISM encompasses many bounds of computing science. Pushing the hurtle and crossing the line first, the object model absorbs distributed processing by allowing definition and measurement of object code, application data throughput, and dynamic microcode analysis of object use. These measurements allow the web server to deduce future operations of the user application context. A precise stream rendering will reduce data transmission bandwidth.

The system analyzes source and object code providing attributes that describe size, execution order, performance characteristics, and resource usage. The system records function input requirements and function output interpretation to reduce call invocation options. That is some calling interfaces will not be needed until a specific program operation is selection. The state code path incremental stream linking and incremental stream linking operations will reduce data transmission using block operations to expand and contract VLISM Spider JIT mnemonic routines.

An important function that the VLISM Engine provides is secure code execution, debugging, ring execution and program communication. Program Communication in a cooperative but secure way with the computer. The operating system will be almost impenetrable. The INET VLISM Engine provides this for many types of distributed systems. Some program instructions can be compiled as a device driver ring component and reloaded within memory. However for the engine to compile these types of functions, the appropriate function port must be activated within name space locking port.

These attributes are used to cross index a rendering rule database during many levels of an application's life cycle. The searching structure of the rendering rule database achieves inheritance and overriding capabilities within its dictionary syntax to allow developers a confining territory of explicitness. In some circumstances, automated facilities of code and architecture that produce subset data need tuning when observing human created applications.

- [OOP](#)

- [Corba](#)
- [COM](#)
- [DDE](#)
- [OLE](#)

## INET Software And Digital Data Store Business System

### The Brand-able User Safe Digital Data Retail Catalog

The software cataloging system for the INET Web OS is a comprehensive digital data manager for the INET software industry and fantasy entertainment industry. Digital data includes meta formats like video, reference film, book, reference book, three dimensional models, textures, cgi animations and music. Software for the INET device includes INET Applications, INET Device Drivers, INET Web OS User Sphere work-spaces and INET SoftSpot components. The user from the INET User Sphere workspace will have the ability to manage software installed within the Web OS and from within applications. Some software may be resident upon the device itself while other facets of software distribution may be persisted at an array of remote servers. The Digital Data Store Business System will be an integral part of safe software and industry digital data management for users worldwide by incorporating a reference source metric that notes original binary properties. An entity's preference will be to balance to reference editions.

A secure authenticated connection between the INET embedded device and the off-site large computer manager (home base) will exist by network computing designs. A software publishing house authority that manages digital data transfer will close many issues related to software corruption for the application resale and distribution market. System administrators can lock a Smart Terminal to only allow installation of software from a list of specific Digital Data Stores. These Digital Data Stores, much like your favorite restaurant you eat at in your own home town, will be a physically secure environment. One will exist for your consumption from people that you know and trust.

The system will manage protected identification of the software imprint according to the source. When a system administrator performs routine diagnostics for maintenance, software will be check summed using these values. The software version and binary signature must match the license policy attained. Disconnecting functions during this phase is handled by the rules defined for the user's software relationship. A software disconnection phase might provide a formatted wizard to pay by the minute or translate user output into an owned application's format.

The new BIOS created for INET smart terminals will allow an administrator to introduce steps during terminal boot that verify the base INET Smart Terminal's resident operating system. As well, integrating itself into the application start pipeline to before execution, will allow real-time network checks of software authenticity.

By providing a focused digital data connection and appropriate GUI integration points within the INET User Sphere workspace framework, users will achieve higher success and satisfaction from their endeavors in computing. The ability and potential for software vendors to compete fiercely within the realm of fair intellectual competition will be promoted by this model. Commercialization, and advertising of software within the space should be developed using a fair yet profit oriented design. Using INET Point to Point Security Identity Transaction as a means of authentication to a digital data warehouse will give high security to the process of software management. Something today is just a file download and click to install.

Anti-piracy law as a function of software management is an important yet often poorly integrated within the realm of the user relationship. Most developers and vendors have to supply their very own methods without support from the operating system. Because Anti-piracy support is not built into modern operating systems, low level developers can overcome software locks by disassembling the application using its binary machine code and then modifying the protection code with NOP operations or provide hacked keys. If the application is advanced enough to perform self checks, again this can be overcome by NOP.

Other aspects of anti-piracy establish a poor user relationship. Users must keep records of license numbers. If a system failure occur or their machine is stolen, investments in machine setup time and software are lost. When a machine pleases users, typically a large amount of programs are installed. The user must remember where applications were distributed from. And what was that license key? License numbers were built for software publishers to solve a copy protection issue; or at least being able to track duplicate entities within a domain. CD and DVD copy protection have their own work, some very sophisticated in operation but ultimately lacking completeness in solution due to physicality of the medium; it is a DVD; it can be copied; it can be installed on another machine.

The INET SDDS Business system will employ an anti-piracy software management feature that is the best known method to known date by utilizing a centralized repository. Digital data objects are controlled as they are transferred from the vendor to the client. The system imposes licensing by delivering the precise version. As well, restricting logic based upon the source country's and target country's import export law. Registered software users are tracked. By possessing such tight control on installed software, the system will ultimately reduce, by a large number, illegal copies of digital data while insuring digital and application integrity of the system for a life time.

The software market and its policies of dealing anti-piracy were cultivated on an as needed basis. Of innocent being, each engineer under takes a task to complete to perfection, useful and within agreement. This cannot always be accomplished, yet the traits of a working relationship are there. These individuals do not think about theft in terms of physical property. They immerse themselves in the logic of digital data. It is obvious that copying a creation is easy. Software locks were developed as an after thought to correct the problem. The entire model of handling both physical world items and digital data items within standard culture is misguided. The intent of the industry is filling a technology need or fulfilling a fantasy. The end result is that the software engineer, author or publisher wants to receive financial gain for their creations. Game programs do take an enormous amount of time to complete. The same is true of a film, song or art work. The INET Software and Digital Data Store Business System will support software promotion in a natural ways.

Software promotion accomplished by allowing a user to suggest a piece of software to an individual is a great concept that the system includes as part of its anti-piracy policy. Users will be able to give free software rental time of a specific application as an introductory gift, the price wizard. Optionally without expenditure, the software can be positioned in front of a user for a trial use. It must be done so without extraneous information such as computer generated packages often note. The software management system will do this proficiently within the application frame for consumer software titles. Items such as specialized editing packages will now get the notice they deserve.

### Fantasy Puzzles Bloom More Mobbers

Communities of game fans are sometimes tied together by innate culture similarities; kids play together, the office has a team of role players, or you like life like simulations. The system will allow the definition of a group of recipients that are either public or private. Groups and users are defined through the standard operating system interfaces thus also connecting the information source to business and personal contact databases. The group will be defined to be recipients of software titles. The originator may only let select individuals within the list. Including the item as a packaged format title, considered web published, should be comparative to the operations of an email. Some personal communication within the portal box will result. Games and interactive seem to be the leading explorer of the realm.

This underlying software advertising and in-line redirection feature will be supported by an API set to allow developers logical inclusion of the technology within their applications. The system will structure the software catalog and associated promotional operations to offer ease with linking and promoting software. If user policies permit, the system will enable tracking of potential customer bases to directly market specific types of applications and well as complimentary products. This will enable the quality, conformance and excellent attributes of software to be a humanized function of communication.

Imagine the ease of use and knowledge propagation found within educational titles; a list suggested by mother goose herself. A school may include several specific titles that follow close to teaching guidelines within a group and send this to her student's laptop. This group and its information can be directly attainable by the hands that will use it. Providing for flexible payment plans out of stream from the student teacher relationship is necessary. The teacher can give the student a location URL that suggests such software. Hopefully this will make it home to the parents where they will use their fitting adult computing devices at some time in future to select a payment plan. The children will have their very own computing terminal, rugged, durable and water proof geared strictly for educational content. Potentially several versions of INET Smart Terminals can exist, even ones that glow and have space cadet plastic with graphics for boys and pink lace for girls. However, there is an argument for school books being released by the public school system. It makes logical sense to have school assign computing tablets.

Establishing prizes at the point of sale is a direction of other INET products such as the INET Web Cash Register. Those systems will use the very same data system implemented within this section of the book. Therefore, the architecture, configuration process and API integration will facilitate the operation. That is, while the system does not maintain the retailer's in store inventory of items such as soft drinks, popcorn, chips or even fresh baked pizza. Each item must access one of the media items stored within the Digital Media Retail store through another layer that connects the INET Web Cash Register through the marketing system.

### Flexible Software Finance

The INET SDDS business system provides finance plans fitting software industry needs. By doing so, the software industry can become more successful in propelling favorite software practices and development. First by reducing the broad focused, negative social impact of illegal software use. And second, by providing a finance schedule payment plan. The goal is to solicit potentially nourishing users by embarking upon a sensible relationship.

By providing a rental, quick software loan, [GPL License](#), Tracked Free Software, Trial Plan Agreements and Software with Royalty Licenses within flexible payment scheduling, more investments will occur. The system can measure actual software use more profoundly. GPL software and Tracked Free Software is under the terms are free. However, Tracked Free Software records the user and terminal for potential marketing advantages. Specifically for development, a specialized payment plan will exist that distributes income at the point of sale during the transaction of a super-application. A super-application is an application that is constructed of multiple third party technologies. Based upon a defined software license, the super-application may use many components for development ahead of time for free or a nominal fee. The INET SDDS business system issues royalty payments as necessary, splitting the net sale as imposed by the software license contract. This will benefit competition due to the subtraction of the initial investment costs for quality third party objects. Software quality and versatility within the market will increase due to the new freedom found by small yet creative software development teams.

Software trial plans are defined within a database containing rules that exhibit savory variations in methods used in logical display and functionality. Implemented as a light syntax embedded within the source model, development costs associated with full bodied applications will be managed more effectively and securely. The system provides precise granular control to enable, hide or disable functions of applications. Server based authentication will manage the software license and software trial license within the context of these rules. Several versions of these rules can exist that combine name-spaces of trial or version specific controlled features. These name-spaces are analyzed within the context of INET Object Technology to provide a precise copy of the application. That is the user never gets the entire code cut block until a proper software license is achieved. As well, some attributes of information technology law as instructed logic will result with these databases to facilitate import and export laws to and from countries.

When software trials end or the time block is expiring, the ramp down software process should offer count downs, persuasive content and provide a descent stage. Providing a social exercise such as this is common in a retail environment. The practice will form more meaning within the context of software promotion. If data was created by the software use that the user desires and values, translation of this data might be pleasing. The data translation of trial application output should not be blocked but promoted. Cleaning and removal is also an afterword process that can be instructed by the trial and feature database of rules. At some times, complete software removal will be the target. Providing a soft link to this software using INET Web OS archival memory will also be a beneficial feature.

Hardware and Software vendors work together to bring a usable product to consumers effectively through OEM agreements. The INET platform intends to further the thoughts by delivering an initially very low cost product that users can use for a limited time per day as public domain. Three hours of computing time on a computing device. The product can be paid for incrementally until the user owns the account. This is intended for the very poorest that wish for reading materials, education, movies, and communication.

### Steam Rolling Over Computing Varmints

The ability for Virus, Spamware and Spyware malware to arrive within an operating system is typically gained via the Trojan horse method. Users download something and expect it to contain only the information described in the product description. Methods of detection are evident in modern form diagnostic programs. By ensuring integrity of applications using these scanning methods, verification of digital data version with software vendors and provide manual testing assessment statuses by an authorized software warehouse manager, the ability for intrusion will be drastically lessened. Just like a California bicycle rider, you must have a license to publish executable content.

The ability to register developers and vendors will be management function of the system. It is expected that one be able to track and possibly keep changes to the program up to date. Software payment to the developer will be achieved through the system. The registered developer information is intended to provide a software contract relationship between the user and the vendor (developer). It provides a professional interface to query user needs, their support help and provide an interface to correct logic errors. Official investigative methods will be built into the system. If an application or developer is reported to misuse technology as in terms of information law and known to cause malicious damage, the signature will be installed into the block list. Within these facilities, reporting and digital data management will be a functional role.



Most users realize the capabilities of computing rely on software. The ability to find and research products is essential for learning. The INET Software Catalog system will provide a hierarchical relationship model that defines application implementation boundaries. As well, Digital Data Objects (music, videos, textures, audio, sound, animations, and 3d Models). INET Software will be labeled. as a server store component, the information portal will render software use, the manufacture, company historical data, previous user relationship data (anonymous), user reviews, and related products will be in warehouse queue. The system will allow branding, visual flow control and business object integration so that third party vendors can integrate application resale as a business cycle.

As a protection from malicious code, the computer terminal and INET Web OS operating system will use a single point to retrieve an INET software distributor list. The Software Distributor List will be a super list formed from the INET industry list. It will include all servers that are hosting the INET Software Store Business System. Country, line distance, application usage, specialty, license cost, and original language will most likely be the main separators between each store business system. These Software Distributor List subscribers, will be authenticated using several protection methods.

One method is software application and component authenticity. The item and quantity of it will be maintained in parallel state with the appropriate business references. Financial distribution costs will be held in confidence as a digital data contractual agreement. Financial gains will be quantified and distributed at the time of sale. A minimum of one software purchase must take place to start the distribution method. In other words, the re-marketeer will establish the promised license rental and capacity will be set and understood by both parties (Software Distributor and Retailer).

Ensuring financial transactions work properly is essential. Software rentals can function freely within the retailer market due to location and hardware asset distribution. Establishing a private whole-seller software rental time unit price will allow retailers room for adjustable markup. Backing this information up through network activity monitoring is characteristic of the risk. If the fund splitting process is blocked by hacking into the system, the disarrangement will be identified. By measuring the data throughput characteristics in proportions to financial transactions to provide investigation data, INET Software and Digital Data Store Business System will ensure the company's companionship as a wholesale software buyer.

A trusted statistical system externally monitoring network traffic will quantify and sample streams. Sensing the differences between software demonstrations solicited by an anonymous potential buyer from an official distribution method is one of the system's tasks. The retailer distribution markups, that is, why they are in business, will be secure as seen in physical implementations of modern day.



## Retailers Binding Software Using Their Knowledge

The capability of a retailer using their knowledgeable software and implementation expertise is promoted within the INET Seller Program. Their education can be used beyond that of just serving the creation of another individual. They can re-market items or collections of software selected bounded together within an INET Web Sphere desktop for example. Therefore their knowledge of software study can be implemented in many facets of customer relationship. Allowing specialization and on-site support solidifies these necessary ingredients. The business owner will use the tools and their knowledge along with other hardware products. Hand in hand some markets go. INET Web Sphere desktops include automation scripting support for specializing even further to reach full potentials.

A company product registered as a SoftSpot component or INET Application will have the ability to be installed real time within the system. Allow use of the while installing and no reboot in the end. Any data translation that needs to occur to allow new software to operate will be processed. Applications can be trial based by number of uses, full function free, rental by hour/day, purchase time block (gaming or specialized software), purchase as you use (functional), Pre-use Layaway (lifetime guarantee; license) and full digital box set (lifetime guarantee; license).

Health check statuses for the software will be easily readable by the user. Users will be able to tell how many people (percentage wise) already use the application. The system will provide an effective way to determine if bugs exist within the application and if they are very serious issues or just minor stuff; screen pixel glitch. The INET embedded device will contain low level code that tracks software to determine if Anti-piracy laws have been broken. The software will be disabled from execution and revert to the disconnected phase. That being said, in most cases comparable fully functional applications will be available and suggested incorporating the free software foundation.

## The Market Value Of Applications

The catalog system will add professional re-market value to applications for local area advertisers. Knock off duplicates will not be allowed. The system will provide integrity checks of all registered warehouses within a digital neighborhood. That is to determine if they are a legitimate holder of download-able materials; information arrived at by cross electronic reference. The INET Web OS and embedded device will contain logic to disable pirated software.

The catalog system provides a self functioning forum desktop that strengthens business relations. A method of mapping new titles gained in inventory and then suggesting them to a select list of clients is captured within the facility. A list can be viewed that displays available software that is absent of currently owned software. Collaboration functions will unfold to multiple function purpose. Establishing a software publisher investigative connection will be exciting.

The catalog system will promote the capture and distribution of funds by sorting the availability (including bandwidth) of software by geographic location. This will provide a good income distribution method for branded digital data stores. Some consumers will enjoy shopping at the local audio and video store on-line. A natural practice in metropolitan shopping. Other circumstances tie software necessity and use to a specific region. Example, a system that runs Taxi Cab companies using broad band wireless technology would be a competitive product in urban areas where taxis are plentiful.

The system will also protect the software licenses the user has accumulated over the life time history of a user persistence. So if at any time a user wishes to change service providers, their bought applications can follow. The system will also provide tracking of off server large byte files; movies and groups of audio. Instructions for scanning content will be given by the INET Web OS to the client device to execute. Allowing a movie studio to possess and track licenses of digital movie owners will provide integrity to digital video over the web. The system of software and digital data object management will be designed as an integral, useful and easy part of the user experience and developer application life cycle. The INET SDDS business system provides the basic retail store portal for digital data. As a unified process, users will incur less trouble and be more affirmed in their software desires. In confidence users will cheerfully escape common computing insecurities.

- [JustText.com - Security and Privacy Tips](#)
- [Anti-piracy](#)
- [Computer Virus](#)
- [Spamware](#)
- [Spyware](#)
- [StopBadware.org](#)
- [Digital River](#)
- [PC World](#)
- [9 Software](#)
- [Game House](#)

## Scheduling And Automation

### The INET Macro Recorder

The INET OS web operating system will provide scheduling, automation of events, automation of scripts and automation of applications. Applications can receive automation data sets from a database table, XML document, or parsed parameter Internet transfer to populate the fields accessed by an automation script. Windowless entry or silent mode can be optionally selected during playback of any automation script. Logic that provides data type and syntax checking on entry components as object events can optionally be active. An XML DTD document may also be appropriate. The output from errors and success will go into a queue associated historically and hierarchically with the passed dataset, script and event.

The collection of the Automation events, managed within the OOP API architecture, will include dynamic web actions, local system events or remote system events. The target for the subsystem is corporate architectures where batch processing is performed on a regular basis. Applications that are used in other parts of the corporate data domain yet are not used in everyday forefront processing can still have up to date use with this system by linking the modernized everyday use system to the less important one. Cloned data pointers may be useful here; a database construct. An event is defined as a operating system event. This includes setting file system events, or events based upon hardware interruption. Other events can be spawned by service applications as well. For example, a motion detection algorithm that cycles while the user is not operating the computer can be set using the camera application. When the algorithm gets a positive result, an event can be fired that activates an automation script. Events are the most versatile form of automation allowing coverage and connection of many applications.

Scheduled events can be time based while others will be based upon successful completion of previous processing. The API will support queue dependency processing, success or failure of an event will trigger rollbacks or the commit action of the transaction (job). Mainframe computing professionals commonly refer to these functions as batch or job processing.

Interfaces to the scheduling API will be computer language based and GUI interface based. The GUI interface based application may not be able to support all the logical combination features common to resulting products of object and structured programming languages. An accompany application that presents a calendar user interface will provide access to the core scheduling and automation API. Security must be at the forefront.

The INET Macro Recorder will produce sessions of the user's actions so they and third party add ons can enhance the INET User Sphere productivity for their own objectives. Suggesting an output to automation scripts with a large frequency of programming language support. The system is intelligent enough to track modifications within the environment and allow in flow modifications and by user debugging. Applications that subsequently run underneath or invisible of the macro, will post into a queue status. Macro Recorder applications will also support GUI interfaces. This is a large component of the underlying architecture of INET User Sphere workspace.

- [Job Scheduler](#)
- [Automation Anywhere](#)

## INET Web OS Server And Client Administration

### Owned Computers Managed Effectively By Hardware Product ID

Some industries and home users will plan on having their own INET Web Server OS with a group of INET Smart Terminals. Hotels, for example, often have computing resources available for their guests. However, asset catalog, software/access control and branding are typically left up to the local manager. This is not a good deployment as the skills required for system administration of this nature are specialized on modern platforms.

Many features of the INET Web OS apply within this distribution example. But most of all, the cost of each terminal is the important factor. Several versions of the INET Smart Terminal will exist for businesses and customers to choose from. For the operation of the INET Web OS Client Terminal, internal web OS logic will depend on the amount of local cache the terminal has. In some scenarios no cache will exist identifying it as an INET Smart Click Terminal that has an embedded operating system.

The INET Smart Click Terminal is the most cost effective solution, and a typical implementation for hotel guests. A typical hotel guest business center may have four terminals. These four terminals can be operated directly using the INET Server. In other cases like WAN distributed INET Smart Terminals, an on board cache may be present. Large computing facilities like city libraries may use this configuration as computing resources are more distributed. In this case, the main server does not provide each terminal with a continual operating interface.

### Time Use And Rental Policies

Most aspects of the user interface are configurable, allowing a novice user to quickly build a suitable kiosk interface. Along with a designed user interface, other aspects of computer usage affect policies. Time accounting is a major policy that libraries use. Each library in the United States has several variations of usage policy. The configuration of usage policy for INET Smart Terminals or INET Laptops must be very flexible. Each location has different rules for use, membership, time (duration) and allowable content.

The INET Web OS system will provide scheduling for use. Potential users are either an unregistered guest or have a computer rental card. Using a terminal that is labeled for computer sign in access, users request a slot of time. During their scheduling process, users can choose from groups of terminals. The group a terminal belongs to is defined by the library hosting center and can take on many distinct meanings. Some of a library's terminals are labeled according to their floor, or the software they have installed. Other terminals are grouped according to their intended age group; tiny chairs.

In the computer rental policy, users wait until their slot of time occurs. If a previous user that has the terminal leaves early, the next in line for it may be able to slide in sooner and get a few more minutes of time. In library politics, the registered name within the schedule is displayed on a rolling marque, monitor or LED sign. Alerts activate or show upon the display when a terminal becomes available or a user on the schedule is up for bat. Users have typically five to ten minutes to sign onto the terminal before the it is released to the next in line. Operators can override this security making sure each customer is happy. User can cancel or reschedule their appointments as they deem necessary. Sometimes, users can schedule appoints days in advance.

### Precise Hardware Identification

Other system administration functions deal directly with the terminals themselves. An administrator must have the knowledge of what is in inventory. The terminal administration faculty includes the query of all hardware component manufacturers, model code, product id, revision date, serial number, absolute capacity, logical capacity, quota management, and CRC version of FLASH embedded machine code. In the past, developers created a series of complex diagnostics and identification routines that identify some aspects of hardware that modern personal computers possess. For example, calculating CPU speed is calculated by the implementation of a looped set instructions with high resolution timers.

Descriptive information that is textual data can also be acquired. Latest revisions of microprocessors have a specialized mnemonic appropriately named CPUID which loads the vendor string into string pointers. INET Hardware components and INET Smart Terminals have this capacity explicitly within its low-level instruction set. Compatibility features with legacy hardware will still require the programming finesse to query this detailed information. This information is used by the terminal administration identity cycle to communicate and decide precise driver and software images.

### Mission Critical Access And Update - Internet Or USB Key With CD

The system state and administration portion is considered mission critical and an image recovery manager is maintained with necessary security privileges. Communication failures are accounted for within the subsystem. A large dependency problem is solved using new INET hardware that is integrated seamlessly with software user interfaces to perform system or application specific roll backs of current RAM image, local storage and server storage with precision. The manager allows selection of system wide states, per application in storage, and per application image in RAM.

Per application image in RAM recovery is a new feature that allows data recovery of dialog fields, picture, audio and internal program data. The INET Web OS software management subsystem will be accessible within this user interface. In administration mode, the system supports driver image, FLASH BIOS, application ring executable, VLISM machine code, and data file incremental updates. Providing a base, automated structure for segmented replace and expansion of binary data within all rings of the INET terminal and legacy hardware platform will solve management features necessary for friendly developer and user communication. Using a segmented replace allows for greater performance during an update operation.

## Logging User Software And Hardware Issues

Security of human interface devices must be handled correctly for the user so they are used in a desirable way. The INET Web OS Client must not allow images from the camera and sound sampled from the audio card to be transferred over the Internet when it is not requested. These become a privacy issue as shown in California where students were spied upon in their own home by a hacker that activated a camera. The operating system must allow only the correct program to gather readings from the keyboard. Private and financial data should be held in secret and only allow the correct programs to be linked.

The INET Smart Terminal BIOS will have the ability to log unsatisfactory information about the user's functional experience into a database. This database will be accessible to the system administration series of query applications, artificial intelligence rule based solvers, and resolution tracking services. The rule based tracking engine, accessing from the server, will have direct access from the BIOS and communication layer to protected memory ring access functionality, private device input, CPU and video overlay priorities. When a problem occurs, the INET System Administration Web OS Series can help resolve the issue.

By incorporation of this feature as a low level terminal service, the system will have a vulnerability to prying eyes when the system is placed into administration mode. Because the process facilitates uninterpretable services, it can be considered a large access point and a technical risk. However, this functionality is needed to interrupt misguided services like viruses, malware, and spam that may be introduced after deployment. It is also needed to ensure basic operations are functional; a low level diagnostic. It will be the ultimate duty of hardware and software engineers to safe guard this name-space of the VLISM instruction set. This will be accomplished using buttons upon their terminal that are not used all the time. Users will get the operation technique by the location of the button.

## Smart Terminal Operating System And Application State Sandbox

This system administration subsystem of INET Smart Terminals, will operate in four modes: Global Application Layer, Select Application Layer, Investigation and Officially Certified Investigation. The Global Application Layer mode will allow users to report issues with any faulty applications. This service and resulting information will be treated as a system wide monitor that allows developers an insight into the terminal's and web operating system's application layer. Only communication with the web hosting provider will be available.

Select Application Layer will allow users to report application issues to the original software designer. Only the code and data associated with the application(s) listed will be accessible. In this mode, only the certified software designer can inspect, update or modify the application session. The first issue to solving an application specific issue will require it to be duplicated. The system will provide the necessary monitoring information to the code debugger to speed this process. This will be the most common access layer.



Investigation mode will allow only communication from the registered web hosting provider. The mode allows low level diagnostics to be performed. The hosting provider can install FLASH BIOS. or roll back operating system components. All software installation and write accesses to the critical areas are available for inspection.

Officially Certified Investigation mode provides third party representatives with low level access to the terminal. The primary attributes of this session type only allow physically certified keys to be used in low level diagnostic access. It must be a new key, one gathered. This provides technical services to be available when hosting service providers do not have adequate resources. Within this a growing service industry will be more secure. Typically keys should be sent in sealed packages or gathered at an office location. Each of these modes cannot be scripted by automation and will only operate by strong initial user authentication. The system will provide detailed rollback analysis of any changes.

### Defective Human Interface Devices

The system encompasses the many forms of information about the various equipment directly in contact with the user. The keyboard, mouse screen, audio jack, flash memory reader, lights, power button, embedded hardware and any other connected equipment. A large range of characteristics about each device will be recorded. Thus including: physical properties, wear and tear, physical attributes, low level agent diagnostics, device identification, functional state, last accessing programs and related programs.

Issue resolution will be dependant upon the identified terminal's administrator. For example, the keyboard has a way to report a broken key on the keyboard or video display issue. If the system is handled by a group administrator, perhaps there is a spare keyboard that the individual will bring and plug in, within minutes of the notification. If it is a personal home user machine, directly in line would be listing local repair shops, and new keyboard distributors. The resulting rule based server based engine will be filled with thousands of scenarios that are executed in various ways when issues arise with hardware or software.

### Locked VLISM Name-spaces By Physical Button

Physical buttons within hidden compartments can be used as ultimate insurance of hacking these rarely used low level system administration diagnostic tools. While the INET System is specifically designed to guard against public intrusions, because it uses technology that is within the physical science realm (consumer), that is network cabling and microwave transmission schema, the ever useful matter occupying lock is an excellent choice to include within deployment capabilities. A human has to press the button or turn the key before an diagnostics can occur.

VLISM name-spaces can be unlocked within a button's reach. The same functionality can be sought by using a special terminal USB data key. A button or USB data key will be a consumer related operation. Using unrelated technologies such as metal keys is also implemented. Some specialized installations require that software be installed by secure lock. In this case, the physical key is brought in by a guard while the terminal is updated.



Using INET VLISM Name-space Locking technology in an open format such as buttons that are placed in a separated group area within the user's computing area is also important. On some devices, the lock button may be located away from the keyboard entirely and nearer the display area. While on others it may be located upon the CPU housing structure, keyboard extras or other device.

The ability for VLISM name-spaces to be insured functionally inoperative and then active for a given duration will be important for secure Internet computing. The electronic operations of the device will ensure this. Apparent within ordinary use would be incorporating specialized memory status management used by the application layer and port reading facilities. The port must be read only to most functional equipment, while securing the write operation through electrical path. Only the physical user interface button or key lock turn should be able to modify the port state. All queries of information to this address, thus including parameters to the BIOS functions will be caller certified real time to validate proper error handling by an application; validated. So if invalid requests are spoofed by a virus, the status will not get reported incorrectly.

### Personal Identity Security And Virus Blocking

Imagine you are using your cell phone as an electronic wallet. At present you are strolling along with forty eight dollars and sixty three cents stored inside. Because the financial transfer button located at the top right of the LCD display is not depressed, no funds can be transferred and erased from the device. The button is designed this way. The transfer and erase fund instruction within the CPU that operates upon the electronic money memory will be nonfunctional until this button is activated.

Other aspects of the memory's integrity for holding financial data will also be present due to this fact in operation. The port's information must be accessible to other hardware within the BUS. Other object based electronics incorporating agent based instruction sets will react appropriately to secure their domain. However, at this time, the device may be asked to report electronic money signatures to validate legal electronic tender. These are read requests and signature calculations not transfer and erase instructions.

Interfacing with this subsystem component should be very easy for the user. A reference should be associated within the main task bar overlay. Video overlay functions will ensure the iconic spot is shown on top. As well, terminal services will ensure that the correct interrupt will receive the event that is denoted by the polygon hot-spot structure. The system will use the same internal pixel map hardware window manager functions used throughout, but have high priority focus upon the terminal.

Since many operating system vendors will provide operating systems, the subsystem component's focus will be a standardized component that is certified within BIOS marketing. This will provide a great integrity to the releasing of electronic tender when it becomes legal. As well, when financial transactions are requested for confirmation, no spy ware can automatically authenticate the request. These functions will be soundly protected for the user's financial identity.

## Logging Software And Data Statistics

A count of software usage and access information can be used to investigate and track progress of information change and development. For example, a user spends time making a movie or digital experience. At some point, a user will want to know how long a task took because they have a similar project. Access to at a glance statistical information consolidating the period in time during the use of the computer terminal, operating system, and user identity is more accurate. This is so because the details of the task, what was 'learning', what was the 'first time try' and what was 'actual work' is difficult to analyze. If the user can page through previous uses of application usage by playback to highlight the details, even processing power usage can be summarized. Providing the logic and space within the UI for easy time based accumulation using a marking system (highlight) will provide the data drilling necessary. Projections can be based upon this information.

## Cost Effective Temporary And Long Term Resource Management

Some configurations of the INET Web OS may require cost effective storage solutions to be used by a given group of people. Libraries are a prime example of how this is necessary. However, in modern computing, utilizing hard drive quotas distributed by protected identity or temporary protected identity, requires third-party software. The INET Web OS has this functionality built in.

Consider the functionality and application data mapping that is needed to allow a user a ten megabyte account. By rules of the account type, it will expire after thirty days of non use. Another portion of the quota policy states that users have to use the actual library machine for the time usage to count. Remote access does not count for quota time. Within the library computer network, the account can be accessed on a daily basis and the drives map corresponding to their library card. When the user sits at a terminal, the quota cache manager transfers files that are considered a in work in progress to the local cache of the terminal.

If users do not have a library card, a guest pass is issued and will require a different setup for the quota drive. A user name password combination, location wafer or a USB security key will define access in this case. Balancing the data for read and write performance based upon statistical use makes the system more friendly to use; a nightly task. As well, the cost advantages are greater because server space for the account storage is not needed. The INET Distributed Resource and Cache Management System will be of great use by many places within the industry. Most of these featured tasks now are engineered as single server technology.

As a generalized resource, idle computing hardware can also be used in distributed processing applications. The INET Distributed Resource and Cache Management System provides secure handling of data from and to applications that can use multiple CPUs. These long term management features can provide users with software and digital income rights that are paid for by the user requesting the resources. A typical configuration is a home computer that is left on over night. During which time, secure instruction and data transfers will occur. The service in some cases may be expected to be non interrupted. Other configurations support sharing the CPU and memory. The user does not have access to any of the data or software running within the INET Distributed Resource and Cache Management System.

This data occurs within the Web OS model as a meaningful entity. Considered attainable for life protection with a quota and respected sanitation after centralization has occurred. The network file system with distributed quota management dedicates algorithms to tie repositories together. These repositories and their priority of ownership can vary. Creation of the ownership rule or home base repository can occur at different times.

The user is able to access their own or private computing resources from any terminal by inserting their USB terminal key. Public terminals allow the terminal administrator to set privacy issues that effect projected content on the public access terminals. For commercialization references, a software rating for the Web OS market will dictate a compliance level for each of these services. In short, administration will allow management of INET Terminal resources from a centralized host. This is important for business users, home users and general product consumers. The system supports direct vendor server deployment for developers and users to maintain product stability.

- [CPU Serial Number](#)
- [CPU Type](#)
- [CMOS Information](#)

## Network Audio Synthesis Technologies

### The Future Of Loop Based Music

Many facets of music production are assisted by the use of computer technology. In fact, many studios would be out of business if they had to rely on older technology alone. Recently, music composition, that is the actual rendering of the audio musical notes, has become available on the Personal Computer. Programs like Acid, Fruity Loops, Adobe Audition, Reason, and Cakewalk all facilitate this new technology of audio rendering on a client machine. Limitations still exist when using these programs and that is a reduction on polyphonic notes and sound quality.

Ever heard the [Korg Karma](#) play an electric rendering or a [TRITON EXTREME](#) render a symphony? The depth quality is far superior in many ways than real time synthesis on modern computing platforms. A keyboard is a highly specialized embedded device, and many would go further on the description. The new forms of software rendering using [VST](#), a plug-in format for the software render, limits much quality on output. Only specialized settings and professional products come close.

### Pooled And Server Based VST

The VST model is extremely flexible in implementation and as a pooled resource on a mainframe server, a group of them would perform well and allow for higher fidelity digital descriptions. Higher fidelity is achieved using mathematical models that produce more unique and detailed data. The encompassing system will provide higher density products (sets) to achieve high resolution audio, large storage library of analog sample data (RAW, WAV and Synthesizer Specific) and more logical parameters to achieve unique segments and compositions. Samples drawn from the audio system can be ahead of time provided that the loop midi data is present. The resulting sample will be used in place of render to save CPU time.

One of the main purposes of the INET vision is to offload computing power and resources to external devices using network technology. The highest quality sound setting does mean expensive clock cycles on your CPU. By offloading the rendering of the audio signal to a remote network resource, higher quality and better scalability can be achieved effectively while controlling costs. That is, controlling costs for the manufacturer and the consumer at the same time.

## Network Synthesizers Use Midi And Mp3

Modifying modern audio synthesis components to be a networked resource will not be an easy job. Playing audio is an extremely time sensitive task; one millisecond off and it could be an entirely new sound. Most modern keyboards respond to and send [MIDI](#) data. MIDI stands for Musical Instrument Data Interface. MIDI is a condensed binary format that describes several characteristics of a play note as well as containing a plethora of commands that are used to modify musical equipment parameters. By sending this information through the Internet, using [Universal Data Packets \(UDP\)](#) for example, the receiving computer could route MIDI enhanced (Internet) commands to a rack of sound bank synthesizers which in turn will output a raw sound wave. This raw wave form will be routed through the host's internal high speed network for further processing.

## INET Universal Synthesizer And Effects Processor

Time to loop or segment audio is a factor when playing live. The product series will provide a localized hardware solution for this functionality. With the INET System, samples for all offered keyboard, drum machines, synthesizer, rack device or your own samples are loaded into the INET Universal Synthesizer; a real time high performance synthesizer. Supporting up to 8/16/32/64 notes polyphonic depending upon model, a new synthesizer emulation can be installed on the road in minutes; connection download time.

The INET Universal Effects processor will sample four or eight channels and offer to mix out real time; fiber optic or analog. Supporting lengthy effect chains using a hybrid approach of machine code and DSP hardware is one of the device's most becoming features. The hardware can be controlled naturally within the Musical Keyboard interface and by user interface on the INET Smart Terminal.

The Live performance product series includes a digital sound event manager (INET DSEM Live - Digital Sound Event Mapper) for live show synchronization. For example, employing the use of gigantic robots can be a powerful entertainment experience. The movements and craft of visual arts will surround themselves within the motor gear control cage kit. The system can use large ray traced graphics, environmental effects (fog, etc.), standard video, standard stage craft electronic interface equipment signals and switches during a performance show that will bring new captivity to stage dynamics. Specialized stage software can be used to produce a simulation. A simulated view of the presentation can be mapped upon the screen to show the entire sequence unified for better planning. The robot, a sturdy metal cage can be dressed by the renters however they so please. Specialized, software allows the dress to be designed. Fabricated with plastic and the proper painting, the robotic dress is intellectual property and copyrighted. The dress fits upon a specific model of live performance series. The INET Live Stage Craft is a visual publisher, instrument monitor and events controller. Want fireworks to happen on the sixth snare hit? Set up the rule and sensor programming within the show's context. The system includes events to power a three dimensional animation engine for audio synchronization. These properties are easily accessed using interface technology. The plug and play architecture allows integration with existing stage electronics.

The INET 3D Motion Camera Tree is compatible with the INET Universal Synthesizer and Effects Processor. Producing sound will be found in many forms of space, paper and ordinary objects. The broom stick as an outer space alien guitar will allow even the most demanding child birth of new instruments. These products require fiber optic bus connectivity for real time play.

### Parallel State Audio Signals

Digital CD quality sound in raw form actually has too much data in it to be transferred over the web in a real time capacity. Just one second of high quality CD audio in [raw PCM form](#) takes two channels \* 16bits (or 24bits) \* 44100 and this equals 1764000 bytes (1.7mb). That is more than one floppy disk just for one audio second!

A compression must be used for near real-time play back when using a the Internet network; currently an electrical based networking solution. By routing the sound signal to a network [audio compression unit](#), the information can be reduced for the given real time Internet bandwidth limitation. However this is not to say that near CD quality cannot occur. Modern streaming technologies are a testament. High quality can be achieved for near real time live broadcast.

### Audio Channel Layers

Effects processing will also be a part of the instrument setup or a channel layer depending on the composition requirements. This will happen before the signal compression resulting in the highest logical quality. The network flow control of the audio data on the server side should reflect this. A network audio effects processing unit will perform its operations on the raw [PCM \(pulse code modulation\)](#) wave form. The potential for a limitless network based audio and video studio exists distributed to an INET VLISM compatible device. The device, because its main purpose is music production may have sound loaded and have a small music keyboard input device.

Sound in its natural form is an analog resource so the capacity to transform audio using a high speed [DAC \(digital to analog converter\)](#) for analog audio operations such as tube amps could be a combination. This may also be needed for some analog synthesis technologies and a hybrid step to integrating current methods to the process. The signal will need to be sampled from this analog resource back to digital PCM data. It is important to note that the possibility of signal interference may occur giving the artifact of noise.

### Compression For Comfortable Composition

Finally the stream will be reduced for the requested medium transport. An audio compression network unit must be designed for the task. When the audio stream has been reduced for Internet transfer it can be routed back to the client computer. The client computer should store the sample along with the associated time stamp and mix the audio in real-time during local playback. The end result will be high quality sounds at a low CPU cost. Most central processing units over the 1.0 GHZ range can mix several audio channels together without any problem.

All of these audio operations will be controlled using preset values while being overridden from values contained within the connection stream. Applying pooling technologies with a rack bank architecture will be the live performance goal. This new form of connectivity should not prevent plug and play of synthesis technologies at the local domain; a network plug device to an INET VLISM smart computing terminal. Also building a specialized hardware server computing platform (mainframe) that manages user MIDI state banks, provides audio synthesis, and manages storage for the sample will enable high quality creativity at the consumer and professional level will using an INET VLISM smart computing terminal.

### Networked Enabled Synthesizer Bank Asset Rentals

One thing that is an interesting side effect of this vision is that now audio synthesis banks are reusable as a network resource. This adds a new level of resource allotment, procurement and could possibly offset accounting principles of music equipment. Can I rent the [Mars network](#) for two hours while I render my tracks? As well, it presents the opportunity of synthesis resources being located globally. So for example, the system could play German, Russian, and American synthesizers all in the same song. As far as I know nothing like this project has ever been completed.

- [Jam Studio](#)
- [Button Beats](#)

### Text Based Music Production

Music production in modern form is set upon a time base where events occur at a specific time. At a desired time set by the composer, audio samples may play. Given that this functionality of production is supported by the INET Web OS Audio API, pure flexibility of music production, the individuals sounds, effects, patterns and play list will also be supported as a textual input.

There are many things that can be represented within the context of time and pattern composition within text. Sample banks that adhere to event firing based upon a toggle switch within a time based event storage data structure is the natural interface. Representational of a drum track hit, could be a string of characters as shown below. Expanding upon this readability will lead to using other similar characters that are common with note formatting. [Notes](#) can be represented using the standard letters, ABCDEFG, along with sharp and flat characteristics. Characteristics of the note should be defined schematically using object form. The [octave](#) can be defined using a numeric constant next to the note letter as is common is form. There is a default octave used for composition. The length of a note is very important. Describing it in standard beats per second and actual time is accomplished within the textual syntax specification.



Modern synthesis technologies have numerous parameter data that is attached. Reverb for example, can require at least five parameters. The parameters, when the object is compiled within the INET Text based music environment, are defaulted to logical settings using OOP inheritance style when all parameters are not specified. For VST, these parameters can be stored in a FXP or groups of them in a FXB file. The use of this OOP style makes it easy for less experienced text composers to achieve sensible high fidelity. For example, defining an effects channel can inherit from existing configurations. Providing a loose syntax parser of the music information is important for broad audience distribution. See [Audio Programming Language](#) for more information.

The language will allow use of VST objects for integration within current platform technology. Loading and activating a VST for Effect, signal processing, or sample render is achieved through the symbolic name for easy reference. Naturally because these items are objects, the methods and names may be of some use. However, given the nature of programming, a relational data dictionary containing name-space segmented logic paths will be of more use to allow English traits.

Audio production within a context such as this can be considered a technology that is representative of a wide range of information. Classification takes precedence for any logical searching. Groups are represented by quality of synthesis, accuracy (depth, realism, simulation), and algorithm used. Samples can represent an instrument's major sonic qualities. These PCM based data packages are captured and labeled for events. Specific events or controller attributes use these pieces to reactivate a natural instrument. Different stages or meaning is reflected within the midi stream. In hybrid synthesis technology these parameters supply note (music notation) and sensor readings. The [ADSR envelope](#) (Attack, decay, sustain and release) standard controls several functions of the note render. The information can also include the volume level, pitch bend amount and after touch readings. specific lengths of time also effect the breath and depth of the instrument.

Instruments are classically group into categories like: electronic, environmental, sampled, keyboard, string, wind, flute, picked, strummed guitar, and percussion (see [Musical instrument classification](#)). Within electronic and other synthesized members, attributes that align the signal based upon frequency spectrum to an information domain are typical: Bass line, lead, and chime. Because there are many more instruments that are simulated, the classification takes a more fictional approach sometimes. Searching for instruments within a catalog will be an API standard that supports audio palette. An audio palette is important for instrument selection because it give the composer a preview of the signal. Signals can be previewed in a specific octave and with several characteristics. The information is supported for textual web note rendering; the catalog may operate using XML record sets for ease of display.

To control rendering parameters using word will be instrument and group specific. The additional information will be best suited as an adjective or adverb. For example, the phrases "play piano clumsily", "strum guitar cfg", "pick guitar acd", "panic", "straight". or "child like" affects each of the ADSR envelope attributes as well as other intelligent audio attributes. The classical style play verb is suited for many instruments. How the information is interpreted is localized to the instrument; classical piano and classical guitar for example. The search for parameter settings as derived by the compiler will be based upon OOP technology inheritance. The descriptive object modifier, if it is near random based, exposes parameters that act as an algorithm seed. Because performance needs recreation, the precise parameter setting will compute the same results.



The INET Volumetric Physical Simulation series of VST instruments push the technology envelope to include more descriptive audio signal composition that cannot be made with electronic equivalents. The acoustic guitar is an instrument that can be described in this way, a road for many musicians. You can strum, pick, twiddle, tap, pick tap, hit the top, strum the face and even break a string. Playing attack styles that are common of professionals like Eddie Van Halen could be programmed to some extent. Violins are also very versatile as well and can be model within the system. The system uses physics to model the environment to at an very detailed level.

The microphone placement and sound stage setup can be described in using natural composition. Adhering to common materials within simulation mode and dimensions for room, cave and pit sizes will be informative to the audio simulation modules. This is important when defining stage size or recording room size. Positioning the microphone upon an instrument is typically based upon the type of instrument. The microphone can be mounted upon the chassis of the instrument or set upon a stand in front of the instrument.

When more descriptive information is needed during the interpretation of the musical notation, extra information within the edit text will be tied to the block. This will make a text compatible editing of notes and time. Recording through a midi device, event editor, or using the in line staff editor will translate this information. However, of most importance is the textual nature of the musical description. Because more precise information is given about the note, a separate block can be used that contains the timing information. A typical data segment style may be sufficient.

The flexibility of the OOP style parser will be inclusive of many formats, not adhering to a nailed standard form. This is different than most logical computing languages. Including professional layers that provide syntax for verbose descriptions is important for the acceptance of the tool as a construct. Advanced functions that provide logic for pattern loops, toggle time base, time frequency functions, sample editing, proportional relations, additive and geometric functions are included. There will be several formal syntaxes available. The loosely fitting grammar will come through by incorporating use case testing and allow simplified content production. The design is so that the tool and learning from it can grow with the user from many different age groups. Inputting just note text will provide audio output. An inexperienced musician can play a [String quartet](#).

The lessons of music from an illustrated point of view can be transferred using audio composition and paper. Two artists come together for a jam session. During which time, they practice, learn from each other, and teach. In a class room environment, students will receive more formalized training. Yet in both of these circumstances, using a computing device while holding a violin, or guitar is difficult. In these environments, a scratch pad can be used. So textual format, allows transfer with pencil and paper. This is useful for younger pupils where they seek the knowledge of what sounds good. There are several formats that are accepted using OCR. Key notation - CFG, or staff musical notation. Other items that effect the rendering characteristics can also be placed upon the page. Beats, BPM, instrument selection, short hand repeating bass lines (refer to by symbol later), slides, and vocal composition-lineup markings.

A dictionary defines the path and location of the object and its parameter set. Several dictionaries can exist that define a total synthesizer implementation. A short name becomes the symbolic name of the instrument. Instruments are loaded upon a channel, and can use one or multiple channels (stereo). Several Instruments can be attached to a channel with varying effect chains. The INET text based music API will provide a flexible solution to polyphonic rendering using a VST, sample bank or midi instrument. Because rendering is done in offline (not real time), the number of channels can be greater due to compilation methodology.

Sound as a wave form has many characteristics that can be modified. The system will also provide a language capabilities for digital signal processing. Sound DSP functions that output a wave transformed can be reused and mixed within other buffers any number of times using an object name paradigm.

An important facet of text based music production is the ease of composition. This limitless approach to polyphonic composition can exceed simulation qualities that are very expensive in synthesis form. This will spawn a new human cognition of parallelism relating text based note notation to parallelism in audio. The aspect that the buffer input is textually (8bit ACSII or Unicode) based will preserve transportability for network transmission. The format will be easy for text based authors and those that use a [musical staff](#). Some may expect that XML be used, yet, a flexible text structure will lend itself to a more broad user base. One important aspect of the format, is that it must not delude uniqueness of the pattern and signal. This is to preserve creativity as an art form. This technology can be used in many content production engines.

#### Figure: Samples of Text Based Music Production

##### Sample A. Simple text – primary

abcde

##### Sample B. Simple text - sequential instruments

violen abcde  
cello ecfecf

or specified with brackets will render and mix to one segment polyphonic.

```
{  
violen abcde  
cello ecfecf  
}
```

## Sample C. Simple text - patterns

1. Bass Drum; fx=2; pat=x000x0x0X000x000
2. High Hat; fx=3; pat=x0x0x0x0xxx0x0x0

## Sample D; Script like.

```
Define main_mix as stereo channel
Define orchestra(1..100) as violins
```

```
attach orchestra to main_mix
attach RockStarSfx to main_mix
```

```
main_mix.start
main_mix.volumeramp 0, 90db, 500ms
main_mix.play cfgca-fg for 10s starting at 10s
main_mix.volumeramp 90db, 0db, 500ms
main_mix.end
```

## Sample D; More English like.

```
main_stage="Rock Band"
  drums are fast with fancy hats.
```

```
main_stage {
  drums.bd.pattern('a')="x000x000x00x00x000x"
  drums.hat.pattern('a')="x00xxx00xxx00x0x00x"
```

```
  metalBass.play {
    octave 3
    metalBass.move=pick
    pat01=render("f#(2s) f(1s) b(1s) b-(2s) a(.5s)A(skreecth)A")
    pat02=Flanger(pat01)
    pat01.play 3 ' play three times
    pat02.play 1
    sample.play "connector_trans.wav"
  }
}
```

```
main_stage.render
```

- Focused upon pattern and loop creation
- loading samples
- Loop build up
- audio fade in/out
- rendering output
- piano roll text
- guitar text
- flute, strings
- loading midi sequences
- automatic drum loops - AI seeded technology
- Algorithmic composition based music production
- visualization parameters for synchronized animation
- audio editing language for sample modification
- closely English based
- convert source to other music formats - midi
- buffer and channel management
- scale
- from simple to complex, OOP

- often in computing languages the structure of language deviates from practicable and standardized knowledge
- channel mixing
- dependencies and prerequisites in syntax

In conclusion, the future of looped based music production is a network based solution because of resources. One that is versatile enough and consisting of open source architectures to allow world wide distribution. This does permit reuse of many resources and this offsets costs for the user and manufacturer. The network based audio system will be designed first as an API resource allowing definition of patterns, tracks, effect parameters, musical data and other effective parameters. By using a distributed synthesizer audio source as a pooled resource, modeling an orchestra set of violins can be more realistic provided that the subtle human variances are accounted for in the parameters among the production engines. Imagine the [Krell network](#) lighting up all the way in a 1024 polyphonic compilation on a device that is almost disposable.

See Also

- [Propellerhead Software](#)
- [Fruityloops](#)
- [Cakewalk](#)
- [Sony Music Acid Pro](#)
- [Adobe Audition](#)
- [Waves VST Plugins](#)
- [Steinburg](#)
- [Izotope](#)
- [Audacity](#)
- [Goldwave](#)
- [Protools](#)

- [Algorithmic composition](#)
- [Beginner Strum](#)

## Music Theory

- [Ionian mode](#)
- [Music scale](#)

## Flexible Installations And Application Connection State

The flexibility of the INET web Server OS will allow remote installations to give optimum choice and freedom to the consumer. This will promote sales and upgrades by pleasing customers more. Remote installation by a portable INET device to register newly purchased hardware or software will quench the time savor thirst modern customers demand.

Imagine this scenario, a short drive down to the local Radio Shack or Borders Books where they will sell software and or hardware for INET compatible devices. Proudly walking out with the new item: game-top, camera, or INET radio you get to the line. Check out, the credit card went through! Now its a mad dash to the car to go home and install, or really? Remember this is the New technology frontier.

Using your cell phone or other INET device, you can enter the registration ID or IR scan of the bar code and the software for the item will be installed onto your central server account. During your peaceful drive, a sound bounces (optionally) upon your car radio, "New software installed". During the software installation, streams are created for each of your devices that can use the new component technology the consumer purchased.

If the INET Stream software is completely new to the device, and the INET operating system was not previously installed, a remote experience will be developed for the device consisting of image display, decryption algorithms, compression / decompression, graphical user interface, and stream services that will match the bandwidth and existing OS until the components are installed. The user can choose to use existing browser technology, or preferred method of a small footprint pCode engine. The method of quick response install is a dynamically loading engine which downloads microcode instructions and allows use of installed OS APIs to be called from the server; a small pCode Engine. The engine's instruction cache will change dynamically as time progresses to further refine the experience on the existing platform. Assigning IDs to the API and microcode block instructions will shorten future transmissions (machine code macros). This will allow the user to gain control of the INET OS quicker without waiting while the download of all other options occur in the background.

The user of INET Web OS Software is able to define where the software will be ran from long term. This is appropriated within the user interface in a context that makes natural sense. The user can also configure where applications are ran from when no connection is available but will be in the future. This makes absolute sense with batch data entry applications where multiple items can be edited or added. Later when the system is reconnected, a synchronization task takes place in the background. For this to work flawlessly, record and file locking occurs at the granular level. A review stage is presented for items that changed during disconnection. This will allow users working in remote environments where network connection is unlikely to still function.

While software is running in a local, remote or primary host context, the viewer must display an unobtrusive visual cue to reflect this state. From this visual cue, transfer of execution context must be available. Use Case A; a user of Microsoft Windows tries the new INET operating system and then decides to install locally on their hardware for full fast performance. Use Case B; the user has purchased a new software painting program for their existing INET primary host. They began immediately using the software from the remote host provided by the software vendor. While they are using it, the data and all of their creations must be transferred seamlessly, and have a noticeable context change.

Most likely since INET devices will have the INET OS Render Client operating system installed already due to the embedded system design, this feature will be used by new Apple, UNIX and Microsoft Window users. The streaming services will handle connections with the local file system, allowing the remote host the quickest access to documents that the user would want to modify. The host must account for partial file upload parsing so that immediate interaction can occur. For example, a one megabyte word file should not require all of the contents to be sent to the host, transferred, and resent to the mini INET OS. This is accomplished using random access file handling within a machine code macro mnemonic.

The purchase of new devices and software will be a pleasing experience for the customer because they will not be bothered. Prompting for them to handle disks, configuration prompts, and access privileges while the software is being loaded is often viewed as a nuisance. The work load will not happen at their local machine but on the server; modern day likened to an old [IBM 350 disk storage unit](#) whirring about. In short, the installation of software will be more successful due to the automatic configuration derived by historical use of such software. New configurations sought within the user interface will be dynamically installed.



## High Quality Video And Audio Processing

Audio and video processing on the INET WEB OS platform encompasses critical support of associated digital signal processing using OOP API library support. The object layer includes support for visual special effects, film editing, time line synchronization, project management tracking specific to medium production, work flow status notifications (segmented group works), multiuser segment locking, and audio DSP functions. A object format is named for plug in capabilities to allow third party enhancement as necessary.

Audio information is edited in compressed form on the local smart terminal if the terminal supports audio while the high fidelity format on the server maintains parallel state. Service for integrated device consoles and controllers such as mixing boards, wheels, knobs, and foot pedals are included to provide natural interfaces for queuing, time alignment and splicing (see [Digital Audio Workstation - DAW](#)).

Video editing is performed in a similar fashion to audio using preview compression. The visual streaming format will supply details as desired allowing for high color range and high pixel ratio media format support. The native format will be the **LOD.PANITBT.NSM** video file format. The user has the capability of importing and exporting common formats of audio and video files. Segments can be selected as well.

### Soft-Lock Preferences

For optimized playback the operating systems provides the ability to associate rendering preferences associated to an audio clip. Internally this will instruct the cache management system to store the transformed content. The entire media system provides this system of association for all media files including video. Associated preferences may be *soft-locked* for future broadcasts. *Soft-locks* do not permanently modify the signal. *Soft-locks* work naturally within the historical and hierarchical digital data object file system.

Within the user interface context, to *soft-lock* means that the settings are recommended within the audio player user interface. Soft-locked preferences will be embodied within the initial stream qualities when audio is activated for listening. Users can override these settings using the appropriate interface components. Internally, the soft-lock relationship inheritance rule also includes the licensed ownership policy managed within the Digital Media Rights Management system. When the license owner specifies a soft-lock filter setting, the relationship is preferred when new users listen.

Guest users can set their own preferences using soft-locks as well. When a guest user listens to an audio clip that does not have soft-locked preferences the default is used. In some cases the default may be set by the license owner. The guest user can establish their own soft-lock settings for the media. These settings do not affect render operations when the license holder or any other guest tunes in the audio file. The guest user settings will be known by its inclusion using a menu selection status thereby acting implicitly without tarnishing the initial audio stream. The original factory stream will be transmitted first. Bad guests would otherwise have the opportunity to play practical jokes. For example, setting the high frequencies to high or making the vocals sound like a chip monk.

Policies of DRM are maintained for multiple listeners, only one output device at a time or for the license count. Soft-locks can be stored for a specific device or transducer setup. This means that the two versions of headphones a user has are adjusted correctly. External speaker qualities can vary greatly as well. However, in general, metal and rock deserves to be played at a higher amplification level. Again, soft-locks are supported for all media files including audio and video media. The soft-lock information is stored in a private database and is used by the stream rendering system.

### Anti-skip Audio And Video With Automated Quality Of Service

The audio stream renderer provides limiters, frequency band equalization, signal dynamics processing, and amplification upon decibel scale for audio in a pipeline queue to entice audio listeners. The highest quality sound supported is Dolby stereo. For ease of use and transportability, the quality of network service effects the rendering bit rate. Optionally, users that wish to enjoy the highest quality sound over a high traffic network can employ anti-audio skip buffering. The technology works by providing a maximum bandwidth headroom. Once this buffer is filled, play can start. The buffer is continually filled and adjusted to keep ahead of the current play position.

This buffer size can be controlled logically by the user. At times, users may know that connections are bouncing within their area, and request a two minute buffer. An interface will suggest and allow entry of the anti skip buffer time window. The buffer is also calculated automatically by capturing the amount and variances of time out spikes. The automatic buffer window size calculation will include historical information captured by the quality of service manager. Capturing the distance from the source, the network time-stamp and the network saturation level provides an accurate automated buffer length calculation. So as the user listens more day by day, sound and audio will be less likely to skip; ever.

### Audio Editing Upon The Face Of A Mirror

Content can be controlled to perform the highest quality of response by instructing the audio render-er to increase the amount of loss during compression. This does not affect the original audio source. Because the audio streaming API also supports editing facilities for owned content, two audio streams are maintained to allow preview sampling. Owned content within this capacity integrates within the Digital Media Rights Management system. Owned content can also be the product of music production software.

Audio sources that are managed yet allow segmented copying will maintain a relationship stack to the original source. This will provide sound effect studios a tracking method to also facilitate *while you listen financial processing*. The original owners of sound effects that materialize within a song for example, can receive royalty payments upon sale, or listen. This in turn will open the door to professional asset usage by initially an armature. The INET Software and Digital Data Store Business System provides the facilities to effectively manage licensing policies.

During an audio editing interface, editing parameters and subsequent function states are reflected upon the server to exercise maximum use of network efficiency. The parameters held in state by the INET Web OS and INET VLISM Spider JIT support are supported using a stack and its associated operations; pop, push. If the audio stream is used in a tool such as a loop sound mixing studio where audio is played repeatedly, a specialized multi-source channel can be created. Repeated use and listens of an audio clip will clarify until the client threshold quality is met. Changes to an audio mixing channel will be reflected back using incremental audio mixing. If the audio mixing channel is modified drastically, the clarifying process will reiterate. It is unknown if Huffman compression will operate effectively given that it is bit level.

### Air Play With Cameras

A musical inspiration is usually accompanied with physical activations. While driving you can see many forms and examples of this behaviour. Individuals may be seen with thumbs tapping to monstrous bass rhythms, fingers clicking at the snare or using the index fingers with rest of the digits for fictional notes and rhythm play. Using visual recognition technologies as input will captivate, strengthen and propel musical creativity cost effectively. The INET Camera Tree with motion activation will automatically align the cameras to the best viewing position for the scene.

Playing an instrument can be as easy as drawing an outline of a piano on a piece of cardboard. Presto, a grand piano or other instrument sound will be rendered real time. A child may wish to draw a series of circles of varying sizes upon a cardboard paper with textual labeling: snare, bass drum, and hat; a drum machine is made easily. The number of input devices can be almost limitless using the camera tree. The INET Camera Tree is also used for other software applications that use gesture recognition. While the camera tree automatically adjusts the position of the three cameras, a single camera can be used. A single camera setup may only be able to identify duration and note but not attack, velocity or pressure.

To create new instruments and forms of tone control would be a likely experience. The visual recognition algorithms are dynamic enough to read color codes that may be within view. A person could where red circles upon their shoulders, blue dots upon their finger nails, and orange upon their knees and feet. Making a one man band from weird gestures will likely require instrument rules. The instrument rules section, a logic instruction table that is scanned (executed), defines how gestures are interpreted to develop sound (notes).

## Micro Audio Scripts

Audio editing and render buildup functions can be specified as an audio editing script. This will allow mixing, effects processing and musical composition to be played as if it were logically an audio file listed within the play sound API function. For JavaScript browser functionality or other web based systems, the will provide in-line capabilities using server computing for stream production. A consolidated audio command string can also be positioned as sound API parameters. A functional implementation exists for full script transfer or abbreviated tokens representing the render stream commands.

Example:

```
PlaySound('Funky.mp3','\uDefault=(-normalize -declick -eq -20hz+3.4db_250hz+5db  
-800hz+4.3db_14000hz+curveDistribution(2.4,4.4,6.5)) \s(Background.wav, Hatszx2.wav,  
SplitFunk.wav, Song.midi) -Default(all) -render(1,1,1+2,1+2,3,3+2,1+2+3,1+2+3) \omp3 -stream  
\oauto -stream \ncache(/usr/WebOS/Funky.mp3)');
```

## Story Board A Vignette For Daisy

Multiple production processes such as story board, film story vignette time, scene script, from book, dictation video recording, multiple location venue change, review, and alter are considered within the in INET Video Api. The studio quality film digital development, production, and testing are supported throughout the asset creation as a project stream. Batch processing of frame and motion segments using story part templates with historical based editing is also supported. A strong support of recommended video and audio editing techniques within base API architecture provides the software developer with choice tools to build upon.

The capture of video and audio can be accomplished using standard equipment. A device that enables upload from the camera device to a central server with security enabled will be effective. Satellite, ADSL, LAN, fire wire and wireless are among the connection portals.

## Star, Planets And Cosmos Align: CGI Technology Reuse

The use of special effects developed using CGI technology is important in modern film making. The configuration, render and composite of these assets with real color video incorporating stenciling, masks and object selection is supported. Since the INET web OS model employs various ray tracing engines, the configuration of the CGI object or CGI effect within the film space is a dynamic parameter operation during the production cycle. This provides easier team work and provides an object oriented design base (OOD) for CGI implementation.

More complex than at first gander, the outsourcing of specific CGI elements within a visual creation is a high probability. *Digital Domain*, *Industrial Light & Magic*, *Rainmaker Digital Effects*, *Rhythm and Hues Studios*, *Weta Digital*, and *Framestore* are some of the most popular visual effects studios in the industry. INET SoftSpot Technology will be an excellent format fit.

The INET SoftSpot allows super settings upon the object and precise CGI graphic configuration. Configuration of audio with in-line DSP (preview and high quality) processing will reduce frame production time. The supplied CGI element manager will also account for network leasing of the visual object. Specific to some precious models are appropriate render engines (radiosity) and software shaders. The product management of owned CPU farms and secure farm rental is mission critical to CGI. The ability for providers to publish available time would be integrated within the system.

### Work-flow Modeled For Internet Teamwork

The work-flow modeled using the INET Web OS API provides group connectivity. As well, direct communication between two parties using the INET Web Live Multiuser Collaboration, even for CGI SoftSpots. If the CGI SoftSpot contract does so provide, the asset is protected from misuse and abuse; a lighting effect is registered for three minutes of film. Or the digital robot, a secondary yet very interesting character, can only be used in one film unless the contract is renewed.

Common CGI elements and special effects such as gun fire, lasers, clouds, dust or other [special effect particle systems](#) also have impact upon the film or video quality (fiction and nonfiction). The audio attributes and visual traits are communicated with the INET SoftSpot object. The database is available for precise configuration. Integration of these items into video production user interfaces allows interchangeability, portability and ease of implementation. To decrease the amount of time for completed processed frame data (visual and audio) considered in production for editing preview and large scale image is the goal. Snap and puzzle CGI.

### Globalization Of Asset Capture

Because the editing suite is network based, globalization of asset capture, source tracking, work flow monitoring (status) and production editing must be forefront feature technology that saves time. The low level system is designed to save time in all stages of a product by offering preview first with batch oriented high quality frame render as a secondary step. The resulting series of video editing interfaces are designed to save time. Within the interface domain, it is merely granularity of control that are noted as high level.

Imagine a talented writer and storyteller designs a desktop to tell horror stories. With this genre of film, attributes such as lighting and environmentals upon outdoor scenes may be common. Rain, thunder and lighting propagated in the style of *Frankenstein*. The ability to craft a story with proper visual diction would be learned as a process. A dialog scene handled with correct posture by showing the appropriate camera angles and dialog time length. The field will be more educational and endless for story tellers.

Research of a feature list must be accomplished in advance for success using production studio resources for both software editing and core API design. The portability of the platform itself will offer comfort and damage free historical backup.

- [Movies Studios](#)
- [Film Production Companies](#)
- [Television Production Companies](#)
- [Record Labels](#)

## Interactive Media Distributed Direct From Service Providers Infinite Spider Video Game Box

Its no lie that video games are a revolutionary form of entertainment. The amount of time it takes to complete some games are months. More complex experiences can take years even with a large project team to finish. Yet, with Internet server technology spreading, it is a surprise to see self reliant console platforms. With delivery from a server environment and the proper hardware resources available on INET embedded device, the interactive television era can begin.

An Open Game Engine on the hardware platform will handle the render and playback of the stream, this is different than a basic INET Laptop; it has the game engine and hardware. Computer Animation and game gear mechanics available in VLISM Web Server OS format will allow priceless new forms of education, creativity, books and puzzles for children and adult of all ages.

Smaller three dimensional graphic chips with standard vertex and polygon cache geometric engine for cell phone, laptop or thin desk INET smart terminal will be possible due to server processing. Since memory load, animation function dynamics, and cinematic playback are the result of server processing many types of resources can be managed more effectively within the game hardware itself. The compression affects and streaming video playback operation will be complimented by the lower resolutions of cell phone screens. Some of which lack processing power to render an anti-aliased texture for example. But with server processing, these devices will be capable.

### Field Of View Render Balancing And Compression

Most items in the field of view (FOV) will be reduced to polygon animation, object AI or two dimensional animation using LOD reduction techniques specific to the object format. Precise polygon and triangle clipping will be performed on client if the appropriate hardware exists to prevent [judder](#). Rendering textures, light maps, smooth curves, polygon models and NURBs into a frame buffer will be the product of a stream residing on server or client depending on client configuration. A network object oriented Particle system will be included.

By balancing a cache of world space items using stream composites of intermixed objects including: game AI, models, assets, physics, world definition information and sound into a compact stream format; the Internet driven game revolution can further. It does take some time for a user to complete a section of the game puzzle before continuing, the available memory will be taken into account on the server to effectively manage the cache on the smart game terminal. As the user moves, other facets of the game grid will be downloaded, when parts of the game grid are out of memory cache focus, they will be deallocated on client machine. This aspect of cache management is a major goal of the INET Web OS Internet Game Engine. The game engine also is responsible for executing functions that predict what game data are likely targets for download. Prediction can be performed on the server given the x,y,z,w (or estimate) location and historical path of the view. Since the hardware on the smart terminal will handle the Internet buffer management, CPU and animation will not be overly affected. The result will give the feel of limitless worlds to explore and solve.



An example of Internet compressed game data would be using a triangle reduction algorithm to compress initial model load. Triangle reduction must be performed on a weighted basis, being careful not to augment a human face, for example, when limbs are more likely targets for reduction. By identifying index locations of model insertions and render pipeline instructions, the scene graph will be managed from the server after initial load to balance the cache based upon "lazy cache prediction algorithms" using the camera vector. Sprite management will be integrated into the server stream as well. Floating points converted to screen coordinates or large numbers where appropriate for transfer by the server will consolidate network bandwidth. New transfer technology may reveal model compression algorithms through incorporating sorting, weighted LOD triangle reduction and mathematical relationships describing angle of incidence with joining neighbors. For example, a specialized package may develop ten triangles with smaller data payload that actually describing the entire package. This will be an argument for polygon and bspline curve transmission.

### Three Dimensional Video Play

Including high definition three dimensional video play back will allow refinement of cinematic content, non active content with cycle AI brains. These assets will be compressed animated billboards. The popping point for the billboard is applied naturally considering the user focus. This point in time is the transition period for models from level of detail streamed animation billboard state to metamorphosize into triangle model data. The engine computes this and balances the tree when necessary.

Dictionary based polygon vector relationships will provide room for compressed function parameters during the transfer of model data. The dictionary will be built in stream using computed cache data derived from the three dimensional scene compiler analysis. The ability for the arguments to reform shapes upon the client can serve as a reducer in transmission bandwidth. Level of quality can be controlled within the modeling application as well as within the scene-graph bit-stream. Utilizing any form of texture mapping association with the two dimensional billboards data will also increase through put. In short, the polygon relationship dictionary assists heavily with compression during model buildup. These functions are automatically generated by the three dimensional scene compiler analysis; a world map compiler and compressor.

Content that is predicted to become active is placed into the appropriate buffers upon the server while ray traced graphics are com-posed into compressed frames. By identifying frame change pixel statuses in conjunction with rotation matrices and base lighting augmentations (2D light-map), the storage and transmission of a three dimensional objects with back face culling information is accomplished. Sending ray traced information does not decrease visual quality yet increases speed.



Frame by frame billboard animation data is incorporated within the **LOD.PANITBT.NSM** streaming image file format. Internally, within the scene-graph game platform, the formatting systems held by multiple asset domains (video, model, sound, texture, world map, physical condition, environment description, etc.) will have a high performance index access. A unique file system description will enable tuning the references to this asset. Offering solid name (old style file name), long name, and fuzzy noun match will ease the burden of searching for development purposes. The index is used to increase the capabilities while reducing complexities of communication during computational distribution. Data structures within simulation, fictional and entertainment application language syntax need less complexity when integrating and indexing objects. Syntactically this will broaden publisher base. Performance wise, this will ease the creation of various stream compositions. This format enables quick asset reuse.

The **LOD.PANITBT.NSM** format is included as a basic image format and thus opening the scene-graph's capabilities of easily managing a relationship between ray traced graphics as an asset and model data by keyed identity. As a result, higher definition video and higher frame rate games can be accomplished more often using fewer resources. The game artificial intelligence design can modify more worldly items; perhaps more than humans can withstand.

### Base Image Format Is Supportive Of Network Scene Indexing

Management of the three dimensional video will be accomplished using the INET Web Server Ray Tracing Visualization System and its integration with the **LOD.PANITBT.NSM** streaming format. Incorporating many video formats translated while supporting keyed color transparency will broaden the input forum. Identifying the model components with nouns can be a human task, selectable from a database of common forms. The model object format supports reuse easily. Therefore, applying geometric and light transforms to integrate the alien content within a world can be automatic and adjustable. If content has highly elevated values of luminance due to material composition, the textures and vertex shading colors can be ramped to usable tolerances using a visual normalization algorithm. Contextually this means that objects are adapted to the world in an initial configuration or import facility. Matching lighting characteristics can be complex to provide automatically with precision within all scenes. Sometimes, these aesthetic values are best left up to the professional content designer.

An open scene graph system that manages a world, an INET VLISM Stream Buffer, and a field of view will serve as input to the INET Visualization system. If the device supports only two dimensional view, that is, the device does not have three dimensional video processing on board, the normal stream consisting of triangles, polygons, and compressed dictionary model shape stream are translated at the server to flat images. The information crosses the wire and is ultimately translated into two dimensional Block Image Transfers BLITs to maintain performance. This will provide one of the most cost effective hardware constitutions while yielding a colorful visual theater. To produce a compatible experience for the device is a major function of the Web Server OS to deduce for devices like these. The resources that can be used on the machine are known based upon the device identifier established at connection time.

## Narrative Story Stream Format

The narrative portions of interactive experiences can be controlled using a flexible stream format. The category of acting will be applauded by providing precise polygon stream (shape compression dictionary included), animation logic, local state control processing and audio formatted data. User device interface polling logic is included within the stream format as well. The audio stream, a combination of events, is a composite of the necessary ingredients as implied by the environment and animation specifics. Mixing of audio can also be accomplished upon the server or intermingled with segments cached upon the client depending upon the device. Linking the INET Articulatory Synthesis technology to the skeleton will increase productivity during story telling adventures. The Narrative Story Stream Format technology also provides a deeper format for story telling and characterization. It is hoped that a story boarding tool will operate within this capacity. Even providing an easy English format for room, hallway, and cavern description can be foreseen as an avenue to explore (see [Holodeck](#)).

## Media Game And Model Editor

A media product creator should be able to link these segments together to form a game structure easily. Including film quality cinematic transitions, introductions, royalty financial processing, story flow models, puzzle or mystery modifiers, and other sub content structures will give new found freedoms to game writing and model editing. The media product can also refine the acting produced by the compiled text animation. View upon the client, that is the playback operation, will use models if they are loaded, or provide the least amount of vector transfer on an as needed basis from the server. Some game engines on the market use scripting within their payload. The system also utilizes the shape dictionary held and balanced upon the client for stream compression.

Physics are a major portion of automated logic and animation that will be included within the INET Game development suite as a container property. The library will also contain digitally compressed motion data for numerous skeleton and joint operations. This will ease many forms of character creation for authors. The motion library is indexed by model and verb. Several motion data sets can be applied at the same time to provide the most versatile feedback. Relating foreign rhythms of motion data is acceptable within the creative bounds. Using signal compression schemes associated with motion data for Internet transfer is understood by the world management system. In conclusion, the Infinite Spider Video Game Box, INET Game Development suite and accompanying game engine support rapid multimedia application development to reduce burden upon the developer and hardware. This gives a more versatile delivery mechanism for game producers.

- [Game Editor](#)
- [Moo Mapper](#)
- [Level editor](#)

- [List of level editors](#)
- [Motion capture](#)
- [List of motion and gesture file formats](#)

## Compatibility And Longevity

Better game gear does have more flexibility, yet a compromise is made at the server level to consider the level of detail upon all models within the field of view. Models that are closer to the viewer will have a higher triangle count compared to models that are in the distance. Models in the distance will likely be a composite from three dimensional video within the stream, or BLITed from local cache. Because the system is designed this way, most INET devices will be able to display content of any game, old or new. It is only the frame rate that is varied by device attributes. This is something that all media developers strive for, high performance and platform independence.

Most game companies do have their own game engines. The INET Internet Game engine is a robust object oriented game engine that allows integration of their offerings within the INET platform. The INET Internet Game engine is a scene-graph management system for local/remote and it is flexible enough to allow third party enhancements for competition. Development and debugging processes are likely to require specialized tools, different from standard INET development debugging. If designers and engineers can accomplish the task effectively, advancements within the developer tools themselves will allow embedded debugging.

Game engine editors are specialized tools that produce and edit binary streams for a game engine. These editors allow import from three dimensional modeling applications. Game engine editors are specific according to a game producer's private design. The game engine is robust enough to allow multiple format stream load yet promote the INET standard stream for compatibility among INET smart devices. The INET system provides standard and open file formats for world definition, three dimensional models and textures. While each of these formats may actually consist of several files or data objects (local / remote), a complimentary binary stream format exists. The content publisher's data is protected under the DRM section of the operating system.

While using the INET Internet Game Engine, game publishers are able to control the hardware specifics of video cards, audio cards, and human input devices through their implementation. As well, the INET system provides good security to the user while considering the specialized hardware programming. These hardware access instructions are part of the VLISM name-space. Other game multimedia functions such as high resolution timers, world object positional communication for multiple player (UDP player x,y,z,w), video playback, matrix math, two dimensional drawing are maintained as well within VLISM. A cohesive base OOP API exists for developers to utilize. The INET platform offers several development tools that allow rapid game development. The INET platform has 3d publishing tools to craft environments and publish these to the global market place. In conclusion, the advanced capabilities of mainframe processing and storage will allow more flexible multimedia applications to be operated on embedded INET smart game tops.

- [Definition of Game Engine](#)
- [List of Game Engines](#)
- [A Streaming Engine for PC-Based 3D Network Games onto Heterogeneous Mobile Platforms](#)
- [Wild Magic Real-Time 3D Graphics Engine](#)
- [Blitz Basic](#)
- [Dark Basic Studio](#)

## Digital Media Rights Management

The realm of digital publishing within the entertainment industry has lost tremendous value and trust due to the duplication and retransmission ease that computer network operations provide. Digital media rights management, in modern form, requires that signatures be in place for the codec to decrypt and report. However, these can be overcome by resampling the playing source, stripping the signatures from the file and cracking the software encryption. These are the most practiced methods. Other algorithms that identify a song or video composition operate by scanning the content itself. A fuzzy match is performed to derive the original source. A combination of these two methods while using Point to Point Secure Identity Channels is how the INET Web OS will solve these issues.

One of the most difficult, circular reference, reverse engineering problems to solve (actual function) is the digital to analog process that is necessary for audio. Once audio is in wave form from a computer audio card, amplification is often necessary. Some system setups provide an external processor for the DAC and use a different transfer medium for the digital data (optic, USB). The end result is a transducer moving air. Sound is made by the paper whizzer cone, and the attached voice coil following the electrical signal. The ear interprets the sound. A research project will attempt to encode a signature that is definable within reproductions. Yet the information being seemingly unnoticeable will be hard to accomplish. Perhaps dividing a song into several time divisions for the extra information transmission will strengthen the stability of the audio signature within reproductions. Better approaches will consider each song in its raw form already unique by its existence; composition and audio characteristics. Each an example of a stenographic key.

## Audio And Video Play

In the pure fantastic arena, the INET Registered Audio and Video Component series of products offer optical transmission of the digital data direct to the output device. The data will be encrypted using a protected signature making the signal only distinguishable by the transducer block component. Housing a woofer, tweeter, mid-range in a three way configuration will provide separate amplification quantities for the amplifier. A configuration can also employ digital amplification with great qualities (see [Class D Amplifier](#)). The integrated circuits of the INET RAVC series provide a high precision DAC to amplifier making signal copy very difficult because of the microscopic electronics. However there are still hot signal wires to the transducers themselves. The multi-channel optical encrypted audio output of the INET Web OS Smart terminal will provide Dolby sound effortlessly. Even greater configurations of sound events and sound distribution can occur with optical bandwidth technology. Pipeline distinct audio signals to every room in stereo.

The system makes absolutely sure that forward iterations of an audio source are selected to be received and decrypted by a registered stream device. Audio and video content will be managed and registered for devices using a library policy. Copyrighted music and movies cannot be played by two family members using two devices at once. By varying the amplification electronics to match speaker usage and qualities, headphones and floor speakers will be securely connected to a library source. High quality scalable video output for movie set top boxes will also be an optimum choice for viewers.

## INET RAVC Devices

The electronics that perform these functions will need to be designed for third party deployment. The security risk is reintegration of the decryption device after the DAC forms an audio signal. Likewise, video output of frame buffer information to a re-engineered capturing device will circumvent INET RAVC devices. Therefore, the difficulty in reintegration of the INET RAVC hardware and security identity must be difficult after a licensed manufacture. Thus enabling competing audio and video manufactures to still fulfill their direct qualities of service. Proposing an initial product line of branded devices for medium and high quality listening and viewing will be appreciated by consumers. Specialized orders to fulfill reintegration within high fidelity home theatre and professional audio will need deployment design to protect fully copyright requirements.

Preventing duplication after an audio signal composition process is difficult when tailoring to support backward compatible hardware. A common [Dennon](#) tape deck can capture audio signals if the process is concealed within a box providing RCA connectors. Dennon has a network technology series that supports iTunes streaming and is integrated with Apple Computing. It is formally named AirPlay. A wide range of network products exist within the Dennon realm (see [Networked Audio Products](#)).

## Supporting Policies Of Rights Management

The INET WEB OS will include management of digital media public domain, owned and loaned. Public domain works may include television broadcasts, books, magazines, general non restricted content or even radio broadcasts. The important aspects of computer entertainment and application licensing is handled within this context however not in the same fashion. Software validity is authenticated using a server technology, encryption and licensing rules. The Anti-piracy feature also supports low level diagnostics. Owned materials are managed directly for a lifetime loss guarantee using signatures. Even providing for the end of the user life particular services can be readily seen a necessity, a no fee transfer to authenticated benefactors.

Owned materials will be available for resale or transfer, allowing the consumer to transfer their ownership rights to a third party. Loaned materials can include artist incentives to stimulate media sales. After all, sometimes it takes a couple of plays before a song strikes you as like-able. Therefore, the best method for managing loaned materials is limiting their playback based upon number of times and frequency of use. Some artist and labels may go further a degrade the quality of successive plays based upon rules. Providing FM, Tape, CD or Dolby modern quality is a transform of the digital information.

The system must consider the policy that the object owner uses. For example the distributors may allow playback twice daily for up to two weeks. Or even allow a permutation that lengthens the time of playback based upon cross marketing indexes. The INET audio drivers and audio file system will place original source information into recorded and copied audio. This information will be within the digital data. This protects the work from re-sampling. Both video and audio apply. Older materials may allow a higher number of free plays. The digital media file must have links that allow the user to purchase the file for themselves for high quality listening and infinite playback. The option of listening to a high quality take once is a viable option for label companies. The INET DRM system will be precise enough that entertainment value management companies can soften the blow to free viewers and listeners by using INET DRM rule based leasing methods. An INET device will be trusted within this context giving the ability for a good customer to watch first run movies at their leisure.

Digital media that does not contain a signature will be categorized by scanning the contents of the decrypted and decompressed output. This process will derive a series of identification numbers. The process does take into account translation artifacts like volume changes, minor speed or pitch changes, rhythm, melody, equalization and normalization of audio. For video classification color distribution and plot ratios are major factors in identification. Content without DRM signatures will have to be verified by the user as being personal property. For these files, the customer must answer the important question of ownership. However, statistics can be gathered that are tailored for investigative use.

### Plagiarism: Textual Media Content Tracking

When information is textual, reproduction can be controlled by the viewing apparatus (software and hardware combination). Providing a link to content can be view only. Copying and pasting information from one application to the next does record the source information. Because of this, a security property that secures cutting and pasting linking ensures that the software is an INET application. Pasting this information to non trusted devices is a security risk and will be properly handled. Limiting the feature to only Secure Information Devices is a necessity when financial tracking involved with textual data.

The information can be image format which takes more bandwidth to display. The system will monitor for any OCR type activity from occurring within other memory segments. As well, by locking the view port from being read by other non associated applications, the INET Smart Terminal will keep the content secure. Using the necessary memory protection model is an important function of the security architecture. The Adobe PDF file format and Adobe PDF Reader support some of these features. Native integration and backward compatibility support of PDF will be proper to navigate. Assuring these qualities of information trust for any media is very important to digital multimedia information finance. Under the INET Web OS, links of this nature can be loaned or controlled using defined rules of access.



For information that is copied using the clip board functionality, the linking information will be recorded into a related database. This does allow content to be reused, however, it provides the original author tracking rights. This same process holds true for image, video and audio data. Consider that at times, tracks of video are overlay-ed with a distinctly different audio source; something common upon *YouTube.com*. The INET Web OS **LOD.PANITBT.NSM** file format supports composition history for the purpose of tracking this. This information is used to distribute income where necessary and when appropriate. Clip art in its raw form has a magnificent reuse quality within marketing. The promise of income for a portion of an image, a title shot upon a broadband advertisement, for per actual impact view, can be calculated using the image editing historical tree. The percentage of impact calculation algorithm also incorporates the weights of color saturation in normalized proportions to entire image. The size in pixel space and the centroid has a measured impact upon the marketing value within the formula.

### Financing A La Cart

By including a finance architecture within this context, the future of information law practice can become resistant to hard core punishment and become more equalized to actual value. Therefore the software language interface must be highly adaptable and easily instructed. A confidence of many server technologies can be seen in modern day. MLA and other citation systems that are used as a reference to the practice. However, most times the option are left up to the ethics of the writer or the designer. Because infringements are difficult to find and weight, the cost and penalty is higher as a result. The fitting of the transaction for digital data can reside at several locations within the financial processing pipeline for all of the parties involved. The INET Digital Data Store will provide the most sensible links to both market materials and streamline income to fit payment budgets. This will require very granular forms of content usage measurement. Providing a suggestion or price quote to vary based upon non-royalty use can be managed. Providing income to the composite parties of photographic materials will be mapped to rectangular coordinates. Audio royalties for sample usage can be applied to to the field of musical and soundtrack composition. The granularity of finance tracking within the INET DDS and the INET DRM system provides a link structure to all parties involved within the work. So for example, usage of a film audio sample can provide residual payments to actors, voice talent, sound technicians, [Production sound mixer](#), and even [Boom operators](#). The fees, if the material's usage policy has so instructed, can be adjusted with contractual collaboration using the INET Digital Data Store for the hosting service and the original content authors. That is, the copyright holders.

Within modern information technology law, these constraints will produce specialized logic attributes associated with common linking. These implementations will ultimately provide interface controlling logic of functions such as cut, copy, paste and printing restrictions. The INET Publishing and Editing interface of such documents will retain memory management of these controlled information links. As well, it will provide the necessary logic for page layout while offering a shorthand implementation. The ever persistent web mouse-over link will suffice in most cases. However, even layout can be defined by these ruling attributes. It must be a common place task to utilize the controlled information hyperlink. Statistical information will also be captured, viewable and be measurable by the author or system administrator by use of the document and its sub components. An interesting new form of "Where did my George Washington dollar go?".



The FCC compliant media management system within the Web OS model could report the copyright infringements on a lazy basis to an owner (FCC Trusted Media Device). These are files whose origin and source are unknown yet match in categorization to known copyrighted materials registered in a database server. These records can be used by the FCC within the USA or other appropriate government institution resource for decision. The penalty of corruption however must be researched due to the seemingly innocent and easy digital operation. An example working system like a library uses a small fee amount. Other aspects of broken policy provide secondary paths of management. Use of the library is limited.

Excess plays will accrue late purchase charges. The soft loop hole will be the CD, DVD, and MPEG content that the user already owns. The system will rely on the user answering Yes or No to the question of ownership. Details about the accuracy of this information can be understood through further physical investigation if necessary. The INET WEB OS leans toward the future direction of electronic distribution, allowing ownership tracking of content from publishers using signatures. In conclusion, the flexible method of dual algorithms being used identify materials as loaned, owned or public domain will allow greater capture of lost profits by the music, video and entertainment industry. Yet the interface to the consumer is non obstructive and friendly. They get a digital media library fee. Unlock songs and video. Unlock your device. In the end, providing a durable, tamper proof, and trustworthy platform capable of high definition signal reception while offering a system for controlled digital media access will require new electrical engineering of the user's platform; the INET Smart Terminal. Therefore, some features will not be available without a specialized driver purchase and installation upon the Windows, Linux and Apple versions.

See Also:

- [Digital Millennium Copyright Act](#)
- [Wikipedia: Digital Rights Management](#)
- [Audio Jack](#)
- [Video Identification](#)
- [Digital Media Consumers' Rights Act of 2005](#)
- [Citation](#)
- [Note \(typography\)](#)
- [Digital Rights Management and Copy Protection Schemes](#)
- [Steve Jobs Not Quite So Enthusiastic About DRM-Free Video](#)

- [Hacking Digital Rights Management](#)
- [HIERARCHICAL NEWS VIDEO CATEGORIZATION BASED ON SEMANTIC ANALYSIS](#)
- [Legal aspects of computing](#)
- [Berne Convention](#)
- [Indecs Content Model](#)
- [WIPO Copyright Treaty](#)
- [Directive on the legal protection of computer programs](#)
- [Directive on the legal protection of databases](#)
- [DeCSS](#)
- [Blu-ray Disc](#)

## Articulatory Synthesis

### The Voice Talent Of The Future

Articulatory Synthesis is the simulation of the human vocal system using three dimensional mathematical models. This method of speech rendering is still in its infancy. However, in the future, this will be the leading voice synthesis technology. Because it is so dynamic, it offers many robust features that are not available in current speech systems. For example, ever tried to control the emotional characteristics on the Microsoft TTS? There is not one. In fact the closest property is pitch and speed. Currently there are several markup languages that are in place to facilitate the controlling of the speech synthesis engines: [SABLE](#), [JSML](#) and [SSML](#). These systems all control the same aspects of the speech engine yet the most versatile implementation is the SSML which is [XML](#) based. By using a small [artificial intelligence](#) database in conjunction with XML, great strides in scripting features can be made.

As a speech writer, controlling the finite characteristics of the voice by name as well as by invoking styles by emotional definition is preferred. Controlling volume, pitch, and speed is quite easily a pass through parameter to most modern speech engines. But by controlling the joints, teeth, mouth, lips, through a series of skeletal joint pivot points like Articulatory Synthesis allows, numerous paths can exist to enunciate a phoneme. But what is actually being manipulated is the inflection that an emotion will have upon the speed and control paths of each of these points. By tying descriptive emotion words together with a relational network of synonyms, control over enunciation with emotion can be achieved.

Imagine invoking the angry emotion. The characteristics are measurable and many common attributes exist between models when everyone is angry. The voice is a little louder. The words are rushed. The words may come out with more breath, perhaps a little spit. These characteristics can be described in the playback string. A list of distinct emotions must be maintained like normal, happy, coy, manipulative, sad, angry, scared, sleepy, singing, laughing or crying. Perhaps there are more.

It is important to allow weights; really using the synonym database that is. The amount of inflection can be controlled by assigning a weighted value or calculating it by distance from the root node. This parameter will have a direct effect on how much weight or pull the emotion has upon the system's current playback of motion strings. As well by allowing descriptive words to control the transition time to an emotion inflection playback, users will have greater flexibility when writing dialog. Artificial intelligence can be utilized to modify the diction for natural progressions and transitions. Including realizations of subject context is difficult but an accountable audio property.

The engine must be developed with the best voice synthesis versatility in mind. It should offer a training session during which time audio input is used to configure and measure the model. Users should be able to get their voice in form easily; an audio texture. The model definition files should be a package format that is backward compatible and easily accessible. These model definitions are a library resource that can be dynamically loaded by short name, description, identity characteristics (age, gender, charisma) and symbolic reference (direct link GUID). Integrating these technologies into office applications may be of use, the day will arrive when email is read with the voice of the sender.

The engine must allow a skeletal connection to exist that controls the mouth and jaw of a model. Typically found in scene graph logic, events will spawn variations within the model's parts. Including information about the context, or passing through named key points, can provide events to the model render-er. This information will be stored in the sound format as is often necessary for precise timings. It is assumed unrealistic unless specialized hardware were created to create real-time the audio stream. This tagging system, portrayed within an attribute of the sound format, will allow easy inclusion of narrative cinematic content within games.

A secondary form of emotional characteristic profiling that is important comes from analysis of original language source audio. By profiling diction characteristics from a well spoken piece of audio, a movie segment for example, two aspects within the sample can be deduced. First the basic tonal qualities of the actors voice within the given scene. This will allow regenerated audio to have similar diction that is localized. A comprehensive algorithm will optionally allow the scanning of an entire audio segment to build a more precise syllable dictionary.

Secondly, the emotional stress and time placed upon each thought can be re-communicated. The text to speech engine will allow automatic and manual alignment of the text to the original source audio. If the audio track is a mix down (flat track), algorithms and filters can be applied to strengthen the reproduction algorithms diction capabilities. The end result, a full length movie can be accessible to many languages nearly without further work. Something that will be very costly if each language were covered for every film. In these cases, the text or script will be available for relationship linking. Providing a solid link to text searching to a film segment is an exciting feature.

In conclusion, Articulatory Synthesis is the holy grail of speech synthesis. Its flexibility allows emotional characteristics to exist within the audio rendering. Mark up languages such as SSML should include extra details that allow emotions to be placed within dialog. The INET Web OS Text to Speech Engine will capture the writer's use descriptions in natural text. As well a new page entry, binary coded, location wafer or OCR read, within the paper back book can be used to set attributes for each character in the book. The formal declarative speech descriptor pattern used with the INET Web OS Text to Speech Engine should be easy to use. It should not be geared to specific words but use a database of characteristics.

Available Technical references

- [Yale -- Haskins Laboratories](#)

- [Interactive Skeleton-Driven Dynamic Deformations](#)
- [Speech Synthesis Markup Language \(SSML\) Version 1.0](#)
- [IBM 7094 singing Daisy Bell \(MP3\)](#)
- [Real-time articulatory speech-synthesis-by-rules](#)
- [Articulatory synthesis](#)
- [Articulatory description](#)
- [From MRI and Acoustic Data to Articulatory Synthesis](#)
- [Articulatory synthesis package in PRAAT](#)
- [Speech Synthesis](#)
- [Variable vocal and Nasal Area Function](#)
- [Vocal Tract Imaging](#)
- [Human Learning](#)
- [gnuspeech](#)

## Disabled Persons Interfaces And Device Support

### Logic And Space For All

The INET Visually Impaired Walker will provide easy access to many parts of a city environment that was not available before to the visually impaired. With confidence a blind person can embark upon a journey and arrive at the destination safely. The INET Visually Impaired Walker provides audio and tactile feedback. Typically worn about inside clothing or on the hip, a small massage occurs for signal. The device can signal for a change of direction or at the moment of arrival. Reporting this by audio limits some functionality - report current location, position from destination, and approximate time to destination. The INET Visually Impaired Walker is compatible with the INET Web OS to provide maximum interface capabilities for planning.

Businesses that publish content with the INET Web Publishing Suite will integrate with the device seamlessly. For example, restaurants that publish their food menus will be easily accessed using common synonyms. Their location, phone number and delivery system will be automatically gathered and placed into the appropriate category. The restaurant's menu will also be search-able using a common feature format. With this system it is possible for the customer to make selections ahead of time, or take several choices of wine while they are at the table. The individuals will be armed with the correct information. When their arrival becomes, the waiter will have easy access to their choices from the identification of their person at check in. Optionally, the customer may choose to play their selections using text to speech to the waiter. The sections of published content are assimilated into categories that are known to the searching consumer. So they will not have to search tediously for certain types of content.

The INET Visually Impaired Walker is also a cell phone device, personal recorder, banking assistant, talking alarm clock and personal assistant. An optional wireless tactile keyboard can be brought along for capturing notes, writing and text editing. The INET OCR Camera can integrate nicely to provide Text to Speech reading of standard books and magazines at the library or anywhere. The text editor provides text to speech of information held in file. Allowing secure storage and retrieval of the customer's content from any location that supports Internet connectivity. They can go to their last point of listening to a book for audio music for example. The INET Visually Impaired Walker is designed specifically for the visually impaired world wide as a compact, easily locatable, comfortable to wear and made for enduring use computing device. The interface will also provide translation between two Visually Impaired persons that operate in different languages.

Giving access to community of like individuals can also be fun, however the INET device also allows community access for all people. The Web OS provides easy access interfaces for web browsing, natural voice page reading and email. Magnification for easy text reading is a present feature.

The INET Application architecture includes a domain for delivering a closed caption experience. If instructions are in audio anywhere within the system, they can be converted to text by filling in the fields. This information is stored within the audio file format upon the INET Web Server for ease of deployment. As well the system uses this text as a navigation path when text to speech is used for the visually impaired. A short path that includes good English (or language) references voice of extraneous information can be experienced. Typically making an experience more fluid conceptually. As well, by adding the ability for sound effects to be used in place of window area contexts, allows them a visual spot tracking upon the screen. Application windows can be easily seen as the next in view pipeline if the users clicks upon them.

The INET Web OS will provide interfaces for all known assistive technologies. Physical assistive interface include devices such as joysticks, specialized buttons, upper torso input reader, and the foot mouse. A research for feasibility to cover is employing the use of a specialized computer camera that focuses on the user's eyes. Using this information, interfaces can be driven by eye movements and blinking of the eye lids. This will allow numerous applications to be used and web information to be traversed.

A desktop designed for the mentally handicapped will be included with the INET Web OS. The desktop consolidates common functions useful to computer users but is section for ease of use. As well, information is stored in a recently used or recently created using historical view to allow easy location of data objects. The desktop provides world, national and community based links to applications, multimedia media and forums to connect these individuals with their community. The desktop is adjustable to increase simplification or expand based upon cognitive abilities of the user. Software designed with the INET Compiling system will have automatic access to these capabilities due to tagging. In conclusion, the INET Web OS platform is designed for Disabled Persons providing an important access to information and human services.

- [Braille display](#)
- [Computer accessibility](#)
- [Computer accessibility](#)
- [FreedomScientific.com \(Blindness Products\)](#)
- [FreedomScientific.com \(Pearl OCR\)](#)
- [EnablingDevices.com](#)
- [Access App](#)
- [Saucer Switches](#)
- [Gumball Switches](#)

- [button click switch](#)
- [in line switches](#)
- [Access Apps on-line \(Scotland\)](#)
- [JAWS](#)
- [Assistive technology](#)
- [Hands-free computing](#)
- [Footmouse](#)
- [Section 508 Amendment to the Rehabilitation Act of 1973](#)



## Web Operating System Providers

### Source And Target On The Fly Melding

One compliance characteristic of a Web Server Operating System is that all user data stored within the system such as programs, settings, databases, and data-files are in an open format or application specific format. The location, storage mechanism, and any data dependencies of each user file is known. A major feature of Web Operating Systems designed as this book suggests is that users can transfer their assets to a new provider. The new operating system provider can be distinguished by many attributes that encourage a user's business. This provides an open technology market to entice competition. Fierce competition will increase productivity. The INET Web OS adheres to the proposed component standard instantiated by the INET Operating System Meld Component design. The INET Operating System Meld Component is a common critical component within Web Operating Systems designed for the open user market.

Within the open user market, each Web OS provider must allow transfer of all data sets to specified target. The new target may be a backup facility, for example, or a completely new host for the consumer; they might want to change their operating system provider. Changing the operating system provider will be as easy as changing cell phone carriers are today with Web Operating Systems design like this book suggests. The INET Operating System Meld Component provides a digital data catalog along with APIs for applications to register their information. The INET Operating System Meld Component is integrated within the file storage system providing a secure file property owner status. In general, the system provides a secure way for clients to transfer all or a portion of their data to different provider. In short, the INET Operating System Meld Component must be a standard component for every Web Operating System Provider to provide an open user market.

The operating characteristics of the INET Operating System Meld Component is very restrictive for ultimate security preferences. It is improper to expose every piece of data the user has at a whim. It may seem a risk, yet it is essential for this component to exist. The protocol and communication methods the component uses during transfer fit a standard open format for the source and target to align correctly. The INET Web server plans to incorporate a relational database for its basic storage system, so the component will link to the user's database. The system provides a measurement of progress, and a measurement of the total amount of work.

In some cases the user may only want to transfer some kinds of data to a new provider for safe keeping. For example, the provider will serve as a new video vault, their valuable audio files, or financial information. This is a distribution of the data and dependent on the setup it might still need to be accessible from the original source OS provider. When transfer occurs, dependency links are maintained to ensure applications will still operate correctly within the file system. Communication links are established providing the correct encryption keys and end access points.

Replication for the use of business data access is also considered within the scope of the component. In this case, data is maintained in balance across a given set of nodes, or target points. The system tracks updates for replication and the speed of distribution for statistical learning.

One use for consumer based data replication would be intercontinental travel; the user relocates cross country or world, a plane trip. This type of service can be facilitated using numerous technology plans. For example, if a local service provider is not large enough, additional technology agreements with other firms may be necessary to offer the feature. In most cases of large distance travel, replication is desirable for a user's performance. Select portions of their data follow them when necessary. The system maintains a cache for each device registered while the main store is at a Web Server CPU. Depending on usage, the component transfers only what is desirable during the instant in time. Based upon data security, some content is restricted and will not be transferred or placed into public view. File security also includes replication that considers geographic regions. The user's digital data is represented in tiers to facilitate quick switching for users that have purchased a data box web server. In other cases, their is copied to the new host environment when swapping.

A feature of the INET Web OS is the management of distributed data and other technologies across the web, network connection or optical bus connection. When a user buys a new central processing server box (not a terminal), they can just plug it into their old server. The INET Web Operating System distributes and configures the computing resources automatically. Configuration is established to effectively utilize both the old and new device whenever appropriate. The user can also establish a specified use for the additional device.

Do not forget the main purpose for the component however; to make sure that the user can always change their Operating System Provider at will. This means the managed transfer of their application programs, directory structure, settings, and user files. The data associated with the application, configuration information and user data, is stored in a format that can be transferred. The VLISM code is transferred along with the associated application data to the new host provider. The new host computer starts a background compilation of all of the new code.

Versioning is an important facet that needs to be in view here as well. In the INET Web OS model, file version is managed with historical records, how much data should be transferred? And of course only data that is necessary for the new provider to use must be transferred. Logically this means that the source provider operates under VLISM stream version a, while the new target operates on VLISM stream b. Translation between these two formats must be facilitated easily and dependent device streams must be recompiled once transferred.

The transfer process must be flawless, provide fault tolerance and recovery. The INET Operating System Meld Component is managed as part of an international standards committee for Web OS providers to incorporate. It is a large responsibility to manage security for. This component, being open source, allows asset transfer to occur when desired by the user. Therefore the system is protected to prevent hacking and tampering. The security is tested by the operating system provider incorporating the component and the international committee for secure data rights, an organization or step used in compliance testing. It is assumed that most of the security is built around INET name-space locking and a hard button switch but each terminal configuration may be designed differently. The negotiated initialization of the process is the primary function to secure. Only registered devices of the current host provider may start the transfer process. INET Operating System Meld Component in most cases is started by an IIOS Bios call embedded within the device. In conclusion , the INET Operating System Meld Component is a critical design feature that enables an open user market for Web Operating System Providers and Web Operating System manufacturers.

- [Legal Hold](#)

## Division For Unification

### Digital Technology Future Protection

By grouping and naming object technologies from schema that are derived from international discourse; adoption, dissemination, conversion and sharing of digital data will be more successful between companies and countries. The INET platform business model will make this easier because it is a conforming system rather than dictating system. But most importantly, it promotes life long data integrity beyond the operating system provider ending total reliance and this promotes intellectual competition among all providers.

Logical and full bodied negotiations must always exist to come upon naming standards that are appropriate for the international mind when considering logic, math, information structure, visual cues or aesthetics and the target comprehension curve. Within the domain of information exchange careful planning needs to be in place for string data considering language both expanded character sets and language translation, data version, numeric data, date, time, currency exchange, ecommerce, goods market exchange, customer management data, geographic location information, personal identity information, editing and typesetting, streaming application format, database storage, graphical user interface objects, window implementation input response, image file formats, motion picture formats, audio formats, and source code requirements or international source code exchange. These facets must be managed by a group of international discussion boards that operate as separate entities to facilitate the highest effectiveness of planetary implementation.

Checks and balances must be in place to protect businesses and consumers within the domain of intellectual property. Intellectual property is loosely used here to redefine digital data such as documents, images, movies and sound, that is a whole work. This is relevant to the operating format. The check and balance system works well in hashing out agreements because a majority of the members have to agree for planned recommendation. Yet because of software flexibility, minority requests are still included. This reduces feature duplication and reduces complexity in most cases. It opens a source for continual improvement through research and discovery. And it gives opportunity for greater comprehension, that is to say the works of the whole are greater than the whole because learning has occurred during discourse. A profit or quota must be maintained by these firms to serve independently.

Companies providing web server operating systems, like the INET Web Server OS, will provide a level of compliance within the international conventions to compete. As well, the devices manufactured will have an Internet safety rating for electronic commerce and personal identity. Being able to serve an OS experience or tunnel an application experience is an important feature of web server operating systems. The instruction set name-space used for Internet transfer and native application machine code used must be agreed upon. This allows multiple instruction name spaces to exist yet provide name space transfer where appropriate. This is VLISM's most important feature as it provides a upgrade path while always accounting for backward compatibility.

The INET Web Server OS will render a compatible stream format for the embedded device being controlled; the experience. For the investment in the maintaining of compliance knowledge as an initial steering direction, the software implementation and hardware implementation corporations are free from monopolistic control. This is a driving key to the success of the web server operating system market. Agreements of this nature will ultimately protect data and logic investments of the entire business industry that rely on digital information technology. In the end, this secures business and personal finance processing.

## Virus Alert, Quarantine, Protection, And Removal

### Holocausts In Data Loss, Data Damage, And Data Security Over

The system will perform scanning functions on an as needed basis. Integrated services.

- [War-driving](#)
- [Computer Virus](#)
- [Linux Malware](#)
- [Spyware](#)
- [Computer Hacking](#)
- [Network Security](#)

## Using USB Key Drives To Transport INET Web Server Desktops

So you want to log into your home computer from the library? Or how about your work computer? The term logging in brings to all user's mind the idea of user name and password combination. Yet in reality this is an extremely poor design for authentication. Especially when encryption can be based upon this information.

By storing a large decryption instruction key on a key drive , Internet usage of this kind will be much more secure. First with an decryption instruction key no information is sent to the server computer except an address. A new terminal protocol will help identify what screen resolution, workstation characteristics and user interface devices the connecting terminal has. The web server is where the user's desktop is delivered from. The encryption algorithm used by the server is already set to match the decryption key stored on the key drive.

To the user it is simply a new autorun.inf type of start. They simply insert their key drive into the [black box](#) and their desktop appears. If the user has multiple operating system accounts, a nice selection list appears. This black box is actually connected to the computer's network interface card. The box handles the initial DNS resolution thus having some code to control the Internet. The devices primary function is compression and encryption; upstream and downstream. Obviously this would be an upgrade path to the new terminals.

Combined with hardware resources for the cipher, modern desktop computers can be reused for the INET platform. This is a great upgrade path for government, libraries, schools, and many users as existing assets are used. For some, fixed asset management of this kind is extremely important. Being able to use old equipment to run the newest applications is awesome for them. The main benefit of the Black Box integration is the extensive upgrade in Internet security for users of the next generation web server operating systems. For the user it provides a better overall experience.

- Possible risks are placing the key into an unknown device. Users must know if the device is safe for them to place the key into? Some hackers may place micro code on the device that makes it copy the key, or expose information. Therefore it would be better if the item were a separate device from the computer itself. This will allow for some tamper proof security to exist, and this will be important at public facilities.
- A large decryption instruction key is a private agreement data package consisting of cipher selections, cipher augmentations, and password encoding.
- Passwords are typically eight to fourteen alphanumeric characters in length.
- A large decryption instruction key can be megabytes in length. This is something that users will not remember, yet carry with them on the USB key drive.
- Passwords and usernames are typically sent across the wire for authentication.

- With a large decryption instruction key, information is sent from the server automatically. Yet you must have the proper information to decode and answer to the server to maintain a connection.



## Live Multiuser Collaboration

The ability for many users to work together remotely over the Internet or inner office is essential for sharing intelligence. The ability for two users to hash something out productively or arrive at an understanding is important for many types of team work. The INET Collaboration Application Framework and the supporting GUI Applications supports secure layers in any application for multiple users. These layers can be derived from any application by object instantiation. Intrinsic with team efforts when physical distances must be crossed, is INET Collaboration's ability to synchronize communication effectively with solid graphical user interface traits. To manage effectively and with pleasurable user friendliness the collaboration and synchronization of data objects, live textual messages, live video feeds, live audio feeds, application output (**LOD.PANITBT.NSM** Draw Lists) and user interface device input/output is the big ambition. This must be managed with the appropriate security functionality for multiple users.

## Textual Collaboration

Textual communication is essential and one of the basic needs for multiple user collaboration. Yet textual collaboration must not be confused with textual input upon a dialog. Textual collaboration is a discreet, secure, method of communication about facets of a project or document; chat. The textual input to applications can arrive from the hosting terminal itself, or any other terminal within the current collaboration ring whose security profile matches the correct bit signature; non visible, read-only or read/write. When textual collaboration is turned on, a separate window shows the text messages named the INET Conversation overlay. When input focus should be routed to an application, the window must be changed to in focus, otherwise all textual input shows within the INET Conversation overlay.

## Over The Web Synchronization

Video collaboration can be drawn from dual sources at the same time for a given terminal: the application workspace and a live video camera. User Interface Device collaboration will synchronize primarily the input of keyboard functions and mouse input with the opened live application. User interface device input can arrive or be sampled from local or remote machine. When collisions occur within a single field for example, last input choice will be selected as the final to store. However, data will not be lost due to the queue based architecture. INET Application interfaces will have the ability to support collaboration using easy OPP methods; a button on the counter-space activates the collaboration ring dialer. The application publisher may wish to pre-fill meeting room credentials with proper security or set specific application and INET Collaboration framework features necessary for providing a desired user experience.

Users have the ability to synchronize information from one terminal to another. The synchronization of data objects is a very practical feature. Once an INET Collaboration Object data set is linked to the data source, information will automatically synchronize as expected. The data source can be application dialogs, fields or more often files. Often teams of individuals work together to perform functions of asset creation. For example, creating a Hollywood film would require that assets be shared amongst the parties. Permitting the scheduling of object updates or the single transfer of item(s) is in line with usability. Object synchronization occurs intelligently with INET software by only sending the changes that are object specific such as textual characters, audio segments or video frames if the object already exists in a form upon the member's computer.

INET Applications that integrate collaboration are designed to communicate state changes of the object data being operated upon. This information is recorded by the object editor when files are shared with collaboration. The changes are managed with historical tracking using the file system, and collaboration database. The data objects are incrementally updated as needed on the collaboration project member's terminals.

Because of the speed of network transfer when large data files abound, synchronization of them is optimized for network usage. During the reading, viewing or listening of them; a low quality version of the most recent data object state is generated for consumption. At times, this may be requested as read only but later can be modified. Parts of the lossless data object can arrive in the background if needed. As a random access data object format, only the portion requested is prioritized for transmission.

Sometimes it may not be practical for an entire film to reside in its tera-byte form on all group member's computers during a long term collaboration project. In this case, a central collaboration project storage of the assets will need to exist while smaller versions of the assets, even scaled segments of the data object, exists for local editing. The decision to create distributed file operations or provide operations that are likely geared for smaller asset payload project is easily planned for within the INET Collaboration Suite. This is accomplished without confusion for many types of collaboration meetings and projects.

The medium used for data object transfer may change several times during a collaboration project as team members come into physical contact with one another. That is some collaboration projects are expected to last years while others are mere minutes. It is easily understood by INET Devices to speed synchronization procedures when the beloved team members are near to each other.

As a fixture of user friendliness, the interface provides several options that regard time, storage location optimization, and multiuser editing. As parts of a project may exist in various forms on several machines, the result of intelligent network management, the necessity of rendering a current state of the whole project on one machine is fulfilled. Users that can work in parallel will accomplish their goals faster. Applications that include INET Collaboration while offering data object synchronization of its produced data can use multilevel file locking. The multilevel file locking portion of the collaboration suite establishes its usefulness by handling all of the tracking logic within a collaboration database. In this task, the function of working with a data object format using a specific unit of granularity such as a sample or image becomes easily implemented using OPP methodologies.

A very important feature is backup and recovery of each member's work. While parts of an asset may be disseminated upon multiple locations, the backup storage, recovery and historical unit differences are manageable as a functional unit of the underlying data object format. That is, by frame, by audio sample, or by character. This is propagated through instantiation of the INET Collaboration API objects and the Transfer Unit Object. Typical features exist for the back up facility which is accessed through the standard INET Web Operating System Backup facility for common interface support.

### Collaboration Ring Manager

The INET Web OS Collaboration suite contains a host of seven application functions with one major client interface entry point. The Collaboration API is an object based framework and is used to support all of the graphical user interface needs. The INET Collaboration Ring Manager is an application that allows one to define an audience or group, the meeting room, duration, breaks, security profiles, audio feed properties, video feed properties and the publishing request persistence (INET Collaboration Object data set management). The application supports an invite feature or allows credential based sign on. Credentials can vary greatly due to public broadcast capabilities. Age, Gender, Operating System or Work place may be criteria; but there are more. Point to Point Secure Identity connections allow selection of a machine for even more discrete control. As well, an initial face to face meeting to hand an INET USB Personally Secure Key provides the another secure layer communications. Multiple types of keys can be used such as the INET Confidential Key. These keys can be created and published from within the Collaboration Ring Manager. The ability for one to check the authenticity of a member is present.

### Collaboration Attendant

The INET Collaboration Attendant application is present on all terminals as a base application along with the other components of the suite. The main purpose of this application is to gather the meeting credentials from the user and log them in to the conversation. Credentials can come from multiple sources for authentication. Typical sources are from a USB Key, by terminal identity, or from a user and password pair. The INET Collaboration Attendant is the main user interface for most collaboration presentations. The interface supports all types of streaming media used within collaboration. The application can be accessed from within other applications that integrate the INET Collaboration Objects or from within the main User Sphere environment.

### Storyboard Segment Planner

The INET Storyboard Segment Planner is an office flow tool that allows one to define the flow of a meeting. With this information present, attendees can view progress as it is shown within the Collaboration Attendant interface. By placing an emphasis on flow, a suitable lesson plan can be developed from templates that is also well suited for academic study. Experts in higher learning intuitions identify this as the process of learning effectively. It is defined as a structure that ensures long term memory placement. Some likely steps are : Meeting about, Introduction or symbol moments, Formal Thesis. Supporting Points A. Point B. Point C. Demonstration of concepts. Reiteration of major points. Extra or advanced information. And finally testing or survey.

The ability to place within the flow other media objects such as office media and live video moments for each member is important. These points within time are used within the projection calculation of total segment time, which can be variable in real time as multiuser collaboration occurs. The Storyboard Segment Planner provides the user interface structure to outline the flow of instruction. Some segments require no interactivity from the guests. The guests should be learning. Having a question place after each point could be important for the designer. During this segment, a provider may have multiple members to support one on one sessions.

### Live Video Collaboration

During live video collaboration, a single floating window or a rectangular grid of many videos showing multiple users is shown within the Collaboration Attendant application. The application will be in foreground with proper audio support. Supporting live video collaboration within an application will tie the information of the connection and the content of the hosting application. For applications that include customer relations that need monitoring, methods are provided to allow storage of the video information within the INET Media Database easily. The database storage of a historical collaboration record format within the context of an application interface will entice elastic usage of the component. The quality of video and audio is adjustable to secure proper bandwidth and performance characteristics.

### Live Audio Collaboration

Live audio collaboration initiates a minimal interface that supports multiplexing of multiple audio sources from microphone sampling and optionally from the output of audio applications. During live chat, the Collaboration Attendant application supports textual information transfer and input. The INET Collaboration History application gives a collaboration initiator recording capabilities for subset data. This functionality is also provided within the object API for third party implementation. Users are shown the status of capturing real time as required by law. In some circumstances, users may be prompted before continuing capture. If the application and content is not officially subscribed, users may lose conversation privileges. Secure application automation playback and video feeds of application workspace is attainable within the suite.

### Language Translation System

The INET Language Translation System will be available within the system interface, incorporated upon the system bar. Providing access to a database of common greetings and phrases within the scope of the collaboration functionality is of great benefit. The INET Language Translation Database of phrases allows a business owner entry of specific policies and processes while incorporation of professionally translated phrases. This will make sales possible in some circumstances. Providing a common summoning format for parties involved, the INET Live Collaboration system will promote connectivity to others near in geography for on the spot communication. When both users do not have a terminal, one will suffice for the necessary communication. The INET Live Collaboration textual communication system provides a session view for multiple users.

The INET Collaboration suite will be used within many business processes that incorporate the INET Web Cash Register as a secondary technology. Within the purchase and order process, the INET Collaboration suite will be used to clarify orders and detail work. For example, within the auto repair industry, because cars are complex machines, the mechanic, shop manager and customer may wish to hash out details of specific repairs. All information captured will be tracked and managed as part of the bill connecting the resulting digital media to the customer's work order and payment receipt.

The INET Web Cash Register can produce an interface that includes collaboration functionality. The publication media includes versions for web browsers, cell phones, laptops and desktop computers. The interface rendered is very usable, familiar and appropriate for the business. The use of HTML5 as an interface projection method is available for some browsers that include capturing local client video and audio sources. Supporting multiple devices including INET devices is a very diverse development project that the INET VLISM and INET Web OS platform solves by using a robust architecture within its content management publishing solutions.

Customers may be happy with some forms of their business being connected through the web browser. But by providing an even more sophisticated and encapsulated experience that is played through a secure native applet, integration within modern lifestyle phone software is possible. As a storefront it provides better streamlined functions that operate intelligently within business practices than browser applications do. One example one this embedded device functionality is context of usage. As a store front model, the user would activate the shopping application and because they are located within the store, the store front automatically shows. The navigation in this way can be controlled which is not supported by browser security.

Usability of the interface includes application and collaboration feature activation. Within some business definitions, the collaboration may be a secondary and rarely used feature while in others it will be a part of major interface flow. Each sale process is unique from business to business that one business may be willing to handle each sale personally using collaboration. This can occur at any time within the shopping cart experience. In some sale procedures including collaboration may be based upon the actual location of the connecting user with the store front. That is, when a sales associate is readily available on the floor it does not make sense for a customer to embark upon a video conversation. However when they are at home, an initial greeting and navigation collaboration may be the best sales solution. The type of media used in the collaboration integration as default can be a preference first in line to be set by the customer. The business interface design template can be overridden by the business owner to configure the technology for specific purposes. Other advanced features of native application production are discussed later.

Third party applications are able to include the collaboration tools within their application for use, allow specific security adjustments for their field of view, and set group policies for capturing or recording easily. The INET Collaboration suite applications are written as SoftSpot components thus allowing seamless integration during teamwork development approaches. The typical inclusions of them provides a standard user interface for activation upon a tool bar and menu that is familiar between all applications. Data and time records can be linked directly with the application session and application context. Data can be recorded to a Collaboration asset database and later indexed by a key that is unique. Data can also be stored in format with application database streams as blobs.

Machine translation of text and real time translation of text and audio (video subtitles) using authenticated resources is supported for international communication. The INET Translation Application gives secondary parties the capability to view and edit while synchronizing the texts within the recorded information as it is happening. Matching the transcription information real-time is not possible since it takes time for a translator to type. However, the information is shown as it is received. When video or audio playback occurs from the data blob, the text subtitles are synchronized. Text subtitle synchronization editing can be accomplished using the INET with the same application.

The multi purpose tools of collaboration provide interoperability between many data systems and business functions. The INET Storyboard Lesson planner is a major functional tool that provides the power of planning a learning or presentation segment. Most importantly the resulting experience can include live collaboration portions of time where many guests are serviced at one time. The ability for a user to create a seminar using INET Web publishing and integrate INET Live Collaboration at designed times gives very useful structure and fresh artistic appeal to information dissemination. The planning application includes integration with electronic commerce banking facilities to allow payment options. The INET Live Collaboration suite is object oriented in its design. This gives third party developers the ability to link their application usage and other collaboration needs to their software easily. In short, the INET Web OS Collaboration suite and OOP API provides design freedom while increasing productivity and information retention.

- [Live Meeting](#)
- [Lotus Live](#)
- [Web Ex](#)
- [Fuze Meeting](#)
- [Goto Meeting](#)
- [Type With Me](#)
- [Ether pad](#)

## INET Staircase Goal Collaboration Management System

A dominion sized goal management of system will be a great feature application of the INET Web OS. The system's capabilities are vast in that the coverage areas even include strengthening the [interpersonal communication](#) quality with each person and perspective client reached. This is achieved through goal framework packages that are preprogrammed with professional communication templates that contain business communication. The content of business communication letters are specific to the goal framework package and the step that is being performed within the goal. The system supports many types of goal framework packages as they can be added to the user's application at anytime. The progress of modern society in achieving success and completion in their endeavors can be managed effectively by a goal management system such as the INET Staircase Goal Collaboration Management System.

The system will be supported as a WAN product globally. Existing frameworks that manage goals sought using domain specific models can be downloaded from an external network resource or central repository and used directly. They can also be modified for tailored purposes. Software project management, personal finance, charity, health care coverage by area (existing facilities and new facilities), erecting a building, small business startups, starting a bakery, running a bakery, build a home, running a pizza shop, starting a new home loan, saving and investing or managing a new charity fund are likely goal framework packages. The distribution of the frameworks take on the appearance of an entire desktop. Within these desktop environments exist applications, books, training courses, schedules, goals, calenders and business collaboration connectivity specific to the goal framework. After completing the goal framework, the useful applications and data can be transferred to the default INET Web OS desktop. Internationalization of these concepts will strengthen business collaboration in many countries. Staircase Goal authors can maintain secure remote project assistance while keeping all historical information.

As a basic feature, the application will allow the creation of presentation events. Presentation events spawn application usage automatically. They are the root message for all events that take place within the system. A presentation event can occur for many users from a user group with one invocation of an event. The user group is representative of a specific set of goals for that team to accomplish. The ability for user groups to direct their web published materials to the correct parties within the system or broadcast to listeners is easily accomplished. The presentation view or event can be expressed in many forms of media including video, audio, textual, expert system knowledge based applications, INET SoftSpot components, surveys, forms or INET web applications.

These project sources have an interface that may adapt over time to a desktop that is geared for the current project milestone. Some events work within the capacity of economic distribution to localize some aspects of friendly cooperative business partnerships. For example, in building a home different types of lumber is needed during stages. The system will research the local distributors for your selection.



The system can manage many users and user groups to facilitate security privileges associated with the view, creation, usage and editing of presentation events. Tracking of use, task completion and content creation is available from an administrator view. The only way things get done is accountability.

The architecture of the system is generalized enough to allow information flow of multilingual digital data objects (application, video, audio, etc) within a user friendly portal design. The portal design facilitates effective use of the user's time. The system provides potent use of screen real-estate allowing incorporation of INET SoftSpot Components. Information application frameworks tailored to user and group specific needs will be more effective for the user base.

The system is distinct from an email application because it presents information in a staged flowing format, one that supports tasks being completed within a designed framework of time. However, email is included within the suite of tools. If more work is performed during the task, new tasks can be recorded within a diary. Making use of audio and video sampling will increase historic knowledge. The presentation events can be arranged in a nested hierarchy and allow chain event spawning. The system will measure the time of all facets of the usage, creation and viewing of the materials. If a reply is required, that will be tracked and implemented.

The system will provide tracking of historical data, related chains, and archival information. Reporting of this information will be at administrator or the chain creator's will. Calendar view entry points are common points of interests for schedulers and managers. Integration with the user's schedule is in ready state along with reminders. The ability for the administrator to create a desktop environment and specific views for the dissemination of presentation event details will be present to allow a third party to design a cohesive collaboration tool suited for their tailored purposes. A work stream that repeats itself many times is one example. The system must also allow versions of previous and future designs.

The intent of the system, while having a generalized approach, will be dependent upon the user group's implementation desire. Consider the necessary requirements of collaboration among nations, their ambassadors, individuals within the ambassador's domain, and the nation's leaders appropriating change. Management projects like this may have been tried before, however none still survive as a implementation choice. The individual users of the system will be a member characterized within an event as a creator, a receptor or an interested party member. The members all exist within many time domains. Each have their very own personal schedules. Many languages will be written and spoken. None of the members must be tied down to a millisecond if can be helped. Yet in circumstances it is desirable to have accountability for a competition time. To inform, show status, and allow follow up of events will be necessary in this collaboration desktop environment. Typically groups by the will of the nation's peoples express their desire for a change.



The INET Staircase Goal Collaboration Management System is an information framework that implements flow and tracking of digital data objects. The system's intent is to appropriate measured progress set forth by goals which relate ultimately to policy practices; formal or informal. The ability to create a collection portal for a charity should relate the participants to the end with authentication; their funds were properly treated. And the ability to create resale of market goods should be easy target. The system supports multiuser multilingual collaboration. By allowing a designer to tailor the information system for specific work-flows, appeal, user friendliness, and dissemination details the target audience can be counted easier. The system establishes a party and request specific data portal. By including goal seeking software that tie the user's will and desire to unit display will allow management of several goals within their digital data life. These projections will occur through broadcast and the web publishing suite. INET users will be more successful by using the scientific method and planned steps. In short, the world lives and breaths on a stimulus beat.

Closest world match: Project Management instead of Goal Management.

- [Project planning](#)
- [Project management](#)
- [Project Portfolio Management](#)
- [Project management software](#)
- [Comparison of project management software](#)

## Web Publishing

### The Immaculate Garden

Web publishing and broadcasts are an essential ingredient of a user's worldly communication. Their methods set forth behaving and achieving its goal of timed captivity, appearing beautiful, spontaneous and with liquid fluid motion will be enjoyed for its innate design by users. The INET Web OS publishing suite gives users the ability to weight, place, and arrange visual content they deem important into a useful page layout. Useful traits will be interpreted by the targeted audience as the navigation system provides simple reference or access. An audience held in a subscription service or one that is completely anonymous is dutifully counted by the architecture. By combining three dimensional organics for the eye, audio flow, emotionally suited, character mouth, face, body acting, and stage dynamics with office productivity software the INET platform will soften relationships with old and new clients.

The INET Web publishing system uses an object oriented implementation to enable seamless integration of assets cross office productivity tools and third party meta tools. The system provides the necessary tools used to form layouts and utilize text easily. Spectacular presentations and multimedia experiences are easily made with complex live data. Exploiting the three dimensional rendering capabilities of the INET Web OS Visualization system, font dynamics and animation capabilities; the publishing suite enables robust learning environments to occur. Many information frameworks that adhere to specific content styles is available for staging the experience. Each of these template frameworks is available for incorporation in all meta production tools and the new office suite.

Artists of the past have used many mediums to project their imaginations. The newest realm of Computer Graphics and audio technology has begotten enormous fruits of creativity in film and music industry. The next medium is obviously using the Internet as a direct presentation layer. Yet the tool work flows used to create the presentation is often not geared for the audience; artist, business analyst. or home user. Modern users must make many compromises visually to reach one form of their goal; hammer.

A visual artist modifies space, either 2D or 3D. Techniques, instruments and hand tools used to do this vary greatly. In the physical world, canvas, cardboard or any surface is used. Expect new methods of input technology to evolve within the INET technology market. The INET Gesture Recognition Hand Sculpting input system is one such research project to be used in the modeling application. Users can use their hands to modify the shape of a two dimensional or three dimensional object's features. Working with deformation and texturing tools will be operated easily within this context. Setting the strength of these tools will be best expedited using the same input method, gesture recognition. The INET Paint Brush completely models a brush in high detail. The paint drops, mixture, gravity and viscosity are modeled within the user's painting environment. Using a digital brush in conjunction with an INET Painting Tablet provides a new realm for the digital artist that is very portable and effective for creating. As a unit, the INET Painting Tablet provides the artist with a centralized retail space for their works to be sampled, bought, and scheduled for delivery.

Creating high quality models to be used in broadcast is sometimes difficult to achieve. The modeling application will provide safe strengths to ensure productions are of quality. Yet when talents are balanced elsewhere, a large library of on-line textures and basic shapes to choose from will speed a visual target to completion. Professionally created models are always an inroad to high quality content. The INET Web OS provides inner work flow access to many asset databases as well as including base content. With the protection given to the artist for content reuse, generous usage is enabled to allow a decisive layout without hindering productivity. Content payment or rental is only accounted for when the user chooses or when the final publishing process is invoked. Model makers have rights. Models that are enabled for verb artificial intelligence interaction can be animated using that style. Standard animation techniques can also be employed. The system includes a robust motion data package for this purpose.

Another input technology, the INET Multi-view Line Model Scanner, allows one to scan cartoon or hand drawn figures from several poses or angles to build a three dimensional model. By matching poses to verbs defined within a skeleton, animations can be made from the plans. The system provides sensing of thickness and depth. Frame [interpolation](#) can also be set by key points for animation. The process works for both two dimensional and three dimensional models. The official terms used by animators for these processes are [Tweening](#) and [Onion skinning](#). The technology also provides anthropomorphic limits (range of limbs, digits, torso(s), head(s) motion) based upon skeletal assignments. Properties that cause a cartoon character to exhibit intermittent and regular motion such as the chest moving during a breath can be described as well. These features will also work with two dimensional drawings. Motion path data can be applied to the model creating naturally fluid animations. The system transforms the motion path information for three dimensional and two dimensional models.

These input formats give artists trained in the classical arts a starting point to create and refine interactive characters or logos. The system works best with hand drawn items and not photographs. Offering known scanned angles or views of the content such as front, back, side, top and verb poses allow a more descriptive model to be created. For complex interpolation, limb and component matching can be aided by hand. The artist will locate a region and outline the shape within several of the scanned items. Giving that these items are most likely rough drafts, portions of recognized materials can be selected independently. That is, one might draw the individual components of a character and then piece them together. Colors can be used upon the paper to create texture colors but it is recommended that painting occur within the modeling program since lighting will be calculated. A thin black pencil or pen line drawing is preferred. The array of applications that are provided enable easy publishing of a cartoon experience. Users can scan content, type the text, arrange the models upon the stage, add acting poses and presto. The system will render an animated three dimensional film with synchronized audio speech and mouth movement.

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Within the digital domain it is the monitor that becomes the palette. Coming of age in Internet form, INET Web of software engineers will give artists more effective use of the screen as a canvas. The system allows this in a natural poly UI Tool. Several publishing tool formats include text rendering, a strong emphasis on graphics painting, deploying INET Octopus Controls and INET Soft Spots. These tools in conjunction with the INET Web OS provide a complete working product for many users and platforms (viewer, data application, web publishing). As well, it provides easy deployment for the user.

Desktop publishing is the closest form of tool that would be appropriate to compare. Yet not exactly, as many desktop publishers do not facilitate advanced graphic editing features. But they are extremely precise in font layout options that create durable presentations. As well, many digital artists know of their capabilities and interface practices. The highest quality leading products are applications like [Adobe Photoshop/Dream Weaver](#), [Microsoft Front Page](#), and [Swish](#).

Large backgrounds on web pages combined with absolute positioning is the way most web artists use the entire canvas in modern browsing. Addressing multiple resolutions and supporting multiple browsers becomes an issue while using this method. To really activate the screen with fluid motion a Shockwave Active X COM component is used. Creating the Shockwave animation does require third party tools and specialized training. In most cases a frame animation painter would be more effective.

## New Operating Cycles

Reducing redundant and unnecessary machine code within the CPU and binary executable can be argued as a necessity and practice within modern browsing. Modern Web OOP rendering components typically use their own inner functions for fonts, textual data, graphic rendering and logic processing to achieve high speed. Font technology used for rendering very readable characters employs anti-aliasing, color balancing and other smoothing algorithms. These technologies are complex and are not easily addressable within the web OOP rendering components. Most font technology systems used by an operating system as core technology do not allow advanced adjustments upon height, width and spacing of individual characters and strings. Nor do they provide three dimensional animation and texturing capabilities as the INET Web OS employs. The INET Web Font System resolves these issues of quality as a base technology.

In modern browsing, three dimensional fonts must be accomplished using third party tools. That is, in some cases, the operating system's font system is not advanced enough to achieve the total artistic vision. For modern browsing, these issues are typically solved in house by the third party software engineer. And at best, these production assets become static images making maintenance and multilingual communication a difficult task. With the robust INET Web Publishing Suite API propagated into user specific tools, the creation of poly layer broadcasts will bring sparkling quality to its viewers. Together, under one roof, these series of tools provide precise creation of still image, video, sound, vector animation, and text. INET SoftSpot components can also be included.

## Navigation

The INET poly UI publishing suite also includes deployment of dynamic navigation systems. To generate domain maps and document indexes is a publishing feature. Each of these items are configurable functionally, operationally and aesthetically through UI interaction delivering usable information systems and tools to users. Searching within a vertical scrolling page (host side HTML, pdf or open source document) or logical information domain is a component that integrates easily at the publisher's desire. By supporting the habits of writers, INET will provide small tips like the bold and italic tag. CAPS, #COLORMARKUP STYLENAME RENDERCOMMAND within its processing tags. This is a deviation within style that will still be accessible globally to further competition. The search can also be tailored for the specific information portal. Adding combo boxes, check boxes, and image icons to extend the search criteria is accomplished with ease. The INET Web OS does have a common panel for the search functionality. The search panel is integrated within the interface as the user preferences desire. That is on the page, or at the top system menu panel.

A table of contents can automatically be generated from the titles and subtitles of the included content. Formatting the table of contents can optionally include abstracts of the underlying articles accessible using mouse over or sidebar selection rollover. Keyboard operations also apply within this context. The advanced search panel that a publisher can place within the UI space includes the ability to show recent changes and provides on the spot navigation to it. An option of interface that shows a summary of change data is even possible for large documentation sets.

One possibility of interface propagation new within the INET Web OS is employing a magnification graph. That is, state changes describing the information object are depicted using a magnification graph allowing easy inspection of pertinent content. A magnification graph is an iconic image representational of the underlying information with high contrast colors showing the differences of the recent changes. It allows the user to zoom, read and navigate easily to the new edited content.

The magnification graph has several views that allow integration within the table of contents, summary, index and abstract publishing modules. Integration of change state information within a table of contents or index is sensed on a user or customer basis. Each customer may have read different articles and amounts of the articles. This information will affect the view.

This navigation functionality can be communicated in several ways to illustrate that modifications have occurred. The display area consumed by this functionality will change based upon functional need, location, server publishing rules, viewing browser code base, and user preferences. Supplying a re-sizable iconic window that is representative of the change states will be primarily accessed through the global search panel. Within the lines of the table of contents tree this state change information can also be communicated.

The summary or extension views are typically illustrated usually by an iconic symbol; an ellipses. The summary or extension case can be denoted in several ways using the text color, an ellipses, an iconic view window sized to the row text (portrait orientation), or a scrolling landscape oriented navigation view. Providing the functionality that reacts to mouse over events while over the polygon spot will activate a layer that provides a magnification graph. Scrolling, zooming and navigating to the changes will be easy.

For best publishing practices the INET Web OS provides the very latest in interface layout technology. It is important that web based publications of the INET Web OS platform use cohesively these features, operational components and screen real estate of the client as effectively as possible. Therefore, most of the template frameworks are designed to do this. Users that design their own framework employ these components at will thus hiding the encapsulated server document processing functionality during deployment. Not providing duplicate, redundant and non-used content for web applications will simplify common user interactions. The global system search also provide this functionality for single access panel location.

### Broadcast Catalog And Information Views

One example of a type of production asset is the Music Artist. By using INET Web Publishing tools the music artist's web pages will be built better to operate as music player, complete with puffy titles, electronic payment and point click stream play. The resulting presentation allows easy viewing, purchase, listening, reading, and book marking of content positions. These features are executed suited to the user's preferences. For the user, higher quality vector font system with magnetic magnification for easy reading gives the ability of close inspection. Better mouse usage when reading as a smooth page scroll (key augmentation; LR separation argument) offer flawless no compromise artistic expression and transition.



When an eye crosses the wonderful site of [NY Company, a Fashion magazine for women's apparel](#) the clothing and materials stand out. Photography, visual description, and classical modeling styles bring the monitor to spark with life. The process of selling and product delivery will gain much progress by using INET Technologies, held resident on publisher's domain. Within the business owner's grasp for creative change. With INET Information Drill Down Interfaces, a publishing interface, each item in the picture can have a catalog window overlay. Placing more efficient use of space for sales. Other catalog systems like The Home Shopping Network really place individual items in focus for the appropriate measure of time while maintaining the super composition; lifestyle, look, attitude, matching completeness and offers interchangeable garments and accessories as side gambit. To offer a complimentary solution, one type of INET Web Publishing poly UI interface facilitates catalog views. This tool offers a best work flow practice to creating a catalog to aid the designer in new creations and in maintenance.

Being able to tie items to inventory, shipping, roll out, delivery scheduling, ordering, payment, and order tracking using INET UniGlue and INET SoftSpot components gives advantage to system manageability. The underlying information system design is well planned and provides a good operational business base. The poly UI component is a key integration point for the INET Goods Retail Store Business System providing coherent business and technology transition.

INET TeleSpark Conversations with phone attendees to answer specific and special questions about goods will enhance buying and sales capacity. INET TeleSpark Conversations is a base user technology offering browsing and telephony integration that is interactive and secure. The inclusion of the technology with the INET Web Cash register makes large orders easier when the customer is using a phone. Lure, charm and salesmanship offer the ability to pull not push. For the retailer, imagine one day being on the video phone with a customer selling an item. The ability to offer barter and advanced over the phone only mover specials can be made a reality. The ability to react real time using INET TeleSpark Conversations telephony technologies offers new sales capacity and new consumer power.

The process of catalog building while using image capture within the work flow will be in the hands of the fashion maker, the photographer and the store manager; not a third part software company. The INET Professional Wireless Network Camera will allow one to tie a UPC inventory bar code control number to a picture by laser scan or use INET Wireless Tags (garment style). With wireless upload to the server, building the store will be accomplished by linking it to the inventory control system since the UPC or Tag information is stored within the image. The INET Shopping Cart SoftSpot and Retail Catalog Explorer are complimentary publishing products for this type of interface and is present within the publishing framework.

The new era of newspaper subscription, movie ticket, coupons, concert ticket, musical entertainment, entertain mail (mailtain), and user interactivity with host character placement is easily presented to the public using the INET Web OS. The INET Web OS has an integrated subscription service for digital media.. The commerce engine can also be configured for a click copy pay to be used by a business for the process of selling attendance seats or show tickets. The system can manage scenarios such as Broadway show, theater movie house, game room studio attendance, musical concert seating, Football stadium seating, Baseball arena seating and Basket Ball arena seating. The engine is very versatile to encompass the call of many economic futures. The INET Broadcast Content Management System supplies the appropriate function maps during promotion creation to the publisher making development of interactive marketing materials almost effortless.

During subscription or purchase the collection of consumer information can be likened to client relationship management (CRM). Again, within this work flow the system integrates payment processing for economic propagation. Optionally with some content, no further information will be needed, just terminal version providing anonymous access. The fulfillment of secure access rights is designed as the INET Subscription Service. Validity of the attendance seat, ticket, subscription or digital data purchased by a consumer can be authenticated at any time. Customers need back up plans for their purchases. The coupon or ticket is stored electronically upon the consumer's device and scheduled upon their calendar. At anytime the electronic ticket can be transferred to another user or checked for validity. Each of these sub system features are related architecturally to the INET Goods Retail Store Business System for e commerce continuity.

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## Finishing Touches

With the INET Web OS Publishing suite, the user can maintain a concise portfolio of information they are publishing for review. This portfolio information will have many associated attributes that are tracked by the system and sub systems of the Web OS Publishing Suite to make an overview, summary and detail view of the user's work. The system will provide checks to ensure that a satisfactory user experience can be gained. For example, the system will check to make sure all items are accessible from navigation. Spelling and grammar are examined within the module. Visual layout is also considered against the primary interface device. That is, if a primary connection to the content is a cell phone, the overall layout and proportions of the content may need further consideration.

The INET Publishing Portfolio view contains many tasks that are administration. Assets that are related, and project coordination information tracking is necessary to record. This portfolio view enables database backup coordination for the project also. The ability to schedule machine or human translation of assets is present. The view is extensive and provides editing interface security. That is, some users may be using the application for review while other users will have the ability to change content. In this cases, collaboration between parties is maintain to provide tracking of the project. The system grows with the users needs taking care not to burden the single entity but also facilitating the large warehouse catalog.

Within this view, specialized sections of content that change regularly or need occasional maintenance will be marked. Live database, routine calculations and external network dependencies can be reviewed, measured and maintained. This provides a consolidated interface for easy maintenance. The ability to track differences between live broadcast data and historical change information is also great feature supported is supported by INET Technologies.

Finally, maintenance of marketing materials can gathered, summarized and maintained within the portfolio view. This includes the integration specialized applications and materials that are definitive of the projection theater. Portable signs and associated radio content is considered. The dependency tree of this information and its assets is maintained for the total package's integrity. The INET Publishing Portfolio overview ensures information integrity for the entire publisher's production.

## Full Life Cycle Domain Management

The INET Web Server Operating System Visual Publishing Suite and database connectivity is a new orientation within information systems. Users will be able to create professional web oriented database applications that present information, collect information, allow people to view catalogs of information, perform e commerce functions, learn exciting new materials and perform statistics on gathered data.

The tight integration of web sites, personal domains and business domains will provide the ease and flexibility needed by the masses to own website domains. The API functionality must include sub-domains and specialized sites that support upload to a common public server to broaden the accessibility of ownership. There are many specialized details of a website that need comprehension and user interface space. Payment, order, searching for a provider (business directory), host provider feature compare, and remote server setup are primary functions. These will be handled using a series of wizard pages and portfolio views to reduce complexity.

Other features will be hidden and used by the INET Web OS for content production using a specific IIP Dialects. That is, depending on the service, some content expression may not be allowable. The Correct IIP Dialect will match rules concerning format policies (type of allowable content), usage policies, and information law requirements. The services offered will match the functional IIP Dialect for the selected domain host and hosting package.

File format is important for proper file rendering. Unix is the main server technology and requires a selected format for End of line processing for example. Other aspects of the file format consider storage, ANSI or UTF-8. The configuration will adjust to match content production to server technology for ease of publishing.

Other facets of a website domain directly relate to the service plan. Providing a schedule to reorder an expiring name on a calendar schedule will aid users when the time is right. Ordering new web names using a search will be integrated. Name auction is a requested implementation. The company Network Solutions provides a name availability search and whois information for currently reserved names that will be integrated. Name server management is a often misunderstood technology due to technical implementation. The system will tackle this issue making sure all systems match anytime a server host, a hosting plan is modified or when domains are parked.

Search Indexing is an important feature. Without proper tagging and existence (e.g. META, robots.txt) of web related files, [Google](#) or [Yahoo](#) search engines will not find. The system will manage a ranking view and search engine submittal wizard for these purposes.

Depending upon the server, some web hosting plans and features require the use of banner ads. As a compliment, the task of creating and maintaining the link to these ads is an integration point. Copy protection is a feature that some web pages provide through effective option and browsing capabilities. On some materials, it may be necessary to use the PDF format to ensure copy right protection is executed. Language translation services is an option of deployment that is integrated within the INET Web OS.

Site user management management is necessary to provide the correct access levels to system administration functions. Some functions are related to FTP configurations while other portions of web site user management directly relate to the actual service. Email accounts are also easily managed for the service provider within the INET Web Domain Management API. In all of these cases, an effective OOP API and interface solution is delivered.

Backup and historical editing features are available with some services. The INET Web OS provides access to these integrated backup and historical editing facilities. As well, when the host plan does not support them, complimentary solutions for backup and history are managed directly by the INET Web OS Publishing Suite.

The management facilities and creation of web domains will be handled from within the networking user interface. Providing the ability to securely manage content is important. FTP is the most common method, however, there are better security models for managing raw files. INET will employ a model that enables this through its web publishing technology along with inclusion within the Web Sphere Explorer when the server is compatible. The identity use and access to this information should be guarded. Where ever possible, allow generation of secure passwords (INET Knitted Pass-codes) by the computer for remote host server access security. These specialized passwords will be protected but displayable upon the user's machine only.

When a user wishes to transport INET Knitted Pass-codes - these access passwords - they will be encrypted upon the data key. It must be noted that these pass-codes are not the same as the communication encryption device ID. When the INET Knitted Pass-code key is inserted into an INET Smart Terminal or compatible, only then can administrative tasks take place to a web host.

### The Scripting Playground

This open media producing system will likely develop distinct internationally aware based audiences: a user audience, a power user audience, and a developer audience. Versions of the presentation will be held within the multiple tier file system as renders are refined for the connecting devices. The INET script engine is a dynamic system that maintains a link between the binary and textual versions of the logic. Providing an interface to work directly with the binary and textual versions using API, scripts can be edited easily without syntax corruption. A compatible browsing experience is created for legacy technology also.

Digital computing has created newer methods of entry, view, editing and testing of information in general. By upgrading input technologies and output technologies to be effective for secure web broadcast and operation, the INET platform technology will lead artists, publishers and technologists into better communication and resource management. Saving wood by decreasing use of forests; Technology and nature; the paper argument; the bandwidth argument; the CPU usage and memory argument. By blending and capturing moments of life's thoughts remixed to artistically sculpt textual drama stages for the viewer with realistic light and shade for digital projection, a digital post card will echo. Let the application festivities commence.

See also: Document Formats

- [Table of contents](#)
- [Index \(publishing\)](#)

- [Bibliographic index](#)
- [Abstracts](#)
- [Open Document \(ODF\)](#)
- [Open Document XML.org](#)
- [Mail order catalogue](#)

## Animation

- [Kochanek-Bartels spline](#)
- [Kochanek-Bartels spline with Motion](#)
- [Morphing](#)
- [Tweening](#)
- [Onion skinning](#)
- [Computer Assisted Cel Animation - Cacani](#)
- [Aniboom - Shape Shifter Animachine](#)
- [Flicker fusion threshold](#)
- [Inverse kinematics](#)

## Internet Management

- [Critical Internet infrastructure](#)
- [Domain name](#)
- [Hostname](#)

- [Domain name registrar](#)
- [Network Solutions](#)
- [List of Internet top-level domains](#)
- [Domain name registry](#)
- [Independent Domain Registrars](#)
- [List of top ranking domain registrars](#)
- [DNS management software](#)
- [Subdomains \(Vanity domain\)](#)
- [FTP](#)
- [File Transfer Protocols](#)
- [Types of websites](#)
- [ICANN](#)
- [Drop registrar](#)

## The INET MegaLimbo Content Management System

### An Example Implementation - Remarketing Resorts

Marketing resorts like Las Vegas, NV of the United States of America using completely new digital economics will entice worldwide travelers to embark quickly upon their voyage. To market effectively, the program must include a translated interface of all languages for ease of use. As well, providing real-time currency exchange rate information creates an immediate market for each user's budget.

Many modes of the user interface must be outputted to connect with several user devices. This is where INET VLISM Technology excels. It is a platform that provides a scalable implementation for each device a consumer may have. The major differences between platforms is in how the application is generated and executes. Output can be one of these formats: Web programming, [rich Internet application framework](#), Java byte code, compiled native machine code, INET VLISM p-code for JIT, or data files read by a common player application (VLISM-DAPP).

Web programming can include two types platform requirements. HTML4 and HTML5 experiences developed have different performance characteristics specifically with playing animations. At most times, the quality of user interfaces can be the same between the two versions. However, the underlying source code will be different. This is because HTML5 supports better user interface entry components than what was available in HTML4. The web model includes other source documents such as JavaScript, CSS, and XML along with the HTML content. Some script programming logic and display formatting is different between the two versions. Supporting two versions of web technology is necessary to support older phone and browser technology. The architectural growth pattern is inherent within the INET VLISM system design.

Application frameworks exists today that can compile web programming source to native phone applets. [DoJo](#) and [PhoneGap](#) are such as technologies. These technologies are known as [rich Internet application frameworks](#). The INET Compiler system can invoke these technologies to produce applications that also include extensions. Ultimately this provides a reuse of the Web programming publication. Many of these frameworks also provide extensions that can be used in addition to the native JavaScript and DOM object methods to access hardware resources not normally accessible through web programming. Extensions that read the battery status, take a picture using the camera, or read the accelerometer for example may be useful to some applications. These application frameworks rely upon the phone's internal browser engine to render content and at times operate slower than native applications. At times, the resulting interface may displease users some. The INET Web OS compiler system provides a language independent solution that can be considered to direct compete with these frameworks as it can produce native applications itself.

The VLISM compiler technology supports rendering from one source code base to multiple platform requirements. The native IOS executable uses the Apple iOS C++ compiler. Supporting multiple versions of iOS is necessary. Blackberry devices use a native executable that is a C++ source base. The Java platform is supported both in application and applet form as the VLISM compiler produces appropriate Java ByteCode. This incorporates many platforms and embedded personal devices like cell phones. The Android platform is supported as well.

VLISM-DAPP is an INET technology that provides a player executable for multiple operating systems (Microsoft, Linux, Apple) and embedded devices. The application reads the publishing data files and executes the internal commands. The input format for VLISM-DAPP is an XML based format that describes the multimedia, textual rendering and logic contents (HTML, XSL, CSS, JavaScript etc.) inputs of the publication. VLISM-DAPP also includes secure financial transaction processing.

Take a moment to review some of Las Vegas's current resort content. Here is a list of the major resorts in Las Vegas. When you are reviewing think about how you would deliver each of these functions upon a cell phone interface.

## List of Las Vegas Casinos

- [Silver Sevens](#) - Corner of Paradise and Flamingo Las Vegas, NV 89109 1 800-640-9777 702.691.2472
- [The D](#) - Downtown on Fremont Las Vegas, NV 89109 1-800-522-4700
- [Tropicana](#) - 3801 Las Vegas Blvd, South Las Vegas, NV 89109 (702) 739-2222
- [Bellagio](#) - 3600 Las Vegas Blvd, South Las Vegas, NV 89109 (888) 987-6667
- [MGM Grand Hotel & Casino](#) - 3799 South Las Vegas Boulevard Las Vegas, NV 89109 (877) 880-0880
- [Polo Towers](#) - 3745 Las Vegas Blvd, South Las Vegas, NV 89109 (702) 261-1000
- [Hilton Grand Vacations](#) - 2650 Las Vegas Blvd, South Las Vegas, NV (702) 765-8300
- [Travel Lodge](#) - 3735 Las Vegas Blvd South Las Vegas, NV 89109 US 702-736-3443
- [Planet Hollywood](#) - 3667 Las Vegas Blvd. South Las Vegas (866) 919-7472
- [Paris](#) - 3655 Las Vegas Blvd. South Las Vegas, NV 89109 877-796-2096
- [Bally's](#) - 3645 Las Vegas Blvd. South Las Vegas (877) 603-4390
- [Flamingo](#) - 3555 Las Vegas Blvd S Las Vegas, Nevada 89109 (702) 733-3111
- [Harrah's](#) - 3475 Las Vegas Blvd South Las Vegas, NV 89109 800-214-9110
- [Rio](#) - 3700 West Flamingo Road Las Vegas, NV 89109 (702) 777-7777
- [Gold Coast](#) - 4000 West Flamingo Road Las Vegas, NV 89103 800-331-5334
- [Westin](#) - 160 East Flamingo Road, Las Vegas, NV, US, 89109 866-716-8137
- [Hyatt Place](#) - 4520 Paradise Road Las Vegas, NV 89169, USA 702 369 0009
- [Residence Inn Marriott](#) - 3225 Paradise Road Las Vegas, NV (702) 796-9300
- [Ramada](#) - 325 East Flamingo Road Las Vegas, NV 89169 (702) 732-9100 1-800-272-6232
- [Mandalay Bay](#) - 3950 Las Vegas Blvd. South Las Vegas, NV 89119 (877) 632-7800
- [Excalibur](#) - 3850 Las Vegas Blvd South Las Vegas NV 89109 1-877-750-5464
- [Luxor](#) - 3900 S Las Vegas Blvd Las Vegas, NV 89119 (702) 262-4444
- [New York New York](#) - 3790 Las Vegas Blvd. S. Las Vegas, Nevada, 89109 866.815.4365
- [Monte Carlo](#) - 3770 Las Vegas Blvd. South Las Vegas, NV 89109 888.529.4828
- [City Center](#) - 3752 Las Vegas Blvd. South Las Vegas, NV 89158 1 (702) 590 8888
- [Aria](#) - 3730 LAS VEGAS BLVD LAS VEGAS, NV 89158 866.359.7757
- [The Cosmopolitan](#) - 3708 Las Vegas Boulevard South Las Vegas, NV 89158 (702) 698-7000
- [Casino Royale](#) - 3411 Las Vegas Blvd, South Las Vegas, NV 89109 (800) 854-7666
- [Palazzo](#) - 3325 Las Vegas Blvd. South Las Vegas, NV 89109 866.263.3001
- [The Venetian](#) - 3355 Las Vegas Blvd, South Las Vegas, NV 89109 (866) 659-9643
- [Circus Circus](#) - 2880 Las Vegas Blvd S Las Vegas, NV 89109 877-434-9175
- [Treasure Island](#) - 3300 South Las Vegas Boulevard Las Vegas, NV 89109 (800) 288-720
- [Trump](#) - 2000 Fashion Show Drive Las Vegas, NV 89109 866.939.8786
- [Wynn](#) - 3131 Las Vegas Blvd. South Las Vegas, NV 89109 (877) 321-9966
- [Palms](#) - 4321 West Flamingo Road Las Vegas, NV 89103 (866) 942-7770
- [Tuscany](#) - 255 East Flamingo Rd. Las Vegas, Nevada 89169 (877) 887-2261
- [Platinum](#) - 211 East Flamingo Road Las Vegas, NV 89169 877.211.9211
- [Hard Rock](#) - 4455 Paradise Road Las Vegas, NV 89169 800.473.7625
- [Hooters](#) - 115 East Tropicana Avenue Las Vegas, NV 89109 (866) 584-6687
- [The LVH](#) - 3000 Paradise Road Las Vegas, NV 89109 (888) 732-7117
- [Stratosphere](#) - 2000 Las Vegas Blvd S Las Vegas, NV 89109 (800) 998-6937



## Web Marketing Interface Technology

Envisioned for a resort invitation (promotional application) is a main entry portal that maintains a private membership catalog. The main entry portal provides one interface access point for the entire resort. Each member of the resort business sector has their very own section within the portal. The main entry portal applet is focused upon customer relationship and their itinerary. That is bringing them to the city. The main functions are not subdued with marketing but provide access features that allow user to located them. The applet interface is structured so that invoking a hotel casino's main page is two clicks from the main menu: select hotel casino and then select the hotel.

This interface can be disseminated in multiple forms by using a standard website or phone app through INET Technology. For the resort area, each sibling member entry portal must have a certified credential to combat counter marketing; that is an INET eResort Credential. This is a nominal hosting fee that safeguards integrity and provides software network connectivity with the hotel's data systems. To provide authenticity a regulatory entity should be established to manage the INET Credential program. Resort areas are prey to many types of scams, solving this electronically is a must. With an INET eResort Credential resort website, the customer establishes a membership once for the given resort area. Each sibling member of that INET eResort Credential program is available for inclusion within the resort invitation interface. Then the user can plan travels to and from this large resort area easily and securely.

By using a private membership catalog, a travel and eCommerce portfolio is maintained by the system for the user. A major feature of this type of web application is to allow the customer entry of their private information once. The system must maintain a personal relationship with the individual so they are correct and confident in planning trips and fun times. Each market product or service the customer buys must be insured to be legitimate. Careful attention and excellent customer service agreements are maintained to ensure that each charge is protected and tracked. For situations where a budget may be of the essence, an aspect of the interface operation provides this configuration and guidance.

## eHotel

There are plenty of sites that provide booking of hotels on the world wide web. Most of these sites use an XML booking engine. Accessing a common booking engine can be accomplished using a standard XML protocol. As an example, a specialized resort marketing site focusing on Las Vegas, NV will cater directly to this region. Anyone can tell that something special and exciting occurs in Las Vegas, NV. With its wonderful resorts and spacious rooms, each person invited to the entertainment experience would want to choose their experience first by design and amenities of the hotel. Providing airfare to the location is really a secondary and almost non considered option, yet must be included.



Las Vegas, or the main strip, located primarily in South Las Vegas, upon Las Vegas boulevard consists of approximately forty huge hotels. Therefore building a marketing applet and website that shows off these assets is the primary goal. As a trip planning entry point, pointing out each hotel visually with a small digest will be suitable upon a graphical strip map. As well, providing a virtual three dimensional map with very usable navigation can also entice visitors while selecting a location. There are a few styled examples already in existence such as [Map A](#), [Map B](#) and [Map C](#) that may be informative. The mapping system is downloaded to their device and is used throughout their experiences while at the resort. To provide adequate and appropriate sponsorship, each hotel should have access to their very own marketing information displayed upon the applet and web application. This will be a function of a secure multi-user content management system.

The content management system must provide import and transfer of existing marketing materials easily. This can be accomplished using a file transfer or by allowing the hotel business administrator to provide a URL with the information to be read. The URL entry will spawn a [web crawler](#) to read the directories and provide filtering based upon file types. Each of the media materials will be categorized to provide ultimate functionality for the layout configuration manager to use within the content management system. The categorization is concept based as to allow easy transference to the new format using a selection operation. This content management system will provide the hotel manager or project director with options for labeling the content for accuracy during an asset's use.

It is important to note that ramping up a business formed from this idea will need initial population of data. The most important function of marketing will be to promote the portal to local and overseas consumers. After the resorts within the area see the response, they are likely to want to update their very own space. Then marketing details and positions can be arranged financially. The INET MegaLimbo Content Management System provides functions for this.

- [Developer EAN PHP Booking](#)
- [Xml Travel](#)
- [book hotels motels.com](#)
- [travel fusion.com](#)
- [xml hotel](#)
- [kuonxmlhotelbookingsystems](#)
- [EAN Developer](#)
- [stackoverflow Curl](#)

- [stackoverflow EAN API](#)
- [Hospitality Hotel Resort CRM Comparison](#)

### Its a Language Issue

Providing a web application resource of this type requires multiple language translation. Because the content management system is architecturally part of the web publishing suite, uniform application projection and usage can be accomplished with standard technology. For example, the INET Web Publishing suite gives the opportunity for language translation using machine translation or the INET Translation Application to provide the appropriate interface for the target audience. This publishing feature is instrumental in delivering all assets required by resort marketing. The translation can include text, graphics, video and audio.

### eShowTickets, eDinner, and eTours

A necessary ingredient of the new Las Vegas digital economy is to provide users with electronic tickets. The INET Web OS Small Business System provides a way for tickets to be reserved for a show in Las Vegas digitally. Internally the process of digital tickets is supported by the INET Web OS integrated subscription service. Special deals and electronic coupons are also supported. Users can hold digital tickets within their device. These tickets are scanned by the cashier using [QR Codes](#) directly from the user's phone device.

New marketing methods are available for shows as part of the content management system. At a whim each user is able to review information that is convenient to them. This means the system takes into account distance. After all most customers choose the Las Vegas strip to be located right next to the hot action. If the show is within their very hotel, that information is listed first and easily perceived using the interface. The shows are categorized for easy browsing and have a maturity level, and previous customer satisfaction rating listed. Information concerning each show is accessible using Video, Audio, text or image. For example, seeing a comedy clip of Andrew Dice Clay as he is performing at the [Hard Rock hotel](#) can entice customers. He gets a couple of chances to make them laugh outside the club before they come in to bust their guts at the dinner party.

## eCoupons

When consumers are on location at the city mecca, they may be enticed to review invitations within the city more often than other occasions. Customers may receive eCoupons noting attractions while they are at play. The most important aspect that must be accounted for is that a potential customer will have a chance to review only a small number of them. The amount may be controlled using consumer criteria. Information overload, also known as email bankruptcy, is a must to balance. Consumer criteria is part of the user interface for the Las Vegas report applet. Motivation, geographic range, and applicability is determined by its input. The eCoupons they receive must be a direct target reflective of their desires and marketing characteristics.

Geographic range can be an option that limits eCoupons reception. The option can be overridden within the resort interface. The main purpose of geographic range limiting is reflected in that only eCoupons are shown for their hotel. Selecting a new search branch can also change the applicable eCoupons to businesses located within several miles but not within any other hotel.

## eMoments

The constantly evolving seller's market of Las Vegas, NV provides the capability to embark upon new marketing strategies while customers are within a marketplace. One possible strategy would be to narrow the reception of marketing materials to a select set of guests and within a time window to sequence gatherings where they will receive a gift and also spend money. In executing the marketing strategy, it is important that the cell phone user's feel as if they are winning something. That is not all customers are selected, but rather a precentage. And not all of them are to be given the prize and experience at the same time. They must wait while being included within the group. It is important that all time states of the customer be used to make sells.

For example, imagine such an event occurring at [Silver Sevens](#). It so happens that day that a famous rock star has planned to dine at their fine restaurant. To formalize the event, the casino can offer a shrimp cocktail and wine deal named The Barry Manilow appetizer for one hour only while selected customers wait. The selected guests can listen to his music using an easy library system on their cell phone.

The eMoment will be only valid for people at the casino that very moment. The hour in which the event starts is only known to Barry Manilow himself. That is, he is the trigger declaring the start and availability of the eMoment to everyone. The group may be offered to play free bingo games while getting to meet him in person.

The interaction and communication points are accomplished on the fly with INET Technology so that marketing may fit the very moment. These eMoment events can be enjoyed more than a regular intercom announcement can because cooperation is established on a personal level. The cooperation controls the flow of individuals. Once the control has been agreed upon, sequentially each member of the group will react appropriately to conform.

During the waiting period, a time when they are free to play all other games, they feel prideful in being uniquely called. During this time they feel relaxed and confident in knowing they will not miss their opportunity because their cell phone shows them a real-time countdown. Instructions are also displayed. Other questions they may have is supplied through their interaction. When their time is very close, the display activates in a flashing mode to let them know they should be making their way to the waiting area. Within the waiting area, shrimp cocktails, wine and cheese is served for a deal price.

In this imaginary eMoment the Silver Seven's Bingo parlor will be used for the meeting place. It is set apart majestically from other parts of the casino making it a room that may serve as a meeting place. When the guest's time in the sun arrives, a free game of bingo and a star studded tee shirt is awarded. The game is to be played while in the midst of celebrity leader. By playing more, they can stay but only so long. The limit emotionally makes them desire the total time. That is, if one is teasing, then one will want the most of it. As the games progress, the celebrity leader casually talks to guests, making them feel wonderfully loved.

The celebrity can offer personalized digital gifts to each person as they are greeted. Most people in modern day are offered a signature, but INET further seals the deal by allowing a personalized recording and picture. The video segment is capped and trailed with specific branding to make it a gift. The user's device and the celebrity are quickly tied together so that the gift is sent to the right individual. The system makes great use of the celebrity's time while controlling the crowd as if it were a family meeting.

The tasks used to run the entire parade are intrinsically configured naturally within the INET eMoment Event Publisher. The INET eMoment Event Publisher provides a narrow field setup interface and an easy trigger interface that makes it all happen. Multiple event types can be specified within the system. The system can manage multiple eMoments running simultaneously. When a customer arrives at your business and they have their application running, inclusion within eMoments for random selection is automatic unless they are in private mode. The system is designed to compete directly with a hotel's current method of intercom announcement and a few employees dedicated for the crowd management. As a general rule, the systems makes better use of resources so that less people are needed to manage events.

The trigger interface consists of a few function invoking buttons. It is the first interface that is shown when the application is chosen. The interface consists of an Event selection combo-box, a Start button, an Event Management button, and Options button and an Exit button. The Event selection combo-box lists all of the defined events within the system and allows the user to select one of them. The Start button begins the selection and communication process of an event. The Event Management button exposes a series of functions upon a new dialog screen that allows an administrator to define Events.

The eMoment events can be added, edited or deleted. The system is structured so that the business makes an eMoment that is definitive of their desires in common communication and event proceedings. Defining one can be thought of as a generalized type of event a business may host. It is a time for the creation of all branded assets and to plan the flow of an event. During the selection of an event, fields and data that are specific to an eMoment happening is entered by the operator. It is projected that this amount of data be a very small set. For example, the operator may tweak the title of an eMoment and the group of digital gifts. A field that is a group may have items added to it while other types of entry fields allow their data to be overridden. The information is filtered for correctness before activation.

An eMoment consists of a Theme, a group of While Waiting Digital Gifts, a Minimum Waiting Time, the Event Group Size, the Unit Group Size, an Unit Moment Time, Seating and a Message Grid. The theme dialog component provides a selection of graphic assets to be used on the customer's cell phone. The theme is inherited from the global theme settings. As well, some parts of the theme can be overridden during the starting of an eMoment. There can be several assets associated with a theme such as backgrounds, sounds, animation and video clips.

The group of "While Waiting Digital Gifts" is a selection of items the user can interact with while they are waiting in line to enter the event. These can be music to listen to, videos to watch, games to play or slide shows to view. It is foreseen that special items be for sale here to develop finance related to an eMoment.

The "Minimum Waiting Time" allows for time entry which is used in the projected calculation of countdown. This time window is a period in which finance transactions should be occurring within the waiting area. The user checks in the waiting area. The "While Waiting Digital Gifts" will be available at that time for them to use. It is possible that a runnign total be ran for all transactions made during an eMoment. After finishing an eMoment, payment should be processed easily. This will allow the user to make quick decisions to buy something.

The "Event Group Size" is a numerical value or percentage of how many people you wish to invite randomly to an eMoment. The amount can have a maximum that stops the calculation there for people included. The system ensures feasibility so that enough time and space is available.

The "Unit Group Size" field allows for the definition of how large a group going into an event is in persons. The system accounts for couples and parties of people that wish to experience the event together. The entry can be numerical or based upon a time percentage split. The system ensures feasibility so that enough time and space is available.

The entry of "Unit Moment Time" provides selection of how long a person, couple or group can be at the event. The time should be suited to allow them to experience an event while offering to continue for a price. For example, if an entire Unit Moment time is fifteen minutes, then the game they play should be completed in about three minutes while the celebrity spends two minutes with them.

The “Seating” field provides a facility to label seats within a given area. Customers are given specific directions to a specific seat number. If possible a rotating map of the seating area where their seat blinks in red. Phone GPS may be used to show they are in relations to their assigned seat. Customers may check in at the seat by using a QR code located at the location.

The message grid allows textual entry of the multiple messages that are communicated in different stages during the eMoment process. Greeting, Event Description, You've Won, Waiting to wait countdown, While Waiting Deals, and other directions are some of the text lines that can be entered. These textual messages are used to develop voice messages that are played along with a rendering of an agent character. The agent character is part of the assets developed by the hotel or business. Some acting command exist that can be placed into text.

The system integration within the user's phone takes place to not appear as a separate add on feature. Rather, it is part of the marketing interface that is produced for the company. Optionally the production of the interface may include options that allow the user to turn off eMoment announcements. This feature gives the user a privacy choice when it is included. eMoments only notify potential winners while they are at the place of business and not any where else.

## eGambling

Online gambling is a serious market to consider for the new era of resort marketing. However, the market is currently in a large testing effort. Currently customers that want a little fun in their lives have a very difficult time in selecting the correct web site and software that provides these services. Most of these sites from my initial review seem to incorporate serious computer threats that cause malicious software downloads to the computer. To provide an effective service, one that customers can trust, is essential for the industry of on-line gambling to succeed.

A software that is offered directly from a casino's hotel website is sufficient because of their existing credit to the market. That is, customers that visit their resort will be enticed to take along with them an application that is selected and credited to the establishment as being a game that is played with live people for example. Dealers and card shuffles are authorized and previewed online, accepting that even cutting the cards can be established as part of the experience.

- [Online gambling](#)
- [Creating favorable online gaming legislation](#)

## eShopping

The ultimate for the lady that likes shopping. Most of the time, for physical items, shopping can be enhanced by allowing the user to walk around the items to find them appealing. Once an object has been found they like, there may be specialized attributes that make it more fitting for them to explore. Attributes such as size, color options, are some that may apply. The ultimate service would be delivery to the hotel room. Some items may be packaged for shipping for the trip home. While others may be gift wrapped. The Palazzo in Las Vegas has a huge mall within. An existing web site, [www.theshoppesatthepalazzo.com](http://www.theshoppesatthepalazzo.com) shows them off. Offering a non physically engaging affair will be a fine experience for any shopper of modern day. The ability to draw one to the experience with an integration of their cell device for charging, delivery, tracking, and wish shopping will be an instructional piece for the economist. The INET technology platform will achieve this and let the manager perform the duties of information maintenance.

## User Interface Operation

An example operational attribute of the resort marketing user interface might be menu oriented using a SpringBoard interface once language is established. The user may be presented with options to build and manage their itinerary, flights, car rentals, hotels, limousine service, restaurants, and shows. A smart system would provide suggestions for where items may be relevant for inclusion. For example, adding a limousine service after airport arrival at the airport or for a dinner reservation that requires travel to and from their hotel. A shopping cart is a primary function and is easily accessible at any time within the interface.

Providing portfolio tracking historical and current day on many devices such as cell phones is also essential. At no time during their travels should the user question where they are invited to due to lack of information. Maintaining a private membership site provides reduction in sporadic advertising to maintain a concise interface directed for user engagements. Retailers are invited for their category service within the shopping cart. Users can explore stored information and related information about the vendor ad service they provide.

Users may wish to update and add information to the portfolio as they are on vacation. For example, Las Vegas has a lot of shows that one may go to. The ability to reserve tickets through an interface will entice many while being here. The best application will provide eTickets. Best integration points will be QR codes listed upon the phone that the cashier can scan as entry to the show takes place.

Integration points as part of the economic technology book can be easily understood by the XML standards from EAN. The INET information system should allow remarketing of hotel, flights, shows as part of a drag and drop interface. Sometimes, business developers are interested in only marketing sections of a resort at a specific time interval. The ability to perform these functions as an affiliate will entice a new digital market and provide culturally sensitive marketing. This will require each member component of a resort area to be part of the enticement list.

The INET MegaLimbo Content Management System provides integration between business systems using standard record formats and published APIs. The interfaces produced for each content device can be configured for ultimate usability using low level programming API for system specific integration. The MegaLimbo Content Management system also provides editing facilities for interface configuration within the management console using a [WYSIWYG](#) editor. Items that are business objects are shown as content functions within the system. As well, raw database queries are supported. An essential property of the INET MegaLimbo Content Management Suite is art and development fusion. That is, the art of designing an interface is promoted as a combined effort between data system analysts and asset production artists. It is a system that provides future growth based upon the initial development investment through interface use.

These publishing functions will be used by many types of systems to implement generalized user interfaces. The INET GPS Transportation Tracking System is an information system that is implemented as a business object. The interface provides the user with a time estimate of when a specific mobile unit will be within close proximity. Public transportation such as city buses are an example distribution of this system. An embedded device provides intermittent updates to centralized database. Each INET GPS tracking unit has a unique identifier that is placed within the database. For public transportation, this identifier is used to map the bus to a route. A time estimate is calculated based upon historical information of the driver and route. If the customer is within a certain distance of the bus stop, the device can be used to request a stop by the next bus. If the next bus arriving is not stopping at the bus stop, that status will be displayed upon the user's device. Other function such as passengers requesting stops while they are riding upon the bus are very useful. The user should be able to see a list of street names that are upon the route. When a stop is requested for a specific street, the applet should inform the passenger when the stop is near.

Public transportation vehicles that are equipped with the INET GPS Transportation Tracking can offer new types of interactivity with their clients. Very often media is enjoyed using private headphones while a customer cruises. Announcements made by the driver that need to be heard can be played while the INET system pauses the currently playing media. Optionally the media can be mixed in at an appropriate decibel level while the volume is decreased.

In world class tourist cities like Las Vegas, NV, the bus route map can be activated to include marketing interfaces associated with special events and shows. This provides a functional income using local area marketing principles that will be managed by [RTC](#) for example. These items are managed within the INET GPS Transportation Tracking System as alternate location sources. During the normal use of the applet, a user would have to activate the mode that displays the alternate marketing information. As well, these specialized maps and information brochures are only available to applicable routes.

To provide the applet for many types of devices with the integrated tracking view is the primary goal architecturally. This provides the facilities management with robust functions to change the look, business functions, and content while still retaining connectivity with all complex business objects such as a GPS tracking system. As a well designed system, it provides the opportunity for implementing a system for tracking deliveries of consumer goods.



At a tiger's paw of the Pacific Ocean, Venice Beach brings an awesome openness to every being that visits there. Venice is a subtle community that offers an enormous offspring of experiences to be had. This venue invites incredible technology placements for every customer to enjoy using the INET Economic Technology Path. Marketing directly to the beach, sand and sea, a collaboration system can be negotiated as an invitational software to hotel guests. As well, the status can be shown about town as a common decal within store windows authenticating a specific technology implementation. It should be no surprise that native and distance car travelers will have this application.

Food can be ordered from beside the sea restaurants. Items include hamburgers, french fries, hot dogs, pizza, fruit, real fruit smoothies and much more. Using the GPS location, plus a delivery fee (e.g. two dollars to the order), customers will be happy to get deliveries while sun bathing or even walking along the boardwalk. Some thought can be placed for specialty items that may require time to deliver but still manage a customer relationship effectively. Surfing and sea activities have their very own place within the industry. And finally, shopping for clothing and other physical items at a glance allows customers to get more than they can carry by delivery.

Radius coverage limiting is a must for premium business ethics. Multiple restaurants at the sea side will cover a certain section of the beach. Items must be sorted according to distance on the user interface. To the restaurant, waiting table towels will be accomplished by bicycle and foot. For the interface to work properly, it must be designed to work in direct sunlight.

Fine restaurants are plentiful in Venice, CA. At a dance down the side street from the beach, the [Venice Cucina](#), a fine Italian place that is also pet friendly on the patio, serves the authentic taste of Italy. The walking visitor map upon the store catalog must show this landmark and other diners within the area.

For the short term weekend, [the V hotel](#) is in the stratosphere covering only the distance of a few blocks. The Encore Motel and Ramada are within walking distance to the beach. Venice has a small set of hotels compared to the monsters that are in Las Vegas. [Time shares](#) are also a favorite of the area for people that can stay longer. Take a moment to review the following items. Just click on any category that is in the small list on the left side to show that information. Keep in mind how you would build an interface for the consumer, for multiple devices.

## INET MegaLimbo Content Management Interface Templates

Resort marketing is one aspect of business processing that includes a large series of information systems. However, the INET Web Platform is also well suited for the small and medium business in more generalized locations. Consider the modern business owner actually producing most of the product using INET tools. The product can be understood as a sound business investment to add business features that would normally be very costly to maintain. Armed with sound principles of interface design, a series of templates provided with the content management system allows a non advanced computer user to configure and publish an online ordering system for their small business for many types of devices. By using the small business system, online order processing can occur naturally within their store. The end result is a series of graphically branded applets and web applications that support their user's needs.

Consider a common user of the online system. They may conduct business with several stores per day. To make management of these store portal applets easier, a portal exists for traversing the list of store applets. This framework supports, searching and ecommerce function entry. Store applications are managed within the device or phone memory to appear as a single organized unit for maximum growth potential. The memory usage can be controlled as a cache thus providing list management however the complete phone applet for a store may not be downloaded.

Each community will need service stores that sell all of the ingredients that a business owner will need to function within the INET Business Plan. As well, a group of individuals that deploy the technology. Many of the functions that exist in modern web site designs implement some of the best visual resources and assets. A very beautiful site with custom functions is [Zingara Global Trading](#) of Venice, California. Within the current interface published, several assets can be reused. The customer, after buying an INET Web Cash Register must be able to plug that information directly into the existing website. A real world example will provide binary editing and placement of current web content using server FTP authentication and a component placement action. The INET system will also provide phone applets that match that decor. Users can choose how the graphic elements are used within the current page. Reducing the size of select portions of the interface for top, left, bottom and right margin placement is always administered within web interfaces.

A migration path must be available for current web products. Usually these technologies can be understood as open source and well documented computer languages that are designed for this purpose; object expansion. PHP, a very powerful and widely used language was specifically created for web processing. The [Zend engine](#) implemented in C/C++ using Linux server technology provides an open range processor performance. This system can be expanded to provide INET Cash Register support for users that have existing web sites that are PHP based. If a service provider will accept object components, this can be implemented using the Zend Framework. Implementations that require only PHP scripting can easily upgraded using one line of component text within existing PHP code. MySQL, a popular web database engine, is the essential storage technology used by most web service providers. PHP is very versatile as a server technology to enable integrated shockwave stream or file output for existing mix mode content. Many other output formats can be written with PHP using server INET C++ Zend Framework components for non INET Web Server compatible environments. An initial load and configuration panel will need to be completed by the user before that cash register will operate. Take a moment to review the list below. A list that contains some common functions of web integration of a cash register. These integration functions can change with software component additions from the INET Software Retail Store.

#### Example PHP Cash Register Operations

- Adding a catalog viewer
- Processing a delivery order
- Processing a sale

- Processing inventory additions
- Inventory consolidation
- Build Phone Applets
- Set Phone Applet Configurations
- Reporting and management console
- Initialize System
- Online Electronic Ordering System
- item catalog search and identification operations
- XML Plugin Component
  - Third Party Company Connection Input
  - Delivery services
  - employment services
  - employee verification
  - secure background checks
  - automated funds deposit banking
  - employee schedule
  - physical security
  - cameras
  - people count clicker

- sign and media
- automation events - lights, sound, music.
- in store music controls; customers love song requests accomplished before they leave. During their order if a great gift from the manager.
- retail laws
- customer rating and satisfaction
- new items

Formal [web content management systems](#) are based upon PHP. [WordPress](#), [Joomla!](#), and [Drupal](#) are the most popular. A complete list of content management systems exists [here](#). The INET Cash Register system can also be configured to work with XML. Each content management system will have a hosting provider server side migration path as well as a component base install due to the XML communication used by the INET Cash Register. The INET MegaLimbo Content Management System can be accessed from the user's desktop or laptop computer to produce the user's applets. The operating system can be the INET Web OS, Microsoft Windows, Apple OS, or Linux (etc.) clients.

The INET small business system, an application that is specific to the business, provides stream lined integration with the entities entire business processing. There are several INET business additions that facilitate distinct operational attributes for the entity (Restaurant, Coffee Shop, Movie Theater, etc). By providing an open format (XML) delivery system, current business processing systems can be adapted to work for larger implementations. Also, this allows several business processing companies to exist with specific software however still be compatible with the publishing technology.

- [SBA.gov](#)
- [Capital West Advisors - Business Plans](#)

Take a moment to look at the list below for store types. These are stores that use cash registers as a main business function for accepting money. Each type of business will want customized functions and buttons to enable a regular use. The device must have software adaptability with a secure electronic payment function provided in hardware form. Interface publishing management may be accomplished upon another type of device like a desktop version or as a management function for website building using the cash register. An event firing system will enable multiple devices both wireless and wired to the item (lights, sensors, etc.). This will be accomplished using an internal system within the main processing center. Other devices like touch screen front line registers can be built to use less processing for cost effectiveness. It must also process orders using smart phone technology. The point of sale may be exposed differently for close range, waiting nearby, or distance delivery. These functions can be controlled by user settings. As a transitioning function, the exact layout of the customer's keypad upon their current terminal can be modeled.

- Bookstore/clothes store/record store etc.

*A store that sells one type of goods*

- Supermarket

*A large store that sells many different kinds of food and things people need for the house*

- Bakery

*A place or area within a grocery store where bread, cakes, cookies, etc. are made or sold.*

- Delicatessen/deli

*A small store or an area within a grocery store that sells cheese, cooked meat, bread, etc.*

- Drugstore

*A store where you can buy medicines, beauty products, etc.*

- Hardware store

*A store that sells equipment and tools that you use in your home and yard.*

- Nursery/garden center

*A place where plants and trees are grown and sold.*

- Newsstand

*a place on a street where newspapers and magazines are sold.*

- Boutique

*A small store that sells fashionable clothes or decorations*

- Grooming services

- Grocery store

*A store that sells food and other things used in the home*

See:

[EnglishLearners.com](http://EnglishLearners.com) - [Different types of stores and shops](http://EnglishLearners.com)

The restaurant business is a large part of many economic markets world wide. A template exists for multiple step ingredient choosers like the pizza builder. A drag and drop form is also available with *from and to* dynamic parameters. The system provides the business manager with the ability to customize certain aspects of the user interface for their business. As already perceived, some types of restaurant ordering processes require specific functionality within the user interface. With several templates geared for the specific type of food ordering business, each manager can achieve competitiveness within the configurable ascetics. The management complexity of the system is considerably lessened so that off the shelf configuration can be attained by a common computer user.

The business products and services associated with the INET Web Cash Register can be used to link many types of businesses together that make it a sound investment for small business owners. That is, many types of information system portals are available. For example, the ability to add goods delivery, shipping, inventory, purchasing and employment management by leveraging third party support will entice many small business owners for the investment. Each of these functions are handled more professionally and personally with the employee or business doing the task by including a personalized phone app. Employees preparing for a task such as coming to work may be notified in advance. The system as a unit provides multiple business operating principles to each domain previously listed giving a detailed time and cost metric to the owner.

To instantiate delivery for multiple businesses is an elaborate interface and algorithm to implement. However, for the exact business, the functions presented will be proper for the individual making it very simple in practical use. INET Business Services plans to solve broad problems such as balancing delivery time cycles with employee work load ratios. This gives delivery companies the ability to compete based upon performance, accuracy, and attitude separate from recipe or quality of good. The system can provide the business owner with real time labor needs based upon historical information, suggested and estimated burden. The ability to offer it to any retail store that uses an INET Cash Register as a service is very lucrative for any business owner. The delivery persons may be required to be on location for several hours while several employees work together from multiple teams. In some cases, coaching or specialized training course may be required to be viewed by potential employees for customer service training.

For the consumer, the INET Cash Register offers time saving and a more relaxed time when shopping. The applet is compiled specifically for the device however each applet operates and looks similar to one another. That is, each user is getting the same information and same experience. Being able to fold each of the restaurant ordering systems into a shell branded name for consumers to identify with will strengthen the tow. Providing a sticker and complimentary download sites for the customer will be effective. Effectively allowing the store to design their very own decal with the QR code embedded for the area's geographic server register will ease deployment. A language and device specific implementation can be attained from this service. As a boot strap preference, the first store within the downloaded framework will show as the main interface. Additional shopping provides next stage interface results for browsing and searching multiple locations. This system will be grouped within a larger category upon the smart device interface. The INET Cash Register is integrated easily within the INET Web OS. Marketing is integrated with the INET Web Marketing Program. As well, some existing models of cash registers are also supported (see internet).

Another important template management function is specifically for types of reader services. Interfaces that guide and compel readers are often the most bare, thereby, placing content into its most readable form. Currently web technologies are accessible for this service, however with more careful attention a specific type of reader designed for books, magazines, and news paper reading can be accomplished. This is a common feature of many small devices. The content management system provides a template for the reading interface. Features supported are book marking and accessibility options.

Digital media, specifically music publication is essential for consumers on the go. A system that integrates electronic commerce with the playlist management local to the device will provide groups of artists a new portal for easy publication. In large cities, it is common to see the marketing practice of person to person meetings. Walking upon the board walk you will find people with CDs in paper sleeves. To increase the productive time to the sale, the INET Marketing system will provide multiple listeners within the area the ability to hear small samples of each of the featured tracks. One way this is accomplished is by on demand play for users with musical phones or network compatible devices. The music can be listened to but not saved or copied unless bought. Aspects of the musical advertisement can be controlled to make the loop a demo quality loop while saving the high quality production release until purchase for download. Musical CDs are a very portable format for musicians still making the format high quality and a containing physical format. The INET Musical Meeting Broadcast Device includes input formats for CD, mp3, and CDmp3. Digital music can be stored for play or broadcast using a secure wireless connection to the unit. CDs can be burned on some models.

To supply an effective medium for listening, an INET mp3 to FM/AM Broadcaster is supplied for artists to transmit samples of their content on the local air waves. The INET mp3 to FM/AM is also supplied with a URL transmitter to provide on the spot phone applets, music and payment. The device enables about one hundred feet of listening area. The INET AM/FM Radio and Headset can be used by the customer which is automatically tuned precisely to the signal. Picture cartoon characters jumping up and down waiting for you to listen. The signal range is within the normal broadcast expectations to that others with a radio can tune in. Available phone applets can be queried by those with INET Compatible technology.

To provide the capability of visual output, audio sensing filters are employed at the server level to provide visual effects that are ray traced. These filters can be in many scenarios. By using the INET series of Artificial Intelligence Three Dimensional Models, the verbs they support can be programmed to react upon the sound elements. An automated system that provides unique visuals may be used. As well, the video output can be scripted as an augmented experience using the INET video editor. The back end content management provides specific interfaces to manage groups of producers. As well, electronic commerce, digital recording rights management and live performance marketing are included.

Rights of privacy must be protected through use of the INET MegaLimbo Content Management System. This means that applets generated with this software will not compromise the user's free time. Contacting a consumer without authorization will upset some users just because a phone is a personal device. It is the device that they whisper to loved ones upon. The system is also protective of the installed software upon the machine making sure the version is complete free from [malware](#). The binary versions of applets are ensured to be functional versions of the textual input and configuration settings found within the INET Business Administration. These applets are periodically examined for integrity. The software and contact must be initiated by the user.

### INET Business Publishing

The INET Business Publishing suite provides the capability for the store front to be published to many different types of hosting packages. The portal can be a hosted URL name, the most common, or other regional shared server. The INET Cash Register also provides integration within the INET Geographic Server making car, cell phone, and computer based shopping real time to consider inventory. If the item was delivered, accepted and placed upon the shelf, then it is also ready to sell. The Business Publishing suite takes care of a product during its life cycle within all information domains automatically for the business owner. Making it a very friendly system to many. The INET system balances the appropriate API scope allowing connection with the many forms of Business Management Software. The INET MegaLimbo content management system provides several templates for the retail market including men's clothing, shoes, ladies apparel, cologne, boutiques, and hats. The graphic portions of these store front ends comes with several versions for aesthetic appeal. As with any open data source INET business, if the user decides to grow beyond the included management software all of their current data system information is forward compatible.



Enabling digital data sharing of distributor product catalog media for web published reseller directory services will give an effective professional content to on-line stores. This also will minimize data entry for the small business owner by relying on the product origins. To present the product within the best capacity is ultimately the manufacturers desire. It is their love and their spice customers long for. Delivery orders received by the small business owner can be placed into inventory tracked state easily making professional publishing effortless. There is no better solution on the market today that the INET Web OS solution plans to offer. Many systems led business owners to rely on multiple packages that are not compatible. But, they make it through. It is the economic life cycle plan of the INET business model to encapsulate all facets of physical goods retailing within a feature rich, Internet enabled, and forward compatible series of business tools that is easily deployed. The target audience is not technical, rather they are business savvy. The INET Professional Wireless Network Camera works together with the business manager to create an online catalog easily.

- [Cash Register](#)
- [Cashier Live](#)
- [AccuPos](#)
- [Harbor Touch](#)
- [iDigi Cloud](#)
- [Wasp Technologies](#)
- [Google: Internet Cash Registers](#)

### Encompassing Technology

Technically this project covers a large part of the computer information systems market. Luckily the technology market adheres to standards such as HTML, Java and the Android OS. Additionally a new operating system Chrome OS by Google may also need support. These technologies give the developer an opportunity to deliver a working application for multiple platforms. Since the market for Las Vegas is international, some devices that need support may not be popular in the United States. As a preliminary list platforms include the iPhone, the Android, Palm (Pixi and Pre), Nokias Symbian OS and the Windows Mobile device. As well, supporting tablets is also very important. These devices include the iPad, Samsung Galaxy Tab Apps, BlackBerry PlayBook, Cisco Cius, Dell Streak, HP Slate 500, Toshiba Folio 100, HP PalmPad, LG Optimus, Acer Tablet, Microsoft Windows 7 Tablet, OpenPeak OpenTablet 7, and the Google/Verizon Tablet.

- [The Business Edge 12 upcoming tablets](#)

- [List of web browsers](#)
- [Languages](#)
- [Language](#)
- [China Daily - good stuff.](#)

A specific market for the Apple iPhone is established by embedded device linking using VLISM for the iPhone, a Phone App. The base code, an application written in the Objective-C language for the iOS, provides the base functionality for the fluid visual performance that iPhone users demand. Unlike HTML browsing, more interactivity and higher performance is accomplished. One of the major functions of this phone application is to provide secure communication. As well, establishing and managing a distinct user account for the user's iPhone or iPad. Managed software applications are established using the standard VLISM engine and native embedded graphic file formats of the device. The application produced by the content template compiler produces VLISM engine code. The server then uses Objective-C object code to produce a machine code app for the iPhone. This process makes the phone applet smaller, more direct and achieve higher performance. Applications can be configured and controlled using the high level content management system for great implementation results.

- [iOS iPhone Development](#)
- [Open GL ES](#)
- [Khronos.org Open GL ES](#)
- [OpenGL Emulators](#)

OpenGL ES Specific references

- [OpenGL ES 1.0](#)
- [glCreateShader](#)

The Android OS, a popular operating system that is supported by several devices, uses the Java platform with specific libraries designed to implement hardware acceleration that is close to the electronics. For an Android specific implementation, the INET Web OS technology platform will deliver a Java Byte code application to the device. Currently the product line supported by the Android OS connects with several devices including smart phones, tablets and pcs. The application will be controlled by the content management system. The application will provide secure communication and provide user state management.

- [Wikipedia Android Operating System](#)
- [Most popular Android apps](#)
- [List of Android devices](#)
- [Comparison of Android devices](#)
- [Android Reference Packages](#)
- [Android Hardware Accel](#)
- [Andrioid 40 graphics and animations](#)

The BlackBerry phone and tablet has the availability of two distinct application development portals. Java 7 and native development. Supporting a native application is important for high performance real time three dimensional graphics. A typical attribute of Open GL platform applications is that they require continuous mathematical calculations for each frame buffer updates to clip triangles for view, test for collision, and animate. Native applications are implemented within the C/C++ language and use the BlackBerry Native SDK. The native BlackBerry application distributed through the INET technology platform will include VLISM using the embedded linking option upon the server. That is, the applet will be formed solely upon the server using a content management system. Internally the system links templates together to form the experience. The same functionality exists for the Java 7 applet distribution package.

- [Blackberry](#)
- [Blackberry development resources](#)
- [Java 7 API](#)
- [jasml - bytecode instructions](#)

A Shockwave performance is also an applicable distribution target for the content management system. The content management system produces an Adobe shockwave experience using internal file manipulation logic. The SWF file format produced is compatible with multiple versions of the Adobe player, however the most suitable version is supplied to the user. This version check occurs with javascript logic. Internally the SWF file building logic uses a database of templates to link the SWF file. These templates contain ActionScript logic used to implement the behaviors necessary for the experience. The ActionScript maintains a secure connection and user identity for the user as the other the applets do.

- [SWF file format specification](#)
- [libSWF](#)
- [libMING](#)
- [Action Script](#)
- [ActionScript.org](#)
- [FlashandMath.com](#)
- [SWF Version](#)

Windows Mobile devices are a popular item that is considered within the content management system. Several versions of the environment is supported through the use of the of the .NET format. The scientists at Microsoft created the [Common Intermediate Language \(CIL\)](#) instruction format which is conceptually comparable to Java Bytecodes. The Windows Phone SDK 7.1 is the most recent SDK available from Microsoft which is used in conjunction with Visual Studio and C#. However previous versions of the .NET platform will be supported. The supported devices that the Windows Mobile development environment fosters are a very effective market for deployment. The Nokia Lumia 900, Nokia Lumia 710, HTC Radar 4G, Samsung Focus 2, HTC Titan II, and the HTC Trophy are amongst the list. The INET MegaLimbo Content Management system will provide server side preparation of .NET packages that can be distributed to the user. The server side database logic will generate CIL codes for near native performance.

- [Microsoft Windows Mobile Development](#)
- [Windows Phone Developer](#)
- [Windows Phone Library](#)
- [Windows Mobile Development Blog](#)
- [Windows Phone](#)
- [Windows Mobile Phones](#)
- [ECMA 335 pdf](#)

The INET MegaLimbo Content Management system provides the ultimate in usability factor for each device by considering the UX Design Configuration within the management portal. As many mobile developers spring into action upon the word *usability* because there are major differences from full screen interface design principles. The template processing manager, an internal component of the INET MegaLimbo Content Management system, considers during server side compilation, that is internal INET Content Management architecture components. There are several design idioms that are used commonly in the small device developer world that will carry forth as design standard. The book [MobileDesignPatternGallery.com - UX Patterns for Mobile devices](http://MobileDesignPatternGallery.com) consolidates this information nicely. For primary navigation a Springboard, List Menu, Tab Menu, Gallery, Dashboard, Metaphor or Mega Menu is used. And for secondary navigation a Page Carousel, Image Carousel or Expanding List is used.

Form designs are distinct from HTML interfaces because of available screen real-estate. Design patterns exist for common functions that will be integrated within the INET MegaLimbo Content Management system for their specific purpose. Users are adept at their usage principles therefore deviating from them may cause mass confusion. A Sign In, Registration, Checkout, Calculate, Search, Criteria, Multi-Step and Long form template have their place for configuration within the content management system. Additionally it is common place to authenticate some users based upon their membership within other social networking sites such as FaceBook, Yahoo or Twitter. Depending upon the reason for their membership, this may also be an acceptable practice for some centers to provide.

Within UX compact form design it is common practice to place information in vertical lists. Some common UX design patterns for cell phone devices are Basic Table, Headerless Table, Grouped Rows, Fixed Column, Cascading Lists, Editable Tables, Tables with Visual Indicators and Overview Plus Data. The major difference between full screen designs and mini user interface designs is the amount of information that can be displayed at once. Therefore information consolidation needs to occur. This is also handled by the template manager within the content management system.

Complex information systems always seem to branch out to large chunks of information. To allow users to find their desires easier, a search facility is commonly placed within the interface. A part of the INET MegaLimbo Content Management toolbox are search interface components. These are commonly referenced as an Explicit Search, Auto-Completion , Dynamic Search, Scoped Search, Saved and Recent, and a formal Search Form. The results from a search displays upon a Search Results panel. From the results listing the user can retrieve information directly, page through multiple sets, and narrow the search result through filters. Sorting is an important aspect of the user interface operation.

- [MobileDesignPatternGallery.com - UX Patterns for Mobile devices](http://MobileDesignPatternGallery.com)
- [MobileDesignPatternGallery.com](http://MobileDesignPatternGallery.com)
- [Mobile Design Gallery Color Edition](http://MobileDesignPatternGallery.com)
- [Microsoft UX design principles](http://Microsoft.com)

## Web Cash Register Competitors

Following technology companies is a difficult task. Several companies already exist that provide a partial solution to electronic payment as suggested in the previous sections. Companies like **Kuapay** provide applets for many phone users to allow electronic payment with QR codes. Kuapay is currently beta testing in Santa Monica. Their product supports coupons, reward card storage, and many other features. According to the reference site [ReferenceUsa.com](http://ReferenceUsa.com), Kuapay has ten competitors in the same region. They are [Brand X Internet](#) Episodic Inc, Famil Funds, Inter Media Svc Inv, Moving Clouds, [This Next Inc](#), [Twinnet Technology - Hotel](#), Yes But Productions, and Yu Me.

- [Kuapay](#)
- [Mashable - article Kuapay](#)
- [Yummy.com](#)

## Collaborative Network Information Systems And Internet Publishing

### Personal Web Identities

One part of the web server publishing technology will be personal identity publishing. The main function is to allow audiences to be entertained and access information about people and their friends. To make one self known. Most people on the web make an entire website for their identity or rely on an email name. This will allow a more personalized socialization to exist. The INET Web OS will provide facilities that make a tailored information portal for your public identity. One that allows creativity, configuration, and group secure access. Access can be tailored for a geographic region which will be of great benefit for those seeking personalized attention for real people they can meet. After access, users will be able to contact you, look at pictures of your being, watch your favorite television programs, see books that you enjoy or read articles that you have written.

Person to person finance is available through this interface. The individual is able to attain monies through the interface to providing the capability for personal transactions. Imagine a modern day scenario where a user has a game DVD that they want to auction. But only to friends they know or that know them. Most auction sites invite all, and communication about the item can become an unnecessary issue. However with friends and acquaintances, always enjoyed is the comfort and security of a recognized individual. There are many facts from historical relationship that a person can deduce so the transaction and quality of goods is appreciated. Setting the meeting up can be a tailored fad event. That is, meet me at the corner coffee shop, walking map included, with ten bucks and the game DVD is yours.

Selling goods, posting to classified ads, selling personal real estate, personal auction, new used, or looking for that special nick knack is easily delegated using the interface. An individual may setup a personal calendar. Make or break dates with friends. Other personal activities that are goal related are incorporated. An individual can show and track progress of education or physical training achievements. The market potential for third party add ons within the private socialization market has proved enormous in the past ten years.

For the individual, the Collaborative Network Information Systems that the INET Web OS provides empowers the individual with communication essentials, physical goods delivery and personal finance. Refined facets of private socialization networks can provide security such as baby sitting. That is only friends and close relatives are selected.

A link to the local community is important. The INET Web OS provides the individual a Personal Web Identity that can be viewed only by select individuals. Forming a community within a geographic area is possible so that an audience can gain time for recognition. The Personal Web Identity manager allows multiple sides of a person to be portrayed. That is not all information is for each individual. By setting rules based upon identity entry, navigation is tailored for the viewer. Knowledge of the individual and the closeness of the relationship is also fitted within the forming of the navigation system. Several categories and rules can be applied within the interface. Incorporating the viewer's published profile, gender, age, and musical tastes can be a focus for the experience. With some styles of publishing, the navigation allows the audience member to choose their direction for the relationship thus creating a memory element for the experience.

Group management and synchronization is important for the success of many private organizations that may require social cooperation. It takes time together to work as a team on some fun projects. As well there many groups are likely to spend time learning or practicing together. Rock and Roll bands, for example, work hard to manage their relationship with one another for recording. A service such as this strengthens a group's ability to communicate with each other about important group activities.

### Broadcast Business Internet Publishing

Broadcast Business Internet Publishing is just as dynamic but more formal. The framework allows a hand tailored appeal for the business and their entity's desire. One way this is accomplished is by using an application that supplies artistic positioning, data catalog publishing and electronic commerce included within the suite. INET's Office Software is fully integrated within the medium allowing automatic and rule based publishing updates. The Office Spread Sheet is a great tool for small businesses to invoke electronic commerce. The publishing systems includes full life cycle domain management to yield the highest broadcasting results.

Since most web sites or web applications take many days to create and are forever changing, these meta production tools must provide a method to place content along with other components of a site. External development projects can be easily tied within the published portal. Navigation is always at the top of the list of things to modify when items are newly edited. The system updates the necessary site map files.

Within the publishing arena, blog board formatting is always a must. Multiple methods of view can be tailored. Organization can occur by date, relative importance, search criteria, or subject. The navigation system developed can be extensive and provide drilling of information. Allowing for information layering facilitated by user interface operations is important to businesses that pronoun many forms of summary information. The possibilities of dynamic binding for web content are endless when considering the page layout options that the INET Web OS Provides. The system and the meta production tools adhere to the INET Web Publishing standard to provide these features inherently.



Building marketing statistics capturing into the use of business published interfaces provides the necessary feedback to marketing analysts. The INET Web OS Marketing Statistics Value API is designed for integration within [CRM Software](#). Relational database access and XML web communication of click counts, interests, product, marketing and user identity are captured. The full cycle of Marketing Analysis does require many forms of statistics, market research databases, fulfillment processes (business intelligence) and broadcast direction within social media to operate efficiently. Individuals must not feel trapped or hampered with the products they are investigating. As well, the information captured must be intelligent, that is information derived from real consumers with the *potential* of a transaction. The INET Web OS Marketing Statistics Value API will identify these traits used by analytics to ultimately provide indirect customer satisfaction. This this will close many issues of spam modern users experience. It also provides costs savings to resulting advertising market.

Market value of the statistical data captured will depend on the user's desire and registration status. Some statistical information that is collected may be only regional and geographically linked to product type because the user is in an anonymous identification agreement. Other statistical characteristics derived from measurement can be specific for the user at their request, and establish a private bond to current products and new products. The capability for of this statistical knowledge base can be public domain, subscription based or one time. Publishers within the INET digital domain can choose to keep the information secure within their network security. When business intelligence requires statistics to be shared freely or at payment, the API can accommodate the request. The API considers information laws of the user's formal identity: non registered and registered. The INET Web OS Marketing Statistics Value API attempts to balance marketing principles within Internet computing to provide effective tools for the planning of effective competition, decreasing time to market, geographic distribution capabilities (including import/export), as well as analyzing market supply demand curves.

The INET Web OS Marketing Statistics Value API allows automation of these events within many published materials. It is not likely to be a work flow ingredient of the author or report designer, the API is invoked by publishing options. The Marketing API also supports developer defined statistics labeling making it a centralized repository for many types of analysis. Other newly developed and tailored enterprise systems such as inventory control management software and order fulfillment processing require this logical inclusion; e.g. track goods distribution, reception time and consumption. All business software developed for the INET platform should accommodate the technology.

## Governance, Risk Management, And Compliance

The INET Publishing suite promotes the usefulness within standard compliant format sought by law of business documents, Financial Disclosures, database records and other reports as they are labeled and managed within the document management system. The INET categorization, indexing and labeling system includes flexible IT GRC (Governance, risk management, and compliance) rule based support for document, application, and field security. See IIP Dialects for a detailed implementation.

- [Enterprise Content Management](#)
- [Sarbanes-Oxley Act](#)
- [Governance, risk management, and compliance](#)
- [WebSense](#)
- [Statistics](#)
- [Geotagging](#)
- [XBRL](#)
- [wikiXBRL](#)
- [CXML](#)
- [CXML](#)
- [RETS](#)
- [MLS.com](#)
- [Multiple Listing Service](#)
- [Realtor.org](#)
- [ebXML](#)
- [OASIS](#)
- [ManageMore](#)
- [BizAutomation](#)
- [BMS Atlanta](#)

- [Microsoft NAV](#)

## INET Web OS Economic Face Plate Technology

### Technology Making Life Easier Within The Digital Economy

Many new paths of business, transaction efficiency and goods distribution will exist due to the INET Web OS platform technology that relate specifically with the unit cost of the user's device and the ability to project an interface within a given space securely. A name space within the VLISM standard stream format will be created to drive simple face plate devices. This simple device, an embedded device called a "Click Panel" will support display and touch input of menu items on a LCD screen and perhaps sound. The device will display an image of format A and accept polygon coordinates that define hot-spots. Identification of the terminal is essential.

In a car it would be installed conveniently in dash. Imagine driving through any drive through and using a touch pad ordering system from within your car to get favorite quality meal. The consumer will always be in the comfort of their car, in a lot, their order identified by parking space ID. Cute girls will arrive on bikes with specialized baskets (radio) and a *really good seat* that hold the order.

INET Technology supports delivery business using the latest mapping technology. For example, the world famous pizza delivery parlor [Papa Johns](#) will entice customers with real time tracking of their hot and chewy order. The system integration will function with the geographic mapping system functions intuitively. The customer's location and contact information is sent to an inexpensive hand held device using wireless technology. Current cash register and ordering systems can be adapted easily with an upgrade kit and by using the INET Geographic Mapping Delivery Server. The INET Web OS Cash Register also provides integration of these functions. The INET Geographic Mapping Delivery Server handles the necessary discreet communication between the wireless devices and the order processing system (cash register). The embedded click panel device or the INET Web OS Delivery Phone provides the ability to use credit card processing on some models. As well, specialized functions that relate directly to the business model can be executed within the click panel device. Branding of the click panel device's outer appearance can vary for large corporate customers that supply these devices to their employees for work purposes. The device can also plug into the car stereo to announce directions as the employee is driving. The INET Technology path includes QR code pizza pans to link preparation, baking, boxing and delivery to the customer record as information they can view through the INET Web Cash Register. Antsy customers will be pleased to know the precise location of their order. A model of the system is also available for other types of delivery vehicles.

A comparable but fully integrated solution is the branded INET Delivery Scooter given in five high quality industrial models: mini Gas, large Gas, Rechargeable Electric, Natural Gas, and Human Powered Bicycle. The difference between the mini gas and large gas vehicles are the maximum speed and body build. Offering two models for inner city traffic is very apt to modern deployment strategies. For example within Manhattan, certain types of scooters cannot ride within the bike lane because of traffic conditions. As well, the maximum speed must be set for this mode and range of travel. The large gas model is a normal full sized scooter. The INET Delivery Scooter series of vehicles comes with a wide array of customizable details. The color and exterior look of these vehicles are described when ordering them on-line. Several styles and textures of seating can be made. The seat is one of the most important features that is often over looked for the delivery industry. Since a person drives the vehicle more than four hours per day, comfort is key.

Several retail designs are suggested while the customer can place textual lettering within the appropriate branding areas of the scooter. A custom module feature that is available for more money gives the customer the ability to completely cover every inch of the exterior with a customizable wrap finish to fully utilize all of the space. Designs are modeled real time using the ordering software. These vehicles are made for all kinds of urban conditions. The electronics are weather proof sealed within the cycle. Battery operations provide a sensible work day durable battery life. Tracking is included by central system with security. Extra options can be added to them to deliver hot food and cold beverages. A component kit is also available for the customer to adapt their current vehicle. However, offering no compromise on quality, the INET Delivery Scooter is the safest, most feature complete, and most durable series of vehicles for the delivery market.

Grocery stores can benefit from allowing wireless ordering of the goods and services. Because several terminals exist in one location, an alternate configuration than that of a single INET Web Wireless Cash register will be in place. The customer can be identified when they enter the lot if the proper settings are enabled by the customer for broadcast. For the ultimate in roadside service, a new kind of service drive lot can also be created. The same for clothing cleaners, movie tickets, show tickets, or any other car integrated task that requires out of window interaction that integrate cars. During an announced meeting such the INET Car Caster provides, the user may wish to notify their friends with a specific greeting. This is to maintain a relationship with the third party, something modern computing lacks.

Using new INET Marketing principles, a customer can drive or walk up to the local theater poster area and get a link to all the playing movies. Being able to watch a preview or read summary information about the movie will make their experience of choosing more friendly. Allowing for on the spot decision making can also allow for more spontaneity during an evening. Local businesses may redesign their architecture to include using drive up scenarios to increase business through put. By allowing many people input orders at the same time as before it was a single file line, new strides in productivity can be managed in the fast food business. For example, customer a orders one hamburger and customer b orders ten small fries and a twenty hamburgers. The scheduling system could determine the best fit given available hot items.

Restaurants and bars will be able to deliver drinks, express service, and effectively manage the worker during high traffic times using a click device as their menu. Wine lists can also be maintained easily. Fresh morning donut shops like those of Long Beach, CA may change their counter top space to provide for orders that will be handed out exactly when the customer arrives. The INET Cash Register provides communication with several lights placed within the order stacking space upon the countertop to show orders that customer's are waiting for currently. If lights within the counter top space is not used within the business, the cash register will inform the cashier by order number. That is, the identity tied to the physical good which may be printed upon the bag of the product using the INET Plastic Bag / Paper Bag printer. Variations of the INET computing device have a credit card reader on the side for swipe. Food stands like Lucky Dogs (New Orleans, LA) or other a la cart food distributors could use the information real time. Accepting card payment through an advertised secure portal with iconic representation will allow many to add other payments sources. An INET transaction enabled cell phone can provide the same facet of operation; completely wireless with a confirmation tap. Getting the total of the dinner check by the customer will always be on their time and allow them release from the environment.

Hotels and public areas could offer more terminals since the server device is secure from theft and damage, A larger face plate will exist for these tasks, thus giving some quota room for storage at the local device and increasing the available instructions that are compiled to native machine by the embedded device operating system. The user sits down and places their security key into the cradle.

### Locks By Remote Control

The system can be used for automated lock devices with its hidden key encryption algorithm. Users will be confident the lock stays in tight without tampering. Renting lockers at the airport and bus terminal will be easier. Unlocking your car and your home will be available only for you. Providing a series of these wireless locks in conjunction with the necessary communication electronics to integrate into other service machines such as bikes, cars, suitcases, doors, washer and dryer (laundry) will provide flexible services. Current commercial washing and drying machines can be adopted for this publishing technology. Each washer typically has about five lights that provide information to the user (In Use, Spin, Rinse, Wash, Hot Cold, Perm Press, etc.). These lights will be electronically adopted to also trigger a signal to the INET Web Cash Register or Smart Terminal. Users will simply scan a small QR Code when they are inserting money for the precise machine. This information is communicated to the phone applet. The business system in use by the Web Cash Register will provide a personalized and temporary use. The laundry guy characters that show will shine wit excellence within the domain. When the washer stops or dryer at the Cosmos laundry mat, you get a cell call and your clothes will be there waiting for you. Even adding extra quarters to make sure the time is accounted for will please the laundry mat owner but not burn the clothes. The new fun in Manhattan is how much the that love baby will mean during the non burn cycle; a cheap snooze button. The INET Robotic Washer and Dryer provides scientific additives while washing and automatic near transport to the dryer as a home unit and commercial. The commercial unit provides separate washer and dryer transport using the conveyer belt system. of your beautiful laundered clothes. A task of the INET Web Cash register. The dryer time left is easily synchronized with the cell phone clock giving you freedom to enjoy the many fine things of life.

Another facet of product flexibility is the inclusion of an automobile interface portal. Broadcast towers, or small portable dishes that connect through USB to an INET laptop will transmit a URL address for the car click panel to tune in. When the complete address has been received, if more information is desired, the corresponding web server can be accessed to disseminate the appropriate interface. Because the INET URL transmitter is a broadcast only device, the front and ending parts of the URL address transmission are verified by a CRC or similar algorithm to ensure package integrity. Direction of the signal and distance will allow multiple businesses to coexist harmoniously. A small two byte category is provided to allow categorization of the service type being offered. So if the customer is looking for food, or shopping for clothes, only those stores will show.

A business attribute byte will also allow for transmission of states about the entity. The customer may make decisions about the business according to a transaction minimum being attained by the business. Typically a length of one kilobyte would be appropriate, yet there are longer needs. One may argue that correlating information gained using GPS with mapping systems would be more effective for roll-out. Grouped under the technology URL Caster, the Cash Register would include a GPS mapping function that writes an entry to the geographic regional server. Using the GPS option, a electronic commerce list is downloaded to the user's phone for a given radius. The GPS location can also be used in conjunction with image recognition upon the user's cell phone. The coordinates will be used along with the visual information attained through the user's cell phone. To operate, the new user simply takes a picture of the itemized menu that the retailer is displaying. Adding a large number of users would be a problem because of wireless transmission spectrum saturation, unique patterns must be maintained for each user connected.

Landmarks, signs, and service portals will be well portrayed using the URL transmitter technology. First serving as a location device to enable auto mapping of everyday banal resources; rest rooms, taxi stands, parks, and shopping malls. Some URL transmitters will produce icons only upon render of the map data. These integrated devices will be preprogrammed and manufactured for specific applications to control deployment costs. As well, the deployment license and process will be restricted and monitored; only a certain sector of civilian population can deploy banal resources. Otherwise misguided company owners will use the specialized transmission label as a marketing scheme.

INET URL transmitter technology will allow cell phones to become a remote control pointing device in some scenarios. A person arrives at a bus stop, the schedule for the bus and the next available in route should be shown. Services in a vertical high rise complex such as Manhattan, NY will be fun to navigate. While many transmitters will be inside, the companies within will not go unnoticed. People have an interest in where they are located and the building that surround them. The URL emitters will be sorted upon much criterion including direction and radius of coverage.

The first round from the web server during a URL transmission direct might be a small icon picture with a description of goods and services, or a special promotion. The connection between geographic position, mapping services within the automobile, personal shopping lists, consumer tastes will be maintained as well. For example, imagine a tent sale for the local farmer's market. Physically the store managers would not be able to carry a web server around with them. So the portable transmission dish will plug into their INET laptop or INET Cash Register, allowing them to set the base web name and postfix addresses, that is a complete URL. The same would also apply at the large franchise scale, parts of the URL path identify store number, branch or location.

### Television And Radio Product Marketing

The integration of the web enabled radio / television, that is transmission of URL information within the standard TV, FM or AM bands, will entice consumers all the more as a freeze frame of the moment will carry over into their life style at the right time. An offer containing coupons will be sent to their INET radio device. News, video, albums, local shows and shopping specials will be remembered at the tap of a button for later browsing. Fast food restaurants commonly have a television playing close circuit programming where this technology is beneficial. Many modern subways and buses have LCD panels where integration is possible. Local advertisers will be better positioned and have greater penetration due to the technology.

Functionally, a distinction between the INET URL emitter for private and professional use within the FM AM band transmission will need to be made. The car radio will have a mode selection that enables Radio station emitters or local URL Emitters to be displayed. It will be the desire of the consumer market that FCC guidelines be expanded so that private INET URL emitters have a regulatory partnership that monitors for scams or inappropriate content within a given area. Some people will go to any lengths to make money. As a result of this new technology, a stronger link between the radio broadcaster and the seller will exist creating a more effective advertising market.

An application specific click panel and URL Dish (antenna) will allow businesses to easily start advertising within the INET Car integration portal, cell phone and personal communication device. To start, the store will enter their address for map and GPS locating devices. As well, entry of what is being offered, merchant banking information, the time range the goods are offered, and the price and quality of the items. The system will apply this information to the necessary databases and map systems for public domain. The INET Car Business Caster click panel will allow the store owner to use their private URL or list their store portal broadcast within the INET Directory services. The technology used to create the INET Car Business Caster must be an distinct unit allowing for reintegration within third party products. For example, this will allow companies to easily build new market cash registers that include the INET Car Business Caster technology along with their proprietary technology offerings (cash register, dot matrix printer). The INET Car Business Caster portal publisher will allow a user to easily brand a distinct look for their broadcast. The variable transmission format will allow compatibility with numerous technologies; INET Smart Terminal, http HTML browser, plain text, java applet, shock wave, cell phone, pda, television, video phone or car radio. The item is built as a small display area, capable of easy integration within a store checkout stand for easy read out. Optionally sounds may be necessary as a notification event. Providing USB ports will allow future expansion with other INET products.



## INET Web Cash Registers

INET Cash registers that are equipped with the URL Caster technology will also optionally allow privatized electronic credit money to be used for proficiency within a ring of select sellers. Branded Gift card management is also a great tool that will be included. This will be a feature option of the INET Cash register series. For example, a good use of this technology would be the open farmer's market. User's will sign up for a quota of money using normal currency or credit cards. They can do this ahead of time using on-line resources. When the customer arrives, they can borrow a device or use their very own personal device. Using this electronic credit money will save lots of time at the market because payment is a button click on their personal device or rented device.

The INET Cash register will track with historical information of the user's private account. This credit money will only be valid for businesses within the farmer's marketing ring giving higher security to the customer's finances. Several combinations of business patterns and deployments can be foreseen. Technology can be delivered to the individual booths that identifies them as a distinct entity. The keypad used by the seller for numeric price entry must provide large numbers, be water proof, and be easily mounted within their environment and will be managed by the hosting INET Cash Register as a seller terminal.

### Business Collaboration With The INET Web Cash Register

Imagine a convenience store of modern day in a medium city the size of New Orleans, LA. A business owner would like to place their inventory on-line, sorted in categories by food type. The front page of the business web projection contains a list of common sold items and daily specials. The menu across the top is easy to use, has large print and contains about eight categories. The display will be different if a smaller screen is used, the most common choice will be a cell phone. From the main menu, the user can select goods and roll a virtual cart through the web pages.

There are many different configuration needs the INET Web OS Cash Register allows. For example, as an extra service. senior citizens can get extra help on prescriptions and get small amounts of physical assistance attaining sundries. The system also allows specializations according to customer relationship. As a neighborhood service the store owner will allow Miss Johnson to also get her laundry picked up because it is on the way. She agrees to pay a small service fee, a private amount. Other rules that are apply are specific to the store's policy. These items are secured for the manager or system administrator. Some examples of the types of rules may be minimum purchase rules. Example, when orders contain alcohol they must also buy food. Or accepting cash from known customers is fine for delivery can apply. Delivery rules can also apply. That is, delivery must be within a geographic area. As well, some areas may not be services after a certain time. And finally, tips for service is suggested.

For most environments during the point of sale, the optical shape recognition of multiple goods will ease the urgency seen in common stores. During this point of sale process, a customer will walk up to the counter and place their selected items upon the counter. The cash register will count and process all of the items within the scene matching the items to the inventory database. The optical recognition is accomplished using several visual traits associated with the packaging. As well, if a UPC code is fully or partially recognized during the OSR process, the strength of the credential is considered higher and therefore becomes a primary key for the fuzzy search. The INET Goods OSR process is specifically tailored for the convenience store model. Typically within this model, accuracy is very high. This is because the INET Goods OSR process takes into account multiple attributes of the packaging derived from color and pattern. These keys are used during the high performance search of the store's inventory database.

### Business To Business Information Component Linking

The system provides effective business to business information component linking for resellers or manufacturers. For example in Los Angeles, CA, a prime spot for the study of capitalism, some stores sell raw materials for making items. In this case, one business feeds on the products another business produces. A business may specialize in one or two items, making their prices much lower in comparison. The business owner has the connections to get the leader price. So an agreement and cooperative collaborative interface can be developed that maintains a personalized business relationship.

Component Linking, or cross inventory reference allows quicker gathering of raw materials at a good price. For example, a new business owner wants to start making pillows. Exterior cloth, buttons, zippers, filler, and ornaments must be found and gathered. This system architecture allows a user to find the raw materials that are close in geography and view them in real size on-line. This logic is included within the small business system and the INET Web Cash Register. That is, on-line inventory searching is maintained.

Business to Business connections with inventory control, and palette stacking order will be handled by INET Open Inventory Application (INET Business Component Linking; message system), a feature application of the INET Cash Register. Incorporating delivery scheduling and routing information with the many other facets of physical goods transfer is easily managed. These attributes include geographic distance, dimension, perishable, fragile, glass, hazardous, flammable, weight centroid, age, expire, label, size, weight, color, optical recognition signatures, UPC, parent record, child record, catalog image, and catalog description. The record format is dynamic and may change based upon the good. The system provides this information as part of the order process. The information is gathered from the product manufacturer to streamline ordering and publishing. Small and large business owners will be able to carry new products easier, find out where their order is, and when it will arrive.

The system provides ultimate collaboration between wholesaler, retailer, shipping, and delivery. Providing for the human side of the equation during each process step is one of the biggest benefits of using the INET system approach. The system provides collaboration within store layouts for goods mapping in the unloading and stocking of shelves by the physical store model. This gives employees a more straight forward work experience during the task. As well, physical business functions that modify the electronic store front like unloading and stocking are provided for within the interface.

### INET Professional Wireless Network Camera

A research direction for the INET Professional Wireless Network Camera will be to capture the extra information attached to a picture from local transmitters based upon contents of the frame. This will allow advertisers to place specific and up to the minute links that may relate to photographs taken by tourists or enthusiasts. A great application is Time Square in Manhattan, NY. Several hundred large screens exist in this area. Several items may be tagged with distinct information to fit the products or services advertised. Or an interesting poster artwork that is unique may have extra information attached. The information may be identification from the original artist or related to the store displaying the artwork.

Wireless technology and video processing technology will also allow better use of high volume marketing areas. For example, the large display screens of Times Square in Manhattan, NY could be rented according to user demand. In this product offering, one is allowed to purchase a small rectangle area of the total display area to view and listen wirelessly. Information is synchronized with their phone audio providing the ultimate in movie promotion, entertainment, and even interactive experiences. Marketing, a great value is shown with the possibility of selling Digital Movies. Within the offer, a user can watch a little of the movie. If they decide to buy the film, a key click will save the purchase within their cell phone. Later they can watch the movie upon a home theater system.

### Life Saving Devices

The INET Leg GPS worn on the thigh provides a rip cord for those in need of swimming assistance. The system is maintained by the life guards on duty. Swimmers check in before they go out to sea. This will also provide assistance for surfing instructors that bring more than one student with them. A surf instructor told me that he puts a max of six people upon a trip. This device offers life saving information to police helicopters and coast guard vessels. Devices can be rented at the life guard booth or purchased for long term everyday use.

See Also

- [Lifeguard GPS](#)
- [Lifeguard Monitoring](#)

The business owners of Chinatown in Manhattan, NY decrease transaction time and selection time by placing items as close to the foot traffic as possible and by using even tender amounts. Overall, this helps smooth traffic flow within the area. Cohesion is exemplified in Chinatown, that is, businesses relate to one another and offer complimentary goods. Many of the stores are side by side on the sidewalk; even both sides of the walk in some cases. Each store sells a group of specific items. One store may focus on fruit while the other may focus on vegetables. These food distribution places typically compliment each other to provide more continuous selection while customers pass by; a long grocery isle. The INET system will provide this feature within a database search, allowing stores located geographically close to deliver a needed item within the customer's shopping list.

The ability for the transactions, paper usually and small amounts, to be fluid comes from the cashier's ability to roam about. Taking cash directly to their pocket and the transaction is complete. The INET Hand Cash Register device will aid in transaction automation, in hand or worn on the belt. Benefits are decreasing transaction time by unifying price calculation, payment entry, tender from customer, and tender back to customer into two steps: solicitation from cashier and confirmation by customer. The INET Hand Cash Register is a wireless accessory of the INET Web Cash Register.

Competition in Chinatown is equalized due to the quality of physical architecture, all tables are raw wood and made from scraps. Visually upon the buyer, the automatic decision making inferred by these aspects are lost or tuned out due to the fact that most elements within the environment consist of the same materials. This allows more attention to be placed upon quality of the good and price per unit. The INET Web OS System competes on this level by integration of its professional publishing capabilities with the cell phone or PDA. As well, the INET system will equalize the quality of advertising materials to be broadcast level for each store owner. The integrated sign API provides advertisers quick access to publish broadcast media.

It is typical to have two businesses involved to complete a transaction task. A consumer wants a morning breakfast snack consisting of hot coffee, cake and a piece of fresh fruit. So the system of competition in Chinatown in some cases provides a natural distribution of income; individuals specialize resulting in higher quality. Likewise, the INET Web OS will further the cause of income distribution and provide customers with regular feedback on what stores have, where they are located, and how far they are away from their goal. By placing the responsibility and quality of this information directly into the business owner's control using specific and direct user interfaces, a store's selling traits will be more up to date.

## New Methods Of Waiting

Big parking lots and eight store lots like Dong Mai in Long Beach, CA will develop new methods of presenting, delivery and order processing to give their customers a personalized pleasing experience. For example, most customers visit My Le Bakery in the same mall to pick up a bubble tea, sandwich and a pork bun while their counterparts are in another portion of the strip mall. With INET Technology, more can be shopped and prepared for the customer when they arrive within the lot at the click of a button. Something small groups of friends will love as a social medium. They shall park near each other and really use the home entertainment center installed within their luxurious automobiles.

## Floating Distribution Of Goods

Shopping habits and purchasing power of consumers will change as well. Imagine using the INET Car integration in a large city like Manhattan, NY. First, it will allow businesses to produce sales more rapidly than they are now because of the efficiency. Second, it will allow the store or business owner to change distribution location or points to meet demand. This will be an improvement in amount of time a business manager requires to be informed of the statistics. The information is near real time and scientifically deduced. Current methods are implemented using phone ordering system. Finally, adding business functions as software objects will prepare the digital economic system for dynamic growth (e.g. Delivery, elderly care, shipping, dynamic personnel - cooks, waiters etc.)

In a typical INET convenient store model an attendant will work, gathering the goods that the car customer desires. Upon car arrival, the individual would bring out the goods to the curb. The system will notify validity of the transaction and physical arrival of the car. Confirmation of the transaction for some customers and some types of transactions may not take place until a few moments before the actual purchase. The city streets are mean and you need to change lanes, an automobile related task that can affect projected delivery time.

The INET Car integration makes an excellent operating feature for users that want a particular item (perhaps regularly), within a certain price range, and of distinct quality. The transaction of these items will be integrated within the mapping system interface and present time projections relating the proximity of resellers. Imagine on the off ramp and the car speaker says "Coffee in two minutes, next left and down two lights, shall I ring the order?" The store business model allows truthful definition of these traits. It provides space for price and quality to underline the goods. The classification of the quality must be a targeted argument for consumer approval. Some may even eat high priced gourmet from a fleet of roaming trucks. But the quality assurance must be there.

## Phone Call Synchronized Data Gathering

Telephony will be brought into a new likable fashion allowing for customer interaction which will reduce attitude drag, increase customer satisfaction, and decrease turnaround time. The INET Web OS will offer synchronization of on-screen dialog entry for user based information; In INET TeleSpark Conversations, One click and their name, address and contact phone is entered on the consumer broadcast version of the software and the operator version at the retailer terminal. Accepting and processing phone orders for an in store deli will give customers the ability to correctly spell out the name and message upon a cake ahead of time. TeleSpark Conversations provide a dual voice and data connection with an interface.

Because phone calls are routed within the switching system to be two way, the caller can be verified to a physical location. Providing an identity that is verifiable by the consumer while being at home will entice electronic sales. The INET system provides an integrated method that verifies a business phone operator's credentials; INET TeleSpark Authentication.

The system will provide two way communication of visual information and optionally use voice over IP. The existing phone technology, that is, the basic digital services, will add a new premium service that enables effective use of an at home or office INET terminal. The service will allow transmission of a URL address of a known size to be viewed at the business's request.

The system will find outstanding use in over the phone business circumstances that require data information to be transmitted securely. That's no more credit card numbers spoken over the open phone line. Imagine the new experience when buying car insurance, for example.

Connecting two or more devices together to change the logical recipient of the information is desirable in some cases. For example, a concierge at a large hotel, may get calls from guests while they are driving. The INET system interface setup within this business model will advertise several elements that can be transmitted to the user's cell phone or car computer. The best cycle of use for a customer that just wants to find the hotel using their car or cell phone is allowing the concierge to send the address and have the car or cell phone GPS take the information for the default map interface.

The ability to project the precise interface needed is a responsibility of the business if the circumstance requires. That is, a caller's device must be programmed to accept additional electronic information; INET TeleSpark enabled. Based upon the attributes of the call the customer may not choose to have a remote viewer control the transfer or navigation. Yet once a business contact relationship is established, the caller's device may automatically show goods and services or index the information panel about a group of retail items. In most circumstances, the business will be better at locating the procedure and goods once a potential customer is on-line. This provides the optimum service call for the business and the customer.

## Business Worthiness And Readiness

### An Informative Request To Promote A Self Stabilizing Economic Model

The ability to distribute or request transactions by a business for the purposes of income stability which also promotes sustained employment is a focus of the INET Web OS model. Several small status bytes upon the stream coming from the INET Geographic Economic Regional Server shows a business's required (state regulated) income completion. The status bytes also show other important traits about the business in near real time. This information is also maintained as part of the INET Geographic Economic Regional Server using the INET Web Cash Register. The business owner, along with proper third party auditor certification, can calculate the needed monthly or daily transaction amount using statistics. Customers in the area that desire longevity for the business environment they experience can see if financial stress is occurring and where. A change of menu today from a slice of pizza to a hamburger two more blocks away can ultimately ensure employment for some. This information must be protected as being valid to ensure trust worthy competition.

### Income

Once the business has achieved the daily transaction requirement, measured perhaps statistically using historical data to account for spike selling periods, the green dot (percentage graph) will no longer appear on the customer's INET shopping device. Optionally, a connection protected INET LED Consumer Graph mounted within the business window can reflect this information to consumers as they pass by. Achieving the base goal does not mean that customers will no longer go to that business for the day. In fact, this will be the time when true competition and marketing are the driving force.

### Business Capacity

The ability for a customer to view ahead of time the occupancy of a business is a great feature consumers will love. This factor within the INET Web OS model establishes a business's capacity to serve in house effectively ahead of time. The maximum occupancy of a business's is sometimes already known. This trait is calculated using a square footage ratio or by counting the number of tables and chairs. The number of customers within can be provided real time - automatically. Calculating the current occupancy of a business can be accomplished using the INET Sensor array of components. That is, a pressure sensor can determine if a weight is above to count a customer arriving or leaving.



Alternatively a button or software switch within the INET Web Cash Register can be used to equate, measure and track the time a party is at a table. This cash register functionality works well for business formats that require an ordering process. A typical dining experience is that guests wait to be seated, then order. The seating and ordering process will be handled by a wireless accessory of the INET Cash Register called the INET Maître d' Click Panel. The INET Maître d' Click Panel is a device made for menus within the restaurant industry, It is a device that is very cost effective and provides the programmable features of being a hand held computing device for the waitress or waiter. As well, the device can be set up to allow the diner optimum viewing of a comprehensive menu and wine list.

Sometimes, occupancy can also be described by measuring the total effective output of a business. The INET Web Cash Register provides a menu interface that allows consumers to order on-line. The total effective output of a business may be exceeded if the cooks are swamped with orders. The system will calculate an order cook time based upon traits of the meals being prepared as well as the staff that is performing the work. That is some cooks are faster than others and some meals take longer to prepare than others. A cook's natural ability to handle multiple orders at once is also root within the statistical calculation. Customers can still place orders within the queue even if the projected time seems distant.

Using these methods will make occupancy reflected near real time within the INET URL transmission package and database. The subsequent integer reflects the business's current ratio of occupancy or Capacity. For night clubs or other public meeting areas the practice can be developed as a means of marketing. John Travolta appears every Saturday night and know - large crowds of dancers flock together just to see the twist. These sensor devices can be connected using wireless transmission with the INET Cash Register or INET Terminal.

*Business Capacity* also has different implications with company that produces many types of products for retail. Products that may be consumed are common. For example, consider [Great Buns Bakery](#). This bakery produces many types of breads buns, pies, bagels, and pastries for many types of people. Both business and individual customer flock to their location for feeding time. Therefore measurement of capacity is the time it takes to produce an array of their particular products. The company may want to prioritize large orders for production as part of schedule. The INET Cash Register, provides formula parameter input for diversified producers like a bakery to accurately measure output capacity. In short, customers that receive bread on time always return.

### What Your Customers Think

The ability for customers to report satisfaction to a business anonymously while being linked historically to authenticate that indeed a transaction was made will give new insights for improvement to business owners and strengthen the digital tow (need to know). The data captured will be linked to the customer's financial institution. A quick survey will suffice that is tailored for the business model. That is, a restaurant's survey will be different than a clothing store. The customer must be able to freely speak their mind about the service and quality of the product they received while retaining an anonymous identity.



Using the INET Web Retail Business System, the application management portion of the INET Web Cash Register, gives customers a way to express what type of goods they desire. Sometimes a business does well because they are in a given location and not because of product quality. This is because most valued customers shop regularly at a business because of its location. The customer works or has daily errands in the area. Therefore, customers must be able to decide what types of products they wish to buy at a location. Depending on the customer type and frequency, the weight of the opinion will vary. A roaming profile that follows a customer anonymously will also benefit details into target retail products.

A business's attributes for operating, and the authentication of licenses can be attainable by the roaming public. If the store is not open, it may not appear in the filtered list. But the times when the business is open, items will be attainable. Some customers may support family or sole proprietor businesses more as a self fulfilling purpose. The real time status of licenses and health grades can aid in natural selection.

Employment advertising for the long term position and the odd job for cash will aid some job seekers. The INET Web Cash Register provides links to the INET Employment System, a queue of work. Web cash register users can be assured that many functions of their business can be handled quickly and professionally. That is outsourcing of temporary work, delivery items, and services are easily accomplished within the interface. It will also allow economic planners to assess job and income availability on a regional and national level using more accurate means.

### Sales Force Empowerment

The ability for a group of individuals to use their imagination, experience and soft skills within the process of selling is a major focus of modern business. The INET Red Carpet Sales Force system plans to incorporate all aspects of their practices within the context of INET information systems. The ability for a sales person to leave a digital gift, that is linked to minutes of a sales call will provide beneficial CRM information system ties. Making a presentation that has specific variables (textual or numeric) is important as some sales facilities are distinct dependent upon the customer. That is, some customers may gain lucrative discounts based upon historical references. These items will be stored within the sale's person Red Carpet toolbox if they need to be implemented.

The system supports branded and reintroduced sales. This provide the functionality needed by some companies that employ sales persons as a separate group from the normal company holdings. Typically working from a commission base, they market items for sale. These items can be easily referenced as a catalog view, presentation view, and manufacturing view by the customer. This provides a working relationship between the sales force and the customer base. During this time, internal sales are prohibited to a direct customer when they may have a different perspective of the product.

Please take a moment to review the information below. Be sure to review all of the related articles within the links. These are very important to the design.

- [Salesman](#)

- [Vendor](#)
- [Sales for management system](#)
- [Keyence](#)

### Cooperative Community Spending

Communities that spend together can work together in raising funds for region specific maintenance and change using INET Technologies. Imagine several businesses in the area of a beach or a high traffic area. Typically these areas need more maintenance due to the number of people than other areas do. For example, environmental cleaning to reduce bacteria, building maintenance or aesthetic change. The INET technology path will provide community based finance agreements that are executed technically for the business, the state, and the citizen.

To accomplish this, a small fee is added to a businesses' products within a certain area. That is, each business within the agreement formation plans to use the service for improvement. This service fee is always itemized from all other costs to promote secure tracking. Each agreement can be tracked by the community by project plan. This will provide citizens with the capability to manage their environment. The funds will be stored separately and only available for dispensing by the community coordinator for work specified. The goal of this feature is to provide a safe, secure and effective way for community leaders to manage their everyday lives.

### A Self Stabilizing Economic Model

Promoting a self stabilizing economic model by matching supply and demand through filtering for the consumer will give new life to economically poor areas. An area wide search engine will house and process the requests. Businesses can advertise their entire inventory, services they provide, or just a few of the top goods they offer. Being able to examine an area's economy electronically will give potential new business owners a helpful hand on what is missing from the puzzle. As well, business owners will have to opportunity to know their competitors better so each may diversify further if needed. If too much competition for one product exists within a given area, noted by stagnant income distribution, product line offerings can be modified sooner rather than later saving precious time for the owner and specialized employees. As a result, a reduction in risk and failure for business.

The contents of the INET Economic Stabilizing Search Engine (part of the INET Geographic Economic Regional Server) is established through use of INET Cash Registers, the INET business on-line application or the Windows compatible cash register plug-in. The database stores securely sales and product offering. While not being a real time engine, uploads and server processing being planned for the optimum use of local Internet bandwidth, the data will be essential for matching supply and demand to appropriately portion income distribution. The data is used for market feasibility study and the study of competition.

The included software *Entertainment Blackbook* is one place consumers access this information indirectly. The software shows the assorted options of a date or party event, sorting by general geographic area that fit the demand. Consumers can plan fun dates that encompass three or four events and promote a healthy economy at the same time. Some users may make a shopping list using the INET included software *Goods Shopping Store*. The *Goods Shopping Store* uses the INET Economic Stabilizing Search Engine as one of its data sources. New models of economic planning built around these statistics gathered from the INET Economic Stabilizing Search Engine will show good matching lists for the consumer demand filter.

Several INET Economic Stabilizing Search Engines can be linked together to form a ring network covering an even larger area, thereby spiraling searches to nearby areas and connecting geographic areas of commerce together. This is essential for competition, wholesaler knowledge and retail delivery. The system supports calculating shipping and time to in hand for the complete cycle to keep consumers abreast when physical goods need transport. Verifying the integrity of the good and transaction is accomplished using the appropriate consumer business agreement. The entire breath of the vision will enable global trade from individuals, small business owners and large corporations.

### Global Trade

Global trade of goods is also supported. Corporations operating on a distinct trading channel, that is filtering within a select ring of INET Economic Stabilizing Search Engines, can achieve distribution analysis easier to facilitate base income requirements for items on a given country's export list. Using competitive analysis of goods matching the buyer and the seller proportionally will provide desirable income circulation globally.

This form of digital economics may lead to geographic regions being sectioned from international publication. Tailoring any legal appeal suited in disregard of the natural digital legal system by imposing illegal content capture for the user as INET published sites will allow reflection and correction. For example, some items available in China may not be a promised export due to the economic localization.

In conclusion, the informative request Green Dot percentage graph sent using the URL Transmitter, populated by the INET Web Cash Register and INET LED Consumer Graph will provide consolidated transaction data for the public eye. This information when acted upon can smooth rough financial times for many businesses and countries. The INET Economic Stabilizing Search Engine will give economists new tools for leveraging in a seemingly chaotic market. This will be a leap ahead for employees, a leap ahead for mankind.

- [Economics](#)
- [Economics eJournal](#)
- [World Economy](#)

- [International Monetary Fund](#)
- [Global Trade Market](#)

## INET Goods Retail Store Business System

### The Brandable Business Owner Retail And Marketing Catalog System

Marketing physical goods upon the Internet will be elevated better with the complete gesture recognition system. Depending upon the type of item, a topic cameo motion device will be implemented. For ring and earring jewelry matching cameo rings and ear buds will enable precise display. The system works using gesture recognition, topic electronic cameo motion device, INET Lighting and Sensor, video camera and image processing. These services will provide fancy marketing and shopping opportunities for the retailer and the consumer.

Imagine going on-line with a nice slender ring worn on the right hand. The desk light held before your hand is extended with the telescopic arms folding so that the light beams softly upon the right hand. The direct measurement of light that is shining upon the outer portion of the right hand will be acquired by sensors. As well, the measure of ambient light near the eyes will be captured so that the precise illusion of wear can occur. A complex calculation is used to show the sparkling eight hundred thousand dollar diamond worn upon the screen.

The INET Goods Retail Store Business System uses a database as its primary source of catalog. Creating the catalog will be easy with the INET Three Dimensional Professional Network Camera. Because the image information is very large in nature, wireless connectivity to a large storage device will make the process of capturing a shopping experience fluid and continuous. Simply, the retailer or third party consultant will walk with the camera around the store's retail floor to capture the experience. The INET Three Dimensional Professional Network Camera captures all the information about the retail location at a very high resolution.

The camera also captures volume and depth information using laser reflectivity as a means of acquisition. The store's retail floor plan is measured using the accompanying camera base stand. The camera captures its own position relative to the accompanying base stand using precise signal triangulation; GPS is not accurate enough. The known  $x,y,z,w$  numeric values are calculated from this information to reveal the camera's position and view angle. Each of these numeric packages are stored within the corresponding video frame data.

This information is uploaded to the INET Three Dimensional Image Server where the data is analyzed, sorted, compressed, and formed as a volumetric pixel file. The volumetric pixel file will later be compiled into an Electronic Mall for the consumer shopping experience. For compression purposes, a polygon and triangle scene graph is built to support the first person views quicker. Objects and goods within the form are identified statistically. The package and file format supports translucency using scene-graph functions so that overlays of index information can be attached. The basic form of models in pixel data notation can be combined with any other type of graphic source to form a world.

The INET Goods Retail Store Business System and INET Three Dimensional Image Server pipeline process match items in inventory using the recorded location of INET Wireless Tags. Items that have INET Wireless Tags are stored within the volumetric pixel file captured by the camera.

The Three Dimensional Volumetric Video Editor can be used to move items and paint within the space. This will make the store shopping experience precise as the retailer desires. A specialized application will be branded and constructed for each type of market layout. Clothing stores may required a different layout facility than a grocery store. As well, reducing complexity of the editor is necessary due to best practices of software deployment. These specialized editors are based upon the INET Volumetric Video API. The API also has the capability to produce compression by creating a stream of polygons and textures that describe a space and field of view. Perception of height can be easily adjusted using this approach.

Other users may wish to employ the use of the INET Professional Network Camera. There are instances where several photographs of a given angle and position can be converted into three dimensional objects. This information can be placed within a volumetric pixel file using this translation process. Both of these camera video devices have the capability of reading wireless location tags. Users are not stopped from employing the use of a common personal digital camera. In this case, items within the photographs will be cross referenced to inventory using a specialized heads down view within the INET Goods Retail Store Business System.

Image information can also be linked manually by UPC bar code read and bar code entry. This process will be available within the heads down video editing component to tie the inventory to the shopping experience. The end result in these use cases will be a professional shopping catalog. A shopping experience that is easy to create and accurate due to input methods. Specialized views are available for input accuracy checking.

Management of inventory effects the rendered version of the store experience. So if items are moved or relocated within the floor plan the scenery is adjusted to suit. As well, if items sell out and there are no more in inventory, other garment objects are rendered into place. This will keep store shopping experiences up to date with actual inventory within the store.

The comprehensive inventory system allows items to be captured in natural detail. Providing room for further description of the associated inventory item such as manufacture and raw materials is a feature that will help create a professional catalog for retailers and consumers users. Most of the detailed information that directly match the good can be shared with the public.

Garments having wireless location tags will be recorded by the beaconing identification signal. Using field of view visual references, the user will be able to mouse over a garment to select it. Quickly within the experience price and components are shown. Components, or related entities will allow precise unknown knowledge about the item to become readily available.

Textile materials often have specific traits that make them likable and usable by customers. Cotton or synthetic compositions are common searching methods that are available within the interface. The Goods Shopping Store used by the consumer allows preview of the item worn upon the body if the user has photographs of themselves loaded. Providing color compositing of items that are selected makes the experience like a mirror. Once a garment or outfit is chosen, a figure is shown that allows complete freedom movement and magnification.

Offering items in this natural interface leads to cross reference of items that compliment in color coordination. Other types of clothing style can be gathered by the professional designer or store manager. This feature allows emphasizes upon the store's named goods that match directly.

### Forming Electronic Malls Using Geographic Data

The INET Goods Retail Store Business System (GRS# is designed as a directory information system component. Classification, review and modification by the store owner invoke changes to a geographic regional server. Automation, attracting image, accurate and precise information about the business entity will be cross referenced and easily accessed. Including ranking attributes such as electronic tender verification and cooperative business policy verification will strengthen the capabilities of sale due to the many questions of integrity a consumer has. These methods of verification will be provided as a means to question secure identity and official business registration.

Within the Geographic Regional Mall server stores will be identified and categorized using many forms of data. This is due to the nature of the shopping experience that can be viewed. To provide a contextual view that is appropriate for the device and moment accurate planning will occur within business system.

Within the database, a store entry has a named and a search-able noun classification domain. This will allow a business owner to classify their store as a entity selling certain types of goods. The system will place more weight upon the explicitly named. Implied groups will be found using a cross reference to a synonym table within the Geographic Regional Server.

The Geographic Regional Server "Electronic Mall" system encapsulates a business entity to be known within a larger directory of businesses. Allowing for more precise and relative relationships to exist in search-able form will position business names and purpose in a functional order. The entity will have precise information attainable by a larger audience; a public domain business face.

Information and user interface projected will be based upon the relational security of the viewer. That is store buddies can be linked together to form their own relationship which is different than a store to consumer relationship. Considerations of logical groupings will be magnetized to this information projection portal. Roles and relationships within the Geographic Regional Server are a continually growing database that is specific to the shopping interface.

By directly relating known location of a potential customer's device using visual mapping data that is broadcast consumer grade, the consumer will know the distances of goods. Allocating pre demand deliverance data "desire" within the INET Device using the INET Goods Shopping Store interface will consolidate and allow financial management easier. Electronic commerce tied to a geographically based shopping cart system will allow quicker attainment of goods than mail order shopping. A community based approach; a community can form.

The INET Goods Retail Store Business System "INET GRS" allows many stores to be tied directly together establishing an electronic relationship. Providing store to store communication is very important. Physical details, contact details, components, services, inventory, and abilities will be definable using a relational database structure that is expanding within reason of use. Contracts, payment and delivery schedules will be element first for the person with the key. Allowing for a growing model that is unique for the individual, entire business, market sector, industry and economy will become a metric attainable encompassing more individuals than ever before. Enabling person to person communication as a means of business relationship will be quartered within the appropriate user interfaces for the industry, the moment and the need. Measuring use of services and factors of continual use accurately using, at some times even independent means, while covering business intelligence history will be integrated with the INET Business System Intelligence Engine as a means of propulsion.

Industry specific functions and marketing is also pertinent to solve. For example, the trucking industry, a large part of many major economic systems world wide, provides the ability for goods to be shipped and transferred. It is the driver's responsibility to ensure the safety and timeliness of the delivery. During their road trips many circumstances arise that would be an excellent placement for the INET technology path.

Consider first the drivers involved. Their mode of operation, because of their vehicle, requires them to travel certain roads, keep log books, keep receipts, rest at certain times, shop from particular stores and maintain their trucks (repairs). Their traveling experience can be improved by filtering information that is specific to their domain. In some circumstances, close proximity delivery is possible due to the flowering business nature of truck stops. That is, many businesses and restaurants form around their service industry. So, a delivery of a pizza to their truck door from the pizza place across the street is a likely desire. This functionality requires filtering within the database and upon the user display. Some phone applets exist today provided by companies such as [Loves](#), [Petro](#) that provide some features.

The technology within the trucking industry is also stacked with many data systems. It is the plan of the INET technology path to integrate with these items and place each of these information systems within their necessary portal for multiple parties. Interface publishing for the customer shipping the goods must be accounted for as well. Mapping and service technologies such as [Diesel Boss](#) provide a detailed list of services for many items associated with truck maintenance that is important for drivers. The INET Shipping Platform, a reserved view and consolidation of INET database technologies, provides information integration (database publishing) for business to business processing. Take a moment to review some of the trucking specific technologies and industry components listed below. Consider how the INET publishing technology will provide these services within an interface.

- [Trucking Industry in United States](#)
- [Federal Motor Carrier Safety Administration](#)
- [Trucking Logistics](#)



- Access America Transport
- [True 2 Blue](#)

The INET GRS business system with the INET Goods Shopping Store, an included software package in the client, allows a community to form a mall on-line. The requesting of certain types of goods by selling and consumer trend can be forecast by the business owner easier. One main view of the mall will be presented as a geographic map presentation. Upon a broadcast consumer map, users can review nearby stores sorted by location relative to their current location.

Allowing a system of information to form and function within single density view will be necessary to anchor. Of course, providing the ability for the mouse or key to retrieve more detail for closer inspection is fulfilled. Readability and legibility is a strong ingredient. Information is still categorized within this layer. Giving greatness to the portability URL Transmitter, the map information can be near real time. For example, this will include the precise location of Local Farmer's Market, they want the big peaches or that fancy New Jersey cheese. And let us not forget the table top store that sells used books found common upon Sixth Avenue in Manhattan.

A broadly implemented system such as the INET Business System suggests does require remarkable study upon the use cases so that customers will feel familiar with any shopping circumstance. One thing to consider is how the store floor plan is configured. For example a grocery store has many items that vary in detail and weight (amount desired) depending upon the customer's need. In one case the user's cell phone can be used to order items from the deli and bakery as they are seen. The optimum choice is to have the image displayed upon the cell phone as the same order as the actual case. Data processing will provide the deli clerk with the necessary tools to configure the display easily. A customer may wish to get a half pound of potato salad. Within the display case, there are about three types with varying ingredients. To incorporate the cell phone within the experience in an anticipated way would mean that items are chosen by pointing upon the image. So, in this case, a live picture may be used or stored image will display. The INET Scatter Selection will provide the user interface. That is, hot spots denote the available items. To illustrate another use case is shopping while not within view of the deli clerk. The user interface may appear differently in this circumstance showing a regular list of deli items. Customers may also wish to shop ahead of time to make a list of items. In this case the operation of the user interface will provide the location of the items as they are shopping.

The basic operating parameters and scrolling operations will be based upon the available functionality and size of the display component. The Web OS uses a face plate architecture for display and input connectivity "OOP" to offer no compromise of a device's inherent abilities. The INET Goods Shopping Store interface focuses upon identification of new goods or material, identification usage, including usage count, fitting current objectives and identification of an retail entity. The primary information view source will be narrowed symbolically to iconic "a named category or service". This will benefit quick usage requirements to form habits. The consumer when they are at home, shops commonly at the corner store that is identified by the small Eight Ball icon. The named domain category identifier will be a common noun derived from the natural relationship expressed from use. Stores have a name, they have a motto, and they have a relationship.

The Electronic Mall information database interface starts with a market List to supply an initial bounds. While considering the usage, intent and personal characteristics of the user, the text, and matching expressive synonym #search term), a consolidated market list will be rendered for review. The resulting view will be integrated with other detailed line data to produce a high contrast economy map. The view will be suited for the device and the moment in time. By reducing the color within major eye scanning areas of the map, a maintainable interface with legible texts is seen. Complete contextual navigation allows one easy access to the contents of a store, order, delivery order and purchase.

Statistics of the store and its prices can also be found easily within the database Goods Shopping Store Interface. Consumer Rating, reliability and other pertinent information is easily accessible from the view. One of the best features of this system is that the power of marketing is in the hands of the business owner and the public. Providing adequate and appropriate weighting of information is important and is considered at the INET Geographic Regional Server. Negative reflections upon a business at most times can be either personal communication related or product related.

### Coverage Of The Primitive Business Processes

The INET platform will expose functionality and applications to create a market. The raw value established without transaction penalties. The price of doing INET business comes from purchase of the software suite. First and foremost, proving to customers that changing or enhancing their current sales platform to INET will facilitate money. It is a goal to provide cooperative and progressive migration technology to ease the financial burden of an entirely new system. However, new businesses always have newer technology. The premium benefit will be gained for those technology users.

- Sales
  - store location
  - portable location
  - delivery
  - daily deals
  - movement for money
    - estimate time to in hand of items
    - bike map to individual that purchased

- INET Delivery Scooter (Electric, Natural Gas, Bicycle)
  - weather proof
  - built in to cycle
  - durable battery life
  - safe drive
  - tracking by central system with security
  - hot food, cold beverages
  - wheel cart - weight limit
  - third party component kit
- walk map
- locate
- tracking by customer for projected time of the goods arrival
- schedule grid delivery
  - known location delivery drop-off
  - route
  - time based (15 minutes, 30 minutes, hourly)
- Sales Tax
- Protected Record of Electronic Transaction
  - Protects buyer from theft

- Official record noting the two parties; (terminals involved)
- Control over transactions with disputes
  - Locking electronic commerce logically
  - historical sales record
  - official investigation report
    - transaction record
    - image and sound information
    - link security camera to shopping
    - link security camera to transaction
    - inventory tracking
    - time and date
    - employee cross reference
    - length to complaint
- Tips
- Receipts
- Auction
  - bidding
  - ring inclusive gift card
    - buy a fifty dollar gift card

- get locked cash gift amount for specific terminal
  - use identity gift card
    - common gift card for limiting spending
    - transferring cash to individual
  - Bid Monitor
- Returns
- Store Policies
- Employee Management
  - Payroll
  - Time Keeper
  - Schedule
  - Security Cards
  - Individual Identification
  - Benefits Package
    - Find providers of benefit resources
- INET Cash Register
  - Wireless sales accessories
  - Portable payment and card scanner
    - wear, holster

- in hand
- environmental tolerances
  - rain, cold, snow, hot, fire
  - Light and darkness operation
- Comfortable
- Processing through main system
- Wireless accessory of INET Cash Register
- calculator and strip reader
- In pocket money and in drawer money
- Stand, roam and sell
- URL Transmitter
- Car Caster
- Timed pickup
- order processing alerting attendant
  - curb delivery
  - start delivery route
  - operations of schedule
  - less thinking, more riding
- Line Waiting

- count down to unlocking doors
- automated feature published when applicable
- holding area for customers, refreshments
- dividing the group into components using the technology
- count down to events within the complex
- order is ready status
- user interface within environment
  - shelves light up when walking through line during selection
  - sounds occur at the location the customer is using the device
  - customers are tracked within the store and outside the store.  
(groupings, radar map, and real time statistics)
- Restaurant Business
  - POS terminal setup and configuration
  - on-line ordering
  - food chain management; the assembly line
  - kitchen management
  - coupons
- Cash Register based businesses
- INET Wish Lister Mini Cash Terminal
  - carts and baskets can be sold connected as a unit

- offer pre-programming of five items
- compact
- energy efficient
- small but very portable
- two line LCD black and white display
- two or three buttons on the device
  - example, three models of umbrellas S / M / L
  - prices are not usually modified
  - single or double item sales - typical
  - units are the same cost
  - customer drives transaction process
  - walk up and pick an umbrella
  - light flashes showing the total
  - store keeper accepts or denies payment
  - accept payment increases total that is displayed in waiting status mode
  - a centralized e-finance server is used
- Payment Processing
- Internationalization
- INET URL Transmitter Signs



- Pickup
- Delivery
- Electronic ordering
- E-Store Security Monitor
- Out of city
- Geography Mapping Server
  - location specific business processes
  - local business contacts
  - multiple language sales process
  - assisting satellite devices
- Shopping Mall
- Return Policy
- Guaranty
- Limited Lifetime Warranty
- Holding items
- Escrow Payments
- Insurance
- Warranty
- Layaway Policies

- Short Term
- Proportionally Based Upon Duration
- Incremental micro-financial management
- Credit
- Cash
- Checks
- Collection management
- Shipping and receiving
- Packaging and Delivery Services
  - Tracking goods delivery of items using GPS
  - Package framework to unify delivery services
  - Scheduling
  - Gift Wrapping
- International Goods Exchange (Cash, Barter)
- Blue Book Value
- Wholesale
- Currency Exchange Rates
- Tax Equation
  - Business

- Employee
  - Auditors
- Accounting Principles
- Sales
- Seasonal Business Sales
- Commission Based Sales
  - Empowering employees to make money for themselves
- Transactions and Receipts
- Business Dash Board (view)
  - reviews in small space the overall weakness and strengths of a company while operating
  - inner company view
  - comparative company view
  - regional comparison view
  - market view
- Business Dash Board
  - sales
  - goals
  - progress
  - summary

- graph
- bills
- inventory
- trends
- growth
- local events
- Marketing Plans
  - Directory Listing
  - Electronic Retail Catalog Production
    - Branding for exclusiveness
    - Branding for uniqueness
    - Branding for appeal
    - Summarizing product availability, quality, wealth and other tolerances used by consumer searching
  - INET Web Marketing Program
    - search engine submission
    - multimedia ad plug-in space (you tube, etc.)
    - renting banner space
    - web ads
    - click marketing

- appropriate email
- Auction ring
  - no operating costs for transaction
  - easy to use expressive interface
  - ad maker/ form filler
- Anonymous Item Matching (customer desires X)
- Three Dimensional Shopping Experience
- INET Car Caster Compatibility
- INET URL Transmitters
- Parties and Events
  - Large event scheduling and sign up
  - Hosting preparations
    - entertainment venue
      - in house
      - established public meeting room (indoors, outside area, park)
      - hotel
      - movie theater
    - coordination within venue tolerances
      - tickets required for appearance- advanced party purchase

- civil code
- health inspections
- catering, snacks and liquor (recipes, workers)
- guest transportation
- alternate transportation
- entertainment personality
- entertainment theme
- decor
- event timing, scheduling, guest list
- entertainment specialists - third party crews
- financial planning
- INET Electronic Invention Center, email, mail
- Location Wafers
  - Paper; slip found or handed
  - Bottom or side wall of coffee cups
  - Lottery gifts
  - Magazine page
  - Cross product marketing
  - Complimentary product marketing

- fortune cookie links to games for animated video
- [Radio frequency identification](#)
- Camera Picture Links
- URL Transmitters in Film
- Robotic Remote Controlled Camera
- Virtual Samples
- Maintaining a positive customer relationship
- Sign and LED
- Looped Motion and Interactive Video
  - In Store Video Monitor, Television or Flat-screen
  - Grid of flat screens
  - Asset Production
    - Market and product specific theme
    - fill in the blanks and generate
    - Professional development services
  - Small square review using cell phone
    - Passing potential customer gets attracted to motion.
    - They snap their headphones on and capture a small rectangle area near the bottom for specific reviews
    - audio and video play within their space,

- on large screen or on screen upon the cell
- Offers and coupons
- Branded Magnetic Strip Cards
  - Ordering a box set
    - publisher
    - artwork
    - finance range coding
    - id coding
  - Gift Cards
  - Membership Cards
    - Rewards Policy
  - Smart Cards
- Professional Media Services
  - Radio
  - Billboard Rental
  - Television Commercial
  - etc
- Cross and complimentary product marketing
  - Digital data leases



- Buy a skirt and get three free plays of your favorite U2 video
  - receive coupons to neighboring goods
- Buy the game gear and get a free DVD video
- Food offers
- Co Product Marketing Program
  - Available facilities
  - Programs used near by
  - Contractual agreement management
- Inventory Comprehensiveness
  - attributes
  - weight
  - location
  - shipping
  - life span
  - preferable environmental conditions
  - Material Safety Data Sheet (MSDS)
  - externally related data-sets
    - manufacture
    - usual attributes

- unusual attributes
- testing results
- Owners Manual
- Public catalog view of related products
- Encompassing materials and elemental parts (components) composition / ingredients
- Service Agreements
- License
- Registration
- designer
- etc.
- Ordering
- Cost
- Price Markup
- Coupons
- Loaned
- Temporary
- Software Interface attributes
  - Operation
  - item inclusion and inventory management by picture

- picture of table with sundry of items
- rectangle matches object type - select book, head phones, etc.
- Video feed of multiple views of the items will produce a sorted three dimensional video.
- normal camera; in expensive digital camera
- high resolution camera
- Book typeface recognition
- Object selection by noun to increase percentage of scatter, stack and grid organization
- Container recognition of items (box of donuts, box of bagels)
- training HMM system for single object recognition
- Shelves of like items identified by a trained Hidden Markov Model
- Integration of branded and label typeset and recognition of UPC codes
- Wave in front of High resolution camera as your are stacking them upon the table
- if items are already upon the table, the list will be modified to include the new book.
- Producing the shopping store experience
- measuring and tracking actual size to size of projection
- INET Remote Cashier and Attendant
  - Attendants have clear views of the check out area
  - voice/audio signal

- instruction signal / prompt
- theft signal / initial problem investigation mode
- verifying and proofing funds
- terminal pool management
- signal controlled robotics
- INET Dialect Business Administration System
- INET Security Store Monitor
  - video security, a recording unit integrated with cash register terminal software.
  - Electronic tagging security
    - Deployment
    - Use
  - Audio recording
  - In frame mounted security tag sensor
  - Portable security tag sensor
    - Sensor tag producer; printer
    - durability
    - cross application product integration
    - device maintenance
    - outsourcing appropriate vendor formats

- speed of production
- estimate time
  - an owner time is investment. How long to a complete record of items based upon historical use.
  - historical use can be derived from in house time
  - historical use can be derived from outer matching statistical data
- third party printers; an inventory review service; estimate cost
- Clothing specific racks; hangers
- INET Self Checkout Register
- INET Product Scope
  - Statistical information on new products offered that are of interest
  - Relevance considering current offerings
  - Relevance considering past sales
  - Relevance considering worldly perceptions
  - Relating media (News, TV, Magazine)
  - Statistics about coverage of a product within an area
  - Reviews of products; testimonials
  - introducing new items
  - Offering wholesale of items
    - Single company

- Group dividing the large sum
  - Shipping
  - Palette stacking
- Desktops designed for specific product flow
  - Desktops designed for a certain type of retail business startup
    - Informative, Educational
    - credentials
    - insurance of success
    - Process Education
      - Selling
      - Customer relationships
      - curtails
  - Professional guidance from start to finish
  - Getting and integrating with the market specific contacts
  - Contract and legal ease review
  - Contacts
  - Business Board - the relatives of your business
  - Business Competition
  - Local in person representatives

- Video phone collaboration
  - Tools and settings to make a deal
  - Establishing goals
  - Formatting and structuring the advisory communication.
  - Real work, real aid
- Remote business review
  - Supporting Data
  - Marketing analysis
  - Business Analysis
  - Operating Analysis
  - Incorporation of sensors for business review (video, audio)
  - Conclusions
  - Recommendations
- Transforming Interface
  - operating parameters progress from educational start up desktop
  - transforming view to concise everyday user
  - Progress monitoring
  - desktop, reports and on screen application views match company plan profile
- INET Telephony Package

- uses customer music preferences
- Menus
- Multiple language
- Call Desk routing
- Message box service
- VOIP included
- Telephone Hardware packages available
- INET Mobile Tracking and Scheduling System
  - tracking by central system with security
  - Services, Electrical Contractors, Plumbing
  - Estimate Distance - Estimate Work time - Get Tools - Get Supplies
  - Show estimate of time to receive service from a publication bank (Distance)
  - Engine on/off
  - Current Speed
  - Engine Statuses
  - Driver Statuses
  - intermittent transmission of position
  - Integration with web marketing and consumer views
  - A distinct component



- System integrates with other components of INET software
- Work orders / Flow
- INET Small Area Trucking Supply Grid Coordinator (roaming inventories)
  - *INET Mobile Tracking and Scheduling System* extension
  - Solves scheduling
  - Delivery times
  - Distributed inventory management
  - Palette stacking order; The New Towers of Hanoi
  - Vehicle tracking
  - Vehicle identification
  - Goods Security; remote video camera - high resolution

## Corporate And Small Business Advertising

Some aspects of device connectivity that relate directly to advertising and customer relationship need a specific focus within the realm of API objects to sustain market competition. The INET Web OS tackles this issue as not seen before in any previous operating system. Digital LED signs, lighted signs, televisions and photographic signs are incorporated into the economic marketing system. The system also supports remote connectivity management for large multi-location distributions, small office local area store business models, and a single unit distribution. For example, the family based A&J Dime store will only need a single device support. While Supreme Fish Delight has several locations. In all of these API support models, production of the assets to present on the sign itself are converted for the display device's output capabilities.

Access security is an important factor the system considers. Take for example, the famous [Waffle House](#) restaurant chain; a common folk place where breakfast can be had too quickly. The Waffle House home office would like to be responsible for the sign outside. The owners decided to directly control eight lines of their LED display, while the general manager of the location can modify one line of the display. The store also has a small marquee inside that will be controlled by the general manager. Some lines of text will be protected by the security management system. As well the home office would like to know what text was displayed upon the sign that they did not create. These scenarios are handled, first in API form, and then in application form.

### INET Herald Marketing System

The INET Herald Marketing System consists of several application that support each of these features. With a broad focused system such as thus, it is best to separate distinct functionality into separate applications. This will make deployment and training much easier for large organizations. The Sign editing tool INET Marque Maker, provides several generation and configuration options to a marque. This is the main application a digital designer will use to design and create a fluid sign. It provides the capabilities to import common graphic file formats and setting alpha composite layers (order) to achieve a flat pixel list.

The sign maintenance tool (INET Sign Slimer) allows a specific range of values upon a digitally designed sign to be modified. This will be the application that is used by a local store manager. It is an INET UniGlue application that can be plugged into a master console that a store manager may access. The application works within the security info-structure that the user is defined to have.

The INET Sign Sentinel provides all the necessary functionality for a single individual or large organization to remotely manage their sign data. The INET system provides capabilities for sign device configurations within the device installation. Each of the signs managed will be access as an interface object. Single or grouped in multiple selection. The INET Sign Sentinel also has functionality that manages a large array of signs within a given geographic domain. Specifically, the system can query all the content for matches against a database of rules that the promotional director desires. The rules may vary but generally reject blasphemous concepts. In some cases, the INET Marque Maker will be the primary application used. To reduce the time between sign creation and sign display production the single application can be used.

Generally, sign devices have distinct capabilities that require separate application interfaces to control. The API foundation within the INET web server must support the many functions while exposing these capabilities to the Visualization rendering system. This will allow use of existing sign electronics. As well, with the advancement of server rendering new LED signs are being designed that have less computing electronics inside, allowing a pixel buffer transfer only. This reduces the cost of LED and LCD signs (INET Token Electronic Signs). A new projector system that incorporates the use reverse ceiling mounted projection upon filmed or coated glass will enable large high color ray traced moving imagery to be common. The new (INETOSFonts) system provides effective communication at a broadcast level for textual art information. This will enable cost effective multimedia for small building sized businesses.

The input must also be monitored to restrict image dimensions to readable range. The user must be able to configure the device for visual range. That is if the device is a large LED sign used to communicate to passing cars, the input must be monitored in several ways to ensure readability for car occupants. The system provides the user with several methods of to configure the distance readability ratio. These items will be tailored for the environment and the device.

The ability to easily tie database fields or other summary information is present within the economic marketing architecture. For example, restaurants that have a lunch menu may change the price or contents of a single dish. By allowing this information to exist in one place, a database table, each type of digital marketing output the establishment has can be easily updated.

### Electronic Signs For Better Marketing Materials

Physical advertisements, ones that are small but carried by hand, upon a cart or even large billboard sized can provide the transmission of a URL location by using the appropriately manufactured INET URL Transmission device. Giving walking visibility of marketing materials will spark new forms of salesmanship. The Studio at Webster Hall in Manhattan, NY has a new band each day of the week. One cannot effectively decide if they like the audio just by the name of the band. An audio line up can be played quickly to let them decide personally, button press on the sign. Consumers can even self tune their Internet audio device to listen in. The tickets bought (update personal schedule) can be identified and used at the door using the user's INET Device. Or imagine walking down Wall Street in Manhattan, NY, a place that might seem difficult to place advertising. The INET hand held sign makes virtually any environment penetrable. Potential customers that are initially shy to some marketing ploys can look around at video information first linked in through the sign. Or they may choose to listen to the sales pitch broadcast upon their audio device or even save the link for later. It does take a certain personality act to work within the public eye selling. The INET sign includes a electronic payment and card reader to instill the belief of transaction authenticity.

Another form of advertising will be walking a sign with a poster with a location URL transmitter built in. The Rock and Roll band has a few of their musicians strumming while another publishes the album location. In this circumstance, the visual message sent would contain more impact, wow a real rock star. This gives the ability to spark greater emotion during a selection allowing for on the spot sales. A finely dressed gentleman hands out samples of fine bar soaps, something that is common in Manhattan. Surprised, the customer is always happy with a gift as this. Most likely, the bars have the name of the store, the phone number, and address. Yet for the luxury bath store to be remembered, it is necessary for the user to save the link with a cell phone tap right on the spot. The coverings around the soap will be lost after use. Providing the link save on the spot will enable higher yield in electronic commerce. The customer has the electronic store on file.

The sales environment can be less stressful to the consumer but still have push using INET Sign systems. The push method will be greater than modern advertising initially because of the newness of the technology for a given business. Long term, customers will have the ability to review product opportunities they may have had during the day when the time is right for them. The shy consumer passes by and presses the remember link on the phone riding upon their hip. This will make advertising more effective in some cases. There will be a link there because the consumer was interested in the sales pitch.

A distinct marketing unit to be conceived is a grease board with buttons to allow sidewalk secure ordering of takeout specials. Italian restaurants use this method commonly. Shop, dine and never wine. A unit furthered in conception will serve small convenience stores mounted within the bullet proof glass. The buttons are long enough to pop through the thick glass and allow easy order of sundries. Perhaps as you stand at the checkout your favorites list displays at the press of a button. Another concept unit shows a printed thought for the passerby with a transmitter incorporated. The personalized size allows greater impact than a giant billboard.

In the new digital economy better human relationships by marketing design can be established. A desire of every business owner. In some cases, the right time when to speak must be a query. A fresh style of vocal shout marketing can be practiced and proved effective with INET Signs as the consumer reacts to the excitement. Click to review the link, or buy on the spot. While having a sign to provide the information for them, the sales person most likely will not look directly into the eyes while the potential customer reads. The marketer is busy modeling in vogue as a captive piece of the scene. The moment will need further study to discover optimum comfort and order. A stand could be manufactured that elevates the display area above the heads of individuals while walking upon the sidewalk. Customers would look over the top of the individuals to see the fluid motion. Pointing their cell phone or audio device, they can capture the sound of the playing loop. By marketing flow, the users could also tune into a menu selection of marketing materials.

Marketing employment can be supported easily using a sign such as these. Street promotions in major cities across the globe is not uncommon. The INET system provides an application to marketing companies and print studios to enable this. The INET Remote Marketing Assistant provides an in-line route for potential customers to request marketing materials to be distributed in many major cities. Marketing companies subscribe as a service provider within the domain. A customer simply sends the materials and instructions to the selected companies for distribution. Internationalization and language translation can also be an option.

The basic marketing campaign is using an INET Sign or flier with a Location wafer. To make sure the demand is met, the INET LCD sign used will signal its GPS position. Fliers are still a promising portal for many. The printing houses that receive the materials will provide the necessary connections to the INET Employment System to complete the task. Advanced marketing campaigns are also supported. Common formats are recommended and planned within the interface. These include specialized costumes that an actor may wear. The purchase and packaging of accompanying gifts is also a promising crowd pleaser. Imagine, selecting all countries of the world for street promotions. With the INET Remote Marketing Assistant, it can be a reality.

### Dynamic Integrated Lighting Controller System

The ability to control other lighting systems used for visual cue such as express line sandwich production is a great feature that will save business owners time by reducing searching and reading. The LED lights will be built into the ingredient bins. The order tracking system will provide visual feedback on which ingredients are desired and scale the amount. One light, two lights or three. Other uses might exist, so the aspects of sending messages to the light controller should not relate to a specific industry.

## INET Button Kiosk Interface

The ability to handle external inputs from user definable devices adds optimum use for many industry configurations. Consider a manufacturer that will make single press buttons for home use, single press buttons for public, and industrial use buttons for public use. By the incorporation of an object oriented design and extensibility of the device's effect upon the interface, configurable through user definition, script or macro automation script, implementations may result in more effective customer environments and higher productivity. Business owners must be able to easily make a custom sales stand. Consider the basic taco stand. Perhaps the outside of a Plexiglas booth that is coated with a nice image wrap that details the business marketing. Mounted within the Plexiglas, INET Buttons allow several functions to operate in unison. The customer can press two buttons for their favorite taco, and then pick the drink. The total is displayed. Offering self checkout is an option.

A small business owner has a truck that they sell about twenty different items from. The owner could make his display signs, as he wishes with attractive lettering, of durable plastic, and place it upon a large area three feet by four feet. Mounting the buttons within the physical interface for easy selection benefits productivity and accuracy. The buttons could be wireless or USB based. When items are selected by pressing the buttons, scripts or macros play to integrate actions seamlessly within the retailers chosen point of sale system. The INET Web Cash Register supports these devices natively.

## Build Your Own Kiosk Interface

Or how about a Kiosk that shows directions to local attractions, just operating with five buttons and a four inch screen. These complimentary machines will elevate customer enthusiasm and help deliver marketing materials to the necessary parties. The ability to make these interface machines project using web technology will be handled using the INET Broadcast Kiosk Brain. The INET Broadcast Kiosk Brain allows the many button devices that make up a kiosk display unit to be served to other connecting devices. The store owner may wish to employ entertainment, robotic, environmental, sound, jukebox, video, and game play within one ordering process. Consider a restaurant may make forty games to cover their menu. A typical use is location oriented, that is the consumer stands in front or near the device and quietly surfs the information.

Other tasks that are considered too costly or too complex to implement on modern computing systems will be identified and easily adapted to use of this technology. At the basic form, is the economic divide. Imagine a high scale restaurant that cooks large portions of meat for daily dinner guests. Because the owner does not know how many guess they will have ahead of time, they will cook more than they actually need - roasting meat takes a while. At the end of the night, the excess is thrown away into the trash, right off the grill. Because this food is a natural resource, it must still be considered valuable. However, the value is no longer held by the restaurant, because each guest demands optimum freshness. The management of the interface between when the food is disposed of and having someone pick it up adds cost to the business.

An INET Button Box will aid in this configuration by making it simple for the business to report a pickup. As part of the goods transfer, the organization that wishes to pick up the goods will do so within an ordinary amount of time. For some circumstances, a time window will be appropriate. The INET Button allows a restaurant owner to still do their job of cleaning and disposal without extra interruptions.. Pressing the button for the kitchen worker will alert the necessary organization that a pickup is ready. The organization will take responsibility for retrieval, historical data and goods handling. Providing a means to save or recover natural resources rather than waste will promote a healthy use of time.

The INET Button Box will be an important platform to expand upon within the electronics implementation and design of the device itself. Consider the self contained unit, having the capability to be locked, programmed to send messages to a specific URL, have basic two way communication (lights and sounds), and have the capability of adding to the basic box. The platform, an object of electronics designed for Internet communication, must be designed to be expandable. Within the basic manufacturing process, offering several designs that fit targeted implementation desires will decrease deployment costs. Integration of this within the INET Web OS while handling security considerations will be a valuable industry product. It will be a product that increases productivity and reduce waste.

Tagging and database look-up is essential to relate physical goods within the real world to information storage. There are several methods that exist, yet having a globally cost effective wireless method has not been produced in modern form. There are many needs that encompass this technology that can be used effectively and use wireless non-directional secure transmission. QR codes, the little square wafers for smart phones, are the cheapest method but require attention away from the glass. Integrating QR codes into other scenarios such as real time inventory analysis, public work industrial applications, fiber optic lines, telephone, electric power facilities, and water works is difficult for real time analysis. Tracking range is limited to a designated area for power preservation using a combination of two state activation.

By using an FM or AM signature signal that activates a CPU and other components that may require digital transmission, the battery life of a wireless tag will be very long due to query downtime. In cases where the tag stores information about many facets of the area, such as power lines and water pipes, specific types of security are required for access. Thus segmenting the device for many companies that work within an area. The series of INET Tagging technologies plans to incorporate wireless capabilities for these types of applications.

Providing deployment, platform and application support for these devices must be effective for the intended use. For example, consider tagging a specific area. At the last point within the technology interface, elevation of water pipes and their location must be pin pointed visually by the ground workers. A complimenting laser mark display may be employed. Thus in the database the relative position of the items (pipes, fiber optic, etc.) to the wireless tag are recorded within a database. Therefore the most cost effective would be a concrete gun that provides the tag installation.

Other forms of the wireless tag will be important to consider for cross business services. For example, a clothing cleaner store often will send garments to an alteration shop. How the garment is tracked between the two companies should be elevated in digital form. Competing alteration shops could be queried for schedule availability to reduce customer wait. In this case, the INET Cash Register will track the items allowing the clothing cleaner operator and customer to peek at the progress.

The configuration must not be limited to binary states such as buttons. The host of user interfaces and device implementation carry beyond the binary definition to include information from various sensors, light sensors, air temperature readers, multiple state toggle switches, pressure readings, and analog knobs sampled into the digital domain. These values may effect entry into fields, or change interface projection based upon range decision. But by being versatile within the OOP domain incorporating INET Automation, the defined physical interface causes change and the reflection of the state change may be redirected back to the consumer real time in external display.

See Also

- [Display device](#)



## Internet Ready Jobs

### Services Provided At The Sales Level

Stores that offer high quality home interior and exterior support for the American Dream will love the new capabilities that streamline their store model using the INET Web Cash Register. Ceiling fans in several styles are commonly displayed as working models in stores like [Lowes](#). The fans are clumped together in a light wrecked montage that is peaceful. The shopping experience can be improved by implementing INET Tagging. INET Tagging is a wireless stock identification system where UPC or similar inventory identification can be read. INET Tagging is provided for display models where only one of them exists for several inventory items. Providing a model view of the single lamp with color component and style decor markings will treat consumers to upscale reality quicker. Several three dimensional models can be built by using modeling technologies. The choices can even include a detail model of the consumer's very abode.

The ability to provide return on investment with time projections will spark impulse buys when using the INET Cash Register technology plan. Linking work or job scheduling with all of its many details is very important to the impulse. A centralized database that is city or geographic area oriented will balance economic principles and use resources more efficiently. The system will provide the consumer a link to a pool of workers and on call duty personnel for many types of work. Providing an advanced search using multiple contract (worker) criterion provides a robust backbone. Search items such as certifications, experience, tools, schedule, cost estimate, historical costs, comparison between independent and staffed with the benefit of scheduling and prompt payment is beneficial to the economic life cycle. During this search, information about the consumers installation path (home or environment) will be necessary for precise matching and cost estimate. For example, concrete requires different supporting tools than wood work and there may be differences in the total job time. Details about the installation environment will increase accuracy of the cost and time projection.

The system will allow pools to exist for a specific company. That is, buy it at Lowes and have their employees do the installation work. Pools can also exist for private individuals. Everyone knows the local electrical guru of a neighborhood has extraordinary talents. The system of changing the shopping experience will introduce new, healthier work flows within the home market. Distributed equally according to credentials, criteria, work history, availability, and desire; the American way (EOE). Providing a basic model that is expandable for the international market will be beneficial to many countries that have poor economic models today.

Integrating products and services tighter together with architectural planning models will benefit quality of service to consumers. A large market sector that is applicable is the home market. For example, building decks sometimes requires a lot of time during the planning stage. Home owners have a particular style they are thinking of yet explaining these desires to a builder may be difficult without visuals. Enabling conceptualization and customization of graphic base models will give the home owner the ability to customize apparently finished products to their tastes. This will be accomplished using the three dimensional rendering technologies built into the INET Web OS. The market sector specific application will also produce the necessary purchase orders for materials and tools needed. Based upon this information, carpenter and work bids can be projected and agreed upon. Future advancements within the robotics field will also use this technology for building objects on site.

There are several areas within construction process that are affected in a positive light to provide gain in productivity. As a first example, the materials ordering, purchase and delivery process can be an independently parallel process saving time and hassles for the civil engineer. Materials, tools and equipment rental can arrive on a known precise schedule built by necessity of design plans electronically. Communication of these events to the necessary parties agreed to within the project plan electronically enables an efficient, traceable and professional work flow. As well, training, equipment instructions, certification testing and other specialized building instructions needed to complete the work product may be distributed to the necessary team members for electronic review. There are more details that will be discovered for this area of the system, however, the technology plan of process work flow and team management publishing integration will complement the modern construction process.

Integrating the installation requirements with products at the store floor level for the home owner must allow the many detailed facets of a home to be communicated efficiently and precisely. Plumbers and tool users can be informed quickly about the correct dimensions, location or position (interior / exterior / depth) and coexisting installed products. A service reseller will also need cross indexing of multiple geographic local sorted inventory databases to provide the desired work flow, quality and price estimates. Texture and tactile sensations are the basis for many home improvement items selected by consumers. Carpet selection can tie a buyer to a person that can do the work quickly and has the experience with expert precision. Wood paneling, tile flooring, and glass tile splash ups will brighten up the kitchen for a preview right before their eyes.

The Work Flow, Team Management and complementing Information System support designed within the INET Web OS Economic Engine is implemented as an object oriented, expandable and encapsulated for future system growth. The base object model is rudimentary but powerful. Each type of business model that is instantiated within the Economic Engine provides specific implementations of supporting applications and data systems. The framework design provides inter connectivity between many devices and databases. For business models that are translated to the INET Economic Engine and VLISM, this interconnectivity is very important for existing application frameworks to function.

Integration of industry jobs is a great tool that will provide less stress in work and searching for work (XML). It is the design of the INET Web OS to support employee procurement as well as the data interoperability with external employment information technologies for the major fields. If a temporary employment contract turns into full time due to positive work ethics, the client's employment package can be transferred to the employer making temporary to full time hiring much easier. Supporting unskilled labor for quick employment and temporary employment is necessary but often left untouched with current implementations. Sites like [Monster.com](http://Monster.com) and [NationJob.com](http://NationJob.com) offer search capabilities yet there is a long process behind getting a job. The INET Employment System plans to support these sites using XML and history tracking. However, the main focus is getting the right employees to the right jobs quicker.

The basic principle is that people need work done while people want jobs. A system that allows a person to be on call with: web phone, voice cell phone (primary, telephony), email (secondary), and kiosk (slip of paper to emulate [Manpower](http://Manpower) like resources) will smooth resource procurement. In some circumstances, providing a package of the work details that is curtailed for the worker will benefit the employer. Items like map directions, tools needed, training videos, and specialized instructions detailed by the employer can be a part of this employment package generated by the system. The detail of the map directions should be downloaded to the local storage of the device so that the usefulness of the instructions are not lost due to loss of network connectivity. The mode of the directions may vary upon the travel such as walking, biking, and use of public transportation. In the use of such local maps, the phone's GPS location can be used in real time with the data for ease of travel. Envisioned is a cyclist using the map with the device setting in a cradle upon the goose neck of the handlebars. The many details of the job can include many types of media including audio, video phone, interest specific applications and textual information which can be accessed all the time after download.

One of the most important aspects needed to employ indigent people is the ability to offer real time and instantaneous plans for their immediate future. A future can be seen to reference a thirty minute, two hour, or next day time period for a hiring cycle. The system must provide simple effective two way communication between the two parties. To negotiate work, before a regular cycle has begun, the times, dates, locations and other pertinent information must be noted and easily referenced at all times by the two parties.

Providing pre-screening for employment and agreement interfaces that are connected with an ordinary cell phone will allow employees to communicate to employers more effectively. As the INET Employment system provides a service that is streamlined for indigent workers, part of the interface deals directly with employment and gathering an individual's attributes. A scene common in many cities across America today are groups of people located nearby homeless shelters, charities and sources of food. In some circumstances, as many as two hundred people can be seen without work. These individuals can read and most have high school diplomas. To reiterate, this is enough people to open about twenty restaurants. Their ability to negotiate employment is almost negligible without a mobile employment process like the INET Employment System provides.

One solution that the INET Employment system provides as a mobile employment system to alleviate this stagnate behavior is a way to catalog each of these individuals quickly. The INET Employment Marketing applet provides a unique employment identity. This occurs at their location. This identity is tied to their everyday problems and needs as an indigent. A employer can see a picture of them, find out where they are for employment and find any real needs they may have. Any skills they may have are recorded and related to their employment records. The employment marketer provides quick entry and capturing of this information using the cell phone interface.

There are multiple ways that identity and traits can be collected by the system. [Scantron](#) forms are simple layouts that may be produced and printed using the INET Employment system. The INET Bubble Score Card, which uses a complete OSR solution, can be used as the same tool. Both of these formats can be produced and easily collected from groups of individuals quickly.

Audio voice recording and video recording of an individual during a prompted video segment can be easily stored and referenced later. Transposition of this information can also be accomplished using the INET Employment system if the employer provides the resource upon the back end. That is voice recognition technology may not be as accurate as needed.

Some clients may have cell phones that can access the Internet. In these cases, cell phone questionnaires can be maintained as part of the initial interview agreement. That is, during a marketing campaign, targeted individuals will be directed to refine their profiles using their own devices.

Cell phones without Internet support may be used to collect an individual's attributes using [DTMF](#) recognition. That is, clients listen and use numeric input. These technologies are recognized as telephony within the modern communication industry. The system also provides input from telephony sources from toll free lines. Clients may use pay phones to access. Clients may also use web browsers as a web interface is provided to complete the technology support cycle.

Basic communication between the employer and the employee can be established in multiple forms. The INET Employment system features an integrated communication portal for this purpose. The system supports several modes. As always the preferred will be immediate. Therefore live phone calls or video phone integration is available. Secondary forms such as [Short Message Service \(SMS\)](#), voice mail, email, email forwarding, [Business telephone system navigation](#) and faxing. In some of these communication modes, a redial attempt can be configured to negotiate voice and a live person answering. Each of these items are tracked and recorded later within the INET Employment system. In short, two way communication of pertinent job information between multiple parties will be automated within an easy to use interface for [batch processing](#). These are features typical of a [Call](#) Center.

The system balances information gathered with services that are within the area so that potential employees may complete goals needed for employment. That is, indigent workers this may include a nights rest, shower, shave, and breakfast. After these are complete, the individual can signal for availability. As well, other types of communication agreements will exist. Transportation can occur using a van pool, personal cars, bikes, walking or public transportation. The system connects with route information to provide the easiest routes for the transportation mode. Business rules such as agreements for pickup within the morning time at a specific location may need to be verified again before morning pickup. For example, a client after sleeping, may need more time or change their mind. Therefore the agreement is a proactive one where each potential employee must signal for pickup after waking. The system provides a wealth of statistical information capturing that is specific to indigent types. This makes the system a viable part of many service pools. The system and all records are compatible with INET Employment pools.

### The INET Employee Availability Terminal

The INET Employee Availability Terminal is an integrated solution with a heavy duty thermal printer or dot matrix to provide simple connectivity to the INET Employment system for potential employees. The wall mounted terminal provides an effective way for groups of individuals signed up for employment to notify, check the status and retrieve information concerning employment. These terminals are automatically connected to the INET Employment system. The user may sign on with a magnetic strip card, or numeric entry. The system features an easy to read ten line display.

### The INET Employment Kiosk

The INET Employment kiosk is tool that combines all of the necessary input devices in one area. It enables one to start and manage an employment account. Once an employment account is established, several functions are provided that are essential to gaining employment. The employment account can be a portal for direct employment marketing providing a concise interface between the employee and the employer. With the account the employee can receive email, phone box mail, and print location wafers to their interactive resume. A potential employer can review all materials within this interface portal about the potential employee. The interface portal contains integrated applications to allow communication. This will help with matching candidates to jobs where an employer is aggressive in searching. With an account setup, a candidate can submit information through the small location wafer.

The input devices of the kiosk consists of a keyboard, mouse, camera, scanner, card reader, and a microphone. The kiosk is designed as a center piece for employment. The exterior wrap covering and art detail of the kiosk can be controlled during the ordering process for specific branding. It is designed to handle multiple types of employment centers. An employment center can have one or many kiosks that operate in network. Several types and sizes of employment centers can be established around the kiosk: a formal job studio, a company specific job placement engine, or indigent status work. The configuration of the INET Employment Engine that controls the kiosk account will be set for the employment center type. Pools of work and workers will be distributed based upon the criteria of the work and the employment center design. This is to balance overflow (work, workers) of resources to ensure needs are fulfilled.

The kiosk is an embedded INET Smart Terminal device that maintains a distributed processing link with a remote server making it very cost effective for single unit or large scale deployment. This technology is centered around the VLISM distributed processing spider JIT. The remote server contains the complex processing routines that handle OCR, documentation building, [IP PBX](#), electronic mail, on call forwarding [CTI](#), job placement, job management, payroll, payment access, banking, employment application processes, and other business processing. The main function of the kiosk is to manage the input devices and the output devices of the employment center.

Depending on the available space within the center, large floor plans that handle many people can be controlled by the kiosk and INET Employment Server. The number of output devices connected can grow dynamically as the need grows. As well, several kiosk terminals can be connected together using standard networking technology. The physical engineering design of the kiosk is robust giving it a long shelf life. An employment center can expect to maintain the equipment for several years.

Several output device options exist for running the job studio or employment center. These output devices can be connected using standard USB, parallel printer interface, wireless networking or twisted-pair cables for standard Ethernet connection providing easy configuration and setup. An audio amplifier also exists within the kiosk to drive several speakers. The kiosk does have speakers built in but in large floor plans, several speakers can be connected to this amplifier to fill the sound stage as necessary. The amplification unit plays announcements rendered by the text to speech engine located at the server.

A primary output device unit is the INET Summary View Monitor. It is an INET Smart Click terminal that has a small preview LCD display and three buttons. Users that are waiting will use these when a job is scheduled for them. Three buttons for input are typical for the INET Summary View Monitor. INET Summary View Monitors can be labeled numerically or alphabetically for the text to speech engine to reference. That is, when a job is scheduled, the INET Summary View Monitor selected to show the summary job information will be announced. More buttons can be optionally added within the design depending upon server software configuration.

Another primary output device that is essential with the INET Employment Kiosk is a laser printer. A package of work details is distributed to the employee after a job has been selected. Several printers can be connected. Each job packet printed out will be sorted within a tray bin waiting for pickup. The printer letter and tray number is displayed when the user accepts the job.



One of the embedded output devices within the kiosk is a membership card printer. The kiosk is designed to allow easy loading of these blank membership cards. The cards are dispensed once printed. A stack of plastic membership cards can be loaded within the machine. The layout of the membership card and graphics can be configured within the INET Economic Engine. When a new account is established, a personalized card is printed for the employee. This card is used with other input and output devices of the kiosk. Temporary cards can be printed upon the laser printer if the membership card supply runs out.

A secondary output device that the kiosk can optionally drive is a scrolling marquee. The sign displays statistics about the jobs available. Historical job placement data represented may be a promise for waiting individuals. That is if all people were chosen yesterday for employment, the likely hood of employment today is high. The marquee can also be used for displaying the selected employee. Their name is shown along with the summary terminal to go to when a matching job arrives within the work queue.

The INET Employment Funds Machine is a device that gives the employee the ability to withdraw money based upon their employment accounting information. Employees can get easily get cash directly from the machine by swiping their employment card, entering the pin and selecting the amount. The machine is connected to the kiosk which routes messages and commands from the INET Employment Engine. The INET Employment Funds Machine is a Smart Click terminal that embeds a card reader, a small LCD display and simple a interface for checking balance. If the employment center chooses not to have a INET Employment Funds Machine, checks can be issued by a cashier.

The INET Employment Check Service software is not operated by the client but by a formal cashier. The INET Employment Check Service software is ran upon a standard INET Desktop Smart Terminal. The check service allows several methods of printing checks, either in batch mode or for a single individual. A specialized dot matrix printer for printing checks is used for robustness. Most of these checks have to be verified or signed before they can be packaged in an envelope and given to the employee. The single employee may request money to be withdrawn from their employment account. In this case, the employee swipes their card and then requests an amount. A check is issued by the cashier while the employee record is updated.

### Formal Job Studio

A formal job studio is a company that actively promotes their services. The sales representatives of the formal job studio use electronic contracts and agreements with employers to manage a temporary worker pool. Within the formal job studio's Employment Engine configuration several employers will be signed as contracting partners to the formal job studio. Making the process of attaining workers from this pool easy, the employer simply fills in the branded portal page tailored for their work environment with the number of employees desired. The interface supports requesting several types of contract employees at once to fulfill standard operating requirements any employer may have.

When the INET Employment system is operating in formal job studio mode, each employee has the right to manage their own funds. Employees have the right to daily, weekly, or monthly pay as well as using an INET Employment Funds Machine at will. A formal job studio has the ability to design their own floor space plan with multiple output and input kiosks. As well, a formal job studio has the right to deny temporary employment contracting within their space. In short, a formal job studio controls their worker pool through interviewing practices. Several types of resource pools can be designed and marketed.

### Company Specific Job Pool

Company specific job pools are a new operating cycle of economic strategy resulting from INET Cash Registers. INET Cash Registers provide the ability for goods to be tied to services. Companies that resale items that require delivery, installation or on-site configuration will manage their pool of workers with this system.

The Company can also advertise employment using an application process for a specific job within their corporation. The application process is invoked using the INET Web Cash register manager function and tracked using the INET Business System. The INET Business System performs validation and sorting of the information based upon completeness criteria. That is, some portfolios are filtered because information is missing. In these cases where filtering takes place, the system will inform the potential employee of the missing information. However, at most times, since employment information is tracked holistically by INET Web Technologies for the private individual, the information will be complete and accurate.

### Indigent Job Seeker

For the indigent job seeker it is very important to maintain an INET Employment kiosk that supplies daily work and easy sign up. The kiosk will be located at a homeless shelter or nearby facility for ease of access. Payment from work assigned by the kiosk should be available for daily dispensing. Optionally the user can choose weekly, biweekly or even monthly for receiving funds. However, getting payment for work hours accrued must be available anytime. An account is maintained for the employee allowing even a savings to develop. Money from this account can be transferred to any bank using automatic funds transfer. Access to this account can be granted using several methods: picture identification, security code, assigned kiosk card, or the user's identity documentation. The assigned kiosk card is not a bank card, but a card used to access the user's employee account. If the card is lost, it can be replaced by the machine.

Once the INET Employment Card is acquired, return visits to the machine can be easily accomplished by tapping or sliding the identification card in one of the attached readers. The cards are made for long lasting wear and tear. The card readers provided are durable. The internal software of the kiosk is designed to allow several card readers to be connected for the purpose of handling large crowds. The system provides the essentials in communication for each worker checked in to be notified of available work. This is accomplished using a high volume announcement tone in conjunction with a summary display of the work. Best practices are held by identifying each worker using a text to speech rendering of their name.



Once an announcement is made for the individual on call, one of the summary monitors attached displays a summary of the job. Signaling which summary monitor to use can be accomplished using a flashing light on top of the LCD. The worker simply accepts the job, requests another, or suspends searching for the day. The request is made using one of three single use buttons upon the summary view. The default INET Summary View model has three arcade style buttons. A print out of the work detail is rendered when a work detail is accepted. The INET Employment kiosk will maintain government tax regulation information automatically for the employer and employee.

### Employment Kiosk Easy Sign Up Process

The process is quick and one that allows information to be imported from a USB key or other web site information bank for employment details. The INET OCR Handwriting package is used at the server side to discover the employee's documentation details. The employee documentation is used to gather detailed information about the user's work history. Inputting of some facets of a resume can occur as part of paper work. This will give the indigent job seeker the ability to write down their work history ahead of time and then scan it in. The main portion of the system's input is from the OCR of the user's documentation. When an employer views a candidate, they must be sure that the working list of their credentials is authenticated.

In some installations of the kiosk system, preparation and formatting of a skill set is required. The INET Employment System allows an employer to design their very own application process. This will require more keyboard interface activity at the kiosk itself. Office work often requires certification and testing for application results. The skills assessment section can be used for this purpose. In these cases, a longer process of applicant time will occur due to the extra steps. An average time will be computed and displayed for the applicant before starting.

The INET Employment kiosk provides [IP PBX](#) services such as voice mail storage and call forwarding. It is expected that this storage bank only store voice messages from employers looking for their applicants. Each employee stored within the kiosk has an assigned extension. This complete phone number is supplied during the application process. The extension is a three or more digit extension that is entered at the system's phone voice login point. Alternatively the system can also support a rolling block range of reserved phone numbers to support the basic format of phone numbers. That is, most application processes typically do not accept extensions for the home phone. Voice mail can be maintained using current web browsing technology as well as from pay phones or personal cell phones.

The INET Employment kiosk provides a fax service for communication with some companies that require the format. Within this function a resume cover letter can be designed specifically for the company by the client. A facsimile transmission sheet is also generated that shows the transmission length. The cover letter and the facsimile transmission sheet can be combined together. There are several professional templates to choose from within the dynamic list. The fax service is directly tied to the job record to prevent phone number errors. When the package is finalized, a confirmation is sent to the client's storage bank. The INET Employment system uses the standard [Group three](#) transmission format for compatibility. The INET Employment system employs a [FAX server](#) at the server level for its implementation (see [Internet Fax](#) for more information). The package rendered is complete to include the client's resume along with a resume cover letter and facsimile transmission sheet.

Providing an easy to use email service that is designed for employment practices is also an attractive feature of this system. A client receives an email address that is likened to their very own contact name during the application process. This allows a professional email name to be used according to the domain name that supplies the employment service. As well, this offers privacy during the publication of personal contact information. Information sent to and from these email accounts is monitored for quality to ensure only formal communication practices are taking place.

The INET Employment system also provides services that manage applications where the resume must be mailed. This functionality provides cover letter templates that are designed for the industry the applicant is seeking employment within. If the job studio provides envelopes, an address can be printed on the envelope. Alternatively, the client may also bring their own envelopes where the job studio seeks to minimize expenses. The total package rendered to the printer will include the cover letter, resume, testing certifications, and envelope.

The communication storage banks, IP PBX voice mail box and email account, are tightly integrated into the Employment sign up process. When clients enter their historical background information using the USB key, scanner, camera, microphone or keyboard, these accounts are tied to their client account. When contact fields are required within a job application process the account references for voice mail and email are entered as part of application information. Clients can use their very own phone number as well. After clients find a job, their communication storage bank is deleted after a short closing period. The closing period provides a buffer time for clients giving them the ability to transfer their stored information to another storage bank. The IP PBX and email system provides a file format transfer to a compatible system or direct file download. A comparable IP PBX box or email system will be populated with the information before it is deleted. If a file format is chosen, the voice mail is transferred to a common compressed audio file format (mp3) while the email is translated to standard HTML format. This allows a user to store the employment search information upon an Internet drive or USB key drive.

Potential employers may have to access to the entire client package view including background check information while other employers are restricted from viewing some types of information. A benefit of using INET Employment System is the speed at which employment can be gained. Indigent workers having the fastest and easiest method available getting them on the road to making money as fast as possible. Contract needs are also very supportive of a high paced demand for a certain type of skill.

### Managing The Application Process

At a typical state funded employment center such as [The Georgia Department of Labor](#) in Atlanta, GA, the hardware present consists of latest available technology. Within this department, an array of approximately forty Microsoft Windows Terminals can be used. A fax machine and telephone is also readily available for clients to use; typically there is no wait. Before a customer may begin searching within the job database they must wait in a line where they will be given an information packet to complete. The packet used by this DOL consists of ten pages front and back. The information required consists of formal identifications, personal contact information, employment history, veteran status, education history, and disability information. After this package is complete, a client must seek an open terminal to locate jobs.

A limitation of three jobs per day can be chosen while using the database. The access to the database is granted using a standard Microsoft Windows Terminal running a [CICS](#) emulator. The interface is textual and easy to use for most. Because of the way the emulator works, keyboard commands are used all the time. The attached mouse is only used to relocate the input cursor. However, this does not detract tremendously from the usage. User's just enter the numeric selection and press the enter key for operation.

The menu system used for job searching contains approximately fifteen categories. The user selects each menu item using numerical input. Acceptance of the selection is completed using the enter key located upon the numeric keypad, the standard enter key does not function. That is, the standard enter key is used for an extended property of the emulator software. The user's social security number must be entered first before searching for jobs can begin. Interestingly, the user is referred to by first name which personalizes the interface.

As mentioned before, a maximum of three jobs can be chosen for submittal. After the client has made their selections they simply wait in the customer seating area for an interviewer to summon them. In a short amount of time, an interviewer will call them by name. This DOL offers many services that are not directly related to the job search catalog. For example, a customer's resume can be reviewed or a typing test can be administered. There are also many services they provide that are instrumental to attain basic certification testing. The DOL Employment professional appropriately seeks to interview the candidate in summary to maintain a direct contact before releasing the job information. Within their process, there are many information databases that are cross referenced. The current implementation of their work flow requires copying and pasting information between several application windows for internal tracking procedures. Finally, three printouts are given to the client with the full contact information of the jobs that they submitted. The customer's identification information may also verified at this time.

The INET Employment Kiosk and INET Employment Desktop software intends to sharpen a job's attainability by integrating the full customizable application process, real time collaboration, and video capture within its implementation. Many types of jobs include skills assessment as part of the hiring process. This system facilitates a process that can be used by an Employer directly to design a skills assessment section for their very own formal application process. Some facets of an employer's decision to employ a person can be based upon communication skill and working knowledge. Some points that relate to testing are merely magnifications of a particular view the test designer sought. Sometimes obscure testing points mislead the usage potential of an individual's talent. To compensate, the INET Employment system offers the ability to design a fully qualified interviewing process that is specific to the employer. Within the designed interviewing process, many scenarios and types of questions can be asked by the employer. Some employer's use interesting tactics that relate to simple psychology.

The application process that can be designed with the INET Employment System, can consist of multiple paths. Depending upon the answer, multiple video segments or textual segments can be displayed. This offers employers the design of a small expert system tailored for their industry's needs. A design feature such as this can be used to capture a sample of information depth a potential employee may have. That is, if a employee feels more confident about Java Interface programming compared to Microsoft MFC, the exploratory segment will proceed with Java interface programming. Or if a particular type of engine repair is more known, that engine style can be chosen for the path.

For most employment practices, a straight forward approach will be used. Within the interface that the application client uses, prompts are shown that display a question that an employer wants to explore. An instruction button may also be present that allows exploration of the interview point. If the user presses this instruction button, more information about the interview question is shown within a video overlay or text overlay.

### Lights, Camera, And Action

Users at this time may speak for themselves. The software provides easy to use functionality for capturing video and audio from the input devices. If the item is an application question, the video information is saved. The user can also optionally edit the video, recording the message again. In some cases, the video length may be limited to a certain amount of time. In other cases, editing the video may not be allowed. As well, some scenarios may provide several takes to be recorded. These preferences are set by the employer during the design stage of the employment application.

To fully provide a functional interview and application process, along with interactive video recording, a real time collaboration unit is also provided within the INET Employment System. This functionality gives an employer the capability of driving the interview process real time. This session may be the result of passing the first part of the interview. This live session also gives the employer the capability of hiring immediately using the results of their interview process. The collaboration view is a two way communication portal. The employer also has the ability to record the responses given by the client for review later. The best way to see if an employee will fit is to test their bounds.

Numerous functions are provided for the customer to manage their application(s). Common information that the client has already entered into the system can be transferred to the formal application given by the employer to fill out. This can save a lot of time for the client and the employer. Clients can have the opportunity for the employment professionals within the DOL to review their portfolio making sure that the information is complete and in proper format. The system is designed so that only complete applications may be submitted making the formal review process easier for the employer. Since complete application submittal is the goal of the INET Employment interface, jobs can be attained in a much smaller amount of time compared to the older methods used by the Georgia Department of Labor.

Employment applications, once they are scheduled for an interview should be able to be completed by the client within one session. The employer is provided with a private *employer only* interface to review all applications submitted to them. Each item submitted within the client's portfolio can be reviewed quickly. During this time, clients can be acknowledged as official candidates, accepted for formal in person interview, or rejected for employment. The client is provided with real time feed back using standard account management. Within the client account management interface [IP PBX](#) voice mail, CTI telephony, and email services are integrated. Each of these services may be forwarded to alternate private sources named by the client.

Work supplied to INET Employment kiosk can be supported by many industry marketing programs. Specifically for the indigent worker, neighborhood work can be promoted and attained. A flat sum agreement of payment or hourly assignment is typical for such work. The neighborhood work program can be advertised to people that need chores done. A handy man is often needed by many households but in modern times no interface exists. Neighborhood construction positions can also be filled in this manner. Other types of work that is typically assigned to indigent workers is embedded within the marketing industry. Many record labels and product retailers use paper fliers for promotion. Today this is done everyday in large cities like Manhattan, NY. An optimum choice for national and international marketing programs would be to orchestrate use of these resources using an easy interface. The INET Economic Employment and INET Herald Marketing system encompasses this method, providing the complete remote capability to order such work and print the fliers at a local printing establishment.

In indigent work placement it is important to remember the location of resources. Often transportation is difficult and time consuming to maintain for such individuals. Work outdoors is recommended due to the individual status. The marketing program to solicit jobs should be partly maintained by the shelter due to their relationship with local city and government offices. A daily review can be viewed by the local community, shelter, and government to see if any workers were left behind. This summary can be used to gage how many jobs are needed for the next day. This gives the community an opportunity to increase jobs for the poor using indirect communication. Jobs that are located within the community will be easier to locate and travel to.

The system provides a portal for individuals to use for advertising their very own skill set using location wafers. Payment is established within the parameters of this portal giving modern forms of acceptable payment processing to a potential employer. Empowering the individual with secure payment options is very necessary. In an individual person to person agreement such as this, work is assigned by an employer while the payment amount and method is established within the interface. That is, these interface options are provided directly within the employee's portal located with the location wafer. After work is completed, funds are released. The funds are received using the employee's normal method of attainment (kiosk or check).

It is essential to provide the employee with the ability to personalize their portal. The system keeps a record of customers they have served so they may call upon them again. Rating statistics can be gathered from the portal interface to reflect the individual abilities of the worker. These ratings come from the last employer. With a shelter staff review, multiple negative ratings can be removed. As well, scores upon skills assessments can be displayed for an employer's review. A potential employer may review this information to make the decision for employment. Once a record has been established, this information can be transferred to any INET Employment system on the market. While all of the information is transferred, depending upon the default format of the target INET Employment system, all of the information may not be within primary view but available within secondary views. This allows a client to build a profile that is complete and detailed. The INET Employment system maintains historical information of transfer. The client can save a backup of this information to a USB key drive or Internet disk drive.



The marketing program hosted by the shelter can also advertise where labor pools are needed or are managed by another compatible formal job studio. This will provide worker pool roll over for the formal job studio where basic skills match. As well, connectivity can be a promise of active search and resource placement. Again, transportation to the geographic coverage area of the formal job studio must be a consideration when considering indigent placement. Other types of jobs inputted into the system can be attained through professional marketing programs indirectly associated with the shelter. Landscaping, construction, and city work programs are accustomed to such programs. Professional pool jobs that relate to goods and services are directed by sales. There are skilled indigent workers that can perform functions that are the result of these sales.

### Cozy With The Boss

Supporting the employer market with business validation will strengthen the INET Employment System's capability to provide clean steady employment for single and groups of individuals. Currently, companies such as [Labor Ready](#) and [Manpower](#) require multiple steps for the Employer to start requesting workers. It is typically a two or three day process to sign up a new account. A line of credit is validated, and financial terms are agreed upon for the contract. In these temporary employment agencies, a specialized rate markup is added to the hourly wage for the middle man, the employment agency. Tax information and other forms of government and state deductions will be kept as a portfolio item within the INET Web OS user's account. This will ease electronic book keeping. The INET Employment system will verify the business's capabilities and operating credentials through the state's business registry database.

Attaining employment using a third party is sometimes affected by emotions and personal tastes. Communication problems may arise between the employment agency and the potential employee thereby blocking the employer from a valid resource. The INET Employment System intends to solve some of these issues making the process of employment, contract employment, and temporary employment solidified through electronic contract. As well, the process of gaining employment can have several functions attached; application and work history, physical conditioning, and personality testing are common. When skills and education are challenged due to job requirements, the system can offer training, certification and testing to those that have the capabilities but lack official credentials. In some types of work this an excellent recommendation.

To offer training, testing, and certification for a precise job is much easier than generalized education within a field. For example, an indigent worker may have experience working with some types of equipment but lack experience on new procedures used with newer equipment. Or evolution is blocked when education is lacking for a very specific type of job function. For example, installing light fixtures may be accomplished with some basic rules given by a certified electrician. Step by step, the short training program will instruct how this task is accomplished. The system will match the job function to an on-line training database. Depending upon how detailed the work order is, many training programs can be associated with the work order. This will open the doors for many people that have skills that are out of date but have the underlying knowledge to perform the duty.

Several issues exist with the modern employment system's approach. One issue is that they appear to be flooded with individuals by the long resulting result set during searches. This makes it difficult for an employer to find the right individual. And in some cases there is no wrong individual for a job, so how would they choose. An employer may find some individuals that are actually not looking for employment at the real-time moment yet were previously. Also, and most importantly, finding the right individual in modern systems is mostly about search criteria. This criteria is typically entered by an individual seeking employment directly. As a result, the search for a job becomes knowing the proper key to enter to ensure your profile gets selected. It is the plan of the INET Employment System to sit properly within the digital domain for many types of users: those with years of education and those without formal education. It does this in real time. Ultimately this means that development of criteria must come from many types of prompted input.

Raw search criteria is too useful for narrowing a search for it not to be used. As a basic principle, criteria may be the type of job function, location, and skill set. However, the initial bounds of the search refinement will be the broader facets of an individual's skill set and their adaptability. It is true that employers want an excellent tool for their production environment. By building intelligent result set formation that includes humanistic characterization of an individual's usefulness and synonymous relationships, employers may find their diamond team member easier.

As a simple example, imagine an employer is searching to hire a mechanic that has used metric ratchets before. What the employer has in mind is that their potential employee has also used many other tools in combination. And that similarly English measured ratchets are to be used. However, their work order specifically states that the new products are using all metric based assemblies. So, this detail finds its way into the criteria. From these types of details you can summarize how building intelligent result set formation is necessary. The end result must be that this employer contacts the best mechanic first with the most money to offer. Often the best employees are the ones with the most experience and education.

The INET Employment System plans to epitomize large database usage for the employer and employee in real-time. The real-time functionality is handled by offering system interoperability. When the employee has accepted employment, the status is reflected in all associated databases. The second important refinement of the INET Employment System provides advanced indexing and input of criteria for an employee.

It is a major goal of the INET Employment system to support the each of the job types and job functions listed below. A planet friendly technology, the system will give business analysts and economists a chance to study a measurable scientific model to improve living conditions in some areas of geographic regions. While not restricting the economic model from natural competition, a road map for goods and services is helpful to balance.

#### List of Jobs

- Accountant
- Administrator

- Architect
- Auditor
- Auto Mechanic
- Billing Clerk
- Biologist
- Broker
- CDL Driver
- CEO
- CFO
- Chef
- Claims Specialist
- CNA
- CNO
- CNS
- Coach
- Company Driver
- Cook
- Counselor
- CPA



- CRNA
- Dentist
- Doctor
- Driver
- EHS Manager
- Electrician
- Elementary School
- Engineer
- EVP
- Executive
- Fashion
- Finance Analyst
- Finance Manager
- Gynecologist
- High School Teacher
- Insurance Agent
- Internship
- Lawyer
- Loan Officer

- Local Driver
- Logistics Manager
- LPN
- Machine Operator
- Maintenance Manager
- Manager
- Marketing Manager
- Mathematics Teacher
- Mechanic
- Medical Assistant
- Mortgage Processor
- Nurse
- Office Manager
- Owner Operator
- Pharmacist
- Pharmacologist
- Physician
- Police Officer
- President

- Production Supervisor
- Project Manager
- Receptionist
- Recruiter
- Registered Nurse
- Restaurant Manager
- Retail Manager
- RN
- Safety Manager
- Sales Manager
- Sales Rep
- School Principal
- Scientist
- Secretary
- Senior Accountant
- Staffing Manager
- Store Manager
- Supervisor
- Surgeon

- Systems Analyst
- Teacher
- Technician
- Telemetry Nurse
- Therapist
- Transportation Manager
- Travel Nurse
- Truck Driver
- Underwriter
- VP
- Waitress
- X-ray Technician

#### Job Functions

- Accounting
- Administration
- Agriculture
- Allied Health
- Auditing
- Automotive

- Banking
- Biotech
- CAD
- Call Center
- Casino
- Child Care
- Clinical Research
- Construction
- Consulting
- Corporate
- Delivery
- Distribution
- Education
- Engineering
- Entertainment
- Finance
- Health
- Healthcare
- Horticulture

- Hospitality
- Hotel
- Hourly
- HR
- Insurance
- Investment Banking
- Laboratory
- Law
- Law Enforcement
- Logistics
- Maintenance
- Management
- Manufacturing
- Marketing
- Medical
- Medical Tech
- Merchandising
- Network Marketing
- Non Profit Organization

- Nursing
- Office
- Operations
- Part Time
- Perl
- Pharmaceutical
- Pharmacy
- Quality Assurance
- Real Estate
- Receiving
- Research
- Restaurant
- Retail
- Retail Management
- Retail Sales
- Sales
- Sales Management
- Science
- Seasonal

- Security Clearance
- Software
- Sports
- Supply Chain
- Systems
- Tax
- Telecom
- Therapy
- Transportation
- Trucking
- Underwriting
- Warehouse
- Wellness
- Wireless
- Work At Home



Business Analysts may wish to review the following brain storm to expand the technological integration of processing within the INET Web OS. It is preferred to envision the employee through an information processing system considering job placement, and actual work (function) as being a cooperative ingredient of the INET Business Operating System. That is, businesses need employees to operate. By supporting the economy with INET foundation technologies such as encrypted communication, multi-device publication, database, sales (transaction), geological mapping of distribution points, productivity measurement, and advanced work functions, operation can be more accurately honed based upon credible real-time data thereby reducing waste (work, hours, time). An information system that shows generalized traits of employees provides essential business knowledge for future endeavors by other entrepreneurs. The system must be facilitated as a database within a monitored area. Protection of this resource as a government held database (geographic region) in a secure location for both employers, contractors (temporary, short and long term), and potential employees is a must. The intent is to provide an honest information for the people of a nation. Other facets about employers and employees may be captured but not communicated due to the nature of information. That is, it would be a corruption not to allow someone to make a living.

- add jobs to search networks integration
- job allocation within business work flows - the right people discover what they need
- human resources portfolio for a job
- certification validation - users have an account for what type of work they are trained to do
- making an industry flow with human resources -
- contracting
- financial agreements - people do work and they must be compensated for this work
- comprehensive work descriptions for resume matching and building (employer search / employee search)
- employment history
- specialized certifications
- certification training programs

## Better Encryption With Less Communication

The use of totally private encryption keys, consisting of megabytes of stochastic data instructions, will provide a nice instruction source for a bit level encryption algorithm. Most suitable in hardware form, the basic encryption functions will be expanded by ring device drivers; a union of hardware and software will provide an upgrade path for distributed methods and models. The server will send a list of index and length numerics that were derived using random number generation. This index and length pair will be used to decrypt the information. Since each data package from the server is uniquely encrypted, the possibilities of decryption are much less than modern algorithms. This will make secure banking a reality on the Internet; electronic wallet, portable electric commerce, business to business and private transfers. The Server Client ID handshake: openly, initially to identify a request command. Authentication of funds to transfer will occur from the banking institution or other financial storage firm directly to the device, using the registered secure key established by the user. This key is different than the key used by the primary connected web server. The financial institution, once funds are verified, will send a yes acknowledgement to the request. The transaction will be time locked and identified by a random sequence sent from the financial institution. Electronic transactions performed this way, will provide secure point to point transactions without communicating any personal financial information to the request. These keys, several existing, will encase remote desktop operations and financial operations. On the local hard drive for consumer. And on the USB for portable.

## Polymorphic Bit Access Encryption

Polymorphic Bit Access Encryption is an encryption algorithm designed to work with private key data in conjunction with the server. During processing the bit-stream of the data is represented as variable shapes. Cipher operations are generated in association with the solid referenced. Each iteration, a different shape and operation may be chosen. The algorithm is strongly tied to the private data.

- [Archimedean Solid](#)
- [Platonic solid](#)
- [Catalan solid](#)
- [Platonic solid](#)
- [Kepler-Poinsot polyhedron](#)
- [regular polytopes](#)

## Point To Point Secure Identity Transactions

### Transaction Performance Technology

#### Transaction Enabling Technology With The INET Web Cash Register

Methods of modern business, such as agreements to pay prices, formal contracts, governmental body agreements, real time publishing of prices and sales processes (including point of sale transactions) are accompanied by many forms of paper tracking, physical goods tracking, in person meetings, and/or phone calls. This is so because validation of the person doing business, their goods, who they are representing, and the funds transfer are still in question until validation and reception occur. INET's bit level encryption communication system will advance Internet technology communication so that business to business relationships can be managed effectively and securely. Secure socket layer (SSL) has been proved to be ineffective from prying eyes. Businesses do require and need strong security. Consider the identity of a typical INET Device User.

INET Devices use totally private encryption keys, consisting of megabytes of stochastic data instructions. This key is an instruction source for the bit level encryption algorithm implementation. The encryption logic exists both in hardware and in software. It is considered a very strong encryption especially when using streams because of its granular approach. Each INET device starts life bought from the shelf with three identity keys installed. Because of the uniqueness and size of the user's key, businesses can be absolutely confident that no one else on the planet has such a key, identifying absolutely the device. The hardware BIOS protects the use of these keys as it is only used by the communication hardware. It is not accessible within the software environment.

When a point to point transaction is initiated, an array of integers is sent that is used to seed an index augmentation algorithm that also incorporates *solid time* within its calibration. *Solid time* means here matching network time to be within a known tolerance between two computing devices. The resulting data-set of integers, an expansion ten times the original size, is used for indexing sections within the unique private megabyte key. The data resulting from the random megabyte key query is used by the encryption processor and encryption driver for the actual cipher process. Once the encryption algorithm (hardware/software) is seeded with the initial connection sequence, uniform random number generators and *solid time* are used to elapse the encryption communication architecture without revealing other information. Sporadic requests for connection identity and new seeds are managed discretely by the Web Operating System at the terminals expense.

The three major keys are used for decryption of large block medium (network) payloads. This data can include many forms of VLISM code and program data, HTTP Internet with email, and multimedia media. This allows separate channels for each type of protected data further hiding executable VLISM code or other DRM protected information. That is, one key used for executable VLISM code. It is only known to the service provider. The other two keys can be used by third party services providers that are registered for the device. The multimedia media major key is used for encryption by the INET DRM system. Identity of the major private key to be used will be noted within the bit stream as structure. Confidential relationships can be established by the transfer of megabyte keys in person at banking, government, and or internal channels. In person keyed agreements can be considered more secure because the information was obtained from the corresponding institution without network transmission.

### Confirmation Process Name-space Locking

The automated business functions that computers provide using common object oriented logic creates new issues that directly relate to user platform security. Imagine a typical *"pay to the order of"* check printing confirmation dialog that many C++ or Visual Basic Applications employ. A narrow focus upon the operating characteristics of this code that facilitates the dialog within the application will reveal that the application designer expects a return result from the routine that displays this summary information. When the process order button is pressed, alternatively Alt + P for process, a dialog is shown that displays a Crystal Report shipping and purchase order. The total results are shown on the bottom line. The user will need to press OK to print and continue.

One problem that the hacker could not overcome in the case was the required password for database log in. Most institutions place very high security upon database access passwords and not the operating system and applications. Many software developers develop software to work correctly and do not have a specific focus on a binary code base that implements self checking security. These tasks are left up to the product users and their system administration. The imaginary shipping application is designed to integrate with database security, using roles and user groups for the major coverage. In this case, a hacker can modify the registry to replace the binary location of COM based dialog with a specialized call through layer. The call through layer can record all the necessary information to be used to modify any part the database. When shipping orders to stores (a physical shipping address), are safe enough to create and hide, a good hacker can summon thousands of false orders to receive goods and services. The Trojan Horse is the typical method that many specialized malware applications arrive to their destination.

When confirmation type interfaces are required, a generalized function is typically used by modern applications, a COM implementation. Even with special consideration for running code events, the purely automated tasks can be hacked easily by an experienced machine code debugger. In fact, with Intel processors the debug statement of [interrupt 3](#) can be used to change the return code of any function to a correct result regardless of any errors occurring.

The INET platform plans to prevent surprises like these by using new name-space locking technology. The INET Secure Application Layer will call for a user intervention and require a physical button press to unlock certain instruction sets. The technology allows third party development to create use for these specialized buttons (or physical keys). The INET system incorporates the confirmation locking within operating system and BIOS facilities. The locked VLISM name-space processing capabilities will not be available without the toggle switch being active. Specialized electronics are used to ensure non operation of the name-space. INET VLISM Name-space Locking technology in conjunction with INET Point to Point Secure Identity Transactions (PTPSIT) will further secure the authentication process for many types of applications. The confirmation technology works in conjunction with a secure user interface.

### Confidential Agreements

Other types of confidential agreements can be managed effectively without in person meetings by encrypting the large megabyte with noise expansion as they are transmitted over the wire. A listener would be able to identify the package as being a key because of its augmented randomness within the network traffic perhaps. Being able to protect lines physically during this key transfer would negate the network monitor. For select events and setups, this may be a manageable operation. After key transfer, the difficulty is separating the key noise from the bit noise introduced. An adaptive algorithm combined with skip oriented interlacing of random bit noise with the payload may be sufficient to place hacking within very high security range. More research will have to be done to provide an automated and initially key-less skip oriented interlacing bit noise generator for augmenting the key payload before they are sent. Obviously being able to match unfolding of the bit noise generator on the opposite side of the equation would benefit from utilizing the uniqueness of the terminal's connection attributes or what ever is known.

### Key Identity Secrecy Rating

Providing a rated network of physically certified key transfers from business to business as an initial means of attack would be the very best scenario. In this case, two parties agree to meet and exchange keys. The key is created upon the terminal and transferred to the other party. This can occur upon a USB key or more likely transferred using a small distance communication method such as Blue Tooth or Infrared light. After this is complete, the random key data would be of value when used with the hardware encryption engine. An INET Confidential Key algorithm within the terminal can be used to synchronize modification of a key to a new result set based upon parameters. The parameters inputted into the algorithm can be communicated using ordinary means of communication. Executing an INET Confidential Key algorithm after transfer further obscures the openness of the medium transfer. For keys transmitted over a non-private connection, as a requirement before installation, the last step before key installation is parameterization of the Confidential Key algorithm.

The private megabyte key encryption instruction method provides a completely new secure communication channel between two parties that was not available before within network technology. The key transfer process can spawn new opportunities for an official over-site committee. Each group would provide their own certification program such as using governmental security organizations like the Pentagon, FDIC or civil authorities to manage the process of mass key transfer. A certification of a key transfer would benefit the resulting communication market. This new market job will require marketing and official distribution programs. Perhaps the cooperation would congeal into a new form of FDIC that specializes in these keys, management of them, content quality rating, transfer rating and transfer validation.

The certification level is dependent upon the integrity of the key. Knowing that non wireless key transfer such as USB is most secure providing the medium contents are destroyed. As well, knowing that the USB medium is fault tolerant while not secretly transmitting or secretly storing information. Direct cable connect is also viable as most NIC cards are capable of reversing send and receive automatically for null modem communication. In question is the twisted pair cable being free and void of defects, hidden memory storage or hidden transmission technology. Line of sight being the third method may discoverable through monitoring the reflectance of light waves. Forth being near field communication mediums such as Blue Tooth which may be discoverable through amplification and monitoring. These are secure environmental concerns. And last, the non-private network transfer, the least secure, but incorporating skip oriented interlaced bit noise during transfer with finalization using the parameterization of the INET Confidential Key algorithm.

### Rating Providers, Rating Security

The system allows for the competition between distinct sectors of the market (personnel) in unit form: technology and security. Separating product function using private key promotes a distinct relationship between your Web Operating System vendor and the Operating Provider; a facility. Ultimately clients or official certifications can rank the Operating Provider facility by location, building characteristics, employees, available security procedures and task professionalism using precise attribute metrics. Web Operating System vendors, if required by their clients, can establish a certified key transfer with a Operating Provider facility so they can service your system upon request. Some Operating Providers may provide this service.

### The Process Of Time Based Finance Confidential Agreements

When a time based finance confidential agreement is initiated between two parties, the initiator generates terminal identity information along with the operating vendor provider. The official moderator of confidential agreements is contacted to locate the operating vendor provider. The official moderator of confidential agreements operates using protected regional servers connected to a centralized management facility through replication. The moderator records the requester of confidence, generates a request id and returns the location parameter to the operating vendor provider. The moderator of confidential agreements system is maintained to prevent spoofs and scams. Governmental regulations to this service require consolidated information about the secondary party to reveal absolute identity of the business providing service; retail shop, store, etc.

The secondary confidential agreement party then contacts the operating vendor provider with the terminal identity information and request id. The operating vendor provider sends the true terminal identity for official record to the moderator. This record establishes that a secure communication channel between a specific terminal and a registered business is requested and about to be processed. During this time the system also tracks request count, the request id and time allotment for the agreement to be completed. The secondary party also queries the local device's operating vendor provider. This is sent using the operating vendor's existing physically certified confidential relationship key as the encryption command stream to the operating vendor provider. The operating vendor then sends a confirmation of a time based finance request to the user using the root key identity information. The confirmation is encrypted using the key that comes with the device as well as being timed. If the secondary party does not have a physically certified key transfer with your facility the key information will not be one hundred percent secure. This will be denoted within the BIOS application information and user interface shown upon the screen in overlay.

### The Ratings Of A Cipher Key

As a result, INET will have distinct encrypted communication ratings: Physically Certified Cooperative, Personally Secure, Financially Cooperative, [Public Key Encryption](#) , Confidential by Agreed Key and open format. On terminals that have the new BIOS Location Locked IP setting, initial location of the communication can be calibrated to be within a determined route. As well, the route can be included within the encryption format. Public Key Encryption is the modern method that SLL uses during socket port eighty one communication.

The Confidential rating would be the most popular. The key can be discoverable through network monitoring as it is transferred over non-private networks. The key, during transfer is noise induced. It is a megabyte package with a payload that is skip oriented interlaced with bit noise. It is only transferred once over the Internet. Confidentially rates keys, before installed, are augmented with the parameterization of the INET Confidential Key algorithm that is synchronized for both parties privately. The parameterization should be private data such as a code word, or an agreed upon common binary data object such as a CD or document. The information used for parameterization must be binary equals. For example, AC/DC track four may be a good choice. It is foreseen that audio and video data may vary but it is unknown at this time whether the object equality requirement should be compromised.

The INET Confidential Key algorithm obscures the key transfer somewhat. If during the time network transfer monitoring occurs, there is a chance that a hacker could identify it as a key. The key is transferred only once for the agreement terms with a provider making the capture window small. Confidential keys can be expected to expire in a window set by the agreement terms. It should be noted that the key expiration and the agreement expiration are separate distinct times. Key expiration is a means of refreshing the probability of discovery. Confidential Key expiration can be yearly, monthly agreement, daily or other minuscule time period. For minuscule time periods, previous keys can be renegotiated by using only the parameterization of the INET Confidential Key algorithm. The data and communication integrity gained is much better than current operating technology. Confidential keys can be used in many types of agreements that have foreseeable lifespans such as provided with the INET subscription service, INET Collaboration, Electronic Library, Rented Software or a Rented Operating System Provider like the Korg mainframe.



Personally Secure keys are generated by the terminal itself and can be registered with the user's operating provider. They can be transferred to USB data keys and can be handled by user's as data objects. It would be possible for two or more people to communicate within a ring using a Personally Secure key they acquire and load into a computer themselves. Personally Secure keys are used to transport desktops or provide collaboration group using USB keys. Personally Secure keys also allow order of algorithms to be interchanged. Financially Cooperative mode allows for recording of financial instruments used between two parties during a transaction and works with registered banking. It is used to encrypt the confirmation showing the price between the buyer and seller. It can be compared to using a check, credit card or ATM card. Financially Cooperative mode is different than transferring electronic money directly. And last but not least, the open format channel allows communication with all computing devices that operate with ASCII codes. It does not function with encryption but uses compression underneath.

### Physically Certified Key With Transaction Coordinator

One point of security is the INET device and the your agreed transaction coordinator are tied together with a physical meeting. The agreed transaction coordinator is a bank, a firm that you regularly contract with or business partner. An existing registered relationship will have already been established. After the initial meeting, further communication can be secure through INET's security. Most methods of "Secure Internet transactions" use about four to sixteen bytes of information for purposes of small or large money transfers.

The encryption chip driver has an embedded signature that is generated by the hosting provider when it is compiled (VLISM or native machine code) for the device. This method is used to prevent hacking of all device drivers within your computing terminal. During boot up, each device driver when loaded or where it occurs in memory is scanned to calculate a check sum. This state is known and communicated to the server or compared with a secured value stored locally. Device drivers run within the processor's protected memory space communicating along the BUS or device ports at ring zero. Boot strapping the device is handled by BIOS. Some circumstances may only allow booting the device if networking is available for registration; locked at BIOS. This is because all of the data within the cache drive can be considered loaned information. All of the information contained within the Compact Flash [micro-drive](#) will be duplicated at the server level. The new Compact Flash micro-drive manufactured for the INET device terminals will be tied logically using discrete communication directly from the terminal's ring zero disk operating system during power-up. The INET Compact Flash micro-drive will reformat itself for use if taken out and placed into a new computing device for reuse. These Compact Flash micro-drives are designed to work only within secure computing hardware and will not be compatible with older power and communication motherboard sockets.

### Trading Agreements

Trades using the large INET encryption key can be made in confidence yielding quicker trading turnaround based upon the most accurately consolidated information. The buyer is in control. The buyer has the most real time information. The buyer is uniquely identified by the key. All of these facets work in the buyer's favor in any market or transaction they choose to perform electronically using their INET device. Because the algorithm is a strong encryption and trusted, contracts can be completed quicker and this improves productivity.



## Enabling Point Of Sale And Roaming Station Transactions

The point of sale at the counter and roaming station transactions will be greatly improved due to the effective use of this network technologies. Orders can be made without waiting in a line, made for delivery or ahead of time for scheduled pickup using the cell phone, INET Smart Terminal, the INET URL Broadcast tower or dish; their leisure. Once the payment has been accounted for, order fulfillment can begin. Tipping, a required income for some, can be contextually based for business that the customer enjoys. Allowing for even money up as a first selection in cases where such is appropriate. Improving transaction freedom for the individual will give the needed satisfaction paying customers deserve. Customers can make more use of their time without waiting in line. By reducing the amount of worker and customer interaction time, customer relationships will improve. Customers get what they click for without teasing snares.

The INET Web OS will provide common user interface functionality for shopping for global distribution. If the process of selection and payment were different for each store you encountered, difficulties would arise in usability. The fonts, order, layout is a constant flow according to the user's preferences. Businesses are provided with publishing features that allow specialization within most areas of the catalog display. The shopping software allows preferences to be set that are specific to the shopping habits of a customer to provide safe guards for users that get used to automatic decisions. This feature allows other financial management software running to detect that in fact shopping transactions are being performed and inform the user of potential over spending risks.

Within the shopping interface, Branding spots will exist to allow the business owner projection of specific selling desires. Animation and sound may be appropriate providing it is not considered socially barbaric by the individual. Imagine this, roaring into the drive through, the tires of your red hot rod micro squeak due to a harnessing down shift. Abruptly the car radio slims the currently playing metal audio volume. Resounding within the audible range, audio and video overlays operate to play the welcome message. During transmission, the input sample is monitored for noise, pop, click and decibel max filtering for your ultimate pleasure. This moment provides for many forms of greeting by a business. The experience can even be tailored as if it were a vignette crafted specifically to fit upon the vine. Components of the overlay can be determined by historical use, time of day, user preferences or the standard operating personality projection the business uses.

## Enabling Direct Cross Marketing For The INET Web OS Cash Register

Incorporating sensors that sample environmental conditions, light, height measurements, temperature, weight measurements, video image processing, audio sensor readout and published automobile facets of your guest will enable extremely portable content mixing. Other details can include being able to capture the now playing music as a radio play or personal selection can effect advertising at the drive through window. Marilyn Manson could give a free Hamburger in trade for the Album purchase but only if you are listening to his "lucky song". Or, the chance to win the 96.1 Classic Rock station mystery prize exists for random good listeners. During program listening, a timed coupon becomes available. Simply click, accept, and receive a coupon. The point to point technology enables a business to make a deal. Games, shopping and mysteries are in the beginning announced and have no end.

Shopping for some types of items may show a different set of functional features that are appropriate for the business or appropriate for the user's moment. The user is on their cell phone during crash-time and just wants to speak and order food - they want their number three. That delicious fresh seedy bun, crisp red onion, and stiff green lettuce hamburger only available from the best - **Jack in the Box**. Decisions based upon the state of the user's device can affect initial proceedings of the experience. That is, the buy communication that is electronically spoken along with the additional trailing stream experience can be automatically skipped. An interface network path is based upon the user's connection attributes (desire) and their sign on procedure. If the user connects through the common main interface route, they are not time needy and like specials, fries, the potato kind, may be offered for eighty five cents more upon the checkout portion of the interface flow. If they like desserts usually, the interface trailer would include a pie. Time of day may also affect the interface projection. Allow an offering of primary and secondary complimentary items may be appropriate. The structure of the entire experience can also be limited to a scheduled amount of usable time. The usable time measurement can be based upon attributes of near real time operating effectiveness. The INET Store Catalog provides these measurements in atomic state upon the display usual in micro interfaces. By capturing the product demand with product supply, dictionary rules of the stream production engine will be evaluated to provide a valuable encounter for the consumer.

Because interface projection is dynamically generated, multiple languages can be applied. This brings international and multilingual acceptance to any sales transaction process that utilize INET technology, a powerful concept for income distribution. In turn, this opens the door for many that at first are shy to such proceedings. The information will be spoken in a language that is well suited for the individual customer. Within food preparations, this can be viewed as a culture practice within America due to the number of nations that Americans represent. That is most of those that speak English as a secondary language or only speak a foreign language often eat at a specific set of restaurants or use a select number of businesses within their consumer life. The system is designed to give full access to all sales processes that use INET Technology designed for the visually impaired as well. Making each shopping experience as tailored as possible for the individual brings a wealth of transaction paths to many businesses.

Vast cross marketing potential exists within the sale of services that maintain an extended relationship due to the acceptance. The ability to tie digital data and applications to this service as a business agreement will be beneficial to both parties. After all, it was the customer that solicited the service. Data and applications resulting from this purchase may arrive in semi regular patterns. Transmission between the two parties is provided using a secure channel to maintain product integrity. The integrity of the data is left to the business owner.

A remarkable proceeding for the next generation shopper would be to attach digital information to common ordinary things through the implementation of marketing programs. A small store may have several bunches of bananas where the customer just grabs one out of the bunch. With the INET Cash Register it is possible for the customer to simply take a picture of the store's goods or their display menu. The information is located first by the GPS location. The store may attach digital data to things they want to sell quickly or items that are perishable. The store's service menu will be neatly displayed using logical computer interface formatting. During the formatting process, a model is rendered of the store's space. However, the shopping interface for the user is presented in a ordered and neat fashion. Each bunch of bananas can have a unique song, game or puzzle piece attached. In short, with the INET technology plan, bruised fruit may sing freshness again.

As a further example, a personal trainer can market dietary products that optimize meal planning. When a customer chooses this consultant, they can get a free copy of Body Building Diet Plans as part of the agreement. The agreement provides this service for the length of contract. When the customer stops service, the software and resulting diet plans are discontinued. It is known around town that the personal trainer is an expert in nutritional information and commonly tailors dietary information that is specific for his customers. That is, the personal trainer knows the physical capabilities and desires of the customer relating it directly to the nutritional products recommended. When this information is sent to the customer, several databases may be updated for the client. Therefore a trusted agreement will need to be established and maintained for the INET portal. Information between the parties can have many resulting deployment capabilities. In this case, the shopping list that is centralized within the INET Goods Shopping store will be updated with all of the food items necessary for a week. The customer will get a notification that the personal trainer sent the shopping list. The shopping list will be tied directly to the correct information system within the INET Web OS system. Trusted capabilities such as these provide a more fluid use for the consumer. When the customer goes shopping, the items, where they are located, and how much will be upon their common list. Their shopping list for a week may contain many things other than food that was thought of during the week.

Other relationships of the services industry directly relate to scheduling. The ability for a service agreement to be established that maintains itself within the centralized scheduling system will benefit customer relationships with the service provider. The information will not be over burdening due to the proper placement within the user's application portal. For example, hair salons, karate instructors and boxing attendants require a regular visitation policy to use their services. Naturally, all facts about the visit will be known from multiple devices securely. If a customer or service provider modifies their scheduled appointment, both parties involved will have this knowledge. A business owner that is considered to have a trusted agreement is provided with the capability of marketing related products of their service. For example, the boxing instructor recommends the soft gloves of a particular brand for use in his classes. This provides interest specific marketing to compliment the user's chosen services or hobbies. As a result, the process of marketing products will be more on target. This reduces consumer stress relating to unwarranted solicitations.

### Ad Hoc Reseller Agreements And Profit Sharing

#### Roaming Inventory System

Shopping within sidewalk shopping stores to get high quality earphones, cell phone accessories, stuffed animals, play toys, used computer games, used books and other goods will be easier with INET Technology because of its roaming inventory system. Within a roaming inventory system, goods are transported to a location according to demand. The roaming inventory system is supported using a local grid system of shipping and receiving. The business technology will promote profit sharing for individual business owners as well as managing the relationship of selling goods. Even providing the capability of selling an item by catalog information only can spawn a shipment directly to a customer. Including inventory communication with diversified distributors by near real-time location information will enable productive delivery and replacement of units. A functional waste, gift and missing system will record actual physical amounts and hold the information within the database electronically. Allowing placement and relocation of goods from point to point based upon demand will provide faster availability of goods within the desired area.

Within the moving vehicle swarm a network of physical goods cross talk is predicted by the roaming inventory system to provide precision cargo bay areas within the trucks. The naturally developing database, sorted on a granular level of product type or by the bonus mix of the container, the storage position, weight, container properties, dimensions, and destination identity are used by the professional trucking company and private drivers. Each delivery and pick up made by the truck will be the result of a roaming inventory grid operation.

Improvements within the vehicle industry will be made to use on board robotics that soften the physical labor. Allowing for on the spot delivery and recipient authentication provides secure transport of the goods. Communication hardware within the truck can also provide location, speed and near future events of the drivers to refine the zoning and grid prediction package placement. In the optimum configuration two trucks will park within a loading station for a goods transfer. The necessary items within will be transferred by cargo robots. Specially designed trucks that have overhead opening compartments will provide the necessary room for the transfer.

### Web Cash Register Ordering Process

Improving transaction times for customers by managing effectively the ordering process will allow greater output of the worker. The employee in a small staff per store that prepares food may also operate the cash register, example Subway Sandwiches. The method of refocusing the worker's attention to yield product rather than handle math and tender collection will increase production for small and large enterprise. The system will equalize competition in some respects due to customer perception and image. But most importantly, the capability of attaining orders in parallel is the greatest asset for the business owner. The opportunity to move to robotic operations for food preparation will also be an option for large enterprise. New positions will be developed to feed the machines ingredients; raw uncooked meats, bread buns, ketchup, etc.

These electronic transactions as well as the older method of physical money handling will both be translated into paperless receipts for the user providing they have an INET device. The new spending system will allow users to track their spending limits easier than current methods. If the consumer ever needs to return the item, the receipt will never be lost.

Providing better time management functions for the customer will decrease the stress felt during crunch time. Shopping for items that need preparation first will be announced with time projections. The time projection is based upon statistical information gathered on the job according relating the employees that are working within the positions. Imagine the traversal of events that occur for lunch everyday in a city such as Manhattan, NY. A potential customer is walking towards a group of stores that sell food. On their cell phone device, the readout displays seating or out of the door times for several daily specials. This time includes the customer completely arriving, entering into each of the doorways and finding the pickup counter. In store measurements will include preparation time, by micro task if necessary, to give the highest accuracy within the time estimate calculation. The system will learn timings of the process real time to adjust itself. Some people make sandwiches faster and there are variances in hourly performance.

### Currency Conversion For Overseas Ordering

Real time currency conversion of in view amounts with time locked currency exchanged transactions will open the door to easy import export of goods and products for the individual person to person, the consumer, the small business and the enterprise. The INET Web Operating System has an integrated currency data type that is supported within an international domain. Economic engines world wide will thrive due to increased geographic range that the INET Cash Register provides.

### Electronic Tender, The Future Of Money

A psychological effect of current money systems that make them important, especially when dealing with physical money, is that the amount is automatically approximated by how much a person has in their hands and by what is visible. It is common to see eyes targeting money as an identifiable special object while walking within transaction areas. It is the plan of the INET technology path to use a specialized font that is never duplicated upon the screen. The font is used only when showing tender amount information. This font system will be unique and pleasing to the individual. The individual will expect the font to be used, as well as, learn to treat the appearance as the new definition of tender. The font will not be duplicated by any application at any time nor shall any font be constructed that has similar appearance. Within the information domain, it is important for national information to appear uniform as this type of information does in modern day. Several tracking items are serial number, emblems, and writings.

Storage of a Monetary base using electronic data within INET devices will further decrease transaction times due to the reduction of network query that standard credit and debit cards require. This type of money is considered highly liquid but is not currently available within the modern economic markets. A new science has evolved around it but in some ways it is still in infancy. It should be noted that [e-money](#) must not be confused with using an electronic data Monetary base. Hong Kong's [Octopus card](#) which is a smart card is similar to this method (no physical contact payment). Storage of money as data to be used as a Monetary base format representing Credit Money will not incur transaction charges thereby acting as a tender note. Allowing private person to person transfer of funds from device to device makes it fluid. Within this digital economy, verification of funds as being non counterfeit must be a free service provided by the acting treasury department within the country of monetary origin to ensure its value as authentic [credit money](#). For example, the [US Treasury](#) will be used to validate the American Dollar. Finding and tracking counterfeit money will be faster, more accurate and easier than modern methods. Storage of the necessary information used in accessing M1 and M2 type money will also be available.

### Secure Communication

This private trusted point to point network connection will also be incorporated in other communication associated with the device. That means secure video conferencing, audio VOIP, text messaging, email, electronic commerce, on-line shopping, and private web browsing for each user. Confidence in Internet technology can be understood provided the platform has a strong encryption algorithm. The INET computing platform in embedded hardware has functions that facilitate robust encryption and Internet communication as described. In short, the communication sub systems of INET OS Web Clients promote secure identities that will protect businesses and consumers from theft or snooping.

See Also

- [Near field communication](#)
- [Manchester coding](#)
- [Jack in The Box](#)
- [Bloomberg Energy](#)
- [XE \(International Currency Exchange\)](#)
- [Money supply](#)
- [Mad Money CNBC](#)
- [Futures Trading](#)

- [Microeconomics](#)
  - [Macroeconomics](#)
  - [Economic Letters](#)
  - [Oil Computing](#)
  - [An Astonishing Rise in Oil Volatility](#)
  - [The Oil Futures Curve](#)
  - [Interactive Brokers](#)
- Supported as a dialect of XML through web publishing. Web publishing extends the database view. [XBRL](#)
- [wikiXBRL](#)
  - [CXML](#)

## Device Connectivity

The ability of INET Devices connecting with other equipment, once identified, is one of its most exceptional capabilities. Exciting for the user is plug/play and the hardware performance of communication with the device. One facet that allows complete freedom of older hardware identification is using optical shape recognition. If the model and serial number are difficult for modern users to enter, taking a picture will suffice for the database search index.

It is the goal of the smart terminal project to create driver interfaces with modern and old equipment thus consolidating the transport medium to wireless, fire wire, or modern USB. This includes label printers, cash registers, bar code readers, time clocks, rs232 devices, printers, laser printers, external hard drives, speakers, samplers, microphones, automated lock devices, and joysticks. By supplying a line of sturdy ports, series of adapters and extension cables, the devices that are supported will give fresh market appeal to Internet software management/distribution.

Most modern hardware devices have the capability of being queried for its serial number, model number and release number for identification. If new methods can be identified, they are open for integration. However, using an old CITOHP CP120 does require the parallel port interface. In this case, the user will plug the printer into a conversion kit plug that in turn is connected to the Smart Terminal using the standard USB port. A WIFI connectivity kit will also be available. An important factor of the conversion kit, USB cable and port built into the smart terminal is the high use endurance; the ports are built well.

An interesting property of the CITOHP CP120 printer is that it is a dot matrix printer. Printing on forms is easier. The CITOHP dot matrix printer, when it receives ANSI characters is a work horse printer, the paper feeder rarely jams. And it is effective best in ANSI mode, the fastest printing mode as the description of the characters are in local ROM. The line feed is measured to be a typical metric in the forms industry. Yet by default all Windows applications use Graphic mode in output, thus eliminating all of the textual escape sequence capabilities of the printer. This is another area that INET device drivers will excel in, providing full features implementations of the device itself, giving the server software the direct capabilities to drive the device both in specific and uniform methods while maintaining a small driver microcode footprint. Only the drivers you need are installed on the smart terminal.



Providing conversion boxes for older RS232 or 10baseT network cash registers will allow greater distribution management for small business owners that want to keep the dusty key register yet upgrade accounting systems and business management to modern methods. And this is attractive to small business owners due to the Internet promotion capabilities that INET Web OS server software provides, including shopping card ecommerce, on-line ordering, telephony support (synthesis driven, professional voice or self recorded), staged distributor connected inventory control, shipping and receiving parcel tracking (Self, USPS, UPS, FEDEX or other), order tracking, Business Accounting Finance, and off site backup support. Laboratory equipment and Laboratory testing should also be considered. Usually these devices require real time polling. This could be served with a plug interface and wireless connectivity. Preserving the integrity of the test environment by allowing hardware control efficiency of the device to occur. These are features that server side processing can provide easiest due to the distribution methods used in the INET Web OS. In short, providing an upgrade path that is effective by leveraging the Internet device driver model for connectivity will popularize the INET Web OS market due to the advanced software maintenance methodology.

Systems integration points that allow access to legacy operating systems, transaction processing hardware, business foundation systems and paper oriented procedures must be accounted for in a transformation process to maintain operational integrity. The transformation process must be straight forward, well planned and offer multi-tier provisions for each type of business process plan. The consideration will include hardware, software and raw process provisions. Each level of transformation must prove to offer higher quality output due to the upgrade to the INET Web OS.

## Home Audio, Car Audio And Portable Radio Integration

Radio, Car Audio and Portable Radio Integration will be a reality when cars expand their technology holdings to include secure WIFI, Blue tooth or other transport. Many cars and third party car stereos do have blue tooth. The process of transferring audio and video to vehicles must be easy. Accounting for this capability within the WEB OS Media Management system will please users by having a working interface for usability. Listening to your own music within temporary listening opportunities for instant pleasure will make a good holding for taxi cabs in metropolitan areas. Just put the key in the cradle and rock rap. Current technology implementations can be found at [Parrot](#).

An advancement must be made in the radio transmission industry to transmit a web address along the FM signal, unnoticed to the listener, to allow transmission of a loan marker. So when the listener hears a good song, as promoters are supposed to do, they press a save button on the device. The device will remember the web address of the audio/video file and export of the list to an INET Stream compatible device. The user will be able to buy directly or act on the impulse to just watch the video a couple of times using the DMR (digital music rights) loaned privilege.

## Broadcast Television And Digital Video Integration With INET Web Server OS

A new embedded device that allows management and playback of digital video, broadcast television and audio programs from around the world will be a new product offering. The INET AV Web Encoder allows a streaming video and audio to be played from the INET Web Server OS to an INET stream compatible device. The video will be sent to the in hand user device using advanced video compression. The audio and video encoder (INET AV Web Encoder) is a combination of hardware and software logic designed to reduce transfer data by examining frame rate, color depth, frame pixel space, image expression space, audio precision, audio signal expression and redundant frame change data. The INET AV Web Encoder will support classic NTSC signal formats, HDTV and new 3D Television formats. The INET AV Web Encoder can optionally use a hard disk drive for storage, cache and multi-broadcast play. As well, given that bandwidth varies, based on QOS agreements and network propagation, the most important features of the video motion, the centroid, will be updated first.

Offering controlled devices that integrate with the INET AV Web Encoder such as a jukebox or semi robotic catalog system (INETWebDVD) for the physical DVD and BluRay disk technologies will promote extremely portable multi-media experiences while maintaining proper bandwidth procurement for the viewing device. The DVD jukebox device will have internal high speed transfer connectivity with the audio and video encoder; optical. These Jukeboxes are designed to be expandable by plugging them together. This will be a great success story for people who have over hundred audio CDs. The jukebox catalog system will tie together with web technology to deliver many statistics and information about each artist, album, and song.

Other devices such as an AM/FM Tuners, VHF/UHF and Cable Television Tuners, Shortwave Radios, Compact Disk players CD, Digital Video Cameras, Microphones and Mixing Panels may be offered under brand, but the INET AV Web Encoder is the main product that integrates these devices to the INET Web OS Server for streaming. The INET VHF/UHF and Cable Television Tuner will allow controlled timed capture from a broadcast source. The INET AV Web Encoder could be offered as an integrated solution with the TV Tuner. And it should be able to upload the information to the INET web server OS account. An embedded version of the INET AV Web Encoder might even be integrated into newer televisions.

Supporting Software written to schedule a capture of a television program from all the television and radio stations in the world (Web Source or local broadcast) will enhance the user's options. The user interface of a modern computing device is much easier to use than a remote control when trying to schedule video or audio captures. The software will maintain a database of television stations that have on-line transmission. From this source, a program may be captured.

- Audience participation with news and media content. Web addresses will pop up on INET devices.

- Watching television programs that disseminate information about stock markets, science, government voting, or world news would be well suited to have multiple URL transmissions occur. This enables the instructor/actor to play learning and simulation scripts that synchronize the INET device to live on air video and audio. This will make INET devices a great learning experience.

- [QVC](#)

- [Exciting 3D TV](#)

- FM and AM radio participation.

## INET Web Operating System Home Automation

The INET Web OS has optional hardware that provides home automation using all modern and standard technology. Standard x10 equipment can be utilized for example. By using the Home Automation box, a wired connection to the WEB OS provider, control by PDA, laptop or cell phone registered in the WEB OS will be possible. The OS provider can be in home or remote. All devices that are served by the User's Web OS Provider, those registered, will have access to automation.

Home security systems and total solutions kit

- [Home Automation](#)
- [Home Controls](#)
- [Smart Home](#)
- [Home Auto](#)
- [Home Automation \(org\)](#)

## Robot Automation

### Manufacturing And Toybots

The market for consumer robotics has been on the rise since the first Lego toy. There are many robots on the market today. Each of these devices describes their own interface logic and command structure. The most important facet built within these toy robots is their ability to send and receive commands from a host. The INET Web operating system will provide a robust handling of the current technologies. The INET Web OS system must allow transfer of binary code or VLISM code to the Automation Brain, typically a separate controller. Integration with these automation systems will provide flexible real time reports for plant managers or restaurant owners. As well, it will provide a compatibility with market stream formats (RSCS) that will be long term, up to date with standards and allow interaction between these toybots using a locator system. Allowing multiple stream format translation will be likely since robots are unique to their maker.

The INET Robotics Division will make industry strides to create agent based task components. These components can be raw electronic parts to be used in a super structure; new toys. Or, these components can be basic parts of an assembly line; cookware, mixer, an arm or an ingredient supplier. Other parts of the business will make products that modify non robotic parts to work with robotic parts (eg. Oven on off, temperature switch, opening the door of the oven - handle). Creating a line of products that can interact together in an explicit organization as a functional unit is very important for the future of the INET Robotics Division and the entire financial market; society and culture.

By supplying a prepackaged electronic object that can send and receive commands to a buffer and offer these values to various motors, manufacturers will be able to explore their creativity easier. Using a digital computer with a wireless connection to the sensors, motors and lights will decrease the cost of robots while providing the capacity to increase their intelligence. The system must control multiple wireless robots at the same time to allow fluid home and business automation products.

The sensor data will be used to gather information that is specific about the environment it (robotic path) is in. Computationally, it will instruct its citizens (robots within control) more robustly as a centralized source. It will also make using robotic systems more adaptable to different environments. The configurable limits of the robotic system while comparing the target application will be prudent to balance. Some tasks and error checks will be effective as on board practices. When environments are not continuously changing, robots can act with superior performance. A robot that vacuums your house will need to know the floor plan to measure and log its coverage of carpet.

Walking among the numerous hardened steel, rubber and plastic models of [Oxford Comics in Atlanta, GA](#) so many new forms of interactivity erupts. Imagine that each toy model is linked to sound effects, their voice over, weapons, special powers and ambient world material (metal feet clacking upon the stone canyon) using the Robot Model Identification. Providing for the centralized artificial intelligence to be based upon a central server decreases the unit manufacturing cost. The visualization and object recognition system and database will automatically allow standard interactions within the user's environment. Movement is better than feeling.

Adding the specialized field of animatronics acting will be adept to natural language. Story books can set up a major or minor playing field using the character and props optionally available. The most notable consideration is dynamic capture using video to create hybrid movies. Using the robust sound system of the INET computer, speech and synchronized sound effects will add great depth to the experience. Sometimes when things are visualized within three dimensional space, camera angles become more interesting. New forms of story telling can be foretold using this technology.

It is hoped that natural language text and robotics can be made one within the INET system. Even providing a way for audio and text to be processed using the INET Text to Speech Engine to play audio upon a robot's speaker is relevant with home robots. However, dependable programming languages offer more sophisticated and precise control over robots. When possible, flexible setups that have agent based component robots should be configurable with a schematic flow diagram editor. Events can feed events. This will allow reuse of equipment and allow creation of new devices easier. These devices will use the INET Robot Automation Core to route signals to control the robots' motors and gears from the central brain. It will be great when the count down starts upon the texts - "Give me a hamburger with extra ketchup", "Cook the new Italian Sausage using Italy's famous recipe for pork sauce pasta, version 2b". "Instructions for Lasagna version 3c. Make a Lasagna using regatta cheese. Make your family proud". The differences between an industrial setup and a home setup will account for performance.

Other types of ordinary cooking should be able to be programmed using a loose syntax language. The INET Robotic Chef system comes with eighty five thousand recipes installed. However, if your taste buds still yearn, the INET Robotic Cooking Compiler will translate old family recipes like the one below into a pure stream of robotic motions.

*Make a Lasagna using ricotta cheese. Use fresh tomatoes, hamburger and Italian sausage for the meat base, and fresh garlic sautéed in extra virgin olive oil. First sauté the garlic for five minutes, then add the Italian sausage and hamburger. Puree the tomatoes in a blender and place about two table spoons of sugar in it. Add salt, tomato paste and the puree into a large pot and bring it to a busy boil. Once a boil has established, add the browned cooked meat: Hamburger, sausage, and other contents of the sautéed pan. Add diced and chunked tomatoes. Change the sauce pan temperature to simmer and cover letting some steam escape. Make sure to stir occasionally to prevent the contents upon the bottom from sticking. Boil the pasta noodles. Layer the ingredients into a large pan. Coat the bottom of the pan first with oil, start with a layer of noodles, and sauce. Alternate layers between ricotta cheese mixed with eggs and sauce. On each layer, put Parmesan cheese and thinly sliced mozzarella. The final layer, the most important, the top place a large amount of sauce and cheeses. Add extra sausage if desired. Bake until brown, about forty five minutes to an hour at 350 degrees. Let stand for thirty minutes so that a proper slice can be made. Other vegetables can be added to taste such as olives, onions, and oregano. Make your family proud.*

INET Robotic Cooking Compiler first scans the entire recipe to gather a list of ingredients. Next proportions are calculated on the amount of ingredients based upon an artificial intelligence database. Invalid proportions are a risk operation. If measurements are given within the recipe, those measurements are used as a primary source. Otherwise the artificial intelligence database is used to calculate common sense amounts for each ingredient.

Next an order of preparation is established. Order of preparation is calculated using the order of the items within the description. Next cooking terms are parsed to determine the device name. Some device names refer to pots, pans or mixing equipment while other device names refer to actual cooking equipment. Finally the last part of the service prepares a list of all the accesses to the robotic equipment.

Systems such as the INET Robotic Cooking Compiler are domain specific and refer to only the focus. This enables the artificial intelligence system to interact more intelligently than a system that is generalized. Each component is expected to achieve a goal within this system; to cook and serve. A system is offered for the home, however it requires a specialized installation within the kitchen. It even places all the items into the dish washer for ease of use. Several configurations of metal pans and bins within an area must first be scanned to ensure each item within the field of view is an edible item. INET Meat Hooks are designed to extend within the meat after initial penetration upon robotic arms. Handling a hot dog, Italian sausage, bacon, steak, large steak, roast and turkey all in one unit. The system maintains the inventory associated with the house hold food storage as well. When items are missing, they are placed upon the shopping list. With a system as this, a family can plan three daily meals for weeks or months. Multiple dishes can be served to each individual.



Entertainment meal time is a wholesome group activity that can be an excellent event with proper advertisement from the robotic waiter upon the television. This activity is fluidly orchestrated with mission possible entertainment. Ordering of the acts with personalized citizenship view of waiter and meal related items. Colors and borders around the item show the status of the cookware for the fireman to ultimately debug. Providing a real time exact audience suitable mode of the stars all eating at a table during intermission is a fun item. Providing full use of the entire array of home entertainment devices, down to the delivery moment with in between snacks and desserts served. Can introduce new marketing methods to home fun kits as lights and fog machines elevate the landscape of the living room. Providing proper handling of all portions during their cycle must be account for in some way. A research direction will include serving spoon fed of a child while laying upon a floor at their play time. The robots can even wear costumes and have their lights activate. They may poke you at times when s scary moment is about to happen. [Freddy of A Nightmare on Elm Street](#) is always there.

Including record and data of robotic activities will be important to investigations of the future. When robots become more common, their programming interface will become more accessible. While it is difficult to determine, from an electrical engineering perspective, if a robot's work will injure a group of humans or damage property, or if work is committed (programmed) with criminal intent, a regulation needs to be in place to capture this information. The industry regulations will cause labeling and classification of robotic systems that group the industry. Investigative information can be derived from the device, programming, timing, environment and live environment characteristics. A classification and license to operate robotic equipment at a store location will need consideration. [Issac Asimov](#), a famous Russian born writer and American, contemplated the [Three Laws of Robotics](#) to nail these thoughts down in Science Fiction. Providing a system of law for clearing a robot's developer or programmer from punishment must include scientific transcripts of this nature. Tamper proof is the best method to record the information.

These types of issues will most likely arise in industrial applications as restaurant robots will be more adaptable by in practiced methods. So the logging operation will be necessary for only certain types of robots. Yet, most likely, include more robots than expected. By centralizing the automation computations with the major sensor interpretations (three dimensional environment sensing), more intelligent decisions can be made about the robot's work to prevent accidents. Scheduling can also occur more precisely within a time-line. Other safety factors that identify hazardous objects can be in place if certain conditions are met. For example, never can a child program a robot to use a knife would be a good rule to have in the database. And in the work place, special safety considerations will need to take place. Everyone knows when the robot is making its special Veal and Egg Plant Parmesan, do not go into the kitchen booth before clicking pause. You could get hit with a sauce pan traveling at thirty miles per second.

Diagramming and controlling the system should be easy when incorporating the use of agent based component robotics. Agent based component robotics will be used in consumer mainstream production cycles. A new type of consulting position will open, robotic implementations by market sector. Upon the screen a kitchen is shown containing cookware, dish washer, robotic oven, ingredient supplier, spice rack, mixer, vegetable shredder, fryer and dolly arm. These robots will interact with the will and demands of customers. Programming the recipes and portions to serve must be flexible. The Dialect Business Processing System and INET GRS business system offer a follow through of operating parameters and attributes of a system like this;running the restaurant. Envisioned is an air tight, refrigeration, cooking bot vending machine to replace the sidewalk vending of modern day (Manhattan, NY). The taste buds will offer no resistor.

- [Vision Robotics](#)
- [openslam.org](#)
- [Canny edge detection operator](#)
- [Image rectification](#)
- [Binocular disparity](#)
- [Disparity sensitivity in man and owl: Psychophysical evidence for equivalent perception of shape-from-stereo](#)
- [\*\*Video\*\* TWENDY-ONE official video demonstrations](#)
- [\*\*Video\*\* The New ASIMO Running](#)
- [\*\*Video\*\* Advanced Musculoskeletal Humanoid Robot Kojiro](#)
- [\*\*Video\*\* Hubo II Humanoid Robot](#)
- [\*\*Video\*\* KOBIAN: Emotional humanoid robot](#)
- [\*\*Video\*\* Robot Violinist](#)
- [\*\*Video\*\* Rubik's Cube Speed Solver \(42.12s\)](#)
- [\*\*Demon Seed\*\* An interesting science fiction story about home automation.](#)

## INET Practice Management Support

The INET Web OS provides complete translation and integration of all software that are within the field of medicine known as Practice Management systems. As a result of the translation, refinement of the application platform provides patient integration more directly with their personal devices. While the field of medical practice is highly regulated and prompted with many data storage requirements (HIPPA), it is a desire of the industry to use the new tamper proof INET Technologies. As a specific focus of technology implementation, an independent department of INET Research will focus on software translation and adaptability. Therefore, one focus is professionally ensuring that [Medical Management Software](#) work properly and provide integration points for the new publishing features and security.

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## INET NLP Statistical Intelligence Engine

### Statistical Polling, Diplomatic Initiatives, And Multilingual Communication

#### The Mass Conscience Funnel

Upon examining a large mass problem such as democracy, it should be demonstrated by data that an information system such as suggested by this article will be effective for many functions of accurate numerical analysis. But by no means a replacement of human comprehension democracy in action, the current form of democracy will be better served using statistical analysis of polls that incorporate natural language texts. Doing so will create happier clients of the organization and will produce a stronger connection with the attitudes and desires of the population. That is very important in today's high traffic of information: digital media, events, strategy, words, thought formula and science.

Achieving customer satisfaction through a system as this aligns the intent of the establishment upon its input more directly. It provides the ability for more accuracy in the original plan of a successful service provider and their target match customer expectations. But most of all it allows an organization to change shape or policy based upon scientific measured demand. With more accuracy being understood, whole geographic areas (country) that are sectioned into smaller regions (state, county, city) will desire specific items that are relevant to their sector. The items that contribute positively to a region's standard of living, security, culture, and societal tolerances can be reiterated within education, philosophical study, mass media and practices. Most of all, by balancing communication channels from a funneled single minded opinion to a geographic area's population the negative political practices and office confusion can be realized and resolved. Proper change can take place for more people to live in harmony. But please do not forget the minority.

To be useful within the context of an office, the most likely place of use, the system will be surrounded by dynamic supporting applications that respond or listen to demand. As well, the system's data will be available for mining within the spread sheet graphing package and all facets of office product. The data will be object based to allow drill down within the hierarchy. As well, the data structure will provide branch searching of contextually related subjects within a given historical period. The category correction of data objects for manual recognition should be a management feature.

By utilizing the INET NLP Statistical Intelligence Engine in conjunction with current web technologies such as email, a world wide distributed system can be facilitated that allows data mining of opinions from a large global public audience. This system, in the correct hands, will empower changes that are wanted by many for a business product or government service. Even increasing border security where necessary and decreasing hostility though open channel communication regardless of origin. Even expansion to include the INET Staircase Goal Management System would be befitting.

By allowing the free flow of information and completing a reaction to an opinion within the business cycle will reduce the need for negative actions that ultimately cause profit erosion. Interpreting the written word it different than viewing a motion news cast, word must impact without exaggeration When the system is a driver of sorts combined with a reaction, business models will thrive. Auditorium sized mass expression will be replaced by words, discussion, documents, images, videos, and audio.

The user identity roles will be profiled with a rule database to provide proper operation, security and integrity of the system. As a secondary operation, formalizing user registration to be in-line with [EML](#) requirements will give support to government institutions that need driving input to support effective policy output. EML support will also be supported by other back end management systems. Both user identity roles raise several questions about security specific to forms and survey entry: Do users of the system get more than one input per day? Should there be a limit on the number of words in the document to allow greater accuracy of current AI methodologies. How does limiting the word space modify the communication effectiveness? Could a secondary method exist that allows the user an overview section that will be used for categorization and details section? Can formatting input of the user through interface design aid greatly in the effectiveness of the categorization? Could a database of known ideas be utilized to give accuracy in the weight. Should the system accept audio and video signals? How much Historical information should be kept? While in our society we have freedom of expression, how would the system affect other societies? Should the information be public domain for media resources to devour? By weighted means of mass, how does this modify the perception of topic priority? And detecting exaggeration for the sway? And lastly, how can the system be penetrated to augment policies that are beneficial to other countries but not America? It is obvious that in most cases of counterintelligence, it is a goal to remove positive aspects associated with growth in economy. The system intends through collective communication, to strengthen the human condition not weaken it.

Blog boards are how this is currently manifested for the masses yet there is no automated and centralized system for opinion mining. Typically blog boards are specialized in their subject's content. Users log into their board of choice and push their information out. Other users can search for information they would like to read about. And it is in the reading that the change occurs. Yet typically large bodied entities like the United Nations would not find an effective means to digest such individualistic information. And this is where a system using natural language processing will perform exceedingly well. It will allow many people to speak to the educated elite and or rich in a clean fashion so that personal dislikes are set a side. In conclusion, the INET NLP Statistical Intelligence Engine will provide a healthy working system for statistical polling, diplomatic initiatives, and multilingual communication.

## Adjective, Noun, Verb, And Ray Tracing

The ability to create cartoon animations, man made structures, buildings, cars, planes, boats, houses, food items, animals, ants, insects and humanist form into multimedia form using natural language input will be the next generation of novel entertainment, animation production and scene creation. To create a scene indoors, outdoors, cave, trees, sand, and beach does require a lot of detailed description, most of us do not describe to visually picture. The most difficult characteristics will be the small details in life, those that we consume and use visually almost automatically. Parameters adjusted in both language form and on screen control will be required because weight or precision is an important metric that most human languages lack as far as NLP is concerned.

The framework application. a split window with a main focus on the writing aspects for meta content creation is the desired interface. Having the ability to adjust the visual product of parameters derived from adjectives will be essential. Clauses will also produce a parameter adjustment panel. The generalized models that can be modified though these parameters will give the artist/writer effective visual communication and originality. Other versions of a noun can be selected using thumbnail view. The models will be located upon a network computer.

Changing a texture on a face, the basic mold of the forehead, lips, and ear size could be the result of a phrase or using shape deformer specific to the model. Moving and scaling might be accomplished in written form or graphic object interface. Refining the visual appearance of these specific hooks inside the model through a graphical user interface using handle bars, re-sizer, and shape deformer will allow further definition. The parameters and data should be linked conceptually to the words, saving state for the user upon the cursor in the word.

Providing a language form of interactivity using a system like PROLOG which lets a developer define a dictionary of relations will tie directly into objects that are components of the super model. Using a high degree of model definition in a database that contains geometric forms, noun relationships, adjectives, emotions, movement and specific or local augmentation parameters will provide a flexible system.

One of the most difficult problems about artificial intelligences is the searching limitations within contextual understanding. Example: "The apple tree on the front lawn is blooming." Defined presents determine that the phrase front lawn means that a house is near. Are there other houses near in the scene? What time of day is it? When an apple tree blooms, how many apple fall and are on the ground? The ability to nest scene description text for seemingly abstract relationships will become quickly necessary. As well, matching model genre will make a scene cohesive in artistic form.

Most likely a way of writing will develop that allows description of a scene, allowing for a bit of logical focus. For example, the statement: "There is a white two story house with shutters on all of the split windows. The curtains in the windows are pastel. Two of the windows on the top floor are opened. The family of humans, two girls and three boys along with the father and mother are living wealthy lives."

The most difficult concept for the computer to understand would be wealthy lives. What does that mean as far as human go? The concept must be tied to modern times, to show what types of clothes they would be wearing showing in the open window. They would be well nourished and seemingly happy. Perhaps other significant characteristics of wealth would be in the visualization. The rest of the sentences at most times directly relate on the visual description. There is a white house, people, windows (two open) and the curtains are pastel colors.

To allow for distinct originality, some visual traits of the scene should be based upon random input. This simplistic focus is important. Therefore, by limiting the context of conceptual focus as prescribed, a model factory can be sought in a database to create the polygon or NURB model. The appropriate modifications, adjectives and user input, are communicated to the builder or specific object factory. It is placed into the scene graph.

Since modern the human form flows together to create a realistic world and a fiction world, the fiction world disseminates into more meaning or importance than nonfiction in the eyes of modern society. Just think about how many discussions are about fiction television or movies. Being able to control these parameters in visual form will only entice web server capabilities of distributed computing. Giving monster control to ordinary writers will graft a connection that was not there. The ability to see, and do from the summoned word.

Models that are complete in form to be used by a system such as this, may have more definition than just a vector format. Verbs make things happen and animation is the next step after modeling. The INET Software and Digital Data Business System will provide the necessary hooks to allow the necessary in-line searching. It is a catalog that refines delivery methods of content. When models can run, walk and dance, the extra artificial intelligence will be listed. In some cases specialized forms of verbs may be added to the language parser. As well, when a standard operation exists such as common verbs, the motion path data can be adopt to the model. The model must have a standard joint system however that fits the model class.

When imagining a system of this complexity and robustness, mainframe technology seems better suited because of its fast data access. Capabilities of a system that can store a vast modeling system of this type are monsters typically. An average adult, after twenty years of reading language materials or experiencing Internet technology will be noun friendly. An automated system could use Internet publishing technology to learn basic aspects to be refined by nurturing hands; a model factory designer. The most difficult problem to overcome first is not to be overwhelmed with the amount information a human can recognize. Because in reality the information is tied together in a basic form for access: visual language and in computer science this is called a data structure.

Designing a system that can catalog geometric forms yet retain other related fields in parallel is essential. In some way relational databases do provide effective use, however for superior searching and indexing there are better models suited for use in the field of Artificial intelligence. This information will be stored in a database record.

- [AI Art](#)
- [Magical Stories: Blending Virtual Reality and Artificial Intelligence](#)
- [Artificial intelligence, expert systems](#)
- [The ART Research Group](#)
- [Universal Parallel Computing Center](#)
- [Scene Direction Based Reference In Drama Scenes](#)



## Education Management

### The INET Web OS Information Sage

Often in modern society, it is forgotten, the importance of teaching. In my opinion, education is the one of most valuable experiences any human can undergo. The INET Web OS Information Sage suite plans to support this lifetime endeavor using several distinct information technology applications, information systems, archival systems, publishing suites, and embedded devices; the student eBook. The INET Web OS Information Sage intends to modernize and standardize the classroom in America and perhaps globally providing equal opportunity education and value to all that use it.

Education is a complex subject to discuss. The outcome of the events that take place in a classroom are life long. Learning to read is one of the best sources that develop international society and human relationships. Language is the modal form of your code space, while INET technologies deliver high definition, high color and fluid frame rate experiences for the class room as an assisting technology.

The student eBook has significant connectivity to the teacher and the curriculum. The eBook is designed as a learning platform only. Camera feeds from the eBook to the in class network will seek to organize the classroom for more productive experiences. Providing pupil recognition to calculate the direction of the student's eyes can highlight panels upon the teacher's lecture desktop. Providing other forms of gesture recognition will allow measurement of a student's perception capabilities and attention span. Several traits of the student can be developed from this information. This information is statistically categorized to provide reports to the instructor. This will refine the teacher's understanding of his or her students on an individual basis. A teacher can then adjust the classroom order, gestures, presentation, and speaking direction to battle short attention spans. By comparing these statistical results with previous versions, a measurement of the impact can be deduced to find the application results.

Official electronic learning programs that assist with the student's education is essential. Providing an interface format that is for in classroom work as well as providing one that is for the home is included. That is, the eBook operates in several modes controlled by location, time of use and preference. Skills assessment, Pop quiz and formal testing modes can be tailored for the type of test and instructional purpose. The home based learning mode offers several methods that allow the student to review and explore course materials. Course material is a broad term for a very specific amount of information in most circumstances. A typical use of an eBook by a student is to review what was learned in class that day. As well, home work is adopted as part of the plan. In this way, home work will be a structured measurable practice. This will give the parent and teacher more accurate and up to date information about their child. Teachers are offered a summary that is composed of many students for greater productivity. By offering additional learning and studying paths, the student is allowed to explore more course related materials.

A presentation that is fresh, has several characters, actor agents that are course and subject specific will establish lifelong idioms for many information domains. A unique character for Science, Reading and Math will establish a working human relationship through this graphical representation. Within the years of studying a subject, growth patterns for the character can remove tension during continuation of a subject. Students will begin to recognize the context automatically; a small use of the associative learning concept. If the student moves to a new town, they will still have identity recognition within the classroom environment as the character used will be similar. This may reduce some of the stress inherent with student relocation. It will be an endeavor for each school to modify each character to achieve a distinctive individualistic appeal, yet the overall meaning and structure of the body, face and skeleton will remain the same.

As well, a chronological order is important to establish for each character. From year to year, imagine the Science professor agent establishing a slightly different character, tone and look each year you take that subject. Some attributes may be that he would age some, or require more attention and interactive class work. This system of natural information unity will aid with course structure throughout a student's life delivering an iconic relationship for society to reveal. Everyone will come to know the nutty professor has a distinct look.

### Modern Methods Of Computer Aided Instruction

Many computer aided instruction applications exist today. Web portals such as: [Education on-line](#), [Free ed](#), and [Berkley Education on-line](#) offer an enormous amount of information for surfing. Translating content sites like these to be integrated with the centralized format (government) is recommended for most public education programs. The INET Information Sage does this by providing content translation thereby extending course navigation. This is important because education sites such as these provide an expansion to or contrasting view of a subject. In turn, according to the functions of learning, the amount of a subject consumed by a student is proportional to their drive. This feature provides the instructor within a broad solid foundation to deliver along with their very own lesson plan.

To keep a student on track, teacher planned lesson materials within the suggested education path is desirable. Within the lesson designer, teachers can build instructional materials using natural input methods. This allows anyone with a teaching background to explore the new possibilities of creating professional computer aided instruction catalogs without computer programming experience. As well, it saves time for many given that most experience of actual teaching methods comes for an individual's oratory capabilities.

Providing the most concise capture, design and deployment strategy facilitates better content production. The INET Sage Lesson Designer is the tool that is used by the centralized course content producers, giving full capabilities to local talent. A few simple setup requirements are needed for capturing materials. A large blue background, desk and chalkboard during filming makes object recognition easier. Only a one shot full body length is needed to capture gestures, stride and teaching rhythm. Object recognition accuracy can be increased using colored bands around the major surfaces of the body. A kit is optionally available (INET Motion Skeleton Pads) featuring colored digit gloves, forearm, elbow, leg, thigh, and shoulder patches. Generally, these motion pads are not required but do aid in the fluidity of motion translation during object recognition. Some types of teaching may require these such as courses where the instructor uses a model within their hands.

Featuring multiple stage dramatics such as head shot, full body shot, and side view is often necessary to maintain attention and aesthetic composition. A narrative shot is also supported providing a way for a voice over to narrate a graphical presentation. The narrative shot is best suited for segments where the chalk board is recognized. These interesting camera angles are set after the object interpolation has been performed within the agent model using the motion data.

After lesson segments are captured by an instructor, the video, audio and chalk board presentation can be converted to the agent actor character. Object recognition is used to analyze the video segment for mouth and head gestures. Other motion path data is also recognized using the motion path pads. All of this information is converted to motion path data to assist in building the agent character. This data gives more life like motions to maintain interest within the resulting animations.

Textual information is gathered from the audio stream to produce a text and diction result. When accuracy of the voice recognition is not proficient, editing may be required. A textual script can also be entered but requires that time relationships be established with the audio source. By using the audio sample and textual script information, the diction model is established to offer natural speed and extended voice attributes during the Text to speech conversion. The INET Text to Speech engine is then used along with the agent character's voice model to create the natural voice dialog script. An audio signal that contains the humanistic references common to the practice of oratory.

Each agent model type within the lesson designer is related within the database to a stage with accompanying props. The props assigned to the hands can be indexed by the lesson segment that is currently being edited. This gives the instructor full creative range on demonstration models being utilized. The hands of the agent actor are molded to lesson design thus subtracting the cameo marker device from the instructor's hands to provide adequate visualization. The camera angles within the lesson segments can automatically be set to draw attention to formal use of these model props within the instructor's hands. This is accomplished by implanting references within the textual script. This instructs the render-er to change the camera to a pleasing close-up of the model.

Intermittent camera angle changes implanted that maintain aesthetic composition can be automatically generated by the course render-er. The system decides when to change the camera angle based upon textual content relationships, textual content acting instructions, teaching rhythm, and audio characteristics. Textual content relationships are deduced using natural language processing and artificial intelligence. That is the content is analyzed for sensing the major and supporting points. A transition between each of these sections occurs with camera angles providing a slightly different default view of the classroom. The agent actor may straighten his clothes, take a breath, jostle the arms about, clap his hands together, wipe his forehead or perform another idiosyncrasy common to such events.

Textual content acting instructions are directly entered into the script within brackets using English or natural language. These acting instructions override the major motion path data that is ordinarily used for the segment. The effect and duration of these acting instructions lasts only for the running time of the command. The end result, that is the position of the elements within the scene, overall character pose, and camera angle set, is persistent until the next context point change. To maintain humanistic motion, the motion path data is applied within the model space throughout the segment. The amount of effect that the motion data has upon the model space can be adjusted as preferred.

Teaching rhythm is a relationship that is derived by correlating the subject content to gestures and stance of the instructor within the video. Typical camera angle changes are zooming in upon the chalk board when their backs are facing away from the class room seating area. When their head changes to slightly looking back, as is common with short explanatory segments, a short zoom out is utilized to expose more of the chalk board and more of the agent actor. When the head turn back to the chalk board, the frame is change back to its original position. Within this context, if their entire body turns around back to face the group of students, a torso shot can be decided. Other useful camera angles can be automatically decided as well. For example if the instructor moves to their desk or prop area to retrieve a model for examination, the best shot will be a full shot. A full shot is a camera angle that is inclusive of most of the class room teaching area. The agent actor would be in full view. A side shot can be appropriate for functions of explanatory segments where chalk board writing is interrupted for a long duration. This draw focus away from the information presented upon the chalk board to the teacher directly. During segments of this nature, an instructor commonly uses their hands and arms. Explanatory segments can also transition into narrative shots of the chalkboard information.

Audio characteristics are indicative of head and full body shots since audio emanates from the mouth and is punctuated by body language. Through recognition of tonal changes calculated relative to the base line pitch of the voice or abrupt changes in diction speed emotion can be inferred. Several attributes of the face can be set in subtle motion for quality. Animation items such as eye brow movements during joyous reasoning occur regularly with proper cheek bone movement. A pause or sigh can trigger a head shot or full body shot depending upon the current camera angle. A full body shot is decided upon when large of amounts of gestures are shown with a busy tone.

The automatic recognition and implantation of camera angles according to inferred data recognized will ultimately provide some irregular or misleading camera shots. While the recognition of these items comes from logic, the ending sequence of the process ensures natural durations for each scene change exists removing some if there are too many. It also applies natural camera angle changes where segments are too long thus providing a natural relief for the scene. This is to maintain an overall consistency with the entire presentation as automatic recognition is granular. This is accomplished using a rule database populated with common sense cinematography attributes.

Several methods for segmenting the course materials exist, providing a way for the teacher or course designer to give a structure to the course. A teacher may wish to instruct and test using a chalk board or dry erase board as the input method. These segments are converted into the necessary interface within the segment. A table of contents can be established to provide navigation through the editing and marking the video segments. Camera angles, acting commands, inferred emotions, chalkboard segments, narrative segments, are sibling relationships established within the table of contents editor. This provides the course designer the ability to refine the automatically prepared aesthetic presentation. The INET Sage Lesson Designer offers several navigation methods to provide the best fit for the course material and age of the student which can be selected at this time. Upon the completion, a fanciful stage and skills assessment testing center is revealed.

### Designing Courses From Live Video

Other types of teaching may explore formal environments that cannot be translated easily to computer graphic models. Videos that teach electrical, mechanical, or industrial applications need real life video in most cases. In the case where an electrician would like to show how to install a light fixture, natural recording of the event while a job is taking place is desired. Or in the case where the musician wants to show how to play basic cords, how to play *Stairway to Heaven* by Led Zeppelin, and screech walk using an electric guitar, other methods will not suffice. As well, this style of content creation will be common for many training videos associated with the marketing of jobs. That is, several technical videos will be associated with micro task jobs stored within the INET Employment System. In these cases, the INET Education Live, a INET Sage Lesson Designer component, gives the professional the ability to show and tell at the same time. The INET Education Live gives power to the educator to create and deploy quality training materials based upon structured design concepts using a live video capture to ease the burden associated with computer aided instruction (CAI) programming.

In these types of courses it is important to give the director the ability to segment during capture using a natural method. This will provide a target space for additional information that will be associated with the visual content upon the segment splice. A marking system is implemented to provide the capture of an event within the video; a cue point.

Several methods of marking a cue position within a training program can exist. Depending upon the complexity and length of the video teaching segments, several devices can be used. Appropriately these devices synchronize the stop and start of asset capture or mark cue points while the capture continues. This functionality is configurable during the capture stage.

## Cue Marking Devices

If the camera is attached to the computer directly, a USB Logitech Web Camera for example, the space bar or mouse button can be used. The space bar is appropriate for bust shots while a wireless mouse can be used for staged and standing sessions. When the INET Professional Network Camera is in use, the INET Remote Control Click Shot can be programmed to mark cue points. This will automatically tag the cue position numerically for later reference. The INET Dictation Pen Assistant can also be programmed to associate its click point with the marking of a cue position. The dictation audio will be tied to the marked cue position. During the editing of the training segment, the voice dictation is available for refining the segment.

During the resulting instructional content the student views, information not within the the live video learning segment can be exploited during segment passage. The user is invited to explore this information to impress learning the skill and tools used within the task. Typically, a template for visual overlay layout configuration will be chosen within the designer to integrate this feature. These information templates can provide an alpha composite panel to signify related information.

The segment is not limited in functionality. For example, the student can be tested with a quiz before continuing. A formal segment can also be established to provide a transition between learning blocks of information. The segment can wait interactively, or be timed before continuing. Visual transitions will include the fade in and fade out which are the most popular effects used for structuring multiple segment instructional content. This is to maintain element fluidity and visual stability. Directly relating that the segment is formally ending, a review segment is typical for such curious places. The review section will underline the major processes explained within the previous video segment. A link will exist to provide quick navigation to the sub segments within the video if the student wants to watch it again. The sub segment alignment will be an indicative relationship to the cue points marked by the instructor when they captured the lesson.

## Structured Content Blocks

Within the module that provides an interface to use live video, several coherent pedagogical structures will exist to guide course design. Maintaining a textual script for content makers is beneficial to potential teachers that are not formally trained. Many individuals lose sight of some details while focusing upon other types of details. In this script structure, developing a course map is one of the initial steps. When employing formal teaching concepts, subjects are introduced then expanded upon. The course designer helps the instructor with what to say and in what order during the recording of the live video through managing an outline tree of the course. Each element within this tree becomes a lesson segment. Somewhere within the live video capture, there will be several cue points that align with elements of the course outline.



The video editing course engine will provide a template base for course structure. Several types of segments will exist to provide functionality. Templates for use within a video frame as well as formal segments are necessary. Offering multiple selection of visual styles and layouts for each segment type is a dynamic design consideration. Basic segment types include: overview, summary, live video segment, video overlay info-panel, textual segment, quiz, section test, and certification. The live video segment can be referenced in random order by cue point, or by microsecond time specification. Within the resulting lesson stream, a continuous program of information is disseminated in the specified order. A fully designed course provides section table of contents, course map, in context navigation, indexing of content, and closed captioning.

The INET Education Live video editor provides the ability to author a visual link segment. Within this course segment the author can visually link objects within an image for associative visual learning. In these segments, students will select objects within the scene while a configurable event fires. The event is configurable to any series of the basic segment types. That is, when the student clicks the polygon area within the image, a section of content is started for review. After the section is completed by the student, the navigation automatically returns to the visual link object section.

### A Blue Collar Toolbox

Another very important course segment is the visual step practice. This provides a work bench for the content author to design an interactive graphic demonstration of the lesson. The process will include testing for an order of steps to be accomplished by the user for completing a goal. The student can also press a suggestion button while the next operation within the segment is displayed temporarily. Several functional types of this segment will exist depending upon what is being taught. The visual step practice segment editor within the INET Education Live module is easy and flexible to use. The ability to change the pointing device operated by the mouse or human input device to appear as many different tools is necessary for this practice segment. That is, the student must have the correct tool chosen as well as providing its correct operational use to achieve a correct response. The segment can be planned to display instructional steps to guide the student through. Other types of segments developed with this interface type may be intuitive and not need process prompts. The purpose of this segment is to give the student a practice simulation working with models of the environment.

For example, imagine a mechanic teaching how to change all the spark plugs, wires and distributor cap within an import car. Because there are many complexities involved, it is necessary to inform and test the student on the order in which things of this nature are done. Depending upon the make of the car, up to twelve wires may be involved. Within the lesson, some things can be done out of order such as taking one wire and changing the plug. Therefore the validation of a correct response or the entire task being completed may vary based upon rules of accumulated work. The segment editor provides an easy interface to describe the necessary relationship rules.

As part of the rule defined task, the spark plug wire correlation must be maintained between the spark plug and the distributor cap as before installation. This is a necessity for engine's pistons stroke cycle to match to the appropriate plug. The distributor cap must supply electricity to this plug at the right time. For a teaching segment as this, several images may be involved. First opening the hood. Locating the distributor cap, the spark plugs and ensuring the correct model exists for replacement may be some of the tasks. Next, proper tools must be located and maintained. The software provides a tool box simulation for such practices.

### Expandable Object Segment Model

While the INET Sage Lesson Designer provides several types of formal segments that are very useful, often it is necessary for third parties to incorporate other types of simulation or stimuli within the training. The INET Sage Lesson Designer is well designed in this respect offering an objected oriented model for implementation. Any INET SoftSpot that inherits the Sage Lesson Segment object model can be referenced within the Sage Lesson Designer studio application. This is a very useful deployment strategy for custom and retail situations. For example, offering three dimensional simulations is often a negotiated benefit of United States Army, United States Navy, and United States Marine Corps training software. Civilian deployment strategies commonly include specific database references for accounting software. In short, the Sage Lesson Segment object model is a key technology for large scale deployment of teaching materials; across the board. The object model provides a direct plug in for externalized development.

### Visual Design And Layout

Because visual templates are the basic principle of the over all look and layout of the course, the artistic desires of the content producer must be fulfilled in many ways. The package comes with a dynamic list of templates tailored for many applicable industries. The ability for a designer to implement multiple styles and layouts to a course is important. Especially when companies will be providing branded content. The system provides a template population section to provide color configuration, layout positioning and the importing of assets associated with brand names.

### Robust Video Editing And Processing

The course content designer provides robust functionality for editing live video. This makes course production much more productive due to the native interface design. During the editing of live video, cue positions can be automatically implemented as video segments for example. As well, associating these points or sections of the live video to the course outline provides is accomplished easy with mouse selection. Cue positions marked during the recording of the video provide a reference point for designer to instill structured information. Implementing the course template structure becomes a batch oriented task for the course designer.



Common video editing functions exist within the tool as provided by the robust INET architecture. The ability to clean video images automatically of several types of artifacts exists. The library also provides several convolution filters associated with image processing (sharpness, video blur, and special effects). Video processing enabled within the interface is also quite easy to use. Specifically balancing color, contrast and tint throughout a video segment is easily accomplished. In some areas, automatic numerics are calculated based upon statistics.

The video editor provides the facility to use object masks. Thereby a segment of video can be processed to exclude portions of the video such as the background while leaving objects that are in the foreground. This requires the user to mark objects within the video. The video processing routines use the inner composition of all the contents selected to process the rest of the motion data. This provides other types of artistic content to be placed within the frame. Specialized backgrounds and professional computer generated graphics can be placed within the scene.

### Proof Reading, Course Navigation And Segmentation

Several facets of this instructional asset will need proofing. Errors and critical thinking gaps are refined through content dissemination. The INET Sage Lesson Designer provides a proofing mode to allow content to be reviewed by multiple parties. This is a significant goal as deemed pertinent by many pedagogical info structures globally. Parents want to be sure that information is precise for viewing and learning. During the preview session, content can easily be marked for errors and documented through the interface. If the project coordinator wishes, content can be modified in line by the auditors as well. In most cases, the project when viewed in proofing mode will only record caught errors within a database.

Because the educational materials captured are a valuable asset, storing the information in an open format will preserve the investment. The INET system also includes translation and transfer functions to update existing educational information portals adhering to the academic label. The format of the materials captured must be able to be recompiled again, edited and maintained to be refined each season. New paths of explanation and lesson routes are always definable within the course information network.

### Content Production At Hand

Incorporating content of modern facilities that show tutoring or learning environments usually depend on Three Dimensional Artists that use external asset editors. The system can be used to reference web based repositories. Movies, Videos, Diagrams, Images, and Simulations are stationary objects to be referenced by the instructor for inclusion. This application work division comes through technology development methodology.

The INET Information Sage suite compiles all assets including the academic agent character to offer a structured learning user interface. After information encapsulation and render occur, the layout of the information is the important factor. The generalized layout manager supports format and positioning of information within logically made flowing patterns. Complexities that are solved within the layout manager rely upon total length of the expanded content. Layout templates defined to be visually prioritized for learning and that dynamically conform over a series of staged, populated layouts are used to publish information to students.

## INET Academic Content Production

The INET Academic Content Production engine performs its image and animation functions using the INET Visualization system. The access level of the engine is tailored for types of presentation segments that occur during lessons. Making rhetoric of simple animations that normally occur during an algebra lesson, for example, when variables are factored is easily accomplished using the layout animation compiler.

Utilizing common idioms that are configurable such as a black board user interfaces are included. The INET Academic Content Production stores these templates and visual property hierarchy object chains within a data object database. The data object database provides a structure for course content and associated assets to be grouped and categorized.

Several segment types that propose new detailed insights into linked main information trunks can be chained together to create an animated, magnetic, morphing, and magnifying experience. This provides educators with the ability to encapsulate a teaching style that is specific to a subject. For example, within science there are many constructs and subsequent models that should be grouped together. Additionally the database data object reference can contain an entire lesson plan that can become the lesson on one that merely becomes extra information within the formal lesson segment. This database format provides a centralized resource for content producers. Many of these database can be referenced during design.

## Navigation Systems And Templates Designed For The Age Group

Navigation systems are rendered for the appropriate target audience and allow configuration. Some experiences within course material are better experienced in a timed, sequential order. This is true of a physical classroom environment. No one really controls the first grade teacher, they are speaking and the information is given. Likewise, some content and course materials will have a similar automatic consumption interface. The interface that exists within a television can be compared to that of teaching, it is a focus, a volume adjustment, and an attention tune.

The content production engine will support information flow chains that are conducive with the practices of public education. The advancements within computer logic can also allow periods of simulation, testing, and review during a lesson plan. Computing presentations within a classroom can be controlled by the teacher during a lecture to provide maximum effectiveness.

Input into the system can be dependent upon the age of the student or the subject. Supporting the natural tablet interface of writing mathematics during an algebra exam is a target feature. Within this interface the student naturally solves problems as if it were paper. The system provides a very accurate OCR package for recognizing mathematical notation. The Mathematical Notation OCR configuration is dependent upon the level of math being taught. Often within OCR, a common step is error correction. The configuration must be specific for the lesson plan to provide a sensible error correction stage.

Supporting the arts, and writing expression is also conducive to the academic content production engine. Writing with the hands must never be forsaken due to the popularity and availability of pen and paper. During the first few years of student instruction, most likely the input of all information will be based upon hand writing input. Writing will be an essential skill for civilizations to come. Often legibility becomes an issue when the teacher is not aggressive during the early learning process of letter formation. A mode can be configured while using the INET Hand Writing OCR package to suggest proper adjustments of the student's hand writing in real-time. The suggestions are shown on the display outlining the original character with a contrasting color. Within the repetition practice mode, the student is invited to reform the character over and over. When the older student is forming words and sentences, the character correction shown using color contrasts is more subtle within the interface. The sentence and paragraph hand writing interface offers repeating segments within the structure upon an overlay in batch mode. The package is flexible enough to allow a style to develop. That is, the recognition of malformed letters is a configurable attribute of the engine.

Artistic drawing talents can also be realized through practice. Picasso did not form a perfect circle during his first time wielding a brush. Rather, it was through the progression of time and motor function repetition that his hand drew expensive bloody red dots. The system provides several teaching methods for teaching basic art skills. From outline stenciling to color coordination. Additional art modules are provided within the INET Academic Content Production engine and by third party inventors.

### Education Funding

Public education must not be depleted of functionality, funds, connectivity and inventions. Therefore providing the best system of deployment means a safe network solution and a cost effective one. The student hardware must be a durable education book with a consolidating interface. Allowing personalization with plastic coatings that extend the water proof chassis will replace book covers. Students must be able to magnify their personalities.

Several things can be learned from current systems that implement on-line education. What is of primary interest within the INET Web OS Information Sage is the target audience of the presentation. Presentations relating to school can be classified in many ways. Primarily noting the viewer to be a student, parent or teacher will affect compiled attributes of the user interface. Based upon content, due to student parent relationship, a technology interface gap will exist. That is, some items will be accessible only by the parent to help the parent in reiterating a school lesson. A specialized interface that aids the parent is beneficial for many reasons. Defining an audience target and their interface operation is key to content consumption.

Allowing a school to take full advantage of simple interface technology will strengthen the necessary tie to technology that needs to occur. For example, requesting a second grader to download forms and print them out for their home work may be difficult. It is fundamental principle of design to affect interface. Some content packages of modern day fail to do this because of web interface technology gaps. The INET VLISM system provides the most effective solution for full screen network deployed interfaces. This allows interfaces to be designed for many age groups using the same technology. INET VLISM system design also provides the best security model needed for such deployments. Students must stay within academic information when using their books. Academic endeavors is the only purpose of the device. The systems are supported using the INET Web Server Operating System or any other Web Server Operating system that conforms to the VLISM stream format. And finally, the INET VLISM design provides the best performance model for necessary cost effective deployment of an embedded hardware device. In short, VLISM technology is an academic technology for the future.

### Chalk Talk Tact

The viewing apparatus becomes the teaching chalkboard. There are select technologies available in modern day that will provide cost effective unit deployment. The liquid crystal display and [Electronic Paper](#) are adept for this application with supporting industry controls. Use of the entire screen area must be well planned.

The teacher's ability to solicit information must be very direct when in the classroom. Simply dial a student and expect attention from the student. One can assume that the information will be best suited bare, that is, in easy consumable form. Materials used outside of the classroom must be designed to reach out. An operating context that is self paced with review functionality is an important program operation. The student should be able to just view the lesson without interaction. Upon these terminals, logging the terminal use and timing information may support tuning the experience for effectiveness.

Curriculum management through guideline structure leads the great task of unity in subject traits and education weights. Students often complain of teacher relationships and their position of freedom within the context of education. This position and interpretation will vary based upon the academic model that they *execute* daily. Public school, private school, religious school, private funded education, and home school are the modern forms. There are many different structures world wide, yet most funding for the global educational system comes from a centralized source like taxation; a government source. The course structure set, because it is distributed across many people and great distances, is left to localized implementers. Improvement will come by redirecting these resources to be more productive at information dissemination using a series of tools for delivery, reference and assessment.

## Freedom Of The Cage Match

Allowing a growing organism complete freedom of movement never establishes a forward momentum that causes change. Stimuli is needed for genetic calculations to perform mutation functions. An unchallenged organism becomes sedentary and takes the easy route offered. The structure of modern schools in America, provides several levels of education types for a subject. The divisions of education quality does vary by instructor and by culture. Culture does affect education due to control issues, a seemingly unrelated effect of the industrial revolution. If modern computing methods were implemented using a fragmentary project plan, the adaptation would be easier due to experiences gained.

The explanatory segments of classroom teaching are what impact students first. Major trunks of information achieve cognitive penetration during this discovery layer, a presentation. These are the best segments that impale memory because they are structured in logical steps; even more evident within the sciences. Concise supporting points of view that elevate the major thought process must be viewed written or projected statically while this discussion occurs. Making use of the hypersensitive time embeds the learned material with analytics for later honing. The progress must be measured and recorded for each student. Because teaching materials will be designed as a centralized data source, the progress of information and student learning will be more accurately tracked.

For a transport of the learning experience, it is presumed that a three dimensional experience would be best. The environment of the teaching stage can be captured to include the entire school environment. This will allow graceful and natural connectivity with the assets during [CAI](#) course production (publishing). The data is to be captured in a flexible format including the related media, lecture video segments, agent actor, text, models, simulations, classwork, video, home work, and quizzes; translation of the information to a consolidating user interface will simplify use. Maintaining a state relationship between the classroom mode and homework mode will be essential to providing a fluid learning experience. The INET eLearning Book is an instrument of academia and therefore must operate as one all the time.

## Homework Is A Work

The homework mode will providing easy connectivity with student identification and context to a pool of teacher's assistants. Modern forms such as [Home Work NYC](#) work toward a solution, however INET will provide an integrated solution. This will compensate directly where more explanation is required during the younger years. The INET technology interface will succeed in providing interfaces to the youngest generation of learners without parental involvement. This business hurdle makes the technology more accessible and self paced for students because scheduling tutoring time while after the work day is difficult for many parents. Parents at most times expect their children to do their school work. The stage is set to make the time when students are during their school work or home work more productive. When parents want more involvement with their children's work, they can monitor progress in their own interface. A desktop to provide one on one coaching for lesson plans and checking their loved one's work is available. Contextual linking of lessons, related information and additional information will ease the student and parental interaction.

Homework correction, feed back and record keeping will be a valuable asset for the student and teacher. In some subjects such as writing, a valuable interface for teaching the skill involves marking the content with special symbols. The instructor is provided with an interface that facilitates the common mistakes made. An instructor may suggest new ways to form a sentence or paragraph. This will be easily noted within the interface. Other subject domains are important to cover as well. Math problems given for homework can be inputted in multiple formats. An important facet of the eBook is that input can be from a qwerty device or from a pen stylus. A pen stylus is an important function during the early years when handwriting, both cursive and normal print are supported. During input several characteristics of the handwriting style can be measured to provide better formation later. A specialized program will aid in this process. Keyboard typing will be more essential in the future. A standard sized keyboard is supplied during the appropriate years of education.

The INET Web OS Information Sage is a product line consisting of many technologies. The suite is designed for many ages and curriculum. A new device, the student eBook enables learning to occur in various modes and locations. The device and many of its course materials are designed for special education and for those with disabilities. Homework and self study are important considerations that the software is designed implement. Most of all, the initial hurdle of designing a complete multiple level curriculum is enabled through natural methods. Teachers and lesson designers will simply record their very best methods of teaching on digital video. This digital video is transcribed into a complete animated learning segment, one that compliments in school methods. In conclusion, computer aided instruction will provide the very best education distribution to those that lack. Computer aided instruction will level the playing field and stop education malpractice. Everyone deserves the right to an equal public education. Everyone deserves a future.

#### Thoughts to consider

- Curriculum management through guideline structure
- books and information can be kept by student for the lifetime
- student testing
- homework on-line
- no more lost the homework, your notebook - GPS books
- scheduling and warning light
- working with a child as a specific device implementation
- lights and buzzes when needing to study, parents and the school may work together for a schedule.

- no arcade games - school computer
- providing a warming world away from home
- positive experience
- channeled, time scheduled after school student group collaboration
- **teaching methods**
- video, audio, animation, text, exercises, review
- information and teaching style can be more uniform and standardized to ensure information and method meets the ears.
- chalkboard based learning
- incorporating the system as a classroom guide
- the classroom computing suite
- the student computing suite
- testing and scores
- recording use time
- suggesting study times to meet goals
- branching out with other related information for basic understanding
- branching out with other related information for advanced understanding
- artificial intelligence lesson path
- new high school picture book and graduation present - A golden USB Key
- developing index information automatically for live video classes.

- Live video course offer the ability to create content must faster.

## **See Also**

- [literacy rate](#)
- [Teaching](#)
- [Collaborative learning](#)
- [Collaborative Networked Learning](#)
- [Global Public Education](#)
- [Why education is broken](#)
- [National Curriculum](#)
- [United Kingdom National Curriculum \(official site\)](#)
- [National Strategies \(UK\)](#)
- [CAI Instruction](#)
- [Social Learning](#)

## *Examples of eLearning systems*

- [e-learningforkids](#)
- [Official site of Chamilo](#)

## *Content producer systems of eLearning*

- [Chamilo](#)
- [Official site of Chamilo](#)



- [Aptara corp](#)

### *Teaching methodology*

- [Teaching method](#)
- [Instructional scaffolding](#)

## Many Devices And The Centralization Of User Data

Creating new embedded Linux devices with [wireless](#) capabilities will be of great benefit to consumers of tomorrow. A good start today is [Stream Media Radio](#), a localized database to speed searching will be needed. This will hold the names of the Internet radio stations. A specialized high performance server is needed. Byte Level Quality of service agreement with multiple hosts will be an essential management feature of the web server.

The next cycle or branch of business could be a HD screen. The users could watch net channels on a slim device. For example, branding NetFlix, HBO, Cinemax, ShowTime or ESPN for three months while paying subscription after will entice manufactures to encode specific web sites for video feed. Of course the device's capabilities can be furthered, but make it life style oriented and rugged. Something you can toss around. Perhaps a protective coating on the front of the device. Newer generations could have USB capabilities. The toy version could play 3D games from a [DVD](#), while allowing Internet activity and browsing to occur.

However the ending goal would be a hybrid embedded terminal with GUI controls that are Internet enabled through a virtual machine using VLISM. [Linux Devices](#) is the research direction for the terminal. The ultimate in quality by delivering rich media content from development tools associated with mainframe technology with distributed computing is a reality. Vector shape processing is essential for robust presentation. Common formats such as Adobe SWF and Microsoft Silverlight. I suggest that these formats be transposed at the server side and transmitted to the consumer device in the designed vector stream format.

HTML documents on the mainframe server side will be condensed to increase network efficiency and render costs of the client device. Perhaps a centralized storage of broad web documents will benefit deliver costs as well. However dynamic content will still need to be handled. A web spider could preprocess a cache to save translation of dynamic content. Management of these items will be done via database and time stamps. Nevertheless, delivery of a terminal, both desktop and portable laptop, will bring robust mainframe technology to the consumer.

### See Also

- [Arm Processor](#)
- [Trusted Logic](#)

## INET Web OS Technology Summary

### Lifestyle Software For The Computing Human

Software included with the INET Web OS series of operating systems will include a new base line offer that no current manufacture has. These programs will be developed by individual companies. Part of the capital users spend upon the INET operating system will pay for these applications; each company will receive a share. The platform delivered within the INET suite will be one that provides for the user's many needs out of the box. The industry has learned what these needs are over the past twenty years. Especially, modern users are interested in multimedia content derived from their life (pictures, sounds etc.). Modern users are interested in entertainment. Modern users are interested in two way communication. Modern users want value and add on expansion features to existing applications. INET applications support expansion of all its applications where appropriate within feature add on, upgrade, per use expansion and secure agreement delivered expansion. When users are defined upon a system, their entire user identity is used by these software programs at initial start for identity.

The software library includes software catalog investigation tools that branch to alternative or more advanced software. The catalog is structured for the designed component and application purpose. It provides a software map and educational services to users on the many inventions that developers make. This will open the software industry for better competition.

#### News Reader

The application will allow a concise view of news reading materials that the user subscribes to. As well, having a choice of publications spawned local city, regional, state, or national. Attributes may change based upon country.

#### Book Reader

The application keeps a queue positional of where readers are within a book. Allows a natural full view of the materials, font and view preferences are easily accessible. Text to speech rendering using the high quality Articulatory Speech Synthesis technologies are also at digit's reach. Magnification, linking, and highlighting are features but not heavily imposed.

#### Calendar

The application provides view and reminder of scheduled events. The events can be entered manually or arrive from other applications. For example, a meeting scheduled by the electronic commerce application to unload the DVD box set can show. Or the moment with Tina tucked away within the black book application is in view. Views while considering security can be published to your friends. And your friends can request time with you when it is appropriate.

## Electronic Librarian

The application keeps track of electronic books or media that are owned, or checked out from a library system or other third party. The system allows the easy index and searching of these materials; shelves. The system integrates to public library and private library systems at user will. Other practices of rental system use that directly market digital media are included within the interface. However, [Public Libraries](#) are the main precedence. During use, bookmarks and annotations can be saved and accessed for each and every book. The Dictionary and Encyclopedia are integrated for ease of use.

## Integrated Dictionary (Spelling and definition)

Spell checks in-line within text editing controls. A definition can be shown for any word listed within view making it a great learning tool. As well, audio pronouncement of word using several types of voices is also available.

## Integrated Thesaurus (definition)

Allows Thesaurus reference in-line within text editing controls.

## Encyclopedia

Desktop reference edition licensed from expert resource. Selection may change based upon user age or criteria.

## Geographic Map

Integrated Geographic Mapping Service (Linked) to on-line service. The mapping information caches local areas from related searches. Cache allocation is based on frequency of use.

## Public Transportation Trip Planner

Many public transportation websites have a trip planner on-board. This application will place this information at the user's finger tips and allow memory of common routes they may take. By integrating with other applications that come with the system, less data entry and more concise scheduling can be accomplished. [Public Transportation](#). An accompaniment interface mode would allow users to hail taxis. This portion of the system would be benefited with server processing and GPS integration of taxicabs. In a city the size of Manhattan, taxis are easy to come by most of the time. The user would press the button on the phone and a nearby available taxi would answer the call. Locating the person through the GPS beacon. Users will arrive in style as their favorite music video starts looping while they sit in the back. An available spot for direct marketing with consumer profiles. Other forms of travel could also be placed here. Regular travel on train or distance ticket buses would be a compliment.

## Education Sphere Explorer

System provides education advancement courses and access to on-line content. Geared for age grouping known by modern school curriculum. Ease of interface allowing total use of screen real estate. Testing and memory of courses taken is a top feature. Educational resellers are invited to publish content and resell certifications based on secure testing. Links to school curriculum are established by enrolled public or private school students.

### Note Taker

The application is geared for quick snapshot typing of notes within a classroom or meeting. Allows entry based upon room or class. Can apply tree based structure to information easily. It is linked to the Scheduler. The system also provides input using a stylus. Translation of handwriting to digital text occurs in background.

### Spindle Web Browser

The distributed application provides the exact capabilities that modern web browsers do using distributed technologies. Including a smooth interface cooperation to host applications, the system is flicker free, easy to use and persistent with security and personal identity concerns. In addition, the spindle web browser can also displayed cached and precompiled websites that the user commonly visits. That is the web browser, handles HTTP mode as well as VLISM stream format.

### AquaWeb Padtop

The system included as an HTML editing facility for publishing raw UNICODE information and applications. Robust in nature, a debugger and IDE experience, the facility will be used by advanced developers and beginners to maintain HTML view documents. Including writing tools, large source editing, HTML Tidy, compare and syntax highlighting the system can be used to produce. Supporting in-line and comfortable view of content as shown in various browsers including the Native Browser.

### Scribble Padtop

An activation view function of User Sphere Workspace, by hot key and UI, that allows easy reference and editing of fragmented use tasks such as note taking, information reference (dictionary), contact reference, reminder messages and use of Padtop widgets (calculator). Information produced is not limited to the space and can be transferred. The Scribble Padtop maintains continuous stream information by time and date. The main all purpose application is the Scribble Editor, an application that hosts the pertinent information parser. Relying on identification keys, the information parser will send the data to the associated application. The application will allow a summary and iconic view of the stream to refine searching.

*Appointment 8/16/10 The refrigerator repairman said he would be here no later than 10:00 but most likely around 9:00am. [www.RepairCoolers.com](http://www.RepairCoolers.com). The cost will be around 150.00 bucks. Make sure to have the money in hand.* There are several segments that can be links to different parts of the system, but the most important one is the Appointment Scheduler, for 9:00am. Formatting the message differently would ease recognition.

The line within the Scribble Editor, will change to show the schedule has been accomplished. Further refinement of interface details could allow management button link.

Other applications are also available: *Email to anthony@yahoo.com subject "Important sales events coming up shortly." Dear Miss Antsy: Please come to my dinner appointment for a good fish fry next Sunday.*

*Diary Today she looked at me. She jumped up and down all over fifty cents. I was glad to see her smile. Walking away, I saw good light in her eyes. She be back I thought.*

*Find emails from one-economic.com sent today will show a component that describes the search results.*

*Calc (23+44+98+3)^4\*3*

*Basic for i=1 to 10:print 493^i:next*

*Map 20033 Fifth Avenue, NY NY*

*Dir 20033 Fifth Avenue, NY NY to Union City*

*Google 25 c++ berkley sockets unix shows the first twenty five matches. Google:next shows the next 25.*

Scribble Pad offers Components inline to ease user interface operation.

Net:www.one-economic.rhcloud.com will show a browser for the website upon the continuous flow page. The user will be able to scroll the web site page and navigate. A new scroll bar will allow context switching of what view to scroll, the component or the entire stream.

Home Automation and Robot Controls. *Auto:Light upstairs hallway on* or advanced macro commands like *Auto:When I leave turn dish washer on*

Phone:Call Bill after shower

Car:Porche defrost window after breakfast

Sales:graph 10/13/2010-12/19/2010

## Entertainment Black-book

The system provides road maps to fun times in a location. Plans of desire, characteristics, and mood allow the user to plan an evening. Planning an evening may be initiated by using the user's profile. Some users may use the application during a business trip or travel. Other users may use it regularly within their home town. As an event designer, one can quickly tell what must take place between these two circumstances. Site seeing or special events may be included for users that are here for the first time. The system is designed to make an evening flawless. Complete with map rendering (device location integration) to send friends to start engagements. For that special touch during a party meeting a personalized invitation package can be tailored to include all necessary information. The format is portable to connect with mapping and driving systems within a party goer's phone or vehicle. When an invitation requires payment, electronic commerce functionality can be included within the delivered invitation applet to process payments. The application also fits within the user's calender The application portal invites service resellers to promote their restaurant, event, or environment. The application portal invites service resellers to make fun event themes for clients. The application portal provides the new age medium for couples to enjoy their time together. Including spontaneity within a relationship often is knowing about an event or environment.

## Pertinent Information Catalog Manager

The database system provides reporting and editing of information funneled into its memory. INET Feeder Applications vary upon data usage and intent.

## Brain Stormer Writing Tool

The tool provides quick searching of materials as ideas are being brainstormed. Allows an outline to be established and supplies links to quality materials for supporting arguments. The application promotes the standardization of communication by supplying structure and form to the concept.

## Audio Note Recorder

The audio note recorder, also being able to be linked in-line with Note Taker, allows easy unattended capturing of speech communication. Great for classroom work.

## Contact Organizer

A centralized interface for contacts. The application sports links to all the user's devices and provides synchronization. User definable categories allow the user to separate business from pleasure. Items can be sent from one Contact Organizer to another to reduce errors and typing.

## Open Format Office Software

The ever useful suite of office applications. Drawn from the OpenOffice.org and StarOffice mediums.

## Audio Editor

A high quality audio editor with special effects.

## Film Fabricator

A film studio in a box for generating and publishing life experiences the user captures on film.

## Font Catalyst

The object oriented editor allows creation and editing of font faces. Font faces can start with two dimensional vectors yet be modified for three dimensions. During the vector conversion process from two dimensions to three dimensions, z plane face build up can be selectable. It supports good methods for editing vectors and the specifics of font typesets. The new facets available with three dimensional type face can be modified (texture, lightmap, z depth, rotation, etc.). The application supports packaging and resale of font faces thus connecting to a certified digital data retail store.

## Calendar

The OOP API supported interface allows distinct views based upon category selection. Shows stale mates on time runs and provides effective reminders to the user, what ever device they have with them. A highly critical notice could ring the cellphone personalized telephony message or show a box on the laptop. Moderate events evokes a small status reminder. If not answered, snooze control will take over.

### Personal Web Identity Publisher

The application allows a user to publish a dynamic content flowing navigational structure that invites users to get to know them. Allowing a contextual selection of the desired relationship, business, friend, or other. Pictures, film, audio, etc. The application is object oriented to support integration and third party publishing features. Users can maintain multiple domains and information sources.

### Oscar Robotic Device Remote

The application provides single entry point for physical device usage.

Lock Manager - All mounted lock devices are shown in this interface that are owned, or rented. The laundry mat dryer will be listed here as well as having a major component interface within the laundry mat applet.

Devices within the system are to provide work or output not directly related to computer technology. Devices may be part of your home.

Home automation attendant. Lights, water, thermostat, security alarm, cameras, window blinds, door open/close, Digital Media.

Other times, Oscar devices may be rented within a temporary environment the user visits.

Laundry mat

grocery store

shopping mall.

Gas Station - Car Washer

Robotic advisor. The system provides interface and remote access to robotics such as Vacuum, Cook, Dish Washer, Table Setter, Clothing Washer/Dryer, Mail Opener Box Scanner, Delivery attendant, Cabinet Stocker, Refrigerator Item Retrieval, Spice Rack, Weigh, Lawn Mower, Garbage Cans, Emergency Fire Manager, Pet Helper.

### Electronic Commerce (Bank registering required)

Secure on-line transactions. Registration of the device for secure electronic point to point secure identity transactions. Also allows reporting of expenditures and alarm limits.

### Personal Goal Management

The system provides a maintainable metric for progress of goals. Keeping the stack current and providing an interface layer to the Calendar.

### Digital Document Manager



The system provides a specialized interface for document searching and viewing. It allows a user to create a view of multiple documents that integrate together within one interface, tabs or sequential listing. The view parameters can be transferred along with soft or hard links to the data. This allows for a concise view of status and historical change data. Status, marking and categorization can take place here.

### Photograph Editor

Provides a tool for correction of photographic errors.

### Photograph Organizer

Allows photographs to be categorized and viewed in slide show. Production of a compact slide show. The program also allows several photographic compositional artifacts to be removed. Enhancing the photographs viewing area to be normalized. Removing unusual artifacts associated with incorrect lighting during picture capture, resizing the photo and cropping elements from the photograph will be common practice..

### Calculator

A hand held calculator.

### Alarm Clock

An alarm clock with integration to NIST, [Time.gov](http://Time.gov) or similar service world wide. The service also allows connection to wireless alarm clocks.

### Automation Recorder

The personal record will allow users to automate system wide functions and application usage events. The application produces an automation application that can be linked to a button within any application, sitting upon the counter top with user definable icon. Interfaces can be designed as well to appropriate retrieval and changes to data storage.

### Image Editor

A good image editor.

### Music Catalog player

Contains the music licensed on the system locally and remote. Allows transfer and synchronization from portable devices.

## Video Catalog Player

Allows the play list playback of videos. The Video Catalog Player and Music Catalog player operate upon the same code base, yet the produced view is associated with the specific content.

## Music Creation (Loop and Midi)

The application allows music to be created using loops or importing MIDI files. The interface allows note input using a piano style interface. Sequencing of audio events can also take place. The application allows DSP effects to be chained together to form interesting sounds from the base instruments. Software versions of the instruments can be used or if the user has a sound-bank processor, it can be incorporated using the standard USB interface.

## User Sphere Explorer

Artificial Intelligence and Associative Cataloging System. System provides view of any information within the user's domain. Information is catalogued by summary views. Text to speech can also be used in a user friendly manner to access information.

## Electronic Mail Communication

The application allows plain text and rich text format of email messages. Included are quality word processing features, the standard paragraph text editor, contact address, threaded email address validation, registered email, and SoftSpot component email contents. The interface of the email system will be included as a component of User Sphere Explorer and the System wide find feature. (Suggestion from Life Streams - Eric Thomas Freeman; Yale University; May 1997)

## Message Board Communication

There are many forms of text messaging alive and kicking in the mobile and browser market. As well, textual communications with Bulletin Boards and Internet forums. The application will provide communication with the systems using the correct format and allow an ongoing conversational thread between parties.

## Video Phone Communication

The system provides secure video phone communication. The video conference contact book uses the standard component.

## Audio (VoIP) Phone Communication

The system provides secure audio (VoIP) communication. Optional charges apply to real phone carrier calls. But point to point VoIP audio communication is provided free.

### Personal Financial Adviser

A personal finance manager optionally connecting directly to banking account.

### Three Dimensional Modeling Tool

A modeling tool that allows beginners and intermediate level artists to sculpt their dreams. Providing connection to on-line models and other resources. Resale of on-line content, professional models, can be purchased and incorporated into the presentation. The system supports animation, special effects and has multiple material bases included. The Film production studio and the modeling tool are integrated to allow mixing of media. The modeling tool has the capability to connect with professional modelers and on-line banks of models for purchase, through INET Software and Digital Data Store Business System The model file format that is output uses the open source format.

### On-line Radio Station Catalog

The system provides a consolidated tuner style interface to listen to radio stations world wide. The ability to find stations, by country and interest is present. As well, searching some content to filter genre for example is accomplished using machine translation to provide accuracy. Search by country, genre and quality.

### On-line Television Catalog

The system provides a consolidated tuner style interface to watch to television stations world wide. The ability to find stations, by country and interest is present. As well, searching some content to filter genre for example is accomplished using machine translation to provide accuracy. Search by country, genre and quality.

### Computer Management

The computer management application allows users to define user names and set up valuable user security privileges. Manage backup information. As well set system wide rendering functions.

## Goods Shopping Store

The application provides a community based on-line retail catalog of new and used items. Professional and home user market materials apply. The system invites community leaders to increase goods transfer. International market placement is available provided the customer and store owner agree on shipping. Yet the main intent is real time find it buy it, pick it up or ship it. The sells can be directed to certain users, a User Group. The software allows a shopping list to be created based upon price and attribute. Electronic materials can also be purchased and ownership of digital media changed. Providing contractual agreements will be necessary. The software also allows integration within the leading market places of modern day and track their transaction amounts: Ebay Auctions, Yahoo Store Front, Criag's list and local paper classified section. The software will supply a centralized interface for communicating with each of these services. If the item is listed on multiple services and the item is sold by one, the system wil automatically discontinue advertisement on the other channels. However the main focus of the application will be the INET Store Front Business Model; one that is personalized, organized, flashy, easy to use and uses the new functionality of the INET Web OS. When users have a shopping list of items they are broadcast into the looking for category. Other users can invoke sales based upon this information. When items are placed into the selling category, potential clients are informed, of course at their request. Operation of the Store can be integrated into third party applications for open market space cross applications. The system provides excellent functionality for auctions and has a bid monitor built in. User's that sell on-line pay no transaction fee. However, there is a distinction shown based upon business license or private transfer. Transactions are recorded and protected within the electronic commerce server. [On-line Shopping](#)

## INET Web OS Software Catalog Explorer

The system allows software retailers and developers to promote the use of free, trial based, rental, upgrade, of new software products. Providing the ability for the market to be competitive, authentication of publisher is a desirable feature. Listed first are the users current applications. If there are alternatives, the system will promote these.

## Internet Search Engine Integration

Finding information on the web will never be easier, allowing seamless User Sphere Explorer integration between local or remote digital data objects.

## Operating System Transfer Coordinator

The Industry Wide component allows controlled transfer of an operating system from one host vendor to the next. Applications and user data will be transfered upon proper agreement statues. The ability for new operating systems to be advertised within this space is present.

## Parental Control

The Parental Control feature allows parents to safely and easily restrict content and applications for users.

## Computer Security Adviser

## Dialect Small Business Management

The application provides an effective system to run a cash tilde, reporting, inventory and payroll for a small business like a store. The inventory system will support tracking of loaned items from a centralized distributor. Where appropriate, Internet communication about a business and the proceedings binding them to a government will be fulfilled. Many forms of information are transfered with the business knowledge that is included in these application. Providing an extension and upgrade path for the suite is a requirement. Typically in person meetings are required for establishing a reseller license. During this time, the components will integrate within that meeting to allow transfer of any further dialogs, additional code models or information specific to the company or product. Providing training for these items will maintain the vision of making money with the INET Web OS.

## Multilingual Correspondence (Live, Machine, or Queue)

The application provides an effective translation management process of textual data. Supporting machine translation or human translation (fee based). The market of human translators will be dynamic and contain verifiable connections. Time estimates and scheduled fee accounting are provided. Specialized rates can be offered for quicker translations.

## Multiuser Visitation Collaboration

## Games

The system will include five quality video games, three card games, two board games and three puzzle. Some of the titles released will change yearly to keep fresh play.

## Technology Tutor

## Web OS Tutor

## Software Tutor

Providing the user with an education on the INET Web OS will entice new users. Providing testing and authentic certification testing on usage will provide solid documented evidence of skill. Providing robust learning environments about the catalog of software will be a standard practice. Creating learning paths that identify transfer of skill, new skill, existing knowledge and new knowledge for age group will enhance global social distribution.

## INET Server Software And Business Software Catalog

The INET platform includes many software packages that are installed as a user based for home consumers. The INET platform also includes many business functions for data processing. Below is a list of all software that is currently maintained within this book.

## INET Computing Hardware

The economic vision of INET Technology is robust. It includes not only a terminal and consumer grade hardware but also numerous other inventions within the technology line. Below is a list of these devices.

## VLISM Compiler And Platform Technology

### Spider JIT Mnemonics

As the driving technology within all INET Web OS and INET Applications, the advanced multiplatform JIT and compiler enables a robust and high performance application execution environment. The base technology includes operating system parameters and logic for controlling modern hardware. The operating system and boot production are for any Linux variant supported and INET Hardware. Comparing the robust architecture of Linux using variants Ubuntu and Fedora in specifically low memory services, the INET Web OS provides similar performance characteristics to include multiple types of system prints based upon service requirements. INET Web OS development tools will also produce binaries for super computer versions of Linux like [SUSE](#). The [Attachmate group](#), based in Houston, TX has recently acquired the SUSE project along with Novell. SUSE is known world wide as the leading OS for super computing power, which will be the scale of economic servers for the future. One of the problems the compiler solves is computing infrastructure for multiple users when considering the scale of users. That is, sometimes an architecture may be produced that requires message queues for cloud computing while single user applications post data directly to the drive. The INET Web OS Compiler resolves major comparability key factors within several types of deployment environments. When deployment requires integration with native Windows, Mac or Linux GUI environments, a combination [QT](#), [GTK](#) and [GCC](#) code production is used. The Web OS object compiler includes data structures, boot long-time library (settings), network objects, databases, hardware support and instrumentation. Separate environments will exist for the development or running of applications. This simply makes INET Web OS user deployment freedom number one.

The INET development stream ties a certified strategy to the Digital Economics area of software production by offering a distinct environment for consumer application development and deployment. INET Web OS Platform Development Business environment provides the capability for an Operating System Boot development. The INET Web OS Embedded Device Development environment provides the capability for stand-alone embedded device settings. The INET Web OS Consumer Business OS provides secure business services. And last, the INET Web OS Family Entertainment OS provides secure consumer trading. Each of these operating systems has a server model and a client model. In some cases, both will run upon the same hardware.

An important function multiple OS platforms provides for business and the future of digital law is assessing damages caused by computer malware. In this case, each ring of operating systems provides a distinct bank where users and business can install software from. As well, each software install is signed for a particular operating or business model. An example feature this separation provides is checking software usage domain as protected by insurance and law. For example, an administrator may certify that office computers only have business software installed upon them. While the business operating parameters are more restrictive, only providing for a single entry portal for applications, this accountability is essential for faultless business operation. In general, this will provide cyber-crime investigation laboratories an attacker's audience. The penalties may be more strict for [Industrial espionage](#).

Each server operating system provides several modes that the server hardware can function in. These modes are typically set once at boot time and never changed unless the CPU is going to be used for a different purpose. This decreases the deployment time, configuration time and provides the availability for high performance distributed computing due to the realized operating mode. For example, several pooled economic processes, standard data processing and data storage services are available within the INET Web OS Consumer Business OS that provide publishing and business functionality as an object. The INET Web OS Consumer Business OS has a series of applications that manages a host provider and publishing. The deployment benefit of a business server as an object provides a regional server. Several businesses within that area may have just an INET cash register. Therefore the INET Web OS Consumer Business OS provides multi user and star database replication network management.

Each mode setting of an INET Web Server Operating System is provided as a starting and management point for the computer as a long term resource. The resource will be managed by development staff or corporate infrastructure through settings and applications that are appropriate for the use of the machine. Software that accompanies the base server software will be labeled and realized by the server OS. The intent of these functions are to provide ease of use, and stability for each product. The deployment of these features will be upon a generated desktop for the server configuration. The server configuration can be one of several INET Digital Economy Business settings. It is also expected that a machine can function as several server units when a business has a limited number of server machines. When modes are mixed, the desktop configuration and view provides this valuable information within the desktop interface design. On some remarket designs, program data and digital may be protected from additional software installation. In this case, these server modules provide a "black box" operation while exposing appropriate function and data control. For example, modern times allow multiple copyright infringements to exist by duplication of data. For media servers, a store must provide license fees in proportion to usage. This provides remarket and package distribution of business and technology patterns with third party remarket value. For example, an INET OEM Business Server vendor, may be a music and media label like Sony. In which case, materials may be played or viewed one time while other materials are downloaded as part of long term property. When counts within the database start getting low, the server may respond for inventory fulfillment. A full life cycle will exist to manage the customer related functions with the store as defined by their purchase.



It should be summarized that the INET VLISM compiler is robust and will produce several types of output. This is not to be undermined by additional technology as the work is well planned. For example, a very useful architecture and technology is language. Most businesses agree to this approach. VLISM supports both rapid operating system development (ROSD) and rapid application development (RAD). Their strength is that their functionality rests upon a database style compiler which will produce multiple formats based upon settings. Strategically, this gives a very modular and object oriented design to the OS while fitting precise implementations with solid object output code. For example, machine code produced for some routines can be more precise by including inline and hard coded values where additional codes were found before. The new type of optimization is one of many that are within the realm of compiler production. Therefore improvements within the technology hardware and software can make greater strides in unison while the operating system compiler model maintains all backwards compatibility. Specifying ROM storage for routines that are well tested can be accomplished on hardware updates. Finally, multiple servers, their functionality and their underlying frameworks can be managed as a module within the compiler to produce the most effective and fault tolerant business system. The underlying application architecture and composition can be defined to be a closed system for some dependencies. For example, typically a dynamic scheduler is provided which computes and analyzes CPU performance and provides the road to work management. However, in a object oriented closed system (encapsulated), items may be precisely tuned. Maximum number of tasks within a ring for example. And providing a lookup table for instruction block size. Other algorithms such as database storage and database management can be provided effectively using basic structure providing that SQL is not pure dynamic within the source.

Upon each management view are specific functions that either group business functions, or specific software functions such as data recovery options. Take a moment to review the following INET Web OS Consumer Business server modes. There may be more not listed. Think about all the possible options that may be a fit for a data center and remote desktop management architecture. Remember, each server component may be branded and remarketed as a black box design to general users. Each view may be structured by security privileges. Finally economic transactions and distribution is automatically built into each server.

#### Modes for Business Server

- Web Server
- Intranet Web Server
- Database Server
- Application Publishing
- Goods Retail Store

- Additionally, some servers may have a secondary selection mode to refine some of the language set and domain settings for each business type. That is in some cases the business type dictates how interactivity will occur. However, each server mode includes many base functions included within the over all server processing model of a retail store.

- Food Service
- Clothing
- Home and Garden
- ect..

- Subscription Server

This provides functionality for a business to keep private customer subscriptions. A delivery is expected for each account.

- Digital Publishing Server

Provides generalized publishing services for digital data that is for sale.

- Employment Server

Provides real time comprehensive employment services.

- Game Server

Real time gaming

- Social Networking Server

The black book of all romances, personalized for each member. By area.

- Digital Music Label

Provides the capability for a music label to sell and track digital assets. Artists are invited.

- Video Jukebox Rental System

Like the red box service seen today. People can market to locals within the area.

- Digital Marketing Channel - provides a protected digital media server for artists to publish digital media, while retailers can softly link their store items. The system offers a design implementation choice using a rule database for media selection. Some database can be designed for comedy placement of goods while others are more realistic. Still some products will be limited by the manufacturer to a select set of media files. That is, a large company like Coca Cola can make their own music and games for their products.

- Home/Life automation
- Robot Artificial Intelligence and Local Node Visualization Server  
Provides the centralized brain for navigation of the user's environment.
- Music Production Server  
Produce music by samples and digital signal processing. The server environment provides for the capability to add hardware rack resources for distributed music processing and rendering. Additional tools for balancing to studio quality are also online.
- Video Production Server  
The server provides tools for creating project based films that also may includes CGI.
- Visualization Farm Server  
distributed Ray tracing
- Marketing Server  
Provides detail rendering and collaboration of marketing. Signs, audio radio, LED signs, printed signs, and all customer information. Data can be collaborated with a centralized source. See INET Herald Marketing
- Staircase Goal Collaboration Management Server
- Point to Point Secure Identity Transaction Server
- Poll Server - INET NLP Statistical Intelligence Engine Server
- Education Management Server - provides a system that can be monitored by education regulators. Students are required to be connected to the information.
- Natural Language and Modeling Server - provides a facility for user to describe a scene. The scene is composed from known nouns within the database. Objects are reactionary to adjectives and verbs. The system generates a consolidated parameter listing of objects and their actions. Stored and associated with the text, these settings can be modified. The benefit to this system is the large database of nouns. Value is added and distributed when models are leased or bought. Specialized portions of objects such as face, eyes, mouth, and lips can be linked to external data. For example, adding textual speaking scripts using the Voice Production server provides animation transforms.
- Voice Production Server - \* Uses language as a model to produce sound. The INET Text to speech

- Machine Translation Language Server - This product provides translation for phrase and application interface.

- Print Media Manager Server - provides third party specialized printing.

- Development Manager Server - the development of programs for the platform.

- Data Translation Scheduler and Server - provides secure document handling and translation for any type of digital data. Based upon the data type, a path will be formed for the work.

- Multiuser Collaboration Server

- Electronic Mail Server

- Texting portal

- Video

- Audio

- Application

- Meeting

- Instructional

- Goods Transportation Server - Real time tracking of goods as they are being transported within a corporate infrastructure or a detailed supply line.

- Public Transportation Server - provides user interface and actions for the public transportation system. Interactivity is also built within each unit to respond to personal requests such as information, music or video games. Communication of use such as stopping can be generated using the system. Arrival of a bus can be scheduled alerting the driver of a need. As well, customers will be well informed about times.

- Limo / Taxi Cab Server - Complete life transfer.

- Digital Data Agreement Server

The server maintains identity as two parties and groups of their machines. That is, the INET User Name is a walking stride in good and proper uses.

- Electronic receipt server
- Security monitor server
- Industrial Construction Server
- Construction Server
- Department of Motor Vehicle Server
- Digital Identity DNA Server Authenticity Server (eGov Licensing model as well)
- Police Department Server

Handles the day to day publishing needs and sorting. [LAPD online](#)

- Civil Law Server

Allows remote connectivity to schedule and connect with all forms of identity.

The VLISM Spider JIT compiler is implemented as a collection of C++ objects. Each function listed below is represented as a C++ object. This enables greater portability and reuse of the technology within other systems. These systems can produce machine code real-time as a JIT or the compiler can be configured to output CPU and operating system specific code. It should be noted that the term operating system can also be applied to web browser thin client technology. For example, the instruction VLISM\_ADD has multiple function entry points while each overloaded parameter encapsulated within the class fits specific types of additions. The first parameter of the function call tells the system to invoke a specific parameter interpretation and calculate the result. This parameter is the interface selector. The default, 0 (zero), provides variable type and parameter conversion during execution. Most of the time, unless a text syntax compiler is being designed, the parameter is expected to be resolved to a type safe function call.

The compiler will produce stand alone executables, boot strap executable, C++ Source Code, Java Bytecode, Dot net CLR or HTML, CSS and JavaScript applications. There are many more implementations not listed. A database used for storage while implementing SQL for data editing is a platform for most multiuser applications. Stored procedures for distributed processing is an architecture benefit for most multiuser web applications. The compiler can also produce autonomous programs that are standalone database applications that execute upon a client machine in native form. Later the database can be backed up and translated for a server side application. The INET Render Operating System will protect these data files from being tampered with by other programs.

The INET data dependency and code path dependency searching algorithm provides cross index to data and logic functions based upon application production settings. For example, the technology provides high performance rendering for applications that use HTML, CSS, DOM, and JavaScript. Internally during compilation, the display documents are compiled to a rendering command pipeline. This is accomplished using OOP design. Development on a server model using MYSQL and platform technologies such as PHP for integration with Java Applets will add complexity to the compiler yet the long term computing goals are more important. Several code banks providing object functionality are provided.

The new Web OS operating system model will include many of the base system features that are in modern operating systems. The technologies such as protected mode, buffered I/O cache, interrupt vector array, device model, machine code blocking for multitasking, memory management, The INET Web OS adds a design for multiprocessor memory operations. These systems are stored within linker libraries. The development tool provides deployment and debugging facilities during the development of products. Embedded devices using the platform compiler system will be effective in performance, open creativity, cross platform interoperability, and security.

New virus protection is applied to application design to complete the cycle of application management. Application management will be newly implemented within the INET Web OS. The File System will be object based and provide support for binary executable objects for link time and run time performance. The file system implements private executable data and private application data to each operating component. Shared resources will be linked to programs by intentional distribution list settings.

In addition to supporting modern computing hardware and OSes, the INET series of computing hardware provides a newly designed motherboard. To reference the addition of network computing within user options first provides flexible distribution. As well the errors of the past are reflected in [Type-Safe programming](#) technologies like HTML, JavaScript, and CSS. Web technologies are supported as a format using communication subsystems that include encryption. These implementations are an attempt to provide application designs that will not crash the machine.

Many scientists cower when asked to reinvent the wheel. When it is done, each step or generation allows duplication of past efforts (Objects) according to the necessity of modular programming. To provide further detail in a necessary research path is to enable design possibilities in parallel computing by memory model. Architecture of the parallel processing client will include message queues. As seen within dynamic load balancing web applications, the architecture will provide flexible distribution to a host of multiprocessor systems.

By removing the computer language grammar technology from the compiler foundation, absolute robustness can be gained for many development practices. The base compiler details web scripting services, GUI main interface rendering, as well as provides the capability for standard OOP programming for large scale enterprise applications. Within the stream, each mnemonic. parameters and segmented payload data is represented in a compact space given by the current name-space. Within the JIT compiler an absolute reference to a name-space is made when only a few instructions are referenced from that name-space. Context switching between namespaces are accounted for within the stream design as well. This provides for multiple references to a name-space using a smaller reference point. The parameters sent to most of the instructions are relative to data segment space. Memory pointers or identifiers to variables are referenced by symbolic identifiers. These symbolic identifiers are hash sequences used within the memory manager to provide direct memory access to the information when the JIT outputs machine code for the native CPU model. Type casting and boxing are provided inline when needed for parameters to be converted to and from a type. Therefore only the necessary instructions exist within the outputted code making a more concise memory model for resulting code space. Instructions that support block operations, (string operations, memory operations), also use the hashed symbolic identifiers to prefilled with the parameter data. Internally within the native machine code, these references are relative to the stack, data segment or code segment.

Take a moment to look at the example programs below. These programs can be ran on all platforms when compiled using VLISM. The compiler set is reused from C++, however the VLISM language can be used as input.

### VLISM Sample A

*The following program outputs an HTML application, a Java Applet, a Java application, a Windows Executable and standard VLISM Bytecodes*

```
#include <stdio.h>
#include <cstdlib.h>
#include <VLISM.h>
using name-space VLISM
void main(void) {
Compiler *vExec = new Compiler('HTML, CSS, PHP, SQL, Java=Applet; Windows xp, 7,
8=Coff_Exe; Java, AWT, Swing=Application; VLISM, JIT-bytes=Application; ');
vExec->clear_instructions();
vExec->symbol(int16, 'X');
vExec->symbol(int16, 'Y');
vExec->symbol(int16, 'C');

vExec->instruction(vMOV, 'X', 10);
vExec->instruction(vMOV, 'Y', 25);

vExec->instruction(vADD, 'C', 'X','Y');
vExec->instruction(message_box, 'C');
vExec->compile('/home/VLISM/output/test/*');
delete vExec;
}
```

## VLISM Sample B

```
#include <stdio.h>
#include <cstdlib.h>
#include <VLISM.h>
using name-space VLISM
void main(void) {
Compiler *vExec = new Compiler('HTML, CSS, PHP, SQL, Java=Applet; Windows xp, 7,
8=Coff_Exe; Java, AWT, Swing=Application; VLISM, JIT-bytes=Application; ');
vExec->clear_instructions();
vExec->symbol(database, 'db');
vExec->symbol(recordset, 'rec');
vExec->symbol(chart, 'oChart');
vExec->symbol(image, 'img');
vExec->symbol(window, 'Y');

vExec->instruction(vINVOKE, 'db', 'connect("c:\\testdb.vdb", XML)');
vExec->instruction(vINVOKE, 'db', 'SQL(\select * from graph where artist=\'AC^[-|/] ]DC\' , \'rec\');
vExec->instruction(vDATASOURCE, 'oChart', 'rec');
vExec->instruction(vINVOKE, 'oChart', 'set_chart_type(Bar chart)');
vExec->instruction(vINVOKE, 'oChart', 'set_chart_title_text("The Who song statistics")');
vExec->instruction(vINVOKE, 'oChart', 'set_render_mode(3d onscreen');
vExec->instruction(vINVOKE, 'oChart', 'render_single_image_frame', img);
vExec->instruction(vINVOKE, 'open_window', img);
vExec->compile('/home/VLISM/output/test/*');
delete vExec;
}
```



```
Compiler {
HTML, CSS, PHP, SQL, Java=Applet;
Windows xp, 7, 8=Coff_Exe;
Java, AWT, Swing=Application;
VLISM, JIT-bytes=Application;

}

Globals {
database db;
recordset rec;
chart oChart;
image img;
window outputView;
} Program {
db.connect("/home/VLISM/Database/testdb.vdb", XML);
rec=db.SQL('select * from graph where artist=\'AC^[-|/] ]DC\';
oChart=rec;
oChart.chart_type(Bar chart);
oChart.chart_title_text("The Who song statistics");
oChart.render_mode(3d onscreen);
img=oChart.render();
outputView.Draw(img,1,1);

}
```

One of the most powerful options that the VLISM Spider JIT and subsequent compiler tools provide is intelligent distributed cloud computing. Most applications that are designed for distributed computing have inherent functionality to support messaging between hardware devices. This does place a burden upon the architecture and developer during coding. The VLISM namespace operates using distributed code executing on the right machine. Functions that utilize operations that are executing upon other machines are invoked using server stubs. VLISM makes intelligent distributed cloud computing device independent, secure and highly scalable. Performance is also one of its greatest qualities. During execution, state is automatically managed for binary consumption if the target has already been compiled. This is important for users and businesses because valuable resources will be saved. Once a package has been transmitted to a client device, it does not need recompilation each time the program is ran. Likewise, server side implementations will perform exceedingly well for large computational tasks within the domain mathematics, data restructuring, data access, and data storage.

See Also

- [Web IDL](#)
- [Object Management Group Specifications](#)

- [Corba IDL Specification](#)
- [OMG IDL Examples](#)
- [WebGL](#)
- [BIOS interrupt call](#)
- [Ralf Brown's Interrupt List](#)
- [OS Dev](#)
- [Art of Assembly](#)
- [NASM - The Netwide Assembler](#)
- [Reverse Polish Notation](#)
- [x86 instruction listings](#)
- [Machine Code](#)
- [C Programming language](#)
- [C++](#)
- [Objective C](#)
- [C Sharp \(C#\)](#)
- [Java programming language](#)
- [Computer Languages](#)
- [XML](#)
- [HTML](#)

- [CSS](#)
- [Javascript](#)
- [GDI](#)
- [Direct X](#)
- [DIVE](#)
- [HLA \(High Level Assembly\)](#)
- [Master boot record](#)
- [Booting](#)
- [ROM](#)
- [Disk partition](#)

### Intrinsic Mathematical Mnemonics

- move or =
- add +
- subtract -
- multiply \*
- divide /
- operator precedence ( )
- postfix formula set (XML with compiled symbolic namespace or binary structure representation)
- function

- percent
- base
- power
- $\exp(x)$
- $\text{sqrt}(x)$
- cube root
- min
- max
- standard deviation
- sin
- cos
- tan
- to degrees
- to radians
- asin
- acos
- atan
- ceil
- random

- seed random
- log
- nlog
- average
- mean
- median
- modulus
- and
- or
- bitwise or
- bitwise and
- bitwise xor

### Process Logic Mnemonics

- for
- while
- loop
- repeat
- do

## Decision Control Transfer Mnemonics

- compare less than
- compare greater than
- compare equal
- compare not equal
- switch
- case
- default
- goto address
- call object
- symbolic index branch (function pointer)
- boolean expression compare move branch

## Low Level Mnemonic Support For Translation

- 8086 family support
- RISC family support
- JavaByte code
- CIL - Microsoft dot Net support.
-

## Memory Management Support Mnemonics

- allocate block (ALLOCBLK)
- free block (FREEBLK)
- fill block (FILLBLK)
- grow block (GROWBLK)
- compact (COMPACT)
- compress (COMPREMEMBLK)
- garbage collect (GARBCOLL)
- hash table stream block symbolic object memory (HTSBSOM)
- index block fragmented pattern update (IBFPUHTSB)

## Object Management Mnemonics

- load object
- load server stub object
- get object path stream
- close object
- close server stub object
- check object integrity
- scan cache for object
- store object in cache

- prune object cache
- store object reference in registry
- get object reference in registry
- search for object reference in registry
- compact object registry
- prune object registry
- delete object reference in registry
- iterate reference dependencies of objects within registry
- chain overlay
- unload object
- event: edit expand object with overlay

**See Also** [OMG IDL](#)

#### Data Type Object Declaration Mnemonics

- void
- pointer
- integer
- decimal
- floating
- long



- rational
- imaginary
- complex
- currency
- bignum
- boolean
- counter
- int16
- int64
- byte
- bit
- unicode character
- unicode string
- date
- time
- tick tock big num
- tick tock 32bit
- metric measurement
- length

- true color - compression during transmission within stream schedule for full granularity
- two dimensional point
- three dimensional point
- two dimensional vector
- three dimensional vector
- type cast - compiler labeling and web application code path sensing speed up for unroll
- data object location
- image
- sound
- video
- animation
- universal boxing storage

### System Settings And Services

- set timer callback
- clear timer callback
- get timer resolution
- set timer resolution
- get timer ticks
- get system settings

- set system settings
- get hardware system settings
- load device driver
- get system preferences settings
- set system preferences settings
- get user preferences settings
- set user preferences settings
- generate globally unique identifier key
- generate unique identifier key for namespace
- console output string
- console input string
- read keyboard buffer
- query keystate buffer
- get keyboard status
- set keyboard status
- set special key and function macro
- activate find window
- set mouse cursor image set
- get mouse cursor image set

- get mouse cursor location
- set mouse cursor location
- get mouse state
- pointing device attributes
  - **set / get**
  - click time
  - wheel speed
  - track speed
  - acceleration factor
- sound playback volume
- sound sample volume
- line out volume
- normalization decibel

## See Also

- [DMPIS](#)

## Intrinsic Window Output Mnemonics

- open window
- open panel
- open counter top

- open table top
- add event
- add listener
- show UI Object
- hide UI Object
- close UI Object
- move UI Object
- animate move UI Object
- pop UI Object
- push UI Object
- resize UI Object
- maximize UI Object
- minimize iconic UI Object
- repaint UI Object
- get surface UI Object
- blit UI Object surface area
- set parent
- get parent
- add children

- iterate children
- remove children
- set UI Object z order
- get UI Object z order
- get scroll position
- set scroll position
- alert box
- message box
- confirmation box
- set focus
- natural sort UI Object z order
- set / get UI Object attributes
  - transparency
  - magnification tracking
  - set mouse cursor
  - event: associated view animations
  - event: onLoad
  - event: onClose
  - event: onFocus

- event: onInit
- event: onKey
- event: onKeyDown
- event: onKeyUp
- event: onBufferedCarriageReturn
- event: onMouseClick
- event: onMouseMove
- event: onMouseDoubleClick
- event: onMouseWheelScroll
- event: onMouseWheelClick
- event: onSpecialKey

### Visual Surface Area Mnemonics And Objects

- *collection property*: image process pipeline pre
- *collection property*: image process pipeline post
- fill area
- layer view manager
- set surface polygon mask
  - blending function (ALPHABLND)
  - image clip (IMGCLPPOLY)

- polygon hotspot map event (PHME)
- interface component mapping grid area (ICMGAPHME)
- view-port clipping

### Intrinsic Window Surface Area Mnemonics

lock page (LOCKPG)

unlock page (UNLOCKPG)

page flip (PGFLIP)

create pen (CREAPEN)

destroy pen (DESTPEN)

set pen (SETPEN)

set pixel (SETPIX)

get pixel (GETPIX)

draw line (DRALINE)

draw ellipse (DRAELLIPSE)

draw arc (DRAARC)

draw rectangle (DRARECT)

draw polygon (DRAPOLY)

draw list (DRALIST)

draw gradient (DRAGRAD)

draw Bézier curve (DRABCURV)



fill area (FILLAREA)

set font (SETFONT)

get font (GETFONT)

create font vector table (CREAFONT)

destroy font vector table (DESTFONT)

draw text (DRATXT)

draw text layout (DRATXTLO)

draw rich text (DRATXTR)

draw rich text layout (DRATXTLOR)

general blit image (BLITIMG)

unroll inline blit (UNROLL\_INLINE\_BLIT)

unroll inline blit with transparency (UNROLL\_INLINE\_BLIT\_TRANS)

unroll inline blit with pixel gate decision (UNROLL\_INLINE\_BLIT\_PGD)

unroll inline blit with pixel clear gate decision (UNROLL\_INLINE\_BLIT\_CLEAR\_PGD)

unroll inline clear back buffer blit with repaint overlay  
(UNROLL\_INLINE\_CLRBB\_BLIT\_PAINT\_LAY)

remove image blit unroll (DRABCURV)

get brightness level (GETBRIT)

set brightness level (SETBRIT)

set contrast level (SETCONTL)

get contrast level (SETCONTL)

get saturation level (GETSATL)

set saturation level (SETSATL)

zoom in (ZOOMIN)

zoom out (ZOOMOUT)

set zoom (SETZOOM)

auto pan (AUTOPAN)

### Cairo Graphics interface support

The Cairo Graphics library provides a set of interface functions for rendering within two dimensions. The library is well known in the Linux world and has multiple device support. Major applications are bound to these names and therefore compiling using either the direct name or a symbolic (synonym) equivalent is desirable. Applications will have better support if they can be compiled directly to the function library names. Arguments of software management strive to elevate previous design implementations. The pre-processor could also map these common symbol names to the native platform list and output a new source file for editing.

### See Also

[List of vector graphics markup languages](#)

[Cairo Graphics](#)

### Printer Output Mnemonics

- start document
- stop document
- print line
- print page layout
- print document
- print associated report viewer page

## Socket Communication Mnemonics

The set supports the common interface known as Berkley Sockets. The list gathered from [Wikipedia.org](https://en.cppreference.com/w/cpp/string/basic/basic_string_view).

- socket
- bind
- listen
- connect
- accept
- send
- recv
- close
- gethostbyname
- gethostbyaddr
- select
- poll
- getsockopt
- setsockopt

## Debugging

- breakpoint
- stepforward

- continueuntil - conditional expression
- stepbackward inspect

## INET VLISM Application Layer

### Advanced Mathematics Support Sets

- matrices
- algebraic functions
- linear functions
- linear constants
- physics modeling

#### **See Also**

[List of numerical libraries](#)

### Array And Container Management Mnemonics

- list allocate
  - Bit array - or bit vector
  - Dynamic array - allocated at run time
  - Parallel array - of records, with each field stored as a separate array
  - Sparse array - with most elements omitted, to store a sparse matrix (HASH)
  - Variable-length array
  - Fixed-length array
  - Jagged array, where the rows have different lengths individually
  - Dynamic cache array - represents an array where items are synchronized between client and server. The server holds the most records.

- list free
- list compact
- list search
- list find
- list index
- list split - returns two arrays split at the given index. The index is the first record of the second array
- list retrieve
- list move
- list swap elements
- list translate
- list evaluate field
- list set contents
- list clear
- list count

### **See Also**

[Array Object](#)

### **Data Structure Storage And Retrieval Mnemonics**

- **Volatile LIFO**
- stack allocate
- stack free

- stack push
- stack pop
- stack top
- stack count
- stack clear
- stack set contents
- **Volatile FIFO**
- queue allocate
- queue free
- queue push
- queue pop
- queue front
- queue back
- queue count
- queue clear
- queue set contents
- **FIFO Persistent**
- persistent queue allocate
- persistent queue free

- persistent queue push
- persistent queue pop
- persistent queue front
- persistent queue back
- persistent queue count
- persistent queue clear
- persistent queue set contents
- **Volatile FIFO priority**
- priority queue allocate
- priority queue free
- priority queue push
- priority queue pop
- priority queue top
- priority queue count
- priority queue clear
- priority queue set contents
- **memory cache**
- memory cache allocate
- memory cache free



- memory cache store object
- memory cache iterate objects
- memory cache sort objects
- memory cache evaluate prune objects
- memory cache count
- memory cache clear
- memory cache set contents
- **binary tree**
- binary tree allocate
- binary tree free
- binary store object
- binary find object
- binary search objects
- binary iterate objects
- binary delete object
- binary tree balance
- binary tree count
- **map**
- map allocate

- map free
- map store object
- map find object
- map search objects
- map iterate objects
- map delete object
- map cache count
- map cache clear
- map cache set contents

#### Date, Time, And Calendar Calculation Mnemonics

- day of week (CURDOW)
- day (CURDAY)
- month (CURMONTH)
- year (CURYEAR)
- next leap year (NXTLEAPYR)
- julean (JULEAN)
- serial (SRLDATE)
- hour (CURHR)
- minute (CURMIN)

- second (CURSEC)
- milisecond (CURMS)
- distance (TIMEDIST)
- start watch (STARWATCH)
- stop watch (STPWATCH)
- steady by network time (SBNT)

### String Operation Mnemonics

- charAt(string,integer)
- compare(string1,string2) returns integer
- compare string1 string2) returns Boolean
- concatenate(string1,string2) returns string.
- contains(string,substring) returns boolean
- Equality - Tests if two strings are equal.
- find(string,substring) returns integer
- find character(string,char) returns integer
- format(formatstring, items) returns string
- Inequality - Tests if two strings are not equal.
- join(separator, list\_of\_strings) joins a list of strings with a separator
- left(string,n) returns string

- `length(string)` returns an integer number
- `lowercase(string)` returns string
- `partition(separator)` returns the sub-string before the separator
- `replace(string, find, replace)` returns string
- `reverse(string)`
- `rfind(string, substring)` returns integer
- `right(string, n)` returns string
- `rpartition(separator)`
- `split(separator[, limit])` splits a string on separator
- `substring(string, startpos, endpos)` returns string
- `uppercase(string)` returns string
- `trim`
- `regex`

### Data Formatting Object And Methods

- number formater
- date formater
- currency formater
- time formater
- date formater

- text formater
- set generic formatter unroll
- get generic formatter unroll
- inline format expression

### Sorting Object Mnemonics

- quick sort
- bubble sort
- shell sort
- large file merge sort

### File And Stream Mnemonics

- **Unicode Format**
- open unicode text (OUT)
- close unicode text (CUT)
- write unicode text (WUT)
- replace line unicode text (RLUT)
- goto line unicode text (GLUT)
- number of lines in unicode text (NLUT)
- read unicode text (RUT)
- search unicode text (SUT)

- replace unicode text (RUT)
- regex unicode text (REGEXUT)
- **multiple language control edit**
- open multi-language unicode text (MLOUT)
- close multi-language unicode text (MLCUT)
- write multi-language unicode text (MLWUT)
- set code space multi-language unicode text (MLSCSUT)
- iterate multiple language control edits (MLICE)
- replace line multi-language unicode text (MLRLUT)
- replace characters multi-language unicode text (MLRCUT)
- goto line multi-language unicode text (MLGLUT)
- number of multi-language lines (MLNL)
- read multi-language unicode text (MLRUT)
- regex search multi-language unicode text (MLREGEX)
- **supports the XML DOM Interface**
- **binary files**
- open binary (OBF)
- close binary (CBF)
- read binary (RBF)

- write binary (WBF)
- lock file (LF)
- unlock file (UF)
- search binary (SBF)
- replace binary (RBF)
- set byte location (SBLF)
- set byte location to end of file (SBLEOF)
- binary join (BJF)
- binary insert (BIF) - insert into the middle of a file. uses operating system services and hardware more effectively.
- difference binary (IDBF)
- iterate historical binary version (IHBVF)
- **network file system**
  - each of these files and file operate sets can open file formats that are network oriented. The cache and change logs are managed seamlessly from the client and host for most common operations. As well, providing the capacity to execute logic and file manipulations across the network to make good use of bandwidth is of the essence. The INET Network file system allows easy transport of logic that is deemed large cycle update using in place writes that is common with random access files to the appropriate computing device. The flexibility of this system allows the application developer concise control over the operation. As well, the system provides automation of such events where data volumes are high and complete transmission of the entire file's contents is a performance consideration. The transition of the logic path will be considered real time since some file's statuses are dynamically accessed by many applications. The system maintains a list of security enabled applications that can update the file. As a result of this tracking, new functional logic paths can be analyzed more effectively by the web server operating system and application host. File data is synchronized between the client and server automatically. Such file system operations are defined when the file is opened within the file handle.

## See Also

- [Network File System protocol](#)
- [NFS protocol rfc5661](#)
- [MFS protocol rfc3530](#)
- [NFS Protocol Sequence Diagram](#)
- [Network file systems](#)
- **directory and catalog services**
  - catalog search first (CSF)
  - catalog search next (CSN)
  - rename object (RENOBJ)
  - erase object (ERAOBJ)
  - clone object (CLONOBJ)
  - copy object (COPYOBJ)
  - archive object (ARCOBJ)
  - lock directory (LD)
  - unlock directory (UD)
  - iterate historical collection of modifications (IHCM)
  - get attributes of object (GETATTBOBJ)
  - set attributes of object (SETATTBOBJ)
  - byte size (GETBYTESIZE)



- create directory (CREDIR)
- remove directory (RMDIR)
- set working directory (SETDIR)

• *the catalog object contains properties discovered by the indexing services. These properties are attained through the iteration collection and the base file system object. The file system object has a reference to the catalog information object. The catalog information object is polymorphic in implementation forming appropriate access and entity attributes representational of the description and category. Video, Audio, Image, etc. These objects and structure are utilized to translate the digital data within the object. Applications as well have a format that describes the licensing policies.*

- **event:** directory change
- **event:** directory attribute change
- **event:** file change
- **event:** file attribute change
- **event:** file delete
- **compact disc and blue ray extra operations**
- cd rom
  - number of tracks
  - get track catalog
  - get disc id
  - play, pause, stop, forward, back
- blue ray
  - number of tracks

- get track catalog
- get disc id
- play, pause, stop, forward, back

## See Also

- [List of file systems](#)
- [FUSE main page](#)
- [FUSE](#)
- [Queued sequential access method](#)
- [Basic Telecommunications Access Method](#)

## Tuple Spaces Mnemonics

- allocate object space
- set object space computer pool
- set object cache policy
- attach database for fault tolerance
- add object
- find object
- iterate objects
- lock object
- unlock object

- serialize object

## Grammar Parsing Mnemonics

- YACC
- set EBNR grammer dictionary
- get EBNR grammer dictionary
- parse
- unroll EBNR to object code
  - *create an object that has a parsed model object. Grammer is fixed in unrolled parser*
  - set data in object
  - get data in object
  - set data out object
  - get data out object
  - parse
  - get parsing status
  - iterate parsed grammer items

### See Also:

- [parser](#)
- [Context free grammar](#)
- [Regular expressions](#)

- [Comparison of regular expression engines](#)
- [Extended Backus Naur Form](#)
- [Spirit Parser Framework](#)

### Database Connectivity Object Methods

- open
- close
- get record
- write record
- translate
- transfer
- backup
- restore
- process query
- query language schema selection (SQL, SQL+, psSQL, etc.); SQL parameters can also include regular expressions.
- object[] database

### Web Documents Native And Template Support (HTML, CSS, JavaScript)

- DOM (The Document Object Model)
- HTML - reference HTML by Object
- CSS

- JavaScript

### XML/XSL Parser Object Model Implementation

- XML
- XSL **See Also** [W3C HTML5 Database access model](#)

### Http Mnemonics

The list gathered from [Wikipedia.org](#).

- HEAD
- GET
- POST
- PUT
- DELETE
- TRACE
- OPTIONS
- CONNECT
- PATCH

### Ftp Mnemonics

The list gathered from [Wikipedia.org](#).

- ABOR Abort an active file transfer.
- ACCT Account information.
- ADAT RFC 2228 Authentication/Security Data

- ALLO Allocate sufficient disk space to receive a file.
- APPE Append.
- AUTH RFC 2228 Authentication/Security Mechanism
- CCC RFC 2228 Clear Command Channel
- CDUP Change to Parent Directory.
- CONF RFC 2228 Confidentiality Protection Command
- CWD Change working directory.
- DELE Delete file.
- ENC RFC 2228 Privacy Protected Channel
- EPRT RFC 2428 Specifies an extended address and port to which the server should connect.
- EPSV RFC 2428 Enter extended passive mode.
- FEAT RFC 2389 Get the feature list implemented by the server.
- LANG RFC 2640 Language Negotiation
- LIST Returns information of a file or directory if specified, else information of the current working directory is returned.
- LPRT RFC 1639 Specifies a long address and port to which the server should connect.
- LPSV RFC 1639 Enter long passive mode.
- MDTM RFC 3659 Return the last-modified time of a specified file.
- MIC RFC 2228 Integrity Protected Command

- MKD Make directory.
- MLSD RFC 3659 Lists the contents of a directory if a directory is named.
- MLST RFC 3659 Provides data about exactly the object named on its command line, and no others.
- MODE Sets the transfer mode (Stream, Block, or Compressed).
- NLST Returns a list of file names in a specified directory.
- NOOP No operation (dummy packet; used mostly on keepalives).
- OPTS RFC 2389 Select options for a feature.
- PASS Authentication password.
- PASV Enter passive mode.
- PBSZ RFC 2228 Protection Buffer Size
- PORT Specifies an address and port to which the server should connect.
- PROT RFC 2228 Data Channel Protection Level.
- PWD Print working directory. Returns the current directory of the host.
- QUIT Disconnect.
- REIN Re initializes the connection.
- REST Restart transfer from the specified point.
- RETR Transfer a copy of the file
- RMD Remove a directory.
- RNFR Rename from.

- RNTD Rename to.
- SITE Sends site specific commands to remote server.
- SIZE RFC 3659 Return the size of a file.
- SMNT Mount file structure.
- STAT Returns the current status.
- STOR Accept the data and to store the data as a file at the server site
- STOU Store file uniquely.
- STRU Set file transfer structure.
- SYST Return system type.
- TYPE Sets the transfer mode (ASCII/Binary).
- USER Authentication username.

### File Sharing Protocols

- add shared file
- remove shared file
- update shared file
- suspend share upon file
- release share upon file
- add shared directory
- remove shared directory



- assign shared object security group

### BitTorrent Server

- create bit torrent for shared file
- seed shared file

### BitTorrent Client

- add torrent file to download queue
- remove torrent file from download queue
- get torrent file progress
- get torrent file properties
- get torrent file time download estimate
- build file from torrents

### peer to peer file sharing network modes

- INET\_Licensed

non public domain items are sold directly and can use high speed networking.

- FastTrack
- giFT-FastTrack
- Kazaa
- Gnutella
- Grokster

- iMesh
- password protected information domain - (you name the string sequence, unless others have access, not getting complete file contents)

#### peer to peer file sharing network server commands

- set server network mode
- ping
- pong
- query hit

#### peer to peer file sharing network client commands

- set client network mode
- query is public domain file
- search for file (also query)
- iterate file search collection
- download file (also push)
- download with authenticated license
- upload file with license transfer
- download with authenticated license finance use approval
- upload file with license transfer use finance approval

#### See Also

- [Peer to peer file sharing](#)

- [File sharing](#)
- [BitTorrent protocol](#)
- [FastTrack protocol](#)
- [file sharing applications](#)
- [BitTorrent software](#)
- [Free Download Manager](#)
- [Disk Sharing](#)
- [WebDav](#)
- [Apple Filing Protocol](#)
- [Gnutella](#)
- [Kazaa](#)

#### Mail And Fax Mnemonics

- send text message
- send MIME message
- retrieve mail view
- count mail objects
- search
- update
- send fax

- wait for fax
- faxes received collection
- received faxes count

## See Also

- [Structured fax file](#)
- [COMMON-ISDN-API](#)

## Video Editing Object And Methods

- open
- stream web image video  
*<http://flingo.tv/fling/a?purl=http://alientimes.com/World.HTML>*
- cue
- goto frame
- remove frame
- apply process chain to group of frames
- play
- stop
- show
- step forward
- step backward
- pause

- video speed
- video audio track (audio editing object reference)
- voice audio track (only the voice information of the movie, no sounds).
- voice audio track text data
- voice audio track text data timings
- translate audio track using TTS
- layer
- render flat layers
- put image
- put segment
- segment transistion
- open film board
- close film board
- get film board sequence time line
- iterate film board objects
- insert object into film board
- remove object from film board
- iterate film board objects
- search film board objects

- render film board into flat stream format
- [Flingo](#)

### Audio Producing And Editing Object Methods

- open audio
- save audio
- translate stream format
- cue audio
- play audio
- play audio segment
- create lazy audio buffer cache
- select audio buffer segment
- apply DSP transform
- undo DSP transform
- channel collection
- add channel
- remove channel
- add effect chain to channel
- remove effect chain from channel

- alloc effect chain
- free effect chain
- attach midi sequence to audio buffer
- open midi file
- close midi file
- set midi instrument mapping
- get midi instrument mapping
- render midi file to audio stream
- set voice audio track text data
- set voice audio track text data timings
- translate audio track using TTS
- add instrument (DSP, FM, OSC, 3D Physical Simulation, Keyboard Symulations Korg, Roland, etc.)
- **Open Source Audio Scripting**
- script object (text, micro audio script, audio scripting)
- visual object recognition
- gesture recognition
- paper instruments
- open
- close

- render to buffer

### audio effect processors

- Delay
- Echo
- Reverb
- Compressor
- Limiter
- Amplifier
- Flanger
- Chorus
- Distortion
- Bit Crusher
- Equalizer
- Fade In
- Fade Out
- Phaser
- Resample
- low-pass Filter
- high-pass Filter



- band-pass Filter
- band-stop Filter
- pitch shift
- time stretching
- robotic voice
- modulation
- lesley speaker
- speaker model simulation
- room placement simulation
- stage dynamics simulations

#### **See Also**

- [Digital Signal Processing](#)
- [CSound](#)
- [DSP Algorithms](#)
- [Signallogic.com](#)
- [Audio effect](#)
- [Category - Audio Effects](#)

#### **Web Scripting Languages Object And Methods**

- load script

- save script
- edit script
- encode script
- compile script to object
- run script
- debug script
- attach document object model
- remove document object model
- attach symbol bind
- remove symbol binding
- attach object bind
- remove object binding

## See Also

- [ECMAScript](#)

## Information Web Navigation Hierarchy Control Object And Methods

- set viewer layout navigation style (binary XML to client - msb lsb dtd)
- attach previous playback button context button to user interface
- attach next logical position playback button context button to user interface (ANLPCUI)
- attach session beginning playback button to user interface (ASBUI)

- attach session end playback button to user interface (ASEUI) document information view

- begin page definition
- end page definition
- process document for table of content headings
- process document for category Summary
- attach document object
- attach section test (AST)
- attach chapter object
- attach sentence object
- attach paragraph object
- attach dialect filter object
- attach layout parameters
- set table of contents view style (binary XML)
- attach table of contents (XML)
- set index view style (binary XML)
- attach index to interface layout
- attach index data (XML data set)
- set find panel view style (binary XML)
- attach find panel summary tree

- attach menu tree structure data (XML)
- **information interface projection bridge application framework**
- attach counter top polygon graphic function map
- attach counter top polygon graphic panel bridge function map
- attach context menu polygon graphic function map
- attach context menu polygon graphic function map permutation state logic
- attach vertical view-port scroll bar data to window
- attach horizontal view-port scroll bar data to window
- attach table top polygon graphic function map
- attach table top polygon graphic bridge function map
- attach view-port panel layer
- **named media objects**
- attach compressed model viewer
- attach music synthesis audio channel
- attach high resolution audio edit channel stereo
- attach audio equalization
- attach audio decibel normalization
- attach audio effect chain
- attach high resolution multiple speaker sound stage channel

- attach high resolution audio edit channel stereo
- attach audio synced device event parameter transfer
  - foot massage at scary moment
  - the wind blows with dual speed fan
  - aroma scent packs distributed with select films
  - chest apron buzzer
  - leg tingles
  - INET simulation suit (uses compressed air)
  - arm bands
  - gloves
  - mask
  - belt
  - shoes
  - fog machine
  - special condensed lighting
  - floor shakers
- attach collaboration meeting event
- attach calendar view
- attach report view

- attach data base view
- attach SoftSpot object
- **active media collection needing frame service repaint**
- attach video
- attach audio
- attach HTML View
- attach XML/XSL View
- attach game engine
- attach numeric grid layout
- attach chart graph view
- attach catalog view
- attach high frame rate object
- remove object
- get is within dirty rectangle
- *compiled collection* pure vector stream
- **Event** - render

## Two Dimensional Animation Object And Methods

- add 2d sprite object
- remove 2d sprite object

- *sprite object*
  - *event*: animate
  - *event*: show sequence of frames
  - *event*: interpolate to animation sequence with frame rate
  - *event*: render
  - *event*: init
  - *event*: destroy
  - *event*: clone
  - *event*: general collision
  - *event*: domain of object collision
  - *event*: rectangle area collision
  - *property*: draw list
  - *property*: image pixel map
  - *property*: transparency key color

#### Natural Language Processing Object And Methods

- set expert inference engine chain
- get expert inference engine chain
- add hypthesis rule
- add hypthesis match event

- set context
- get context
- start at rule for subject
- next rule based upon choice
- follow rule path defaults
- find alternate rule path
- **hidden markov model**
- **Parsing**
- set dictionary chain
- get dictionary chain
- parse sentence
- parse paragraph
- parse group object
- find nearest matching knowledge path
- add knowledge link
- delete knowledge link
- add knowledge object
- update knowledge object
- delete knowledge object



## See Also

- [Expectation-maximization algorithm](#)
- [Baum-Welch algorithm](#)
- [Viterbi algorithm](#)
- [Forward-backward algorithm](#)
- [Latent variable](#)
- [Bayesian statistics](#)
- [Bayes theorem](#)
- [Bayesian probability](#)
- [Aristotelian logic](#)
- [Predicate logic](#)
- [Compactness theorem](#)
- [Prolog](#)

## Optical Character Recognition Object And Methods

- **OCR** →
- set engine
- get engine
- scan image
- set image bank

- get image bank
- image bank iterator
- add image to bank
- update image in bank
- delete image from bank
- set context key (used to associate scripts)
- get context key (used by parent application for save)
- attach to application
- attach preview grid marking dialog
- attach edit dialog
- attach script editor
- set recognition options (include lines, include images, etc.)
- get recognition options
- process image bank - performs the OCR operation
- fill field
- fill all fields
- iterate OCR text - supplies a vector with the OCR results.
- run script
- step script

## Location Wafer Support Object And Methods

- get location wafer image
- create location wafer reference
- locate location wafer reference

## Optical Shape Import Modeling Object And Methods

- scan image for view (Front, Left-Side, Right-Side, Top, Bottom)
- set scan recognition image features
- get scan recognition image features
  - include texture maps
  - line drawing only
- group model component in tree
- scan pose by name
- interpolate model data for pose
- save model
- save model texture
- set model recognition engine
- get model recognition engine

## Included optical shape engines

For great performance upon reuse, a precompiled attributes of line combinations exists. This allows the system to perform real time for real time play. For example, when the local computer is equipped with MIDI hardware the samples will happen immediately. When the device being used is a smaller processor device such as a smart phone the sound will occur after the render occurs upon the network server.

- musical instruments
- Hand writing
- people
- home objects
- home robots
- consumer electronics
- UPC, bar codes
- book face typography
- script
- calligraphy
- set / get included
- [Ligature](#)
- signs

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The Font typography system within the INET Web OS will be one of the best on the market. Microsoft, a leader in font technology, created the industry standard OpenType. In addition to the features the engineer designed at that time, the INET Font typography library will include all of the necessary metric changes to allow an even higher level of granular control over font rendering style and layout. Beefing up the support for native desktop publishing needs and desires will benefit many applications. However, given that font descriptions only increase in complexity during this time, an intrinsic data structure exists to persist the information on a platform level. So when a user is typing text, the font palette control panel can be used to choose specific styles. The powerful floating window provides parameter output suitable for the attached control. It provides extended HTML Unicode strings for the user HTML Text editing (CSS or inline style). The panel is designed to make font style propagation easily attainable by many. The effects of this code will be of use when rendering text output for several platform versions. Some information can be sent in image form (upon the panel), however, text being sent in default as a binary symbol format is important for standardization. Providing the architecture as a fall through logic will enable high performance that is geared for readable text. For simplicity, the official names are implemented within the base object as labeled.

- [Letter-spacing](#)
- [Kerning](#)
- [Majuscule](#)
- [Minuscule](#)
- [Small caps](#)
- [Initial](#)
- [x-height](#)
- [Baseline](#) (polygon or curved path object)
- [Median](#)
- [Cap height](#)
- [Ascender](#)

- [Descender](#)
- [Diacritics](#)
- [Counter](#)
- [Text figures](#)
- [Subscript and superscript](#)
- [Dingbat](#)
- [Glyph.](#)
- **font creation**
  - Create Bitmap Font (supports antialiasing using blending and shades of grey)
  - Delete Bitmap Font
  - Create Vector Font
  - Delete Vector Font
  - create Vector Font from font panel selector
  - Create Three Dimensional Vector Font
  - Delete Three Dimensional Vector Font
  - Create Three Dimensional Vector Font from font panel selector
  - translate bitmap font to vector font
  - translate Three Dimensional Vector Font to bitmap font
  - translate Vector Font to bitmap font

- **Augmentation**
- follow path
- stretch attribute
- scale transformation
- symbol object transform algorithm
- **Materials Rendering Support**
- set/get material
- set/get trim
- set/get lighting
- set/get color
- set/get reflection
- set/get fill style
- set/get point size
- set/get bold
- set/get italic
- set/get strike through
- set/get gradient fill
- generate three dimensions
  - bevel style

- bevel size
- depth
- extendor builder
- **Layer special output functions**
- Draw Character
- Draw String
- Draw String With Layout Instructions
- **Export Formats to Share and Store**
- save as base font format
- export to java format
- export to swf format
- export to windows format
- export to mac format
- export to scene graph
- export model object format
- export css definition
- export inline HTML definition
- export application font definition
- **Import Formats to Cache**



- IMPORT PCF — Portable Compiled Format (PCF)
- IMPORT BDF — Glyph Bitmap Distribution Format (BDF)
- IMPORT SNF — Server Normal Format (SNF)
- IMPORT DWF — DECWindows Font (DWF)
- IMPORT BF — Sun X11/NeWS format (BF, AFM)
- IMPORT AFM — Sun X11/NeWS format (BF, AFM)
- IMPORT FON — Microsoft Windows bitmapped font (FON)
- IMPORT Amiga Font — Amiga Font , ColorFont, AnimFont
- IMPORT Amiga ColorFont — Amiga Font , ColorFont, AnimFont
- IMPORT Amiga AnimFont — Amiga Font , ColorFont, AnimFont
- IMPORT BMF ByteMap Font (BMF)
- IMPORT BMF PSF Screen Font (PSF)
- **font poliferation and ease of use**
- load typeset effect library
- save typeset effect library
- browse font typeset library
- browse font effect typeset library
- preview font configure panel

**See Also**

- [2xSal](#)
- [2xSal](#)
- [Scale 2x](#)
- [TrueType](#)
- [Sfnt](#)
- [DirectWrite](#)
- [Windows Advanced Rasterization Platform](#)
- [Ascender Corp](#)
- [MSDN Sample OpenType Font Pack](#)
- [CoolText.com](#)
- [Post Script Fonts, Type 1 and Type 4 fonts](#)

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### Title Board Image Generation

The title board image generation is one of the INET Loose Syntax Technologies that allows a user to create professional quality assets with just a few words. The technology uses the artificial intelligence subset to search a catalog of terms. These terms align to visual effects. The AI portion of the system outputs a title board image script. New terms can be added using third party enhancements to the included library. This is a syntax tight script and it is used after it is compiled. Each of these effects can effect the border, the bevel, the trim or the background of the font object.

An example of a AI titleboard:

On a canvas of four hundred pixels squared,  
draw the text "An Amazing Technology" centered at the top.  
This text glows blue and has small space men around the edge.  
The font should be big enough to cover the entire width of the area. The font should be modern but have thick letters. The font should be a professional business quality.

Place the image "[www.AlienTimes.com/SpaceShip.jpg](http://www.AlienTimes.com/SpaceShip.jpg)" at the bottom right.  
The edges of the image should blend with the canvas. Blot the edges of the image with a sponge.

The canvas should be filled with dark clouds.

- **natural effects for ease of use with fonts**

- neon
- glow
- clown
- metal
- crome
- mirror
- bark
- dark ages
- alchemy
- middle ages
- science age
- classical music
- techno music

- opera
- rap music
- love music
- poems
- leafy
- flower
- wood
- space - astronomy
- muscle
- money
- fire
- laser
- clouds
- granite
- rock
- pebble
- patch work
- business
- personal

- yarn
- pencil
- marker
- felt tip marker
- paint brush
- roller ball point pen
- crayon
- love
- hate
- yell
- metal
- rock-and-roll
- rapp
- dingy
- intelligent
- alien
- boy
- girl
- woman

- man
- animal
- fast
- slow
- slide
- safe
- angry
- sad
- happy
- decisive
- crash
- cracked
- chiseled
- droop
- drippy
- electro static
- impluse drive
- plams melt
- inflated

- deflated
- puffy cloud

### Geographic Mapping System

- geo code address
- render map address
- map rendering settings
- interactive map

### Robotics Object And Methods

- iterate available owned robots
- **Robot object**
- move base
- move gear
- activate attachment
- recharge command
- perform named function verb - internal micro-command
- turn on
- turn off
- **interface variance**
- query measurements

- query floating
- query stationary
- query hazard reading
- query limb
  - query finger precision - *for some applications only precise finger robots can be used. Say you dropped the fork on the floor, the car mechanic robot will not likely have ability to properly handle.*
- query attachments
- query motor sockets - *gear ratio information to employ with IKK solver.*
- query specialties
- query battery charge
- query distance
  - query travel time - *historical and technical information (speed) for distance and travel expectations*
- **environmental image capture**
  - get location geographic image map (3d map of area)
  - get object at location
- **world object database**
  - add object
  - update object
  - delete object



- validate object persistence
- find object
- **work definition**
- define job for object
  - define *micro-task* for object
- apply work rules
  - compute work profile from object database - performs defined work upon the objects. Eg. All chairs in a bar upon the table simulated with interpolated transformations. Gear movement, energy projection, time.
  - apply user calibration for work rules - allows preview of path and work simulation based upon the robot's time projection.
- execute work segment

### Language Machine Translation Object And Methods

- set source language
- get source language
- set text stream
- get text stream
- format output translator (e.g. english to japanese format)
- attach application interface
- remove application interface
- render stream pipe

- set translation engine chain
- get translation engine chain
- **engine component**
  - language
  - input format
  - output format
  - parse map index

### Language Phrase Translation Object And Methods

The language phrase translation components allows storage and linking of phrases that are translated. The system comes with a large formatted database of several common phrases and sayings. Each of these text strings are converted into many languages. When a developer chooses a phrase, the associated translated phrase information can be gathered for a chosen language. Several languages can be iterated at one time for multilingual audiences. The system allows a developer to add new phrase databases and add new phrases.

- set source language
- get source language
- set text stream
- get text stream
- find phrase
- find phrase group
- iterate phrase storage
- format output translator (e.g. english to japanese format)

- attach application interface
- remove application interface
- render stream pipe
- set phrase translation engine chain
- get phrase translation engine chain
- add phrase database
- delete phrase database
- **engine component**
  - language
  - input format
  - output format

### Sales (transactions) Functions Object And Methods

- start purchase order sale
- set customer
- get customer
- add inventory item to purchase order
- remove inventory item from purchase order
- end purchase order sale
- query transactions

- process funds acceptance - cash input, or credit card check
- set transaction defaults - (set the transaction properties, points to a database record or XML set that has the parameters)
- attach inventory
- remove inventory
- inventory connection collection
- search inventory
- get inventory item
- set input device - (attach specialized keyboard for cash register or use standard keyboard or xml input file)
- get input device
- process QR code transaction
- digital coupon collection
- digital receipt collection
- digital record book keeping
- digital object offering at POS collection

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### Marketing Sign Production Object And Methods

- create bill board
- destroy bill board
- attach object

- remove object
- get board dimensions
- get pixel resolution
- get color depth
- set secure access control
- get secure access control
- set font
- get font
- output formatted text
- assign image to location
- render draw pipeline command stream
- transfer to unit
- request lease for rectangular pixel space
- play audio upon leasing device
- play video upon leasing device
- send relationship object to leasing device (coupons, tickets, ads, etc.)
- query bill-board buttons sign
- query sign model
- assign function to bill-board button

- clear function of bill-board button
- assign IIP dialect
- render frame package

### Business Object Linking Object And Methods

The ability for a business to place information objects for general public consumption is a necessity. Technically, to achieve this for broadband business communication will require balanced and protected update rights for the item. The items must be only updated from a centralized location, operating like a waterfall. BitTorrents achieve such balance upon a network, however distribution of the items can be more predicted due to historical request. Within a cache system supporting business objects, it is desirable to have a maintained version link between the object owner (corporate market) and data consumer (retail or business market).

An example of how this technology is very beneficial can be shown within the online retail order delivery market. The quality of product representation cannot be dependant upon the photography and graphic design capabilities of the retailer. A can of [Chef Boyardee](#) can be represented more effectively as a product within a given pixel space. Most advertisers use specific design specifics for brand and logo impact. It is not necessarily the fact that the item is a can, but rather that it is Chef Boyardee inside. Therefore, planning the recognition of a brand can be more effectively expressed within a given pixel space using more plain labeling.

The system is maintained for several global considerations. The balancing algorithm also makes good use of network time, providing for lazy and evenly spread network usage. One major use of this network enabled data object cache system is only store shopping experiences. A small market hosts about five hundred items within their store. Using NET Technology, a nearby shopper summons the store shopping cart and quickly navigates to the can goods food aisle. Easily recognizing their favorite brand from previous experiences, and perhaps having it selected within their favorites list, the customer clicks the order button.

A database system such as this enables quality communication of details they could not handle by themselves. Even a store with five hundred different items could not manage easily the list of the ingredients, nutritional values, and links to manufacturer. Benefiting two parties at the same time, the retailer gets a good marketing program that adheres to broadcast quality demands and the corporate provider achieves the optimum product representation they desire. In short, the Chef cooks a mean pasta dish American families recognize.

- set global object repository namespace - sets the name of the private network

- get global object repository namespace
- set codepage context
- get codepage context
- get object for identity - a service that also maintains the cache balance.
- set object for identity - only a GUID owner can update

### Artificial Intelligence Algorithms Object And Methods

### Natural Language Processing Statistical Intelligence Engine

- set survey data context (survey XML/DTD database connection)
- get survey data context (survey XML/DTD database connection)
- set group trunks
- get group trunks
- analyze data for summary groups
- get analyzation data
- get summary groups
- develop graph view

### Contact And Address Management

- define group
- edit group
- remap group

- remove group
- iterate group
- query
- new contact
- update contact
- delete contact
- rollback contact updates

### Marketing Url Location Links Statistic Value Object And Methods

- create sign definition
- delete sign definition
- update sign definition
- **objects upon a sign**
- *methods for add, remove, update and security*
  - text
  - field
  - image
  - movie
  - audio
- set object internal effect



- attach coupon
- attach ticket sales event
- attach customer linking
- set context
- get context
- process render
- get raw render
- get script render
- publish to device

#### Web Domain, Url And Subdomain Management Object And Methods

- reserve name
- edit name
- check expiration
- get expiration policy
- financial transaction history
- lock domain from changes
- unlock domain
- auction url
- transfer url

- resale url ownership
- who is
- pop3 or imap email queue configuration
- transfer service provider
- search engine listing configuration
- usage statistics
- content publishing and use tracking
- access credentials

### See Also

- [webdav protocol rfc2518](#)
- [DAVLib API implementation documentation](#)

### Localized Spell Checking With Localized Grammer Object And Methods

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- spellcheck string
- spellcheck common file format
- spellcheck parser mapped file format
- set dictionary
- get dictionary
- iterate misspelled words

- grammer check
- set grammer rule database
- get grammer rule database
- iterate grammer suggestions words

## See Also

- [Soundex](#)

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## Threading Object And Methods

- create thread
- pause thread
- suspend thread
- stop thread
- destroy thread
- peek thread
- set semaphore
- get semaphore
- wait semaphore

## Ray Tracing And Scene Graph Visualization Component

The library will directly connect to the scene graph library for authoring and games.

- *invocation API*

- get image frame
- get video segment
- get video
- set image format - JPG, MPG, Mpeg SWF, Film Fabricator, **LOD.PANITBT.NSM** (CGI Layered stream compression), and many more.
- get image format
- **render pipeline filter chain**
- set image layer effect chain
- get image layer effect chain
- iterate layers
- add layer
- remove layer
- hide layer
- set layer
- add volume layer from plane - incorporate objects from within the scene graph while rendering occurs. Specialized maps mark the object's appearance within the output image frame.
- *ray trace settings*
- set engine
- get engine
- set engine parameters (XML)

- get engine parameters (XML)
  - ray depth
  - ray cutoff threshold
  - antialias
  - motion blur
  - background
  - include Atmospherics
  - self reflect/refract
  - reflect/refract material IDs
  - Render objects inside ray traced objects
  - Render atmospherics inside ray traced objects
  - Enable Color Density / Fog Effects
- set key frame animation logic script
- get key frame animation logic script
- *World*
- add camera
  - user controlled
  - camera and aim (look at camera)
  - follow camera

- camera up and aim
- **lens type**
  - Apochromat
  - pincushion
  - barrel distortion
  - aerial photography
  - Fisheye lenses
  - Stereoscopic lenses
  - Soft-focus
  - Infrared lenses
  - Ultraviolet lenses
  - Swivel lenses
  - perspective control lenses
- delete camera
- select camera
- select default camera
- set camera
- get camera
- **scene graph state container format**

- load scene
- save scene
- cue scene for camera
- stream scene for camera

- **objects within scene**

*Font texts and their associated animations can be accessed directly using this model. Most graphic portions of the user view will be accomplished using this format to provide optimum quality and room for future conceptions. Encompassing formats and APIs such as OpenGL for real-time mode will strengthen long term compatibility. Supporting the OpenGL extensions is very important since most popular applications employ the functionality. Using reference quality Scene graph technology such as WildMagic by [Geometric Tools](#) gives a detailed view of the necessary object API to provide full flexibility, an engaging mountain of mathematics for the advanced.*

- load X3D model
- save X3D model
- import 3D model - support of multiple formats
- export 3D model - support of multiple formats
- add mesh
- hide mesh
- show mesh
- delete mesh
- *curve surfaces* each object can be managed with add, hide, show and delete
- nurb
- curve segment

- curve mesh
- surface patch
- surface mesh
- *deformable surface meshes*
- box surface
- BSpline surface patch
- BSpline surface patch
- float array
- rectangle surface
- revolution surface
- tube surface
- **node attributes and controllers**
- node
- group
- animate
- IK joint
- IK goal



- interpolate motion verb - if models support the functions, a verb can play the animation function. Depending upon configuration, physics simulations may apply. If physics are turn off, then the animation is played, but the object is not moved. An event can suggest the numeric amount and direction of the animation function. For example, given a bipedal walking. The string 'Self.Human.Attendant01.Run(float Distance, float Speed, float Direction )' will start the legs moving. And event is fired during the object's animation cycle state that allows a translation to occur. The object class stores a ray path object that describes the direction. The amount of vector coordinate change is reflected within the event because a stride is not linear. In the event 'function Self.Human.Attendant01.update(float x, float y, float x)' the parameters are used in conjunction with the ray path to complete the animation. If physics are enabled, this will automatically occur.

- keyframe
- rotate
- scale
- translation
- dlod node - discrete level of detail
- blend transform
- morph
- point
- **Events**
  - on group intersection - items can be defined for each model group.
  - part over selection - events are maintain for model editing mode
- **Scene graph building functions to extend**
  - add model
    - can recursively include features and attributes

- model name
- bounds
- query interface motion verb methods
- get use policy
- get model heirarchy

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- add texture
- add projected textures
- add light map
- add bump map
- add shadow map
- add transparency
- add material
- add planar reflection
- add planar shadow
- add refraction - index and limits
- add image post processing effect
- add special effect to object - effects image post professing effect chain and scene graph based special effect processing. The portion of the image affected within two dimensions is marked by the viewable coordinates.
- add sound

- add animation script
- add collision event
- add physical property
- add animation path
- add event logic tie
- add logic object
- add artificial intelligence goal
- add volume texture
- add pixel shader
- add vertex shader
- add shader (phong)
- *shaders and macro-materials*

• skin - allows the many facets of human, animal, and alien skin to be projected and configured. Typically there are many layers involved and precise settings for reference class. It is foreseen that these parameters will be modified to allow the customer to achieve their visual desires. The shader includes hair.

- hair - allows hair to be simulated
- fur - allows fur to be simulated
- cloth - allows cloth to be simulated
- fine wood and finishes
- tree bark

- sidewalk
- concete
- stone works
- pebble walk
- ceramic
- plastic
- glass
- metal
- polished metal
- brushed metal
- brass
- gold
- silver
- corrosion and oxidation of metals
- red brick
- concete
- red brick wall
- igneous rock ([rock types](#))
- granite

- sedimentary rock

- natural crystal

- **macro model objects**

- Each of these objects has methods that allow *add*, *remove*, *subtract geometry*. The subtract geometry function provides a cutting method where new faces are created during the cutting process.

- *2d*

- point

- line

- ray

- segment

- arc

- triangle

- axis aligned box

- box

- polygon

- convex polygon

- circle

- ellipse

- *operations for building*

- extend faces

- add
- subtract
- curve connect
- line connect
- boolean operations - or, xor, and
- *3d*
- line
- ray
- segment
- circle
- ellipse
- plane
- rectangle
- triangle
- axis aligned box
- billboard
- terrain
- clod mesh
- box

- cube map
- [Tetrahedra](#)
- cutting frustum ([Frustum](#))
- [polyhedra](#)
- convex polyhedron
- [sphere](#)
- [ellipsoid](#)
- [cylinder](#)
- [cone](#)
- capsule - a cylinder with two hemispheres
- [lozenge](#)
- [torus](#)
- [nurb surface](#)
- add Pyramid
- add Archimedean solid
- add Johnson Solid
- add catalog model
- add Fractal Surface Tube
- *base organic shape generators and catalog*

- bipedal
- four legged animal (see [List of Animals](#))
- insect (see [Insects](#))
- fish
- bird
- bug
- monster
- sponge
- hair
- tree
- grass
- vines
- flowers
- foliage
- vines
- planet space view - generates a planetary body space view, with a complete system - events and controllers
- planet upon surface



- space bodies - star, galaxy, nebula, solar systems [NASA's](#) space probe image data can be used to create a model system that is explorable within man's lifetime. And the ability to capture information within a digital fashion and retransmit it can be accomplished. A series of chains can be established, a robotic information rope, to relay this information to one another. Speed factors are also increased; negating life with data. This information, will last man kind and humanity for centuries. A solar powered approach with excellent terrain and form mapping algorithms will enhance the network's capabilities to adjust for real time intrusions. The bundle of sensor data captured will be stored within a system of many robots operating within a swarm capacity. The ability to align transmission and communication between groups and a swarm of *seeking connection* robotics will have greater success. The algorithm, knowing that transmission is important will predict the general coordinates of another group. Creating environments that are based upon this data can take many routes of precision. The project will dampen the usefulness of telescopes.

- cave or tunnel map system

- ground

- sky

- lens flare

- *solids and man made generators*

- These solid body generators can be configured to arrive at precisely the same model function output by using the given parameters. The parameters can be randomly set or computed from likely needs. they are supplied as the base so users can start immediately. Other object factories are subject to license policies.

- planet surface road system

- planet electrical system - power lines and telephone poles

- electronics consumables - radios, TV, watches, cell phones, computers, keyboards, mice, tablets, mouse pad, and accessories

- electronic equipment and components - bread boards, circuits, capacitors, chips, resistors, batteries, wires, pins, and LCD readouts.

- robotics - manufacturing arms, welders, pulley and belt systems

- building structure base - generates a city in detail with random elements and billboard names. restaurants, manufacturing building, professional office business, chemical plants, oil drilling wells, high rise apartments, steps, elevators, hall ways, rooms, brick building, painted buildings, multiple story, steel buildings, glass skyscrapers, alien buildings, smoke stacks,
- neighborhood structure base - culdesac, brick, front yeard, back yard, fences, mailboxes, apartments, town homes, mansions, estates, swimming pools, lawn mowers, yard tools, garrage clutter
- city structures base
- city elements applied - ground debris, stains, graffiti, rust, dirt
- small town structure base
- populate with organisms
- house structure base
- space transport tools
- economic - models of all the tender in the world, credit cards, checks, travel checks
- flight transport tools - airplanes, jets, and UFOs
- water transport tools - small boats, ships, military ships, submarines, and unidentified swimming objects (USO)
- road transport tools - cars, trucks, bicycles, tractors, dump truck, and motorcycles
- **many sites exist today that list models. With proper management, resource tracking and royalty payment some of the difficult part in describing content can be available. It is important that a royalty agreement is used to provide reference quality models. There will be alterations to most of the content for configuration. Find a partial list of model sites:**
  - [3D Model Free](#)

- [turbosquid 3D Models](#)
- [Artist 3D](#)
- [Top 3D Models](#)
- [Google Sketchup 3Dwarehouse](#)
- [Daz 3D](#)
- [3D World Club](#)
- *model physics controller*
- attach bipedal skeleton
- attach quadrupedal skeleton
- attach slither skeleton
- attach arthropod skeleton - many feet skeleton
- attach wings - affects by flapping - motion path data sets
- attach Aquatic animal skeleton - fish
- attach monster skeleton - loony movements associated with zombies, vampires etc.
- attach gravity
- attach propeller
- attach rocket power
- attach lever
- attach wheel

- attach heat
- attach pully
- attach gear
- attach machine
- attach electrical circuit definition
- attach crank
- attach infinite power source
- attach speech orifice - controlled directly from the text to speech engine. Audio files can be simulated easily through analysis of the data. There is a direct text input for speech.
- attach singing orifice
- attach involuntary motor functions (breathing etc)
- attach motion stream logic
- *shape deformers and operations*
- *these operations are stack oriented and kept in database with version*
- magnetic (pull/push) - allows vertex to be affected by magnetic weight, distance and IK Joints.
- bump vertex map (pull/push)
- vertex
- plane cutter
- [lathe](#)

- nurb cutter
- pipe bend
- solid build bend
- volume path connection (weld)
- curved volume path connection (curved weld)
- snug bevel lip connection
- plane face mounted connection
- glue
- deglue
- extrude
- emboss
- *historical operation collection*
- iterate shape modification chain
- undo last
- select modification context
- select modification current
- select modification first
- archive
- prune

- compile
- *build operations*
- copy - copy into new buffer
- paste - create new object from buffer
- cut - (also known as cut) left operator is the base, two pieces left
- subtract - left operator is the base, no parts left
- add - objects are intertwined
- union (xor, and, or)
- join - intersection and interior faces are left out, models become glued
- curve surface to polygon
- divide faces
- compact faces - removes unnecessary divisions in vertex parameters
- *key frame animation and interpolation*
- *story board method*
- film segment shots
  - Dolly shot
  - Boom shot
  - Pan shot
  - Tilt shot

- Roll shot
- Zoom shot
- camera angle
  - [Dutch angle](#)
- morph interpolation
- *environmental and special effects*
- add fog
- add dust
- add atmosphere
- add explosion
- add clouds
- add wind
- add fire flies
- add swarm flying (works with birds etc.)
- add swarm crawl (ants, etc)
- add water
- add fluid
- add heavy colored gas
- add rain

- add snow
- add glowing radiation
- add heat radiation
- add wood burning fire
- add natural gas fire
- add irregular fire
- add ambient light - light that comes from all directions equally and is scattered in all directions equally by the polygons in your scene. This isn't quite true of the real world - but it's a good first approximation for light that comes pretty much uniformly from the sky and arrives onto a surface by bouncing off so many other surfaces that it might as well be uniform.
- add diffuse light - light that comes from a particular point source (like the Sun) and hits surfaces with an intensity that depends on whether they face towards the light or away from it. However, once the light radiates from the surface, it does so equally in all directions. It is diffuse lighting that best defines the shape of 3D objects.
- add specular light - as with diffuse lighting, the light comes from a point source, but with specular lighting, it is reflected more in the manner of a mirror where most of the light bounces off in a particular direction defined by the surface shape. Specular lighting is what produces the shiny highlights and helps us to distinguish between flat, dull surfaces such as plaster and shiny surfaces like polished plastics and metals.
- add emission light - in this case, the light is actually emitted by the polygon - equally in all directions.
- add particle system
- add general special effects processor ...

**Model Catalog and Library Management** *Providing a multiple language search using artificial intelligence (NLP)*

The interface of the model catalog being conceived as a management function of digital data resources provides excellent qualities to expand upon. A specific interest here is obviously finding a desired object. Objects are keyed upon a GUID to provide global awareness of such



characterized entities. Accessing the index of GUIDs will be accomplished using language keywords. A dictionary format consolidating a name from this information is necessary for precise use. For example, accessing an owned or local object can be described in the following manner: Self.Space.Ship.Alien.AttackFighter. This will return a bucket of matches if several exist. Once a proper one is selected from this context (*more precise name* Self.Space.Ship.Alien.AttackFighter.DroidModel-5332), additional logic associated with visual characteristics of the model can be queried for further refinement. This will make a new copy of the original format while keeping links with the underlying data similarities. Artists may not wish to change event logic.

Since the model format encompasses textures, the UV coordinates linked with the image data can be of practical use. Reconfiguration of the image data may align properly with the UV coordinates. Expanding upon specific color attributes of the image algorithmically can produce a large set of iterative results. New texture maps can be applied with a different set of UV coordinates. Active use of an object within unknown worlds will need calibration. Color palette matching and material sensitivities are major traits. Methods within the model object can be invoked to reconstruct or deform vertex and index data specific to the model type. It is even natural within object oriented technology to provide a base of information from which certain categories of objects incorporate. Supporting multiple purpose functionality for the models to be utilized in visual art or real time interfaces is accomplished using inheritance.

- iterate known libraries
- add library to search
- remove library from search
- set search library tree
- search model
- NLP model search
- load model by string
- clone model - creates a copy so that modifications can take place. The versions are tracked to preserve original state information.
- iterate models (collection from search)
- iterate model history
- save state

- get motion data verb
- apply motion data verb to model
- **financial processing and distribution packaging**
  - *models are maintained as a digital data object with use policies. The characteristics operate within the IIP Dialect system to ensure that proper use is facilitated. For operations that require additional properties, users are invited to invest further. As a digital data object, the model's policy store is maintained by that API. Auctions and resales will occur within that API. It is most likely that the following APIs are a collection of that API in use.*
- publish new model
- buy model for single frame view
- buy model for video frame view - (physics package included, sound)
- buy model for interactive video frame view - (events, sound, interactivity and special effects)

**See Also** [Wikipedia X3D](#)

[Web3d](#)

[Applications](#)

[HTML5 targets](#)

[HTML examples](#)

[The Guild Handbook of Scientific Illustration](#)

[Google books: Game Engine](#)

[Google books: 3D Game Engine Design](#)

[Google books: Ray Tracing](#)

[Google books: Maya: Secrets of the pros](#)

[OpenFX The Plug-in Site - Image processing](#)

An XML record-set with a flexible topic dtd is the modern orientation for data heavy systems like chart and graph visualization systems. Supporting the output of the view in multiple formats that are successful in delivering quick display logic is exemplified within the nature of the INET object hierarchy. Introducing a key benefit of ray tracing is output quality with film length animation. Providing animation segmenting for exploratory benefits is a key goal. Users may wish to demonstrate and instruct in localized process order. Graphs as a formal method of communication offer order, quantitative relational expression, and visual cognition as entry points into a listening mind. The INET Web OS system will deliver high quality charting capabilities with artistic ease by its native architecture of integrating three dimensional scene graph technology. Data drilling and data chiseling will be perfected within a single distributed application whose information security bounds are set within the publishing tool. Even in some personalized scenarios, incorporating agent actors such as a company icons ,an Octopus, Teddy Bear or a Robotic Plotter can be expedient.

Because the content is symbolically represented in a dynamic, fluid and translatable state, synchronization with full audio can be accomplished within other video editing suites for full media control. The system's X3D native file support provides the flexibility of also developing interest specific modeling applications. These tools will be more beneficial to end users because they lend to stage comprehension while reducing the learning curve by including observable probabilities within the interface. These chart models are represented in memory as a high performance indexed structure allocated as an object managed by a scene-graph. The ability to work with graphs, and pieces of them changing state, morphing, animating according to motion paths, vibrating sitting upon a deck of indexed polygon structures has a golden communication value. The end result will be a concise image structure - (bmp, jpg, avi, [LOD.PANITBT.NSM](#), etc.)

Charts connected to a natural data flow application such as office software will be best performed by domesticating the logic necessary to fill the numeric parameters. Worker functions such as included within spreadsheet application adhere to the domain. As well, providing full universal support with development tools and languages will provide excellent consolidation. Consolidation will benefit performance and lessen logic errors in the end. XML, because of its transmission and translation format exceed the flexibility of C++ data structures. However, there is a self tuning architecture that can provide interoperability between the two systems while not sacrificing long term performance penalties. Using native c memory structures with a version layer manager for stream based parameters can be incorporated as a compile step process. C++ and Java are commonly used for ray tracing algorithms because of the benefits of machine compilation. The INET XML parameter object architecture provides this functionality for all computing languages supported by the INET Web OS architecture.

- set chart type
- get chart type

- **The charting package supports modern formats such as:**

- Histogram
- Bar chart
- Pie chart
- Line chart
- Timeline chart
- Organizational chart
- Tree chart
- Flow chart
- Area chart
- Cartogram
- Pedigree chart
- Bubble chart
- Polar area diagram
- Waterfall chart
- Radar chart
- Tree map
- Open-high-low-close chart
- Candlestick chart
- Kagi chart

- Sparkline
- Gantt chart
- Nolan chart
- PERT chart
- Smith chart
- Control chart
- Natal chart
- Nomogram
- Pareto chart
- Run chart
- Structure chart
- Vowel chart
- Box plot
- Dot plot (statistics)
- Probability plot
- Scatterplot
- Biplot

• *the interface for a chart type is object oriented, therefore new chart types can be added*

- set chart numeric data

- get chart numeric data
- *color can be included with each numeric set or individual data item*
- set legend text
- get legend text
- set data label text
- get data label text
- set chart title text
- get chart title text
- set chart axis text
- set data axis colors
- get data axis colors
- set view layout object
- set legend layout object
  - x axis
  - y axis
  - z axis
- set graph view plane
- get graph view plane
- set camera position

- get camera position
- set render mode
- get render mode
  - 2d onscreen
  - 3d onscreen
  - 2d unrolled viewer
  - 3d unrolled viewer
  - 2d printer
  - 3d printer
  - 2d film
  - 3d film
  - 2d web publish
  - 3d web publish
  - X3D xml format
  - SVG
  - Shockwave SWF
  - Java Data Viewer

H@

- set render dynamic output

- set render dynamic output
  - one time
  - fixed view
  - fixed view - external data object (XML - database)
  - dynamic view - external data object (developer can select the view configuration for each graph)
- render single image frame (multiple image formats supported)
- render animation slide
- render scene graph object
- **XML support**
  - XML graph specific data set record set

The data set only includes items that are displayed, no calculations are expected.

- XML recursive data object quest tree function map

The data set is a common linked format between the XML spread sheet application and programming languages. This format can be included within a video layer presentation to provide near real time feed back of a changing data base.

- **View Security**
  - set security group
  - get security group
  - add user to view publish
  - modify user from view publish
  - delete user to view publish



- *security will be implemented as a core object protocol. Combined with the logic for IIP Dialects, some parts of the view may be blocked. So the data and linking of this information to source logic will be a beneficial tracking component for some uses.*

## Graphical Interfaces Object And Methods

The base object that is inherited by all models of an allowable on screen control inherit from this model. There are two models, one for data entry type and small domain animation motion and one for reusable game engine and reusable multimedia engines. Given the domain of naming conventions and their popularity, HTML constructs as a method are of great benefit. For some extended properties that Octopus controls have make them obtrusive to fitting within that complete domain. Conventions have been decorated by invention of XML dtd types. As well work bench all around favorites such as Microsoft Visual Studio products and Borland have their approach. Which one is the de facto standard would be an improper question to ask. Expect environmentally aware individuals nodding with nonconformity. Small abrasions are heard while given when the standards meeting comes about. Eventually, a base set will be popular. It will be the INET Octopus base.

### control base

- **Properties**
- color
- font
  - font size
  - font bold
  - font italic
  - font texture
  - font base line path
  - font material
  - font lighting
  - font depth

- font bevel
- font emboss
- font filter processing
- font shape modifier
- font horizontal stretch
- font vertical stretch
- background
- background texture
- background material
- background lighting
- alpha blend
- polygon coordinates
- CSS (cascading style sheet) class
- style
- title
- help context
- data object
- copy protection rule base reference object
- optional user object collection  
(developers can associate other objects and link events)

- tag
- modification state
- **HTML equivalents** see the [W3C HTML 5](#) specification
- accesskey
- class
- contenteditable
- contextmenu
- dir
- draggable
- dropzone
- hidden
- id
- lang
- spellcheck
- style
- tabindex
- title
- **Events**
- onabort

- onblur
- oncanplay
- oncanplaythrough
- onchange
- onclick
- oncontextmenu
- oncuechange
- ondblclick
- ondrag
- ondragend
- ondragenter
- ondragleave
- ondragover
- ondragstart
- ondrop
- ondurationchange
- onemptied
- onended
- onerror

- onfocus
- onformchange
- onforminput
- oninput
- oninvalid
- onkeydown
- onkeypress
- onkeyup
- onload
- onloadeddata
- onloadedmetadata
- onloadstart
- onmousedown
- onmousemove
- onmouseout
- onmouseover
- onmouseup
- onmousewheel
- onpause

- onplay
- onplaying
- onprogress
- onratechange
- onreadystatechange
- onreset
- onscroll
- onseeked
- onseeking
- onselect
- onshow
- onstalled
- onsubmit
- onsuspend
- ontimeupdate
- onvolumechange
- onwaiting
- **Methods**

- **Protected Methods** - these methods have an inside view of the controls structure. The methods can only be called by the operating system

- point to point secure identity transactions
- information integrity portal platform object
- testing script playback
- bug tracking
- automation
- set image animation bank
- stream service instruction update
- font cache reference
- check version integrity
- **Protected Data**
- software reference version check

#### intrinsic controls

- file locator
- document locator or segment selector
- image locator, editor, or segment selector
- movie locator, editor, or segment selector
- audio locator, editor, or segment selector
- people locator - find people you connect with, love or know.
- data locator (databases, record sets)

- visual diagramming
- text field
- name fields
- numeric
- alphanumeric
- paragraph text editor
- credit card entry
- checking
- payment
- email
- phone
- currency
- shopping cart
- catalog
- spreadsheets
- graphs
- reporting
- number fields
- address



- identification
- video
- *all HTML controls* (color, date, time, etc.)
- **HTML component events and methods** see the [W3C HTML 5](#) specification
- attribute DOMString innerHTML;
- attribute DOMString outerHTML;
- attribute DOMString id;
- attribute DOMString title;
- attribute DOMString lang;
- attribute DOMString dir;
- attribute DOMString className;
- readonly attribute DOMTokenList classList;
- readonly attribute DOMStringMap dataset;
- attribute boolean hidden;
- attribute long tabIndex;
- attribute DOMString accessKey;
- readonly attribute DOMString accessKeyLabel;
- attribute boolean draggable;
- attribute DOMSettableTokenList dropzone;

- attribute DOMString contentEditable;
- readonly attribute boolean isContentEditable;
- attribute HTMLMenuElement contextMenu;
- attribute boolean spellcheck;
- **command API**
- readonly attribute DOMString commandType;
- readonly attribute DOMString label;
- readonly attribute DOMString icon;
- readonly attribute boolean disabled;
- readonly attribute boolean checked;
- readonly attribute CSSStyleDeclaration style;
- **Events**
- key press
- key up
- key down
- mouse click
- mouse double click
- mouse right click
- mouse double right click

- mouse wheel click
- mouse wheel scroll
- mouse in
- mouse out
- hover
- attached human interface device
- motion gesture signature recognition
- on focus
- on change
- on blur
- **event handler IDL attributes** these events will precisely match the specification
- attribute Function onabort;
- attribute Function onblur;
- attribute Function oncanplay;
- attribute Function oncanplaythrough;
- attribute Function onchange;
- attribute Function onclick;
- attribute Function oncontextmenu;
- attribute Function oncuechange;

- attribute Function ondblclick;
- attribute Function ondrag;
- attribute Function ondragend;
- attribute Function ondragenter;
- attribute Function ondragleave;
- attribute Function ondragover;
- attribute Function ondragstart;
- attribute Function ondrop;
- attribute Function ondurationchange;
- attribute Function onemptied;
- attribute Function onended;
- attribute Function onerror;
- attribute Function onfocus;
- attribute Function onformchange;
- attribute Function onforminput;
- attribute Function oninput;
- attribute Function oninvalid;
- attribute Function onkeydown;
- attribute Function onkeypress;

- attribute Function onkeyup;
- attribute Function onload;
- attribute Function onloadeddata;
- attribute Function onloadedmetadata;
- attribute Function onloadstart;
- attribute Function onmousedown;
- attribute Function onmousemove;
- attribute Function onmouseout;
- attribute Function onmouseover;
- attribute Function onmouseup;
- attribute Function onmousewheel;
- attribute Function onpause;
- attribute Function onplay;
- attribute Function onplaying;
- attribute Function onprogress;
- attribute Function onratechange;
- attribute Function onreadystatechange;
- attribute Function onreset;
- attribute Function onscroll;

- attribute Function onseeked;
- attribute Function onseeking;
- attribute Function onselect;
- attribute Function onshow;
- attribute Function onstalled;
- attribute Function onsubmit;
- attribute Function onsuspend;
- attribute Function ontimeupdate;
- attribute Function onvolumechange;
- attribute Function onwaiting;

## See Also

- HTML elements are also supported
  - [HTML element](#)
  - [video element](#)
- [Microsoft RC file format](#)

## USB Functions Object And Methods

- `init(libusb_context **ctx);`
- `exit(libusb_context *ctx);`
- `set_debug(libusb_context *ctx, int level);`

- `get_device_list(libusb_context *ctx, libusb_device ***list);`
- `free_device_list(libusb_device **list, int unref_devices);`
- Device Collection
- `get_configuration(libusb_device_handle *dev, int *config);`
- `get_device_descriptor(libusb_device *dev, struct libusb_device_descriptor *desc);`
- `get_active_config_descriptor(libusb_device *dev, struct libusb_config_descriptor **config);`
- `get_config_descriptor(libusb_device *dev, uint8_t config_index, libusb_config_descriptor **config);`
- `get_config_descriptor_by_value(libusb_device *dev, bConfigurationValue, struct libusb_config_descriptor **config);`
- `free_config_descriptor(struct libusb_config_descriptor *config);`
- `get_bus_number(libusb_device *dev);`
- `get_device_address(libusb_device *dev);`
- `get_max_packet_size(libusb_device *dev, unsigned char endpoint);`
- `get_max_iso_packet_size(libusb_device *dev, unsigned char endpoint);`
- **Start**
- `open(libusb_device *dev, libusb_device_handle **handle);`
- `close(libusb_device_handle *dev_handle);`
- `get_device(libusb_device_handle *dev_handle);`
- `set_configuration(libusb_device_handle *dev, int configuration);`

- `claim_interface(libusb_device_handle *dev, int iface);`
- `release_interface(libusb_device_handle *dev, int iface);`
- `open_device_with_vid_pid(libusb_context *ctx, uint16_t vendor_id, uint16_t product_id);`
- `set_interface_alt_setting(libusb_device_handle *dev, int interface_number, int alternate_setting);`
- `clear_halt(libusb_device_handle *dev, unsigned char endpoint);`
- `reset_device(libusb_device_handle *dev);`
- **OS interface**
- `kernel_driver_active(libusb_device_handle *dev, int interface);`
- `detach_kernel_driver(libusb_device_handle *dev, int interface);`
- `attach_kernel_driver(libusb_device_handle *dev, int interface);`
- ***/\* async I/O \*/***
- `control_transfer_get_data(struct libusb_transfer *transfer)`
- `control_transfer_get_setup(struct libusb_transfer *transfer)`
- `fill_control_setup(unsigned char *buffer, uint8_t bmRequestType, uint8_t bRequest, uint16_t wValue, uint16_t wIndex, uint16_t wLength)`
- `alloc_transfer(int iso_packets);`
- `submit_transfer(struct libusb_transfer *transfer);`
- `cancel_transfer(struct libusb_transfer *transfer);`
- `free_transfer(struct libusb_transfer *transfer);`



- `fill_control_transfer( struct libusb_transfer *transfer, libusb_device_handle *dev_handle, unsigned char *buffer, libusb_transfer_cb_fn callback, void *user_data, unsigned int timeout)`
- `fill_bulk_transfer(struct libusb_transfer *transfer, libusb_device_handle *dev_handle, unsigned char endpoint, unsigned char *buffer, int length, libusb_transfer_cb_fn callback, void *user_data, unsigned int timeout)`
- `fill_interrupt_transfer( struct libusb_transfer *transfer, libusb_device_handle *dev_handle, unsigned char endpoint, unsigned char *buffer, int length, libusb_transfer_cb_fn callback, void *user_data, unsigned int timeout)`
- `fill_iso_transfer(struct libusb_transfer *transfer, libusb_device_handle *dev_handle, unsigned char endpoint, unsigned char *buffer, int length, int num_iso_packets, libusb_transfer_cb_fn callback, void *user_data, unsigned int timeout)`
- `set_iso_packet_lengths(struct libusb_transfer *transfer, unsigned int length)`
- `get_iso_packet_buffer(01060 struct libusb_transfer *transfer, unsigned int packet)`
- `get_iso_packet_buffer_simple(struct libusb_transfer *transfer, unsigned int packet)`
- **`/* sync I/O */`**
  - `control_transfer(libusb_device_handle *dev_handle, uint8_t request_type, uint8_t request, uint16_t value, uint16_t index, unsigned char *data, uint16_t length, unsigned int timeout);`
  - `bulk_transfer(libusb_device_handle *dev_handle, unsigned char endpoint, unsigned char *data, int length, int *actual_length, unsigned int timeout);`
  - `interrupt_transfer(libusb_device_handle *dev_handle, unsigned char endpoint, unsigned char *data, int length, int *actual_length, unsigned int timeout);`
  - `get_descriptor(libusb_device_handle *dev, uint8_t desc_type, uint8_t desc_index, unsigned char *data, int length)`
  - `get_string_descriptor(libusb_device_handle *dev, uint8_t desc_index, uint16_t langid, unsigned char *data, int length)`
  - `get_string_descriptor_ascii(libusb_device_handle *dev, uint8_t index, unsigned char *data, int length);`

- `/* polling and timeouts */`
- `try_lock_events(libusb_context *ctx);`
- `lock_events(libusb_context *ctx);`
- `unlock_events(libusb_context *ctx);`
- `event_handling_ok(libusb_context *ctx);`
- `event_handler_active(libusb_context *ctx);`
- `lock_event_waiters(libusb_context *ctx);`
- `unlock_event_waiters(libusb_context *ctx);`
- `wait_for_event(libusb_context *ctx, struct timeval *tv);`
- `handle_events_timeout(libusb_context *ctx, struct timeval *tv);`
- `handle_events(libusb_context *ctx);`
- `handle_events_locked(libusb_context *ctx, struct timeval *tv);`
- `pollfds_handle_timeouts(libusb_context *ctx);`
- `get_next_timeout(libusb_context *ctx, struct timeval *tv);`
- `typedef void (*libusb_pollfd_added_cb)(int fd, short events, void *user_data);`
- `typedef void (*libusb_pollfd_removed_cb)(int fd, void *user_data);`
- `const struct libusb_pollfd **libusb_get_pollfds(libusb_context *ctx);`
- `void libusb_set_pollfd_notifiers(libusb_context *ctx, libusb_pollfd_added_cb added_cb, libusb_pollfd_removed_cb removed_cb, void *user_data);`

## See Also

- [libusb.org](http://libusb.org)
- [libusb.h](#)

## Scheduling And System Automation

An application that utilizes this function set can be identified as one that drives an interface. Either directly calling the APIs or by using scripts. Such functionality is warranted necessary for some services. However, it cannot be expected in everyday occurrences. By identifying the needed functions and categorizing them, security is intrinsically built into INET software labeling. As a hosted channel, a series of applications can be analyzed to ensure that they fit an non malicious operation. This will magnify the INET Web OS's capacity to analyze applications within a genre.

- **interface operation**
- animate move mouse cursor
- animate mouse move with motion data
- click mouse button
- right click mouse button
- double click mouse button
- double click right mouse button
- scroll wheel mouse
- scroll wheel mouse with curve data
- set control window focus GUID
- find window control GUID
- is control window available for input GUID
- type string words per second
- type string user vary rate

- type string high speed
- set keyboard function state
- **silent interface operation**
- start application in silent mode
- set silent mode
- get silent mode
- *interface* document object model implementation
- **scheduling**
- start job at specific time
- end job at specific time
- add schedule automation service event
- update schedule automation service event
- lock schedule automation service event
- unlock schedule automation service event
- delete schedule automation service event
- **script interface recording**
- attach application interface
- detach application interface
- start record script

- end script record
- script editor
- script viewer
- set script recorder output options
- get script recorder output options
- set script recorder interface
- get script recorder interface
- **logging**
- add log event

### Data Object Categorization Library

### Articulatory Synthesis Text To Speech Library

The system supports natural and cartoon based voice. The information can be scripted to use many voices, of which they can overlap. Overlap happens naturally. Sound production occurs within this model using grouped motion parameters, the details of the movements and number of groups can vary greatly. These path sets establish the simulation of motor control used during diction. Access to them are acquired using a descriptive link.

H@

There is also an algorithm that can approximate sound capacity and qualities from any given sound track. This information is used to set the properties upon the model. The range and detail vary based upon the amount of sample analysis. For premium interest, including text will generate the best results. This information will be used for high quality multilingual voice over translation.

H@

- load voice speech model

- unload voice speech model
- set text to render
- set text for text stream
- get text
- set render properties
- get render properties
- render sound stream
- play TTS sound stream
- attach HTML DOM Engine
- get model profile from audio sample
- get model profile from audio sample with text
- get model profile from audio sample with text and timings

### Multiple User Collaboration Library

- create collaboration group
- delete collaboration group
- update collaboration group
- add member user registry
- add member email confirmation
- add member with paid subscription terms

- update member
- delete member
- suspend member
- add member historical records
- delete member historical records
- update member historical records
- invite list of machines
- accept machine
- schedule attendance
- get meeting agenda
- create collaboration agenda
- update collaboration agenda
- delete collaboration agenda
- invite guest to collaboration event
- advertise collaboration event
- open multiple text collaboration portal
- open text collaboration portal
- open audio collaboration portal
- open video collaboration portal

- open image canvas collaboration portal
- close multiple text collaboration portal
- close text collaboration portal
- close audio collaboration portal
- close video collaboration portal
- close image canvas collaboration portal
- attach desktop view
  - Clipping the projection view to include groups of
    - applications
    - message signatures
    - function window menu bar
    - IIP dialect processing
    - *remote machine operation is not defined by functional purpose*
- set machine translation engine
- get machine translation engine
- request human translator for collaboration event
- accept human translator bid for collaboration event
- schedule confirmation of human translator
- attach file sharing window



Print Media Manager

Information Cataloging System

Lifetime Software Installation Management

Goal Collaboration Management Library

Natural Language Processing Statistical Intelligence Engine

Web Publishing, Rendering Object And Methods

## Hosting Web Portal Server Side

The following API libraries are supplied for remote computing devices effectively.

### Pooled Object Service

- start pool
- stop pool
- set pool initial size
- set pool max size
- add explicit object model to pool
- delete explicit object model to pool
- object pool grow
- object pool reduce
- attach database to object pool state
- attach fault tolerant message queue to pool
- set explicit growth ratio

### Message Infrastructure Service

### Scheduling And Event Object Service

### Job Log Facility

#### See Also:

- [Logging file system](#)

- [NILFS](#)

## Electronic Commerce Software Catalog And Digital Data Management

- pay for software use policy (license key)
- install license key
- install software package
- transfer for software use policy
- delete for software use policy
- get digital data object
- check digital data object integrity
- iterate software catalog
- iterate digital data namespace - (eg supply root directory or type - Video, Music, 3D Model)

## Remote Procedure Call

- call remote object
- get execution status
- abort remote object
- call and wait for return
- **event** process complete

## Protected, Secure, And Sanitization (classified Information) Function Sets

### Electronic Money Wallet

- check money for counterfeit
- spend money
- receive money
- count money
- iterate currency objects

### Point To Point Secure Identity Transactions

- open point to point secure channel
  - **base unit key modes**
  - Global Application Layer (PTOPSECCHANGAL)
  - Select Application Layer (PTOPSECCHANSAL)
  - Investigation (PTOPSECCHANINVESTG)
  - Officially Certified Investigation (PTOPSECCHANOCI)
  - User Application Channel
  - User OS Application Channel
  - User OS Channel
  - User Web Surf Channel
  - Media Rights Channel

- Personal Finance Channel
- Business Finance Channel
- close point to point secure channel
- set stream tunnel object
- get stream tunnel object

### Remote Control Keyless Locks, And Keyed Locks

- set remote lock time
- get remote lock time
- unlock remote lock
- lock remote lock
- *remove remote lock time*
- check lock status
- **Key Locked**
- get lock state

### In Core Write By Physical Button While Read Only In Process Memory

- get access button state
- get access button dip switch

### Mission Critical Access And Update

- get base object code reference version

- get base object code stream particle reference version
- apply object code to base
- rollback
- commit

#### Internet Or USB Key With CD

- authenticate usb key
- authenticate cd key
- authenticate usb key and cd blueray key
- authenticate internet reference key

#### Digital Data Management (DRM) Object And Methods

- iterate drm licensed
- iterate drm loaned
- iterate drm leased
- iterate drm public
- iterate drm infringements

#### Software Licensing, Term Policies, Authentication And Integrity Checks

- get software license
- get software term policies
- get software term authenticity

- get software vendor
- get software information
- get software dependencies
- send software support message
- iterate software support messages
- check software integrity
- iterate software library

## INET Information Integrity Portal Platform Object And Methods

user interface registration

syntax rule database engines

syntax copy protection

interface edits analyzer

a filter system that regularly runs to detect and track document object transfer (cut, copy and paste)

self check integrity test

the system will perform a low level check to determine if another systems is attempting to block correct information integrity checks. The diagnostic is a mostly silent mode operation but has a status readout for completeness that a user can monitor. The diagnostic will ensure that IIP is running correctly.

- check low level IIP
- **event** status update
- stop check

- estimate time to complete
- install integrity objectives - if new items exists

### cybercrime investigation

- lock for cybercrime investigation
  - get digital data object - allows an investigator to retrieve an object and all of its details. the most current version is used first where multiple versions exist within the historical data.
- unlock cybercrime investigation
  - unlock cybercrime investigation permitting locks - allows the user to use the system, after an investigation, but allows parts of an investigation to remain locked.

### user identity protection

- does context name identity explicitly
- does context name identity indirectly
- iterate transmissions recomposed

### home automation and environmental sensors

- poll sensor - sends command string and parameters to sensor for data acquisition.

### hazardous robotic programmed path logging

The API set allows the view only. The Robotic path logging system protects data from being tampered with.

- set robot for log
- get robot in context
- iterate jobs



- get job
- iterate steps within job
  - iterate logical decisions within steps - robot sensors recognized an issue real time and made an adjustment.
- add accident claim for robot
- iterate accident claims

#### geographic locator and anti-theft

- get device location - gets the GPS location of the device
- turn off device from finance and protect.
- start beacon.

#### data transfer use moderator

- get data transfer limit
- has transfer limit been met
- set data transfer amount

#### copyrighted materials tracking and financial fulfillment

#### business persona protection

#### governance, risk management, and compliance

#### information sanitization

- erase information
- query all copies erased

- query chain of copied items not erased

system monitor censorship and warning engine

session length and application usage policies

application access policies

Software Development Framework

source repository control

- check out object
- check in object
- see object history
- set user object
- get user object
- set context
- get context

**See Also**

[Concurrent Versions System](#)

help and support system

- create help book
- compile help book
- add topic
- add chapter

- add HTML
- add search keyword
- add online support connectivity
- add bug report
- track change resolution
- install patch for bug
- attach SoftSpot control
- **programmatically create the library**

• Often software developers are assigned the duty of integrating the support help system. While they may write some of the content, a full documentation must include alternate user sources for clarity. The process of learning a new item, and correlating the idioms while weighting interface complexity to explore lends itself to a larger target audience. The information source these texts come from should be increased rather than funneled to a file directory mechanism. The INET system includes APIs for programmatically adding the help text and user manual. It is a developer defined compile step. The team may wish to include database queries and results from Internet queries for the help text.

**See Also** [Microsoft HTML Help 1.4 SDK](#)

unit testing script playback

use cases (combinatorial testing)

error recovery state

resource allotment tracking

- start event recording resource
- stop event recording resource
- post memory allocation pass

- post graphic resource allocation pass
- post graphic resource allocation pass

### code coverage

- start event recording code coverage
- stop event recording code coverage
- post coverage point pass
- get percentage from code reference location

### bug tracking

- add new bug
- mark bug as fixed
- update bug
- iterate bug history
- delete bug
- get recreation script
- set bug project
- get bug project
- iterate bugs

### user interface standards

- set user interface standard dictionary chain

- get user interface standard dictionary chain

• *information stored used by the main intelligence engine to analyze, recommend, and detail specific scenarios of usability guideline links to support the clause. By offering intelligent inclusions and screen layout recommendations with font and aesthetics for application type. Publishing will also be included within this system that is specific to the type of work flow schema. At some operation points, the system will be used as a generalized interface to ascertain the native values of the information domain it is representing (portray). Offering a publication type standard for example. If a book is to be published, what interface should it offer will be answered by the network. There will be many paradigms installed.*

business defect detection

logic defect detection

multiple user load testing

repetition use stability

stochastic use stability

high load stability

## Other System Friendly Support

Amiga

Java Framework

IPhone

Android

Palm Pixi

Palm Pre

Nokias Symbian OS

Windows Mobile

IPad

Samsung Galaxy Tab Apps

BlackBerry PlayBook

Cisco Cius

Dell Streak

HP Slate 500

Toshiba Folio 100

HP PalmPad

LG Optimus

Acer Tablet

Microsoft Windows 7 Tablet

OpenPeak OpenTablet 7

Google/Verizon Tablet

Nokia Lumia 900

Nokia Lumia 710

HTC Radar 4G

Samsung Focus 2

HTC Titan II

HTC Trophy

Dot Net Framework

Linux Software Support

Windows Software Emulation

Apple Mac Os Emulation

## Legacy System Support

Timex Sinclair Zx80

Timex Sinclair 2068

Commodore 64

Commodore Vic 20

TRS 80

Atari 2600

Atari 2800

## See Also

- [SCUMM](#)
- [GrimE](#)
- [MAME Dev](#)



## INET Host Web OS Service Interface Provider

### Back End Application Provider

The following instructions define the context of the web server operating system. Many facets of work load are added to the Linux and UNIX platform to establish a desktop. Typically interfaces of this nature are located within the bounds of X11, however, the new stream format permits many other types of media to be presented. One of the main tasks of the web server operating system is to host applications. Applications will be placed into stream format ahead of time to reduce drag time when loading. The stream path taken will logically include additional work and cached work. Additional work will be accessed to determine the processes to include. Cached work will be determined from queue status.

Version Control

security

web provider licensing

number of parrelle users

cycles per second

ram allotment

disk quota management

self image reflection monitoring

license key storage

electronic commerece storage

remote service access

user data

application data

low level user device state data (OS, cache, checksums)

device permutations installed

current last states of device

main compiler wall

low level application terminal connectivity

desk top services

render farm support

audio farm support

database services

object pool services

message pool services

web publishing services

business services

point to point transaction

subscription service

QR code recognition and indexing

sales tracking

reporting, statistical analysis and graphing

business portfolio tracking

publishing interface

online catalog management

network marketing - add space

inventory tracking and control

digital business store

Print Media Manager

carton designer (cups, boxes, etc.)

personal finance services

service provider transfer

application distribution services

internet message services (mail, fax, etc.)

geographic mapping functions

digital library

applications

digital audio

digital movies

television recording VCR

books

shopping malls

social networking

## Thoughts Of Technology Evolution

A new breed of transportable computing, laptops and wireless screens is being researched by the computing industry. The base unit will be stored in a bag or in a brief case while the thin and light display components are separate. The base unit will send and receive wireless signals to the monitor, keyboard, mouse and other components. Since the video screen, mouse, and keyboard are wireless, the user will have a range of motion and freedom of comfort never experienced before. New viewing devices can be purchased to increase resolution or other input capabilities without upgrading the base unit. Wireless frame rate is the issue here. Some companies already use existing WIFI technology to do this for in office use. However, a complete product integration as I Prophecy has not been achieved. I think this would be a good feature to include as a possibility for the client embedded device.

- [Hyperion Entertainment](#)
- Can infrared light be used to decrease battery usage and increase speed? See [Light Data Transmission](#).
- [Wireless communication](#) is essential.
- [gizmodo](#)
- [WiFi Planet](#)
- [engadget](#)
- [DisplayLink](#)
- [A New Competitor to LCD](#)
- [Electronic paper](#)
- [Bringing Color to E-Readers](#)
- [Electrowetting](#)
- [A high brightness Colour 160 PPI reflective display technology Based on electrowetting](#)
- [Optoelectrofluidics](#)

- [Janus particle](#)
- [mirasoldisplays](#)
- [Display examples](#)

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