Software Intellectual Property Training

Computer Based Training

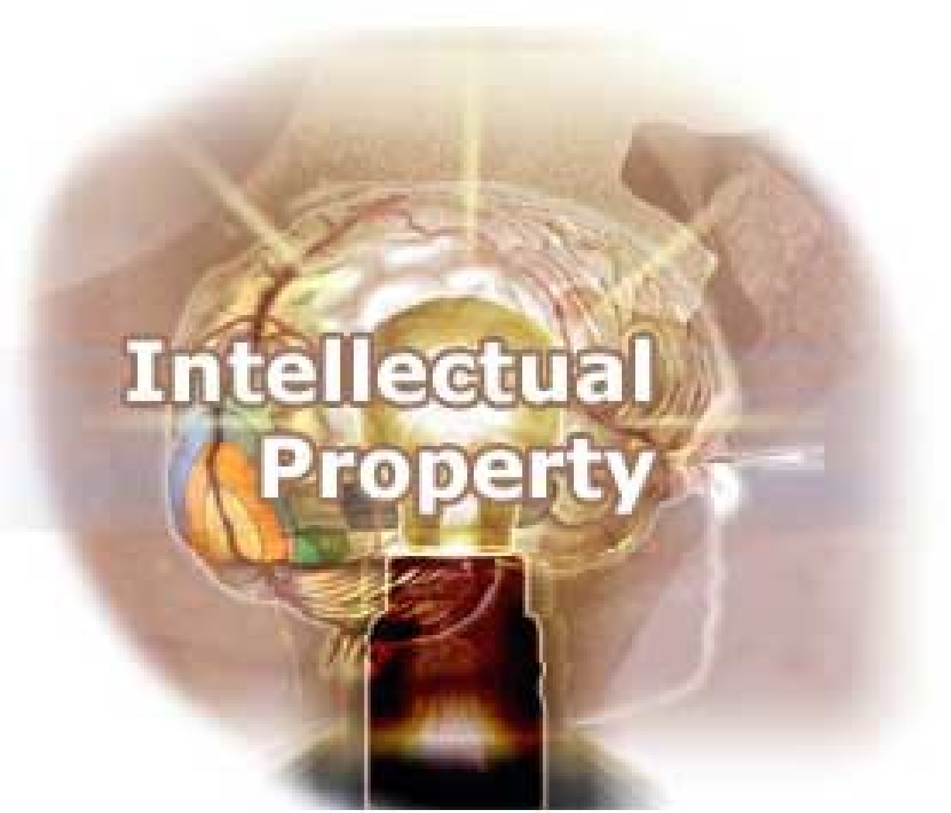
Last Updated: 11th January 2008

Virtusa Internal Only

Global Technology Office
Chamindra de Silva, Anudi Nanayakkara

Virtusa™
Conceive. Transform. Optimize.

Intellectual Property (IP)



Module 1: IP 101

- What is Intellectual Property
- Background of IP Law

Module 2: Software Licensing

- Software Copyright, Licenses
- Open Source Licenses
- Digital Media Rights

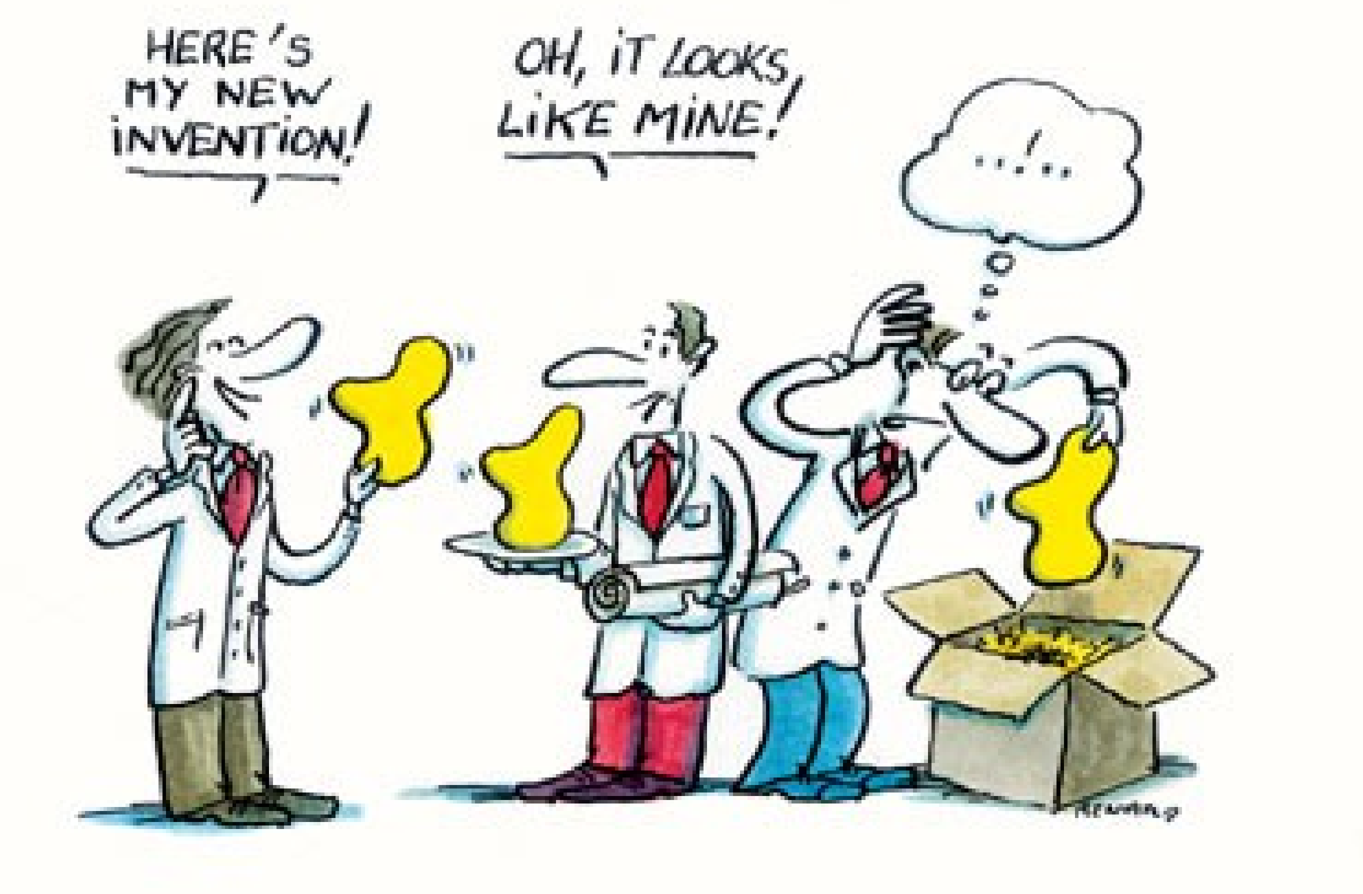
Module 3: The Virtusa IP Process

- Business Case
- Virtusa Process (GIP) updates
- Scenarios & Do’s and Don’ts

The Virtusa Context

- Intellectual Property violation threats
  - Consequential Damages to mitigate violations
    - Unlimited Liability and Indemnification on IP
    - Court cases, re-engineering costs, client impact
  - Loss of Reputation
  - Loss of Repeat Business
  - Perception of respect for IPR in S. Asia
- Importance to Virtusans
  - A Serious Offence
    - Contractual Obligation on IP Compliance
    - Considered intentional misconduct

Protection of Works and Ideas



What is Intellectual Property?

Intellectual Property is an Umbrella term for Subject Matter that is the Product of the Mind (Intellect)

Method of Acquiring_	**Publishing of Creative Works**		**Reputation and Confidentiality**
Formalities required (Industrial Property)	Industrial Design (Blueprint)	**Patents** (Idea)	**Trademarks** (Brand)
Formalities not required	**Copyright** (Instance)	Design right (Blueprint)	**Trade Secret** (NDA)

Copyright

© Toycamera

http://talks.blogs.com/phototalk/images/copyright.jpg

- Set of exclusive rights regulating the use of a particular expression of an idea or information
- Origins in the Publishing Industry can be traced back to the time before the invention of printing in the late fifteenth century (1709: Statute of Anne)
- Copyright law protects "original forms of expression" – be it a book, a song, a sculpture, etc.
- Multi-lateral: Berne Copyright Convention & Universal Copyright Convention (UN)

Which Material is under Copyright?

- A work, in whatever medium, is protected by copyright law unless it has been placed in the public domain
- Work does not need to have a copyright notice or the copyright symbol to be copyright protected
- It only needs to be fixed in a tangible medium of expression
- Cannot be copyrighted
  - Ideas, facts, names, short phrases, mathematical formulae

What does Copyright give the holder?

Exclusive Rights Given to Holder

- to produce copies or reproductions of the work
- to create derivative works
- to perform or display the work publicly
- to sell or assign these rights to others
- to transmit or display by means of digital medium

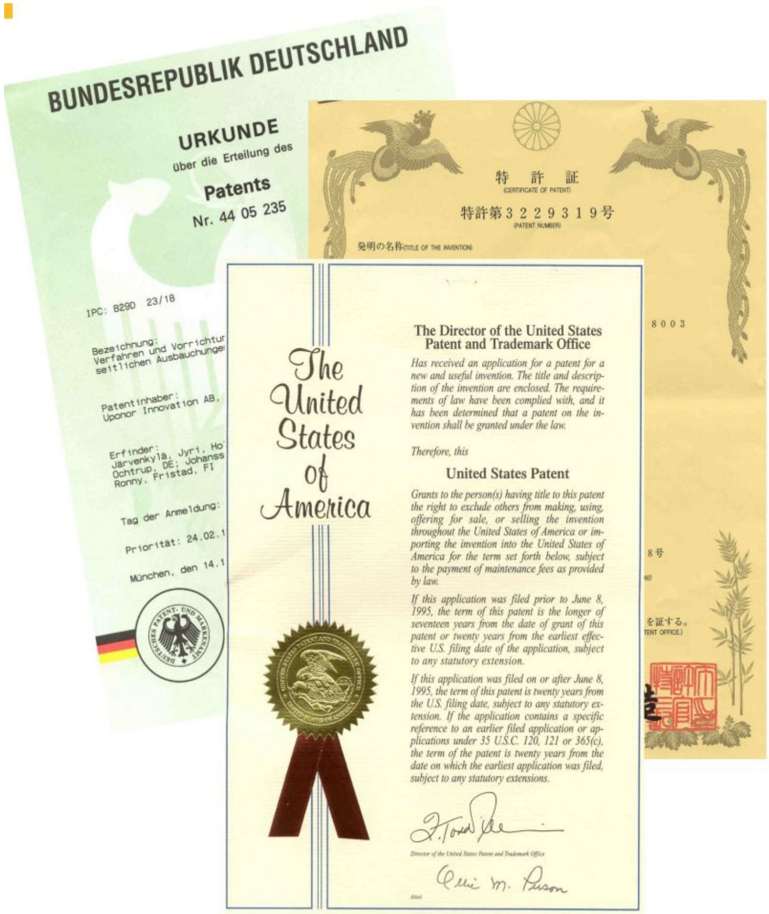
Fair-Use Clause

- According to Title 17 of the U.S. Code, fair use originated "for purposes such as criticism, comment, news reporting, teaching or research.“
  - To cite but not to supersede (derivative)
  - Based on Rights of Free Speech

Virtusa™
Conceive. Transform. Optimize.

Patents

- Protects any new and useful process, machine, article of manufacture, or composition of matter
  - Chemical (e.g. Pharmaceutical)
  - Industrial Machine
  - A business Process
- Granted by the state, for a certain period of time in exchange for the disclosure of the invention
- Excludes others from manufacturing, using, selling, importing, etc for a fixed number of years
- Invention must be,
  - Satisfy high standards of novelty and inventiveness
  - Industrially applicable



BUNDESREPUBLIK DEUTSCHLAND

URKUNDE
über die Erteilung des
Patents
Nr. 44 05 235

IPC: B29D 23/18

Bezeichnung:
Verfahren und Vorrichtur
seitlichen Ausbauchunger

Patentinhaber:
Uponor Innovation AB,

Erfinder:
Järvenkylä, Jyri, Ho
Ochtrup, DE; Johanss
Ronny, Fristad, FI

Tag der Anmeldung:

Priorität: 24.02.1

München, den 14.1

DEUTSCHES PATENT- UND MARKENAMT

特　許　証
(CERTIFICATE OF PATENT)

特許第３２２９３１９号
(PATENT NUMBER)

発明の名称(TITLE OF THE INVENTION)

8 0 0 3

8号

を証する。
TENT OFFICE)

The United States of America

The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extensions.

Q. Todd Dickinson

Director of the United States Patent and Trademark Office

Ellie M. Pierson

Attest

http://jaguar.fiboy.com/images/Patents.jpg

Patent Examples

Many interesting patents including from serious stuff like the Nokia N60 patent to certain way to hold a golf club, Sunglasses which have Elvis-sideburns

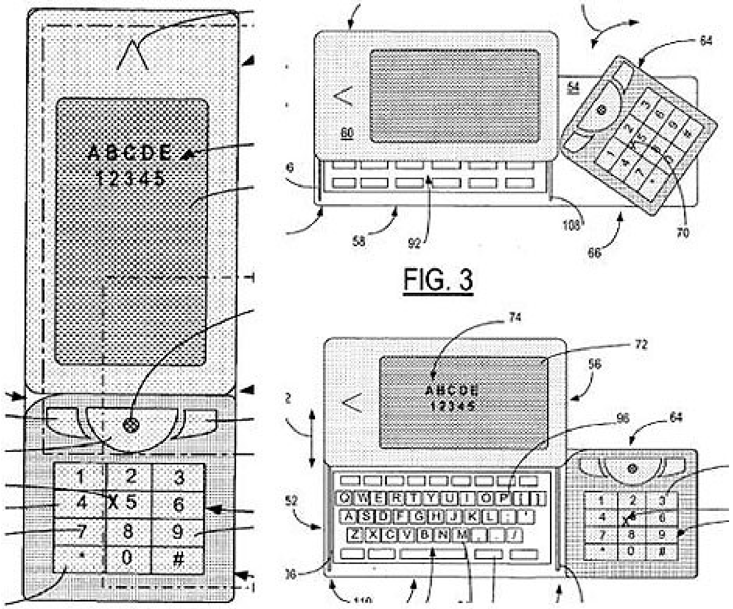
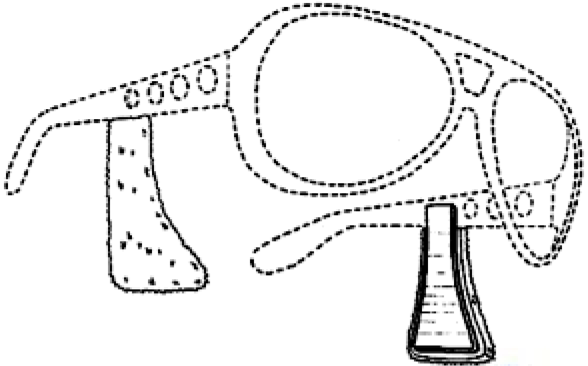
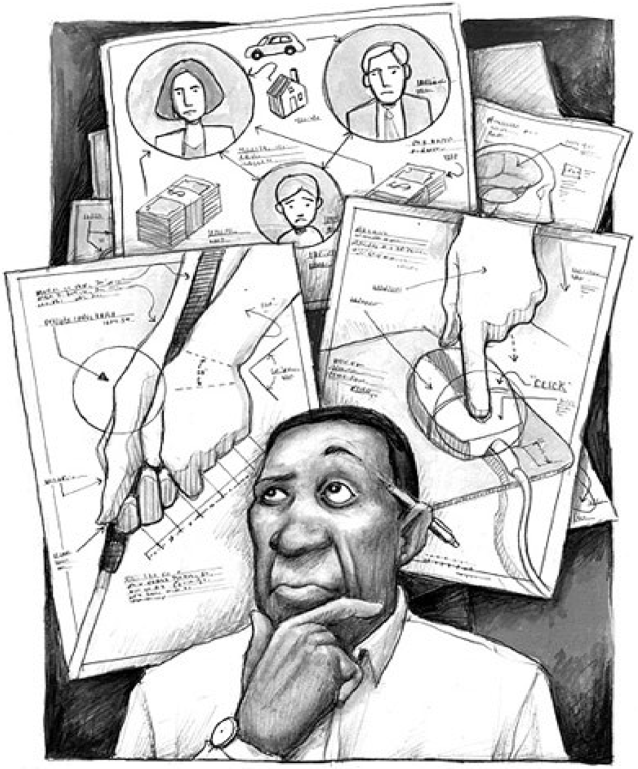


FIG. 3





http://jonkeegan.com/images/patents.jpg

Trademarks

- Protects words and symbols that identify goods and services of a manufacturer.

- A company’s reputation is closely tied with its trademark Closely related to business image, goodwill

- Consumers rely on trademarks in order to recognize quality or origin of goods or services.

- To receive protection, a logo must be “disclosed to the consumers”

Trade Secrets

http://www.axioslaw.com/pgimg/topSecret.jpg

- A trade secret is a formula, practice, process, design, instrument, pattern, or compilation of information used by a business to obtain an advantage over competitors or customers (e.g. formula for Coke)

- A company can protect its confidential information through non-compete clauses, non-disclosure contracts with its employees.

Virtusa™
Conceive. Transform. Optimize.

Public Domain

http://rights.jinbo.net/english/images/public-domain.jpg

- If there are no laws that restrict it's use and it is available to the public at large it is public domain
- This provides the freedom for anyone to use the work for any purpose within that Jurisdiction
- When patents (usually 20 years), copyright expire they go into public domain
- Examples of public Domain
  - Mathematical formulae, name, short phrase, works before copyright law (e.g. classical)
- Ambiguity of public domain
  - Jurisdiction abuse
  - Abuse due to ambiguity

Giving Permission (aka Licensing)

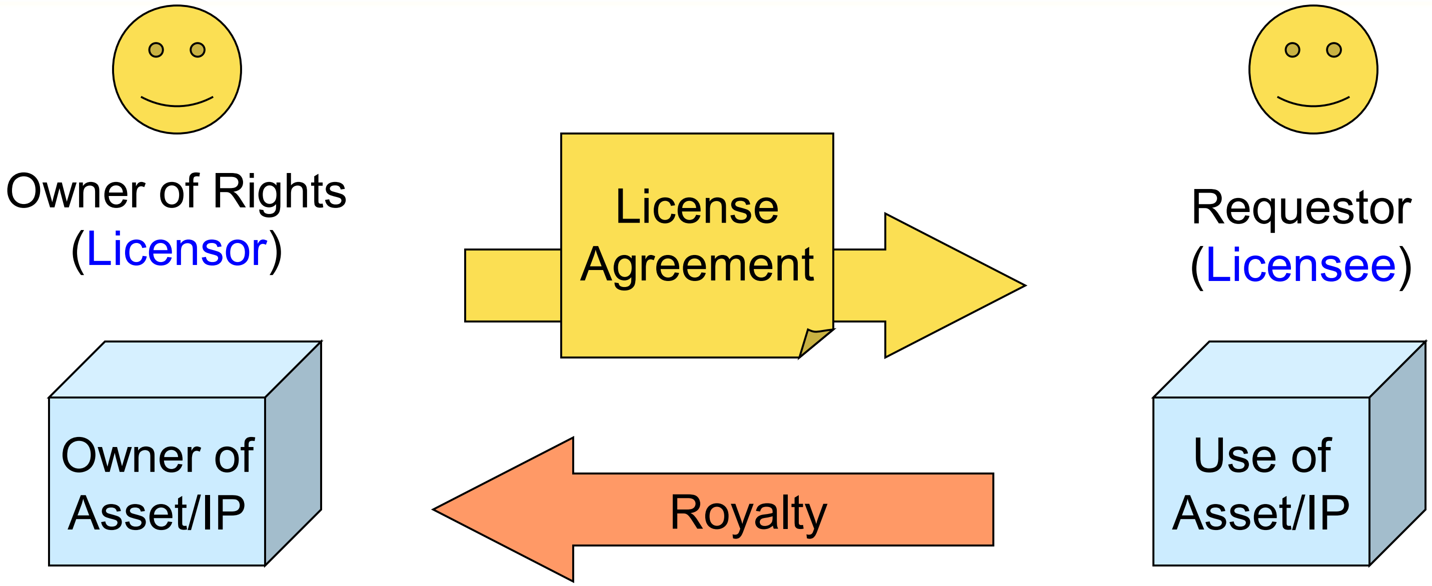
A License comprises the permissions, rights and restrictions given to use assets or Intellectual Property

Use of assets / Intellectual Property without a license could constitute infringement

Use of some one else's assets and claiming it as your own is plagiarism

In both instance above the owner can sue the infringer

Licensing Concepts



Owner of Rights (Licensor)

License Agreement

Requestor (Licensee)

Owner of Asset/IP

Royalty

Use of Asset/IP

BUNDESREPUBLIK DEUTSCHLAND
COPYRIGHT
The Director of the United States Patent and Trademark Office
United States Patent

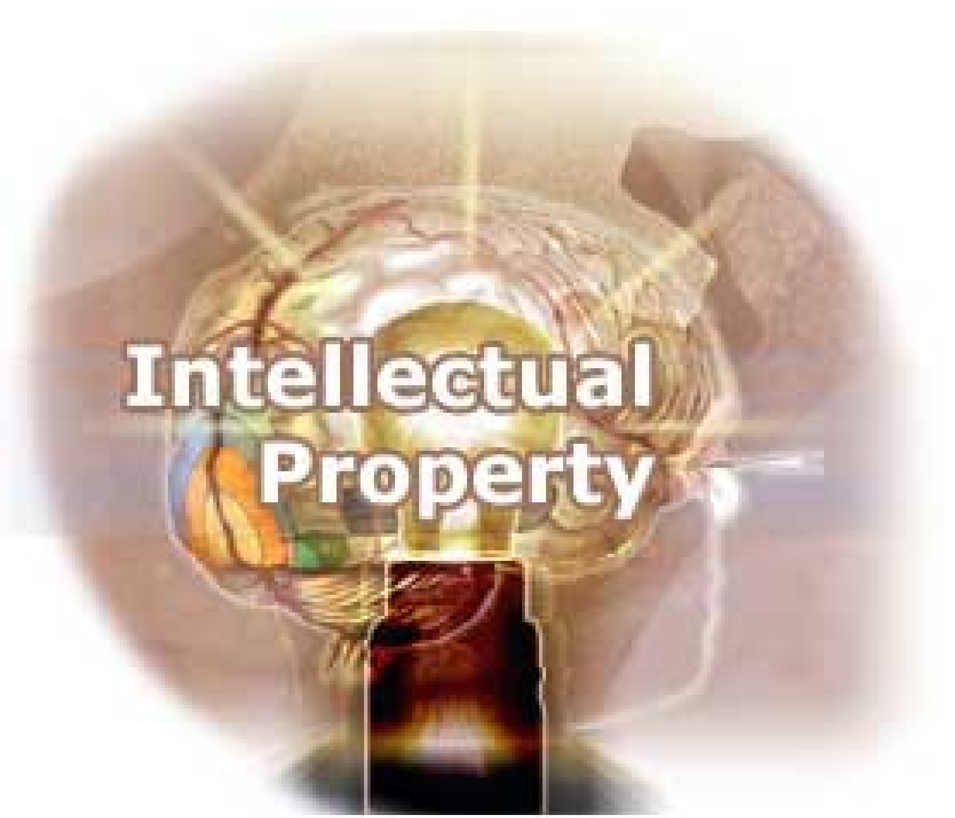
Copyright, Patents, Trademarks, etc

A license is the document demonstrating a permission given. A shorthand definition of a license is "a promise not to sue"

Jurisdiction: Not all laws are equal

- **USA:**
  United States Patent and Trademark Office (USPTO)
- **United Kingdom:**
  The UK Intellectual Property Office ensure the protection of Intellectual property in the United Kingdom
- **Sri Lanka:**
  National Intellectual Property Office of Sri Lanka (NIPO
- **India:**
  The protection of intellectual property in India is done by the Office of Controller General of Patents, Designs, and Trade Marks
- **World Intellectual Property Agency**

Intellectual Property (IP)



Module 1: IP 101

- What is Intellectual Property
- Background of IP Law

Module 2: Software Licensing

- Software Copyright, Licenses
- Open Source Licenses
- Digital Media Rights

Module 3: The Virtusa IP Process

- Business Case
- Virtusa Process (GIP) updates
- Scenarios & Do’s and Don’ts

Legal Definition of a Computer/ Computer Program

Computer

An electronic or other device having capability of storing and processing Information

Act 40 of 2000 - SL

Computer Program

A set of instructions expressed in words, codes, schemes or in Any other form, which is capable, when incorporated in a medium that a computer can read, of causing the computer to perform a particular task or result

Act 40 of 2000 – Sri Lanka

Copyright and New Technology

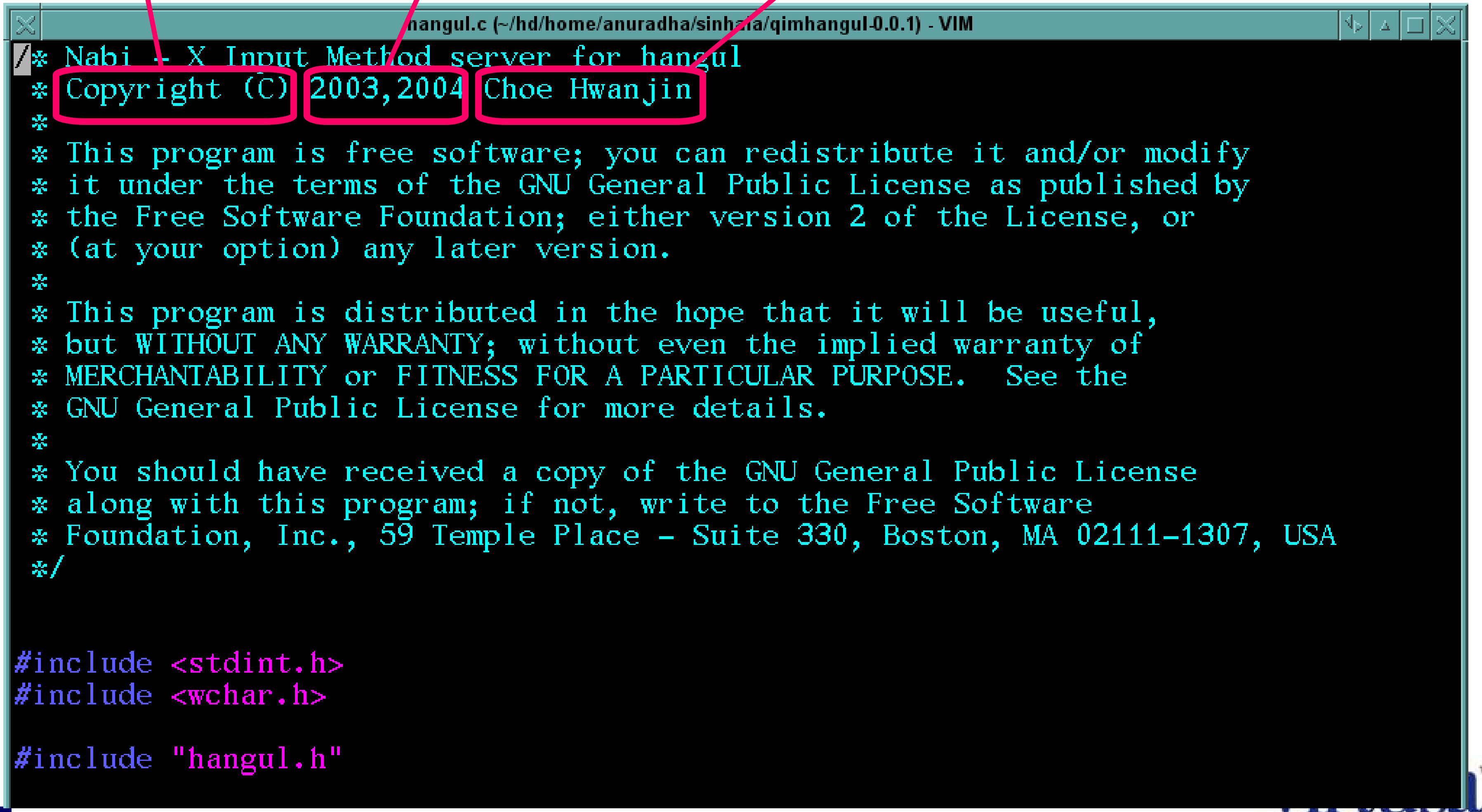
- With the development in information technology, copyright infringement has become a serious problem.
- Illegal downloading happens frequently as there is absolutely no cost of reproduction
- Computer Software Copyright Act of 1980 makes it clear that there are exclusive property rights in software

Copyright Notice in Code

Copyright Mark

Year(s) of Creation

Owner of Copyright



```
/* Nabi - X Input Method server for hangul
 * Copyright (C) 2003,2004 Choe Hwanjin
 *
 * This program is free software; you can redistribute it and/or modify
 * it under the terms of the GNU General Public License as published by
 * the Free Software Foundation; either version 2 of the License, or
 * (at your option) any later version.
 *
 * This program is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
 * GNU General Public License for more details.
 *
 * You should have received a copy of the GNU General Public License
 * along with this program; if not, write to the Free Software
 * Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA
 */


#include <stdint.h>
#include <wchar.h>

#include "hangul.h"
```

Infringement of Software Copyright

Some Examples without consent of copyright holder:

- Create a copy and share it with others
  - CD copies for selling it (aka Piracy)
  - Hard disk loading
  - OEM Unbundling
  - Softlifting
  - Renting Software Out
- Any translation, adaptations or other alterations of program
  - Reverse Engineering and Modification
- Public display and public performance
- Unrestricted Client Access
- Creating Backup copies

Ultimately depends on the Contract / License Terms

Software License

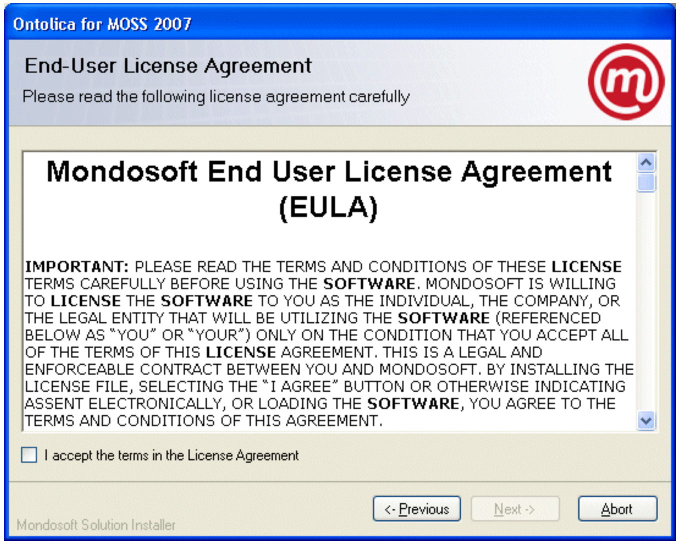
Defn: A **software license** is a contract between a software publisher and an end-user of software. A software license grants an end-user permission to use one or more copies of software in ways which would otherwise be prohibited by law

- A Software License is similar to a lease
- It is generally not bought and you never own it
- Main types are Proprietary and Open Source

Software License Acceptance

- Written Contractual License
  - Ability to use work in return for certain royalties
- Shrink wrap license or COTS
  - Purchase it from a shop
  - By breaking of the seal you accept the license
- Click wrap license
  - Agree to the license on click of a button
- Browse wrap license
  - User is made aware of the existence of a license but he does not have to click it
- Bare or Implied License
  - Implied by usage

Software License Distribution: Online, Web



Ontolica for MOSS 2007

End-User License Agreement

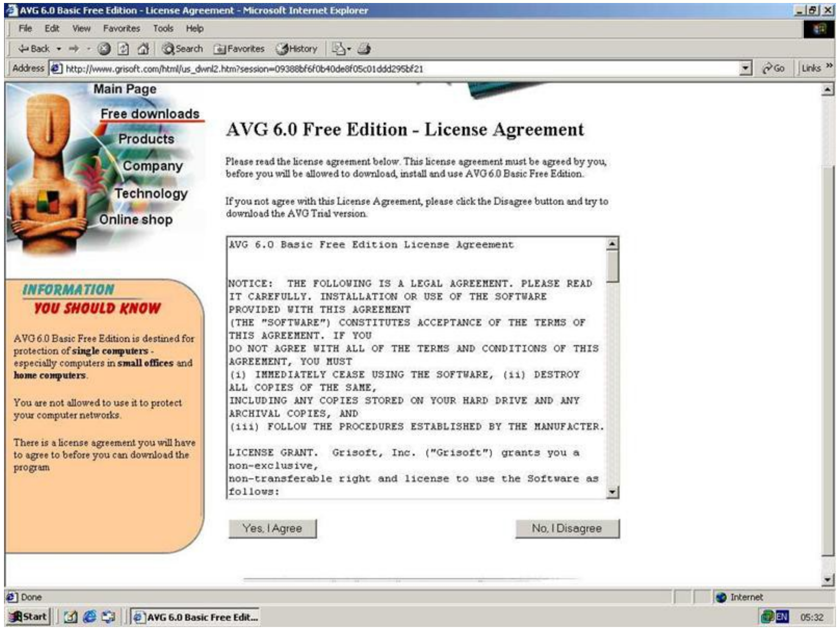
Please read the following license agreement carefully

Mondosoft End User License Agreement (EULA)

IMPORTANT: PLEASE READ THE TERMS AND CONDITIONS OF THESE **LICENSE** TERMS CAREFULLY BEFORE USING THE **SOFTWARE**. MONDOSOFT IS WILLING TO **LICENSE** THE **SOFTWARE** TO YOU AS THE INDIVIDUAL, THE COMPANY, OR THE LEGAL ENTITY THAT WILL BE UTILIZING THE **SOFTWARE** (REFERENCED BELOW AS "YOU" OR "YOUR") ONLY ON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS OF THIS **LICENSE** AGREEMENT. THIS IS A LEGAL AND ENFORCEABLE CONTRACT BETWEEN YOU AND MONDOSOFT. BY INSTALLING THE LICENSE FILE, SELECTING THE "I AGREE" BUTTON OR OTHERWISE INDICATING ASSENT ELECTRONICALLY, OR LOADING THE **SOFTWARE**, YOU AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT.

□ I accept the terms in the License Agreement

Mondosoft Solution Installer



AVG 6.0 Basic Free Edition - License Agreement - Microsoft Internet Explorer

Address: http://www.grisoft.com/html/us_dwnl2.htm?session=09388bf6f0b40de8f05c01ddd295bf21

AVG 6.0 Free Edition - License Agreement

Please read the license agreement below. This license agreement must be agreed by you, before you will be allowed to download, install and use AVG 6.0 Basic Free Edition.

If you not agree with this License Agreement, please click the Disagree button and try to download the AVG Trial version.

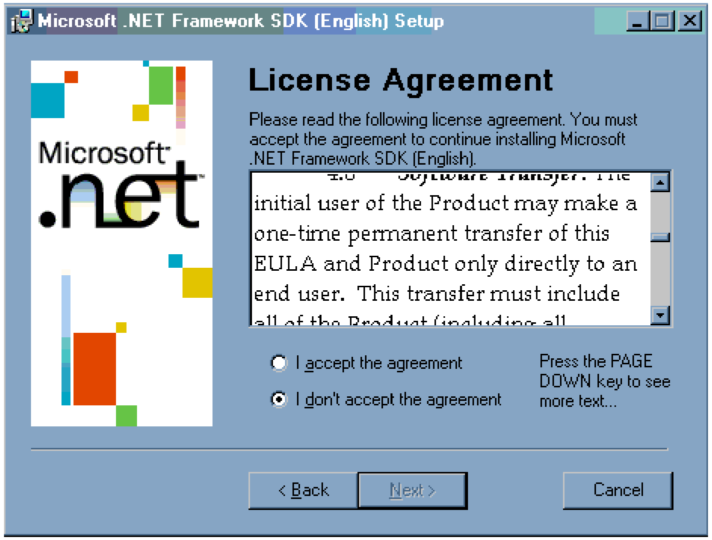
```
AVG 6.0 Basic Free Edition License Agreement


NOTICE:  THE FOLLOWING IS A LEGAL AGREEMENT. PLEASE READ
IT CAREFULLY. INSTALLATION OR USE OF THE SOFTWARE
PROVIDED WITH THIS AGREEMENT
(THE "SOFTWARE") CONSTITUTES ACCEPTANCE OF THE TERMS OF
THIS AGREEMENT.  IF YOU
DO NOT AGREE WITH ALL OF THE TERMS AND CONDITIONS OF THIS
AGREEMENT, YOU MUST
(i) IMMEDIATELY CEASE USING THE SOFTWARE, (ii) DESTROY
ALL COPIES OF THE SAME,
INCLUDING ANY COPIES STORED ON YOUR HARD DRIVE AND ANY
ARCHIVAL COPIES, AND
(iii) FOLLOW THE PROCEDURES ESTABLISHED BY THE MANUFACTER.

LICENSE GRANT.  Grisoft, Inc. ("Grisoft") grants you a
non-exclusive,
non-transferable right and license to use the Software as
follows:
```

INFORMATION YOU SHOULD KNOW

AVG 6.0 Basic Free Edition is destined for protection of **single computers** - especially computers in **small offices** and **home computers**.

You are not allowed to use it to protect your computer networks.

There is a license agreement you will have to agree to before you can download the program



Microsoft .NET Framework SDK (English) Setup

License Agreement

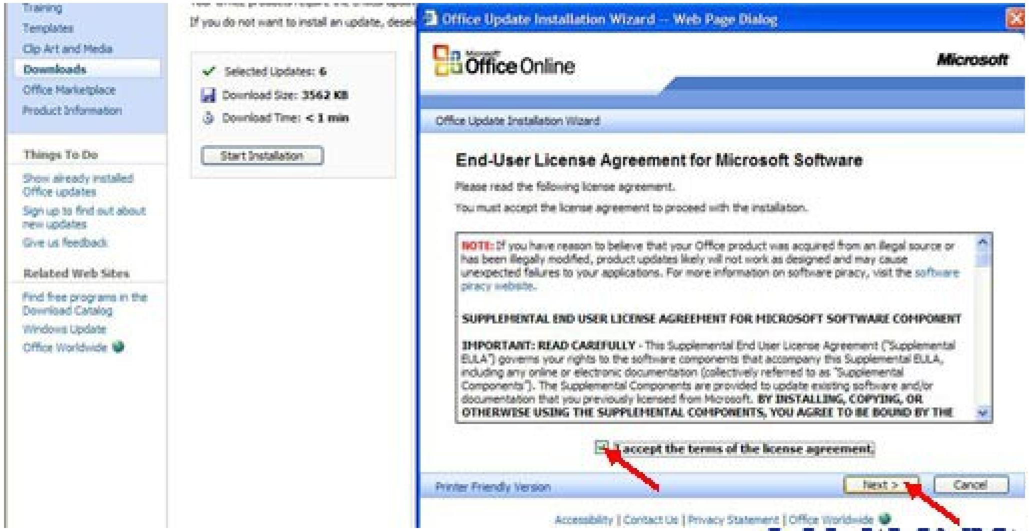
Please read the following license agreement. You must accept the agreement to continue installing Microsoft .NET Framework SDK (English).

4.0 Software Transfer. The initial user of the Product may make a one-time permanent transfer of this EULA and Product only directly to an end user. This transfer must include all of the Product (including all

○ I accept the agreement

● I don't accept the agreement

Press the PAGE DOWN key to see more text...



If you do not want to install an update, desel

✓ Selected Updates: 6

Download Size: 3562 KB

Download Time: < 1 min

Office Update Installation Wizard -- Web Page Dialog

End-User License Agreement for Microsoft Software

Please read the following license agreement.

You must accept the license agreement to proceed with the installation.

NOTE: If you have reason to believe that your Office product was acquired from an illegal source or has been illegally modified, product updates likely will not work as designed and may cause unexpected failures to your applications. For more information on software piracy, visit the software piracy website.

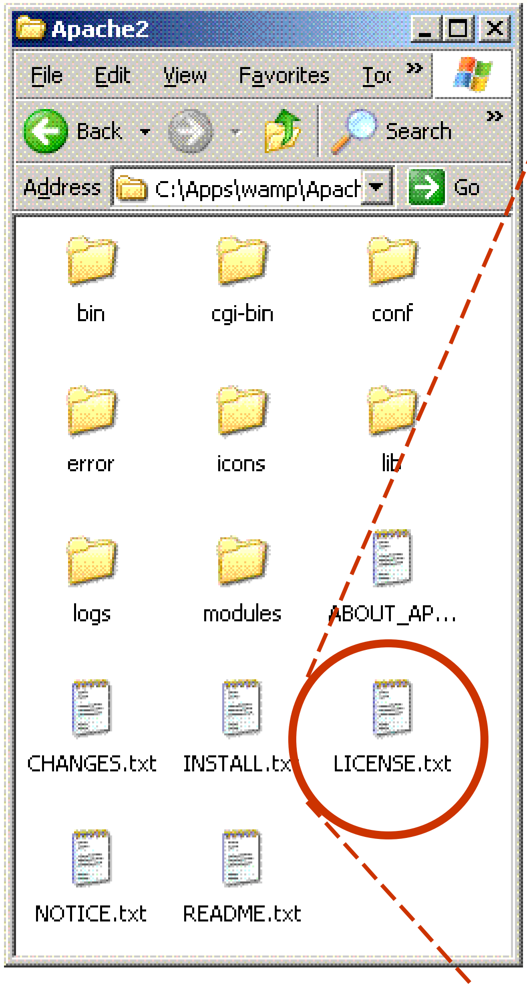
SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE COMPONENT

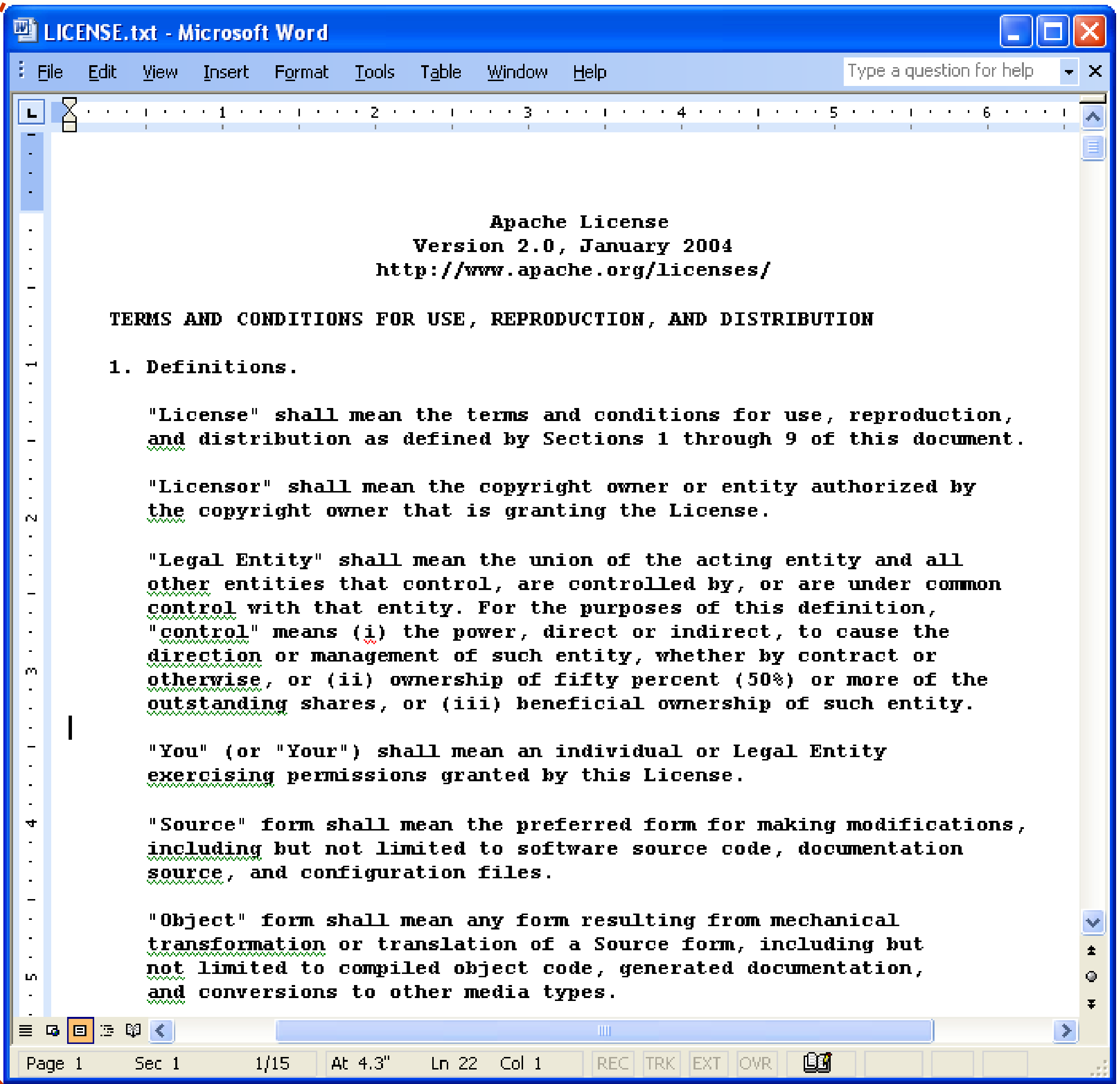
IMPORTANT: READ CAREFULLY - This Supplemental End User License Agreement ("Supplemental EULA") governs your rights to the software components that accompany this Supplemental EULA, including any online or electronic documentation (collectively referred to as "Supplemental Components"). The Supplemental Components are provided to update existing software and/or documentation that you previously licensed from Microsoft. **BY INSTALLING, COPYING, OR OTHERWISE USING THE SUPPLEMENTAL COMPONENTS, YOU AGREE TO BE BOUND BY THE**

☑ I accept the terms of the license agreement.

Printer Friendly Version
Next >
Cancel
Accessibility | Contact Us | Privacy Statement | Office Worldwide

Software License Distribution: Text File




LICENSE.txt - Microsoft Word
File Edit View Insert Format Tools Table Window Help
Type a question for help
Page 1 Sec 1 1/15 At 4.3" Ln 22 Col 1 REC TRK EXT OVR

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

Proprietary Software License

- Proprietary Software is software with restrictions on using, copying and modifying as enforced by the right holder
- Also known as non-free or closed-source software
- Control is placed by
  - Technical Means
    - Releasing only Binaries, Dongles, DRM
  - Legal Means
    - Copyright, patents and licensing
- Examples of proprietary licenses:
  - Microsoft EULA, Oracle, Adobe, SAP
  - Includes Freeware, Shareware

Proprietary License Models

The Proprietary Revenue Model

- Related to the type of restriction applied
- Proportional to the restriction

Criteria	Restriction Type
Software	Copies (e.g. electronically / shrink wrapped) Functionality (e.g. versioning)
Hardware	Configuration (e.g. number of processors) Computing Power (e.g. transactions per sec)
Users	Number of Users (e.g. floating or fixed) Status of Users (e.g. personal or educational)
Usage	Transactions (e.g. by MB scanned) Time (e.g. annual, subscription)

Typical Clauses Found In A Software License

Scope of License
Exclusive or Non-Exclusive, Restrictions, Quantity limitations

Re-Distribution
Transferable or All Rights reserved

Term & Termination
When a license will end and termination conditions

Limitation of Liability and Indemnification
Extent to which vendor will take responsibility for damages caused by Software

Confidentiality and Property Information
Definition of Confidential Information, Disclosure of vendor details (e.g. trademark), Attribution

Territory
Conditions by jurisdiction (e.g. export regulations)

Warranties
Quality of Software, Performance, Breach of Warranty

Source Code Escrow
Escrow agent and timing of deposits

Sub-Licensing
Conditions placed on derivative works. Terms of Distribution (Inclusion of Notice)

Example: Windows XP Home EULA

- Bound to terms by Installing
  - Activation within 30 days
- Scope
  - One License for One CPU only
  - Maximum 5 network connections
- Redistribution
  - Can transfer copy to another
  - Allowed to store software
- Territory
  - Export restriction in alignment with US law
- Revocation of media violating DRM

C:\Virtusa\code\licenses\windo

Windows XP Home EULA

- Confidentiality
  - Limitations on reverse engineering, decompiling
  - Microsoft allowed to gather technical data on system
- Sub-licensing
  - You may not rent or commercially host
  - Reserve all rights not granted
- Warranty
  - 90 days for software obtained from US and Canada
  - Limitation of Liability to cost of software paid or $5.00

Virtusa™
Conceive. Transform. Optimize.

Free and Open Source Software

Defn: **Free and Open Source Software (FOSS)** is software which is liberally licensed to grant the right of users to study, change, and improve its design through the availability of its source code.

- Use the Law of Copyright to defend the rights for end-users of the software
- F/OSS = Free and Open Source Software Camps

Conceive. Transform. Optimize.

Free vs Open Source

Free as in "**Freedom of use**"

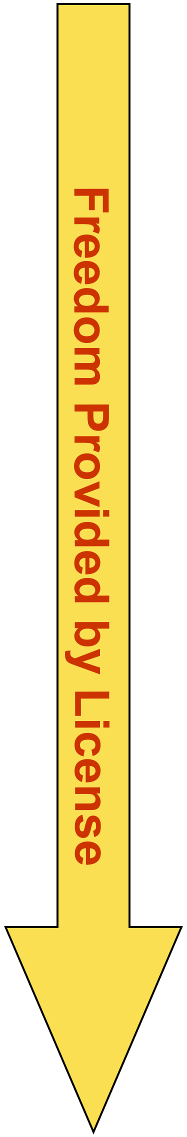
Freedom 0: The freedom to run the program for any purpose.
Freedom 1: The freedom to study and modify the program.
Freedom 2: The freedom to copy the program
Freedom 3: The freedom to improve the program, and release your improvements to the public

An **open-source license** is

1. Non-discriminatory freedom to Use
2. Copying and distribution with out any royalties
3. Modification without any royalties
4. Open and Easily available source code

Different Philosophy, but the same in Practice

The Spectrum of Free Software Licenses


Freedom Provided by License

Proprietary (Freeware, Shareware)

- Traditional Proprietary Licenses, which prevent free redistribution and access to the source code

"Restricted Access" Source (Microsoft MS-Pl, MS-Cl)

- Restricted access to certain parties only or closed groups

(Strong) Copyleft (GPL)

- Maintains copyright, but releases rights to certain things
- Promotes Free and Open Source code as it propagates it's license to derivative works/software that utilizes it ("reciprocal" or "viral" license)

Weak Copyleft (LGPL, Mozilla PL)

- Derivative works only extends to the modification of the original work (e.g. mostly used in Libraries), but not to linked software

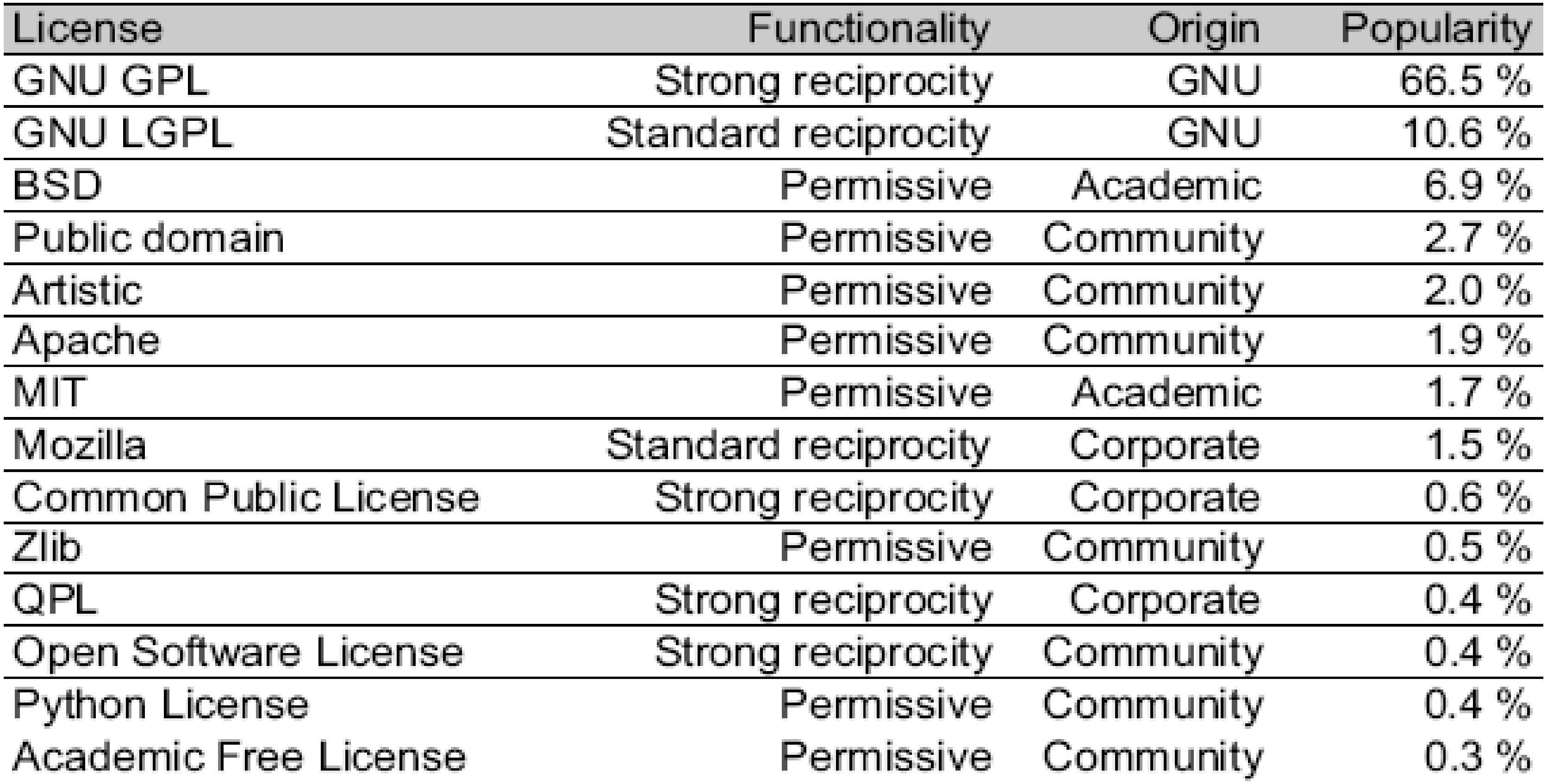
Permissive / Copycenter (BSD, Apache, MIT, CPL, etc)

- Maintains copyright, and allows right to do almost anything with the code

Public Domain

- No copyright maintained and free to use as you wish

Examples FOSS Licenses



License	Functionality	Origin	Popularity
GNU GPL	Strong reciprocity	GNU	66.5 %
GNU LGPL	Standard reciprocity	GNU	10.6 %
BSD	Permissive	Academic	6.9 %
Public domain	Permissive	Community	2.7 %
Artistic	Permissive	Community	2.0 %
Apache	Permissive	Community	1.9 %
MIT	Permissive	Academic	1.7 %
Mozilla	Standard reciprocity	Corporate	1.5 %
Common Public License	Strong reciprocity	Corporate	0.6 %
Zlib	Permissive	Community	0.5 %
QPL	Strong reciprocity	Corporate	0.4 %
Open Software License	Strong reciprocity	Community	0.4 %
Python License	Permissive	Community	0.4 %
Academic Free License	Permissive	Community	0.3 %

Sourceforge Stats

Recent Problems with using FOSS

D-Link vs FSF

- Infringement of network embedded product
- GPL code msdosfs, initrd and mtd was used in device
- Ruling was given for D-Link to release all their code under GPL and pay damages
- http://www.jbb.de/judgment_dc_frankfurt_gpl.pdf

BT vs FSF

- BT accused of GPL violation in Home Hub Product (developed by Telecoms Manufacturer Thompson)
  - ZDNet: “BT accused of GPL violation” – Jan 2007
    - http://news.zdnet.co.uk/software/0,1000000121,39285585,00.htm
  - The Register: “BT Says enough on GPL” – Jan 2007
    - http://www.theregister.co.uk/2007/01/29/bt_says_enough_gpl

Problem: Reciprocal Nature of Copyleft for Products

GNU General Public License (GNU GPL)

C:\Virtusa\
dcode\licenses\gpl.z

GPL License

- Father of Copyleft licenses
- Objective
  - Maintain the Freedom of Software
- Maintained by FSF
- Reciprocal or Viral License
  - Derivative works have to be distributed under same terms
- Recent GPL v3
  - DRM Issue
- One way out of GPL
  - Dual Licensing by Copyright Holder
  - E.g. MySQL

Functional License Classification

- Standard Reciprocity Obligation License
  - If source code is developed further license obligation must be maintained and propagated to enhanced version
  - Also know as Weak Copyleft
- Strong Reciprocity Obligation License
  - Extends Standard Reciprocity to adaptations and derivative works
  - Sometimes even extends to network use
  - Also know as Strong Copyleft
- Permissive License
  - No propagation of license required in modifications/enhancements, adaptations or derivative works
  - Some are known as Copy Center

Defining Derivative Work

- In the United States, "derivative work" is defined in 17 U.S.C. § 101:

  A “derivative work” is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a “derivative work”.

- The following should thus only be taken as rules of thumb for software:
  - If the original software is *modified to create the new program*, a derived work is created.
  - If the original software was designed to accept plug-ins or drivers using a defined mechanism, such a driver or plug-in does not form a derived work.
  - In the same sense linking to a library in the way it was designed to be interfaced with, does not constitute deriving a work. (not for GPL)

Distribution in GPL

When the “distribution” is valid

- dependant source code has to be made available to those it is distributed to
- Including the code dependant on the GPL

Private Use

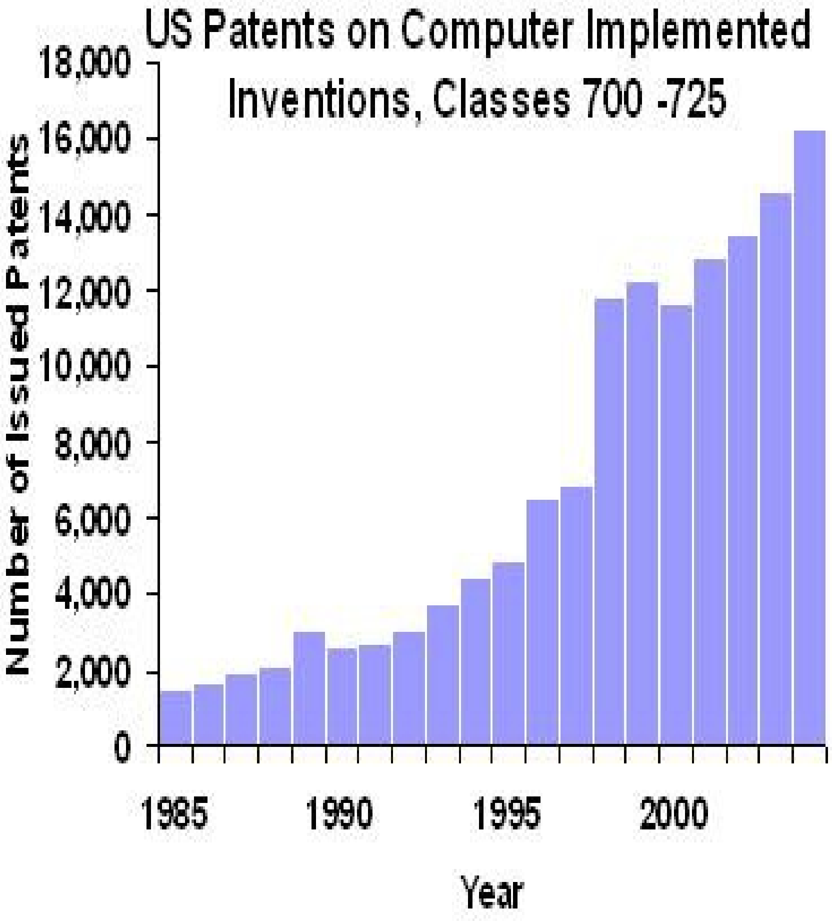
- Individual private use of GPL based code does not have to be distributed
- Deploying GPL software within a company (the entity) is classified private use and they can even prevent their employees using it
- In some jurisdictions (e.g. US) use of code within a subsidiary is also considered private use

Software Patents

- It is a patent granted on any performance of a computer realized by means of a computer program

- After the **Diamond v. Diehr** case: "process for molding raw, uncured synthetic rubber into cured precision products" in 1981
- A machine controlled by a computer program was patentable

- The recent expansion of the Internet and e-commerce has led to many patents being applied for and being granted for business methods implemented in software.



The Great Debate On Software Patenting

- The debate surrounds around:
  - Whether software is patentable and
  - Whether the inventive step and non-obviousness requirement is too easily satisfied for software

- The argument is that Software Patents stifle innovation and kill competition in favor of a few
  - Cold war on patents

- When a software program is written, it is automatically covered by copyright law

Virtusa™
Conceive. Transform. Optimize.

Popular Electronic Media Licenses

- GNU Document Public License (GDPL)
  - Documentation version of GPL

- FreeBSD Document License
  - Copycenter document license

- Creative Commons
  - Licenses for Artistic works
  - Documentation, multimedia, etc
  - Can be used for software, but not as relevant

Creative Commons

- Makes Creating a License Much Simpler
- When you've made your choices, you'll get the appropriate license expressed in three ways:
  - Commons Deed:
    A simple, plain-language summary of the license, complete with the relevant icons.
  - Legal Code:
    The fine print that you need to be sure the license will stand up in court.
  - Digital Code:
    A machine-readable translation of the license that helps search engines and other applications identify your work by its terms of use.

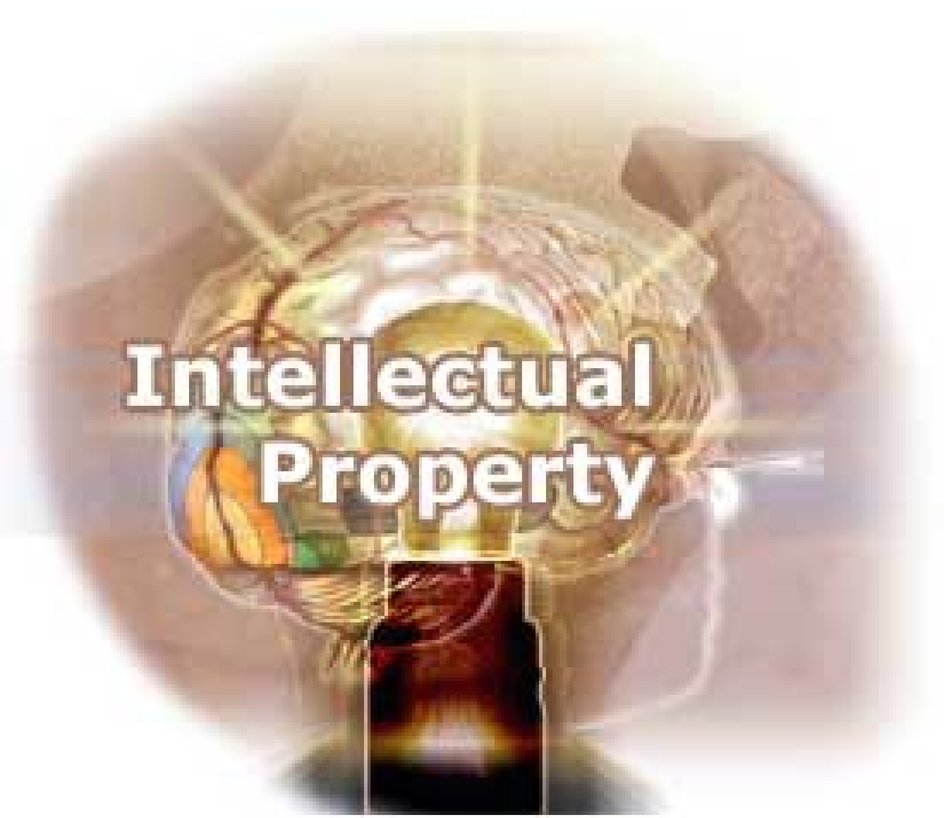
“Baseline Rights”

- Attribution (by): Licensees may copy, distribute, display and perform the work and make derivative works based upon it only if they give the author or licensor the credits in the manner specified by these.
- NonCommercial (nc): Licensees may copy, distribute, display, and perform the work and make derivative works based upon it only for noncommercial purposes.
- No Derivative Works or NoDerivs (nd): Licensees may copy, distribute, display and perform only verbatim copies of the work, not derivative works based upon it.
- ShareAlike (sa): Licensees may distribute derivative works only under a license identical to the license that governs the original work.

Web Site Content, Email and Blogging

- Liabilities on Email, Blogging and Web Sites
  - Serves a legal evidence for
    - Defamation
    - Violation of NDAs
    - Violation of Contractual terms with clients
- Web Sites
  - OCT-1998: Digital Millennium Copyright Act (DMCA) and MAY-2001: EU Copyright Directive (EUCD)
    - Heightens penalties for copyright infringement on the web
    - First the copyright holder can negotiate with the offender
    - On failure can address a DCMA to the hosting provider
      - Hosting provider will take down your entire site
    - Similar to DMCA

Intellectual Property (IP)



Module 1: IP 101

- What is Intellectual Property
- Background of IP Law

Module 2: Software Licensing

- Software Copyright, Licenses
- Open Source Licenses
- Digital Media Rights

Module 3: The Virtusa IP Process

- Business Case
- Virtusa Process (GIP) updates
- Scenarios & Do’s and Don’ts

Virtusa's Business Context

- We build software for clients and deliver source code, etc
- We do not own the delivered code or digital media
  - We assign all rights to all the code (by default) to clients
  - Copyright, Trademarks, Patents, Trade Secrets
- Anything else has to be stated in legal documentation
  - 3rd party assets, FOSS components, Freeware, Virtusa Components
  - Valid Legal documents
    - Master Service Agreement (MSA)
    - Change Request
    - Statement of Work (SOW)
- We have unlimited liability to resolve client IP issues
  - Product risk is greater than enterprise risk

If it is **not** stated in a **Legal documents do not** put it in the **deliverable!**

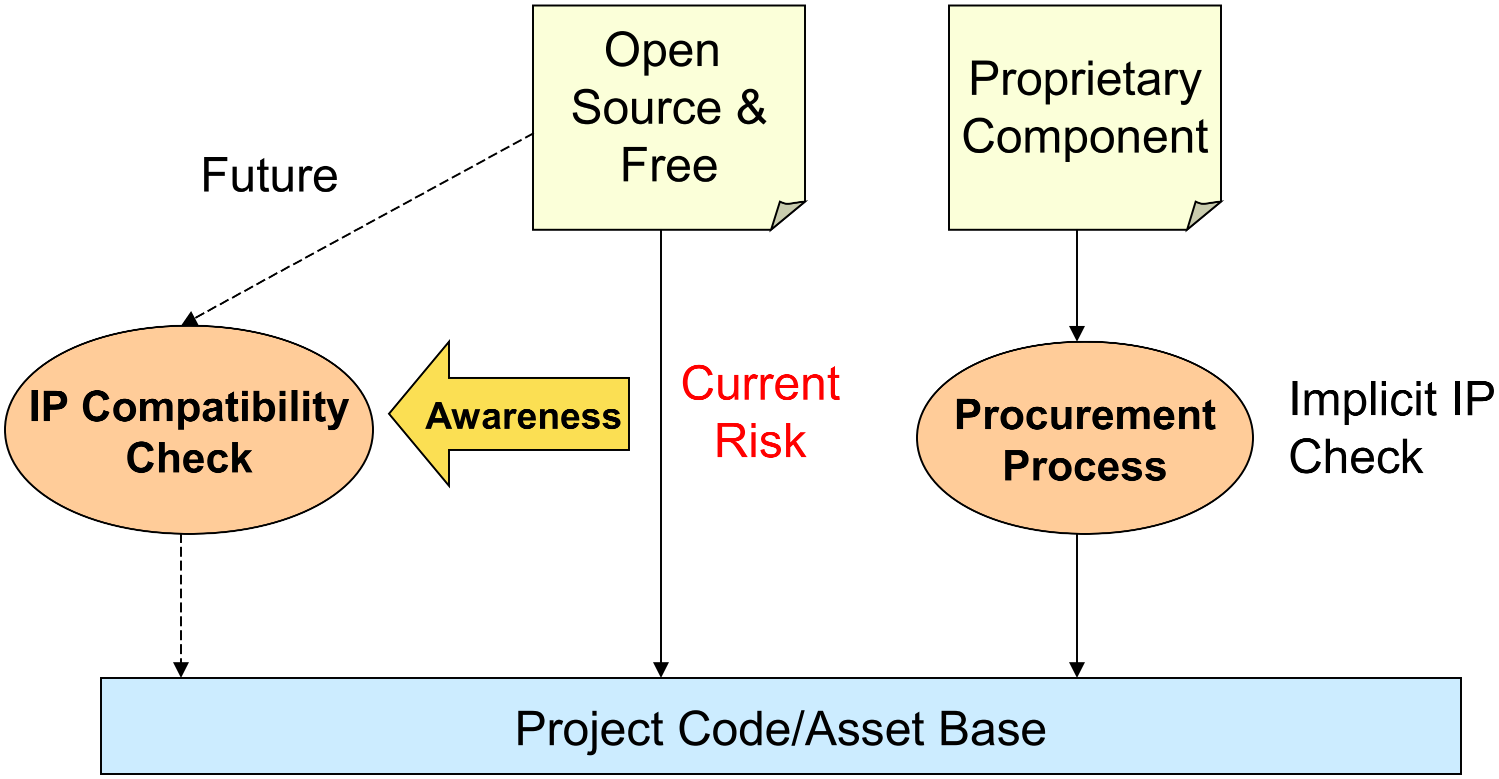
Virtusa™
Conceive. Transform. Optimize.

Typical IP Scenarios for Virtusa

- When Releasing Code to Clients
  - Ensure that all code is compatible with client’s IP policy
- When Accepting Code from Clients to the code base
  - Ensure there are no vendor or 3rd party code the client could black list us for.
- When Moving across Account/Project Boundaries
  - Moving code from one project to another in Virtusa is illegal, as we do not own the code. The client does.
- When Researching for Components / Code Snippets on the Internet
  - Just because it is freely available does not mean you can use it, especially with client code
- When Utilizing of 3rd party COTS Components
  - Ensure license is compatible and you can re-distribute
- Managing the licenses of software tools used on your machines
  - Ensure you have a valid license and it is not a client license

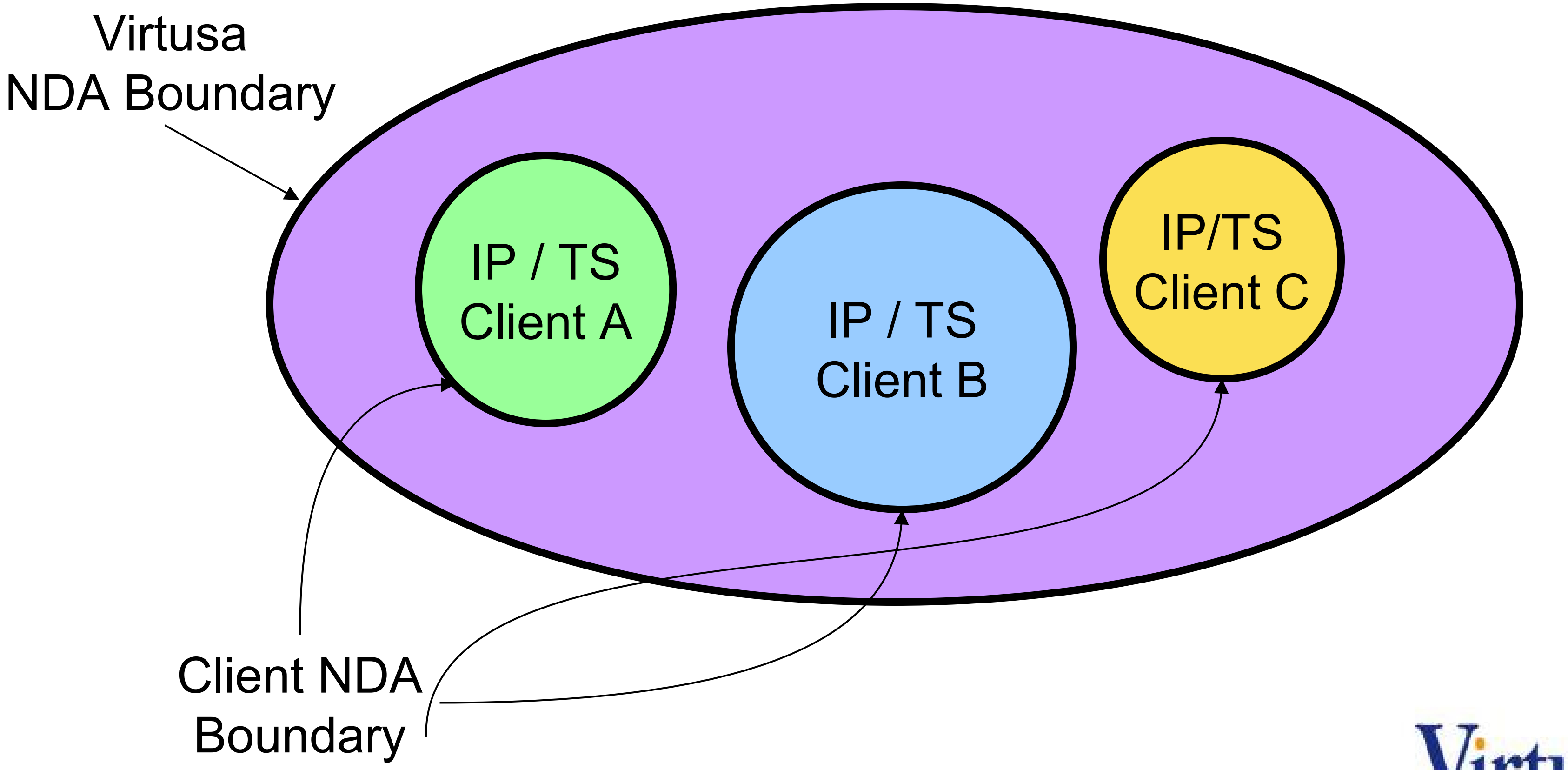
Free and Open Source Problem

- Developers downloading and utilizing software, digital media and documentation without due diligence checks on license
- No IP compatibility check when downloading open source content

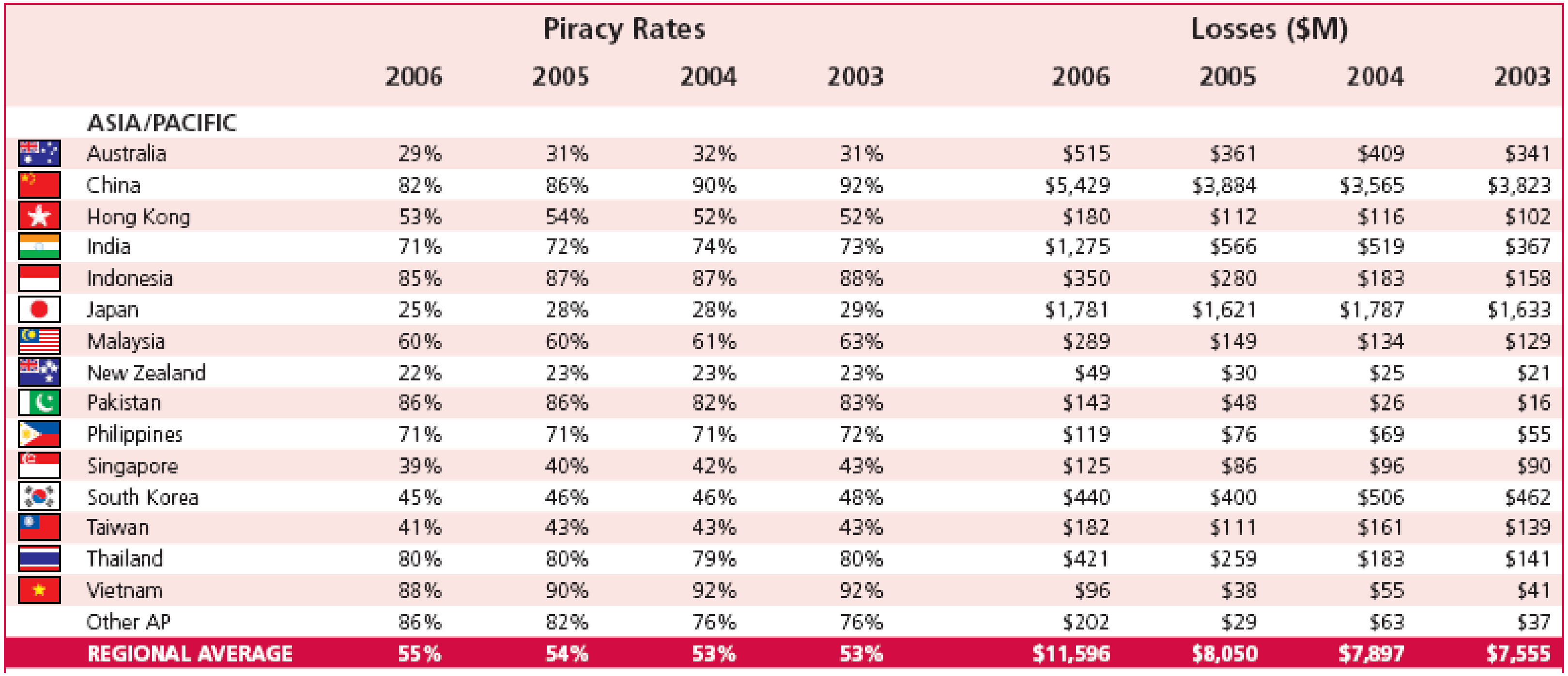


Virtusa NDA Boundaries

- In Virtusa we have 2 types of NDA boundaries
  - No leakage of IP should happen across these boundaries either way
  - Unless explicitly provided by an agreement or license



Intellectual Awareness Perception of Asia



	Piracy Rates				Losses ($M)			
	2006	2005	2004	2003	2006	2005	2004	2003
ASIA/PACIFIC								
Australia	29%	31%	32%	31%	$515	$361	$409	$341
China	82%	86%	90%	92%	$5,429	$3,884	$3,565	$3,823
Hong Kong	53%	54%	52%	52%	$180	$112	$116	$102
India	71%	72%	74%	73%	$1,275	$566	$519	$367
Indonesia	85%	87%	87%	88%	$350	$280	$183	$158
Japan	25%	28%	28%	29%	$1,781	$1,621	$1,787	$1,633
Malaysia	60%	60%	61%	63%	$289	$149	$134	$129
New Zealand	22%	23%	23%	23%	$49	$30	$25	$21
Pakistan	86%	86%	82%	83%	$143	$48	$26	$16
Philippines	71%	71%	71%	72%	$119	$76	$69	$55
Singapore	39%	40%	42%	43%	$125	$86	$96	$90
South Korea	45%	46%	46%	48%	$440	$400	$506	$462
Taiwan	41%	43%	43%	43%	$182	$111	$161	$139
Thailand	80%	80%	79%	80%	$421	$259	$183	$141
Vietnam	88%	90%	92%	92%	$96	$38	$55	$41
Other AP	86%	82%	76%	76%	$202	$29	$63	$37
REGIONAL AVERAGE	**55%**	**54%**	**53%**	**53%**	**$11,596**	**$8,050**	**$7,897**	**$7,555**

http://www.bsa.org/globalstudy/upload/2007-Losses-Global.pdf

- Fight the Perception
- Differentiate Virtusans by their comprehension of Software Intellectual Property Laws

The "Mixed Code" Initiative

- Introduce Process, Training, Awareness programs to greatly reduce the risk of intellectual property violations in the Virtusa customer code base
- Improve Legal Rigor and Customer Signoff to provide indemnify Virtusa against Intellectual Property issues
- Introduce Automation to improve productivity and coverage of software Intellectual Property Audits

- Home: http://hs-corpcolab/process/spi/ip/

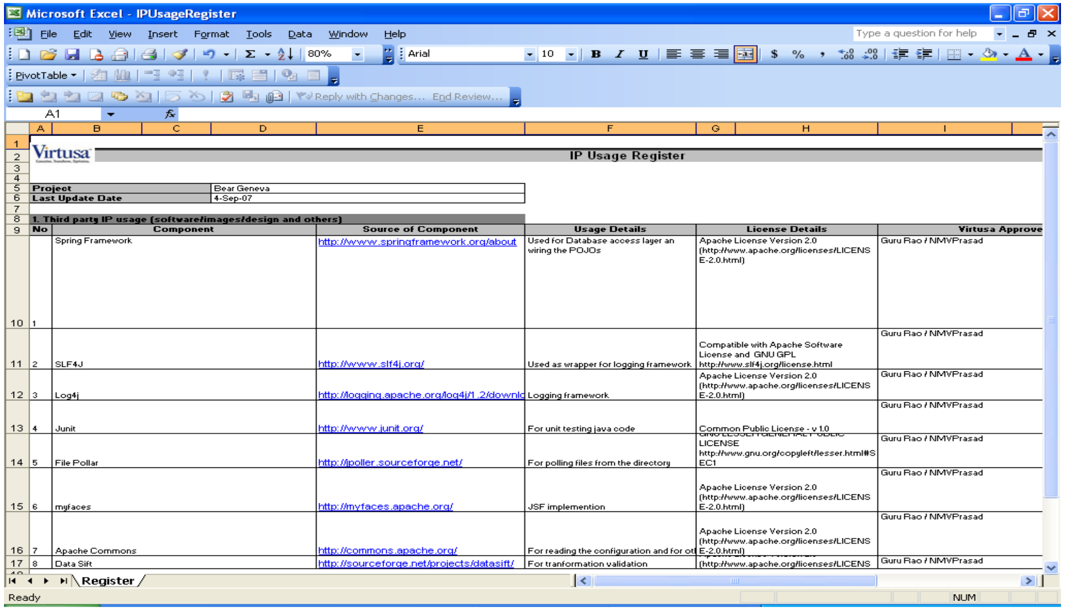
Scope: Software License & Copyright Only (not Software Patents)

IP Related Process (GIP) Updates

- IP Usage Register
  - Project specific approved license list (**within 30 days**)
  - Tracking 3rd party asset usage by project team
  - **Indemnification** by approval/signoff by PM, Client
  - **IPM level 1 integration**
- Client Release Notes (amendment)
  - Signoff on **Bill of materials** in compliance with SOX i.e. include IP encumbrances and 3rd party asset costs
- IP Compliance Coverage Report
  - Measure Progress on IP Compliance Coverage
- IP Audit Process
  - Spot checks on compliance
  - Part of the assurance discipline

Process (GIP) IP Updates

- Activity/Artifact: IP Usage Register (new)
  - Capture information on 3rd party software/images/design
    - Name and source of component
    - Relevant information on it's usage
    - Name of the license and it's details
    - Names of approver and Client approval notes


Microsoft Excel - IPUsageRegister
File Edit View Insert Format Tools Data Window Help
Type a question for help
80%
Arial
10
PivotTable
Reply with Changes... End Review...
A1
Register
Ready
NUM

Virtusa

IP Usage Register

Project	Bear Geneva
Last Update Date	4-Sep-07

1. Third party IP usage (software/images/design and others)

No	Component	Source of Component	Usage Details	License Details	Virtusa Approve
1	Spring Framework	http://www.springframework.org/about	Used for Database access layer an wiring the POJOs	Apache License Version 2.0 (http://www.apache.org/licenses/LICENSE-2.0.html)	Guru Rao / NMVPrasad
2	SLF4J	http://www.slf4j.org/	Used as wrapper for logging framework	Compatible with Apache Software License and GNU GPL http://www.slf4j.org/license.html	Guru Rao / NMVPrasad
3	Log4j	http://logging.apache.org/log4j/1.2/downlo	Logging framework	Apache License Version 2.0 (http://www.apache.org/licenses/LICENSE-2.0.html)	Guru Rao / NMVPrasad
4	Junit	http://www.junit.org/	For unit testing java code	Common Public License - v 1.0	Guru Rao / NMVPrasad
5	File Pollar	http://jpoller.sourceforge.net/	For polling files from the directory	GNU LESSER GENERAL PUBLIC LICENSE http://www.gnu.org/copyleft/lesser.html#SEC1	Guru Rao / NMVPrasad
6	myfaces	http://myfaces.apache.org/	JSF implemention	Apache License Version 2.0 (http://www.apache.org/licenses/LICENSE-2.0.html)	Guru Rao / NMVPrasad
7	Apache Commons	http://commons.apache.org/	For reading the configuration and for ot	Apache License Version 2.0 (http://www.apache.org/licenses/LICENSE-2.0.html)	Guru Rao / NMVPrasad
8	Data Sift	http://sourceforge.net/projects/datasift/	For tranformation validation	(http://www.apache.org/licenses/LICENS	Guru Rao / NMVPrasad

Owner:
PM/Architect

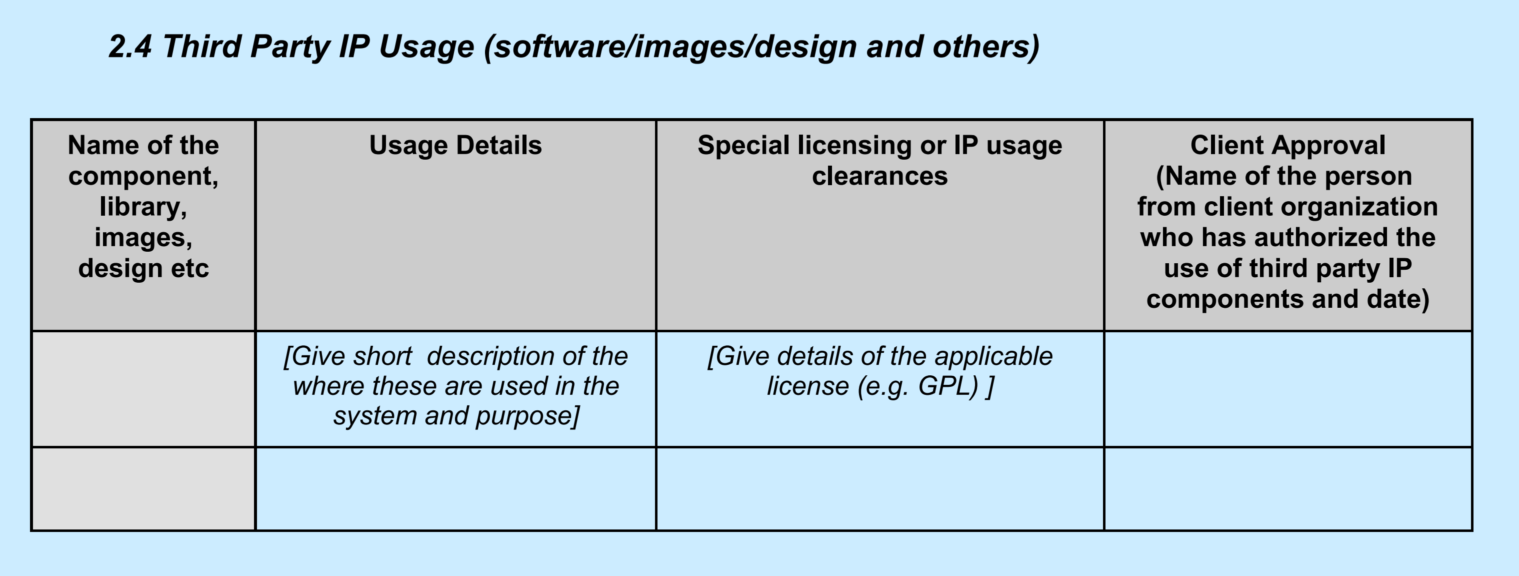
Sample

Microsoft Excel Worksheet

http://dashboard/Process/GIP/GIP50/process/artifact/ar_IPreg.htm

Process (GIP) IP Updates

- Artifact: Client Release Note (Amended)
  - Features and dependences of a specific version of the software
  - Includes net changes since the last release
  - Include a new section on 3rd Party IP Utilization / Dependency
  - A reaffirmation and signoff of what was provided by the IP Usage Register upon release



2.4 Third Party IP Usage (software/images/design and others)

Name of the component, library, images, design etc	Usage Details	Special licensing or IP usage clearances	Client Approval (Name of the person from client organization who has authorized the use of third party IP components and date)
	[Give short description of the where these are used in the system and purpose]	*[Give details of the applicable license (e.g. GPL)]*	

Sample

Microsoft Word Document

Owner:
PM / Leads

http://dashboard/Process/GIP/GIP50/process/artifact/ar_crn.htm

Process (GIP) IP Updates

- Activity: Perform Architecture Review

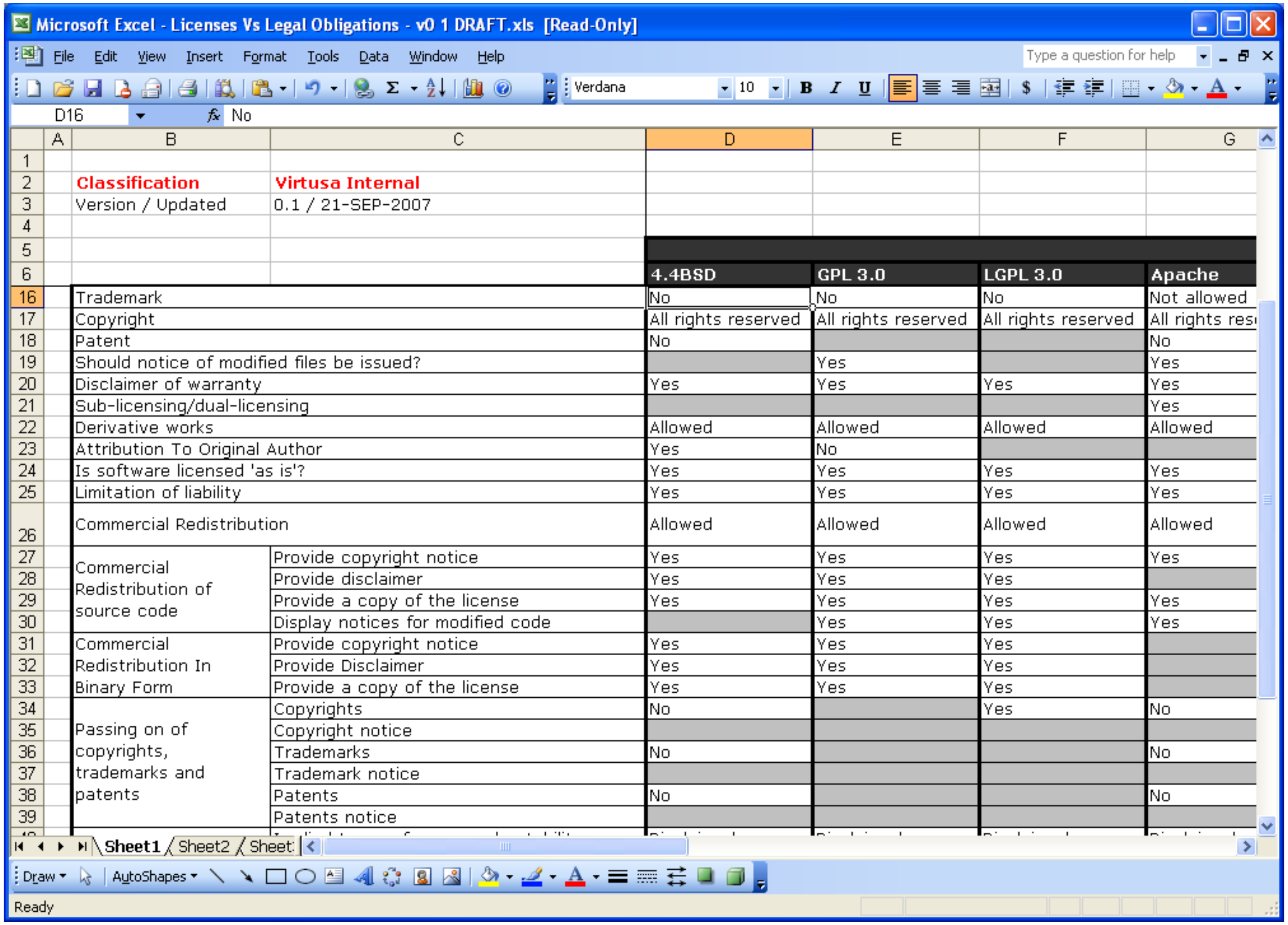
Identify and Analyze Open Source and COTS

The Implementor shall identify the applicable open source code / component for re-use. Usage details of the component, including its licensing details are provided to the Project Manager. The Project Manager shall coordinate with the Client Services Manager and obtain explicit approval from the authorized client representative(s) for usage of the Open Source IP. Details of usage and approval are maintained in the IP Usage Register

Owner:
Architect / SARB

http://dashboard/Process/GIP/GIP50/process/activity/ac_paa.htm

Legal Obligations vs License Matrix


Microsoft Excel - Licenses Vs Legal Obligations - v0 1 DRAFT.xls [Read-Only]
File Edit View Insert Format Tools Data Window Help
Type a question for help
Verdana 10
D16 No
Sheet1 Sheet2 Sheet
Draw AutoShapes
Ready

	B	C	D	E	F	G
2	Classification	Virtusa Internal				
3	Version / Updated	0.1 / 21-SEP-2007				
6			4.4BSD	GPL 3.0	LGPL 3.0	Apache
16	Trademark		No	No	No	Not allowed
17	Copyright		All rights reserved	All rights reserved	All rights reserved	All rights rese
18	Patent		No			No
19	Should notice of modified files be issued?			Yes		Yes
20	Disclaimer of warranty		Yes	Yes	Yes	Yes
21	Sub-licensing/dual-licensing					Yes
22	Derivative works		Allowed	Allowed	Allowed	Allowed
23	Attribution To Original Author		Yes	No		
24	Is software licensed 'as is'?		Yes	Yes	Yes	Yes
25	Limitation of liability		Yes	Yes	Yes	Yes
26	Commercial Redistribution		Allowed	Allowed	Allowed	Allowed
27	Commercial Redistribution of source code	Provide copyright notice	Yes	Yes	Yes	Yes
28		Provide disclaimer	Yes	Yes	Yes	
29		Provide a copy of the license	Yes	Yes	Yes	Yes
30		Display notices for modified code		Yes	Yes	Yes
31	Commercial Redistribution In Binary Form	Provide copyright notice	Yes	Yes	Yes	
32		Provide Disclaimer	Yes	Yes	Yes	
33		Provide a copy of the license	Yes	Yes	Yes	
34	Passing on of copyrights, trademarks and patents	Copyrights	No		Yes	No
35		Copyright notice				
36		Trademarks	No			No
37		Trademark notice				
38		Patents	No			No
39		Patents notice				

Sample

Microsoft Excel Worksheet

Location: http://hs-corpcolab/process/spi/ip/

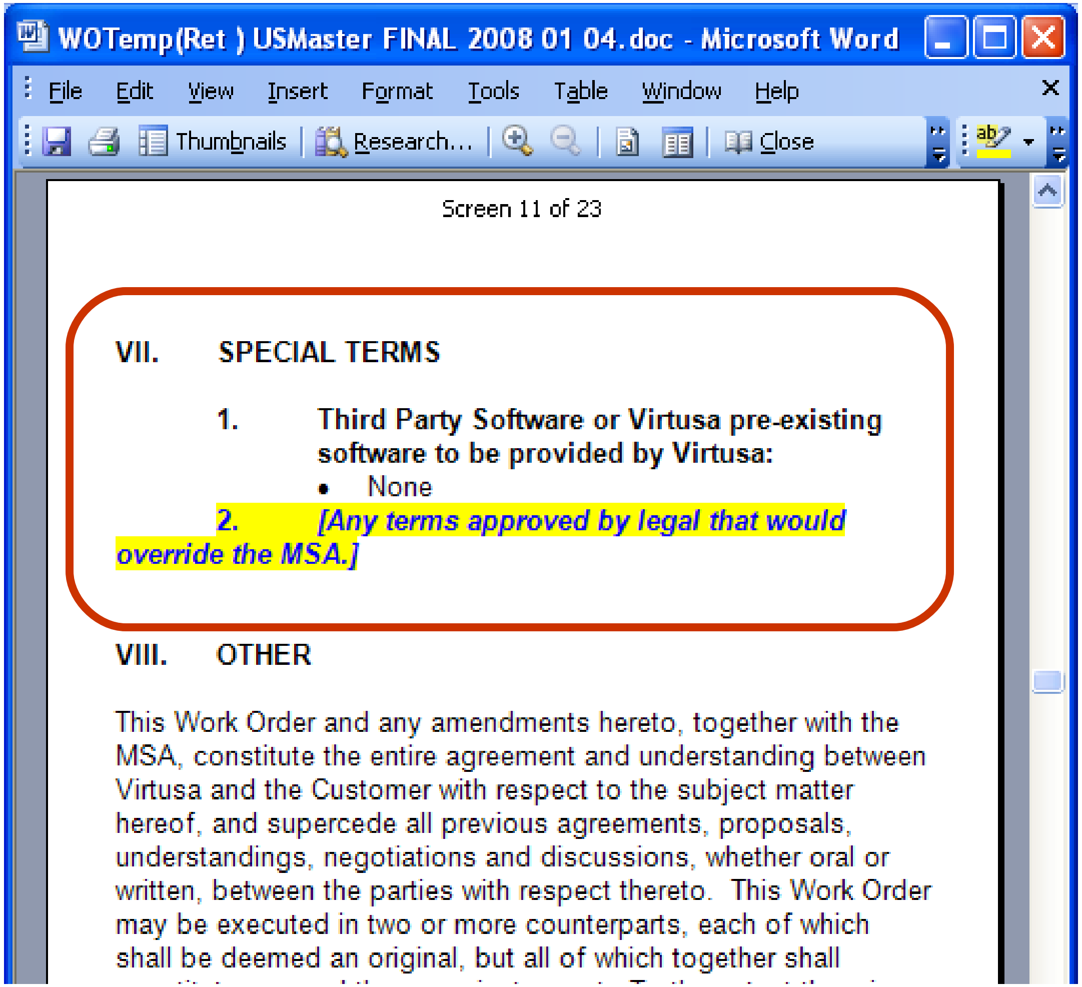
Virtusa™
Conceive. Transform. Optimize.

Legal Documents

- Master Service Agreement
  - A legal agreement stipulates the general relationship between the client and the service provider
- Work Order / Change Request
  - A legal document for a change to the requirements of a work effort that has been signed-off by the client
- Statement Of Work (SOW)
  - A legal statement outlining the specific services a contractor is expected to perform, generally indicating the type, level and quality of service, as well as the time schedule required
- Employee NDA
  - A legal agreement between employee and employer on confidentiality

Work Order

- Work Order Amendments
- Declare Components
  - 3rd Party Components
    - COTS
    - Open Source
  - Virtusa Components
- Declare Distributed Tools
  - 3rd Party Tools
  - Virtusa Tools



Screen 11 of 23

VII. SPECIAL TERMS

1. Third Party Software or Virtusa pre-existing software to be provided by Virtusa:
   - None

2. *[Any terms approved by legal that would override the MSA.]*

VIII. OTHER

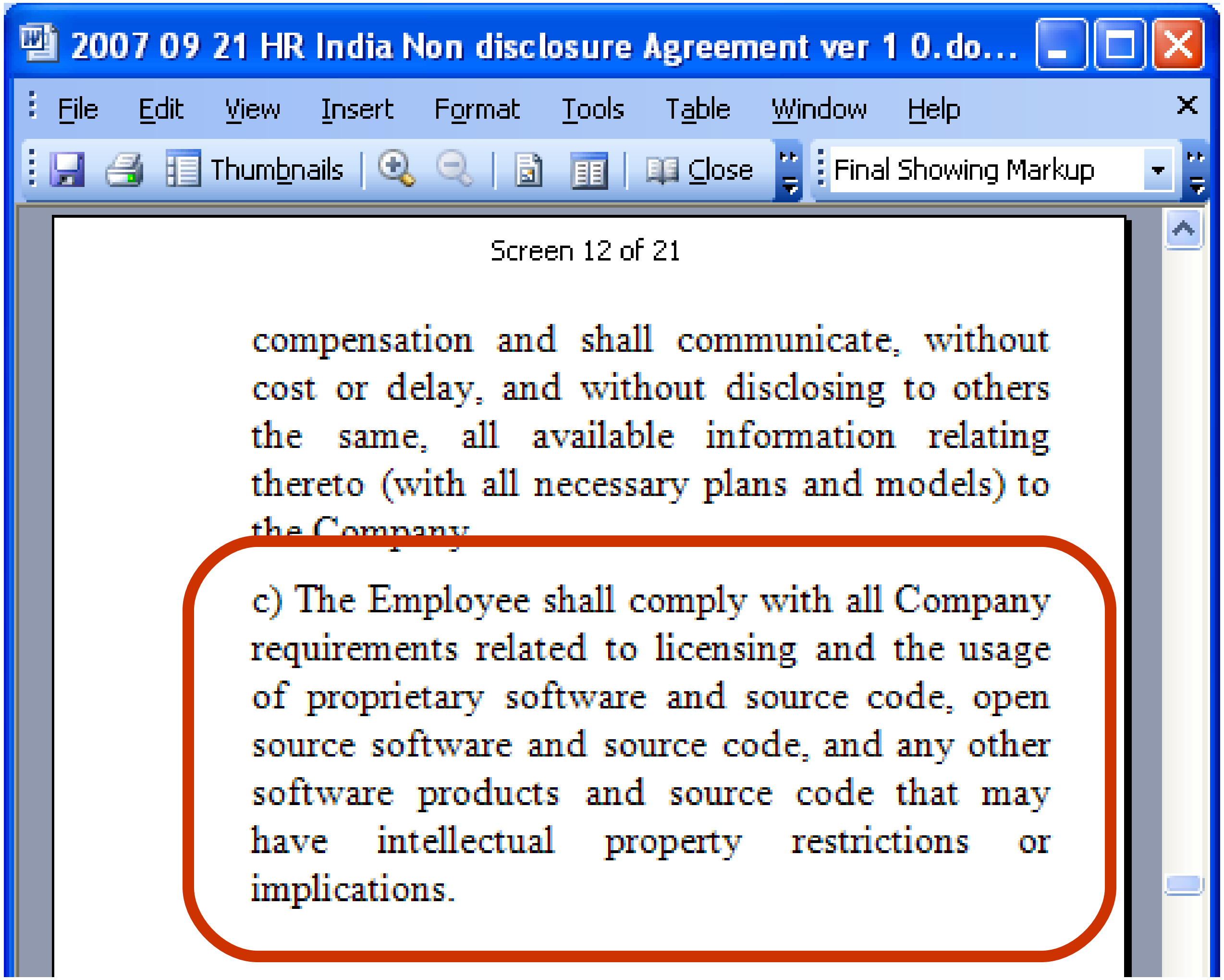
This Work Order and any amendments hereto, together with the MSA, constitute the entire agreement and understanding between Virtusa and the Customer with respect to the subject matter hereof, and supercede all previous agreements, proposals, understandings, negotiations and discussions, whether oral or written, between the parties with respect thereto. This Work Order may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall

Consequence: Contractual Liability, or Loss of Virtusa IP

Employee Contracts

Employment NDA

- Professional
  - Responsibility
  - Accountability



2007 09 21 HR India Non disclosure Agreement ver 1 0.do...
File Edit View Insert Format Tools Table Window Help
Thumbnails Close
Final Showing Markup

Screen 12 of 21

compensation and shall communicate, without cost or delay, and without disclosing to others the same, all available information relating thereto (with all necessary plans and models) to the Company.

c) The Employee shall comply with all Company requirements related to licensing and the usage of proprietary software and source code, open source software and source code, and any other software products and source code that may have intellectual property restrictions or implications.

Consequence: Removal from Project or Possibly Company

Automation

Requirement (Priority H, M, L)	**BlackDuck**	**Palamida**	**OSRM**
FOSS Component License Scan	Yes	Yes	PS
Proprietary Component Scan	Yes	Partial	PS
Public Code CPD Audit	Yes	Yes	PS*
License Compatibility Check (Policy)	Best	No	PS
Indemnification (Insurance)	No	No	Yes
Patent Infringement Check / Protection	No	No	PS
Audit with other Virtusa client code	Yes	Yes	No
Handles Binary Files (e.g freeware)	Yes	No	PS
Client IPR Policy Definition	No	No	PS
Training and Support	Yes	Yes	Yes
Scalability through Eclipse Plugin	Yes	No	No
Report on SOX Bill of Materials	Yes	No	PS
Team based IP Management	Yes	Yes	No

PS: Professional Services

License Audit Tool Analysis

- Best IPR Audit and Most Productive Tool
  - **Black Duck** is the best tool in terms of IPR audit coverage
  - Includes a legal analysis of licenses vs 27 attributes of client policy
  - No indemnification against license violation or patents
- Best Indemnification
  - **OSRM** has the best indemnification with a Insurance cover $12 million for only FOSS code base used for 3 years
  - Professional Service includes IP Policy, Process definition
  - Patents not covered

The Benefit of FOSS and Open Content

- Benefits
  - Improve productivity by utilizing FOSS components
  - Reduce license costs for the client
  - Learn good coding practices
  - Improve Your’s and Virtusa’s visibility and page rank
- FOSS will become an increasing part of Software Engineering Practices
  - Reducing TCO
  - Transparency and Trust
  - Security
  - Latest Innovation

Software Tool Intellectual Property

- Software Tools vs 3rd Party Components
  - That which is not included in the delivery to the client
- Virtusa liability on illegal tool usage
  - Using pirate copies of software on your machine
  - Using Virtusa license key on illegal downloads
  - Exceeding the number of licenses available to Virtusa utilization
  - Utilizing client provided software after end of project allocation
- Responsibility
  - Do not bring or download any pirate software
  - Check if your project has enough approved licenses for software before you install it
  - Uninstall unwanted / unutilized tools (free capacity and seats)
  - Check Freeware / Free and Open Source tools use with PM / Architect
    - Approved FOSS / Freeware repository will be provided

Some Dos and Don'ts

- Always pass the decision of what 3rd party assets to use to the client
  - At Virtusa it is the client's copyright and liability we are protecting
  - Ensure client signs off on all 3rd party assets
- Always check the copyright and license of things you get from the web
  - Ensure you report usage of 3rd party assets to the Project Manager
- For a product company GPL (Copy Left) is a problem
  - For an enterprise it is less so, but watch distribution channels
- Recommend not to use Freeware, Shareware in your code
  - Unless explicitly stated by client
  - No awareness of what product contains and how it works
- Ensure you copy and maintain copyright / license notices
  - Even in permissive licenses you need to maintain the copyright / license info intact even for permissive licenses

Some Dos and Don’ts

- Don’t use digital media from the web in your code
  - Unless you have a license or permission from the copyright holder
- Never copy code from another project or account (customer) code base
  - Only within account if express permission is given
- Make sure you know the bounds of permissible use
  - And even then report it to the project manager

FAQ

Q: Can I use Open Source Tools?

- You do not need to worry about FOSS SE tools as long as they do not end up in the deliverable to the client

Q: I need component A badly but it is an incompatible license

- See if you can obtain an alternative license from the copyright holder possibly though royalty

Q: The client wants us to use a tool which we believe is violating IP. What should we do?

- It is the client's decision what happens in his code base, but make sure you warn them and ensure he signs off the utilization of the tool on the IP usage register

Q: I still have some tools installed on my machine from the last client project, (where the client gave us the tool)

- Ensure you remove any software tools which was given to you by the client as part of the project. No IP should move across NDA boundaries

More Information

- Intellectual Property Dashboard Home page
  - Off http://dashboard/ip
- Discussion Forum for Non-sensitive IP Queries and Help
  - Virtusa Intellectual Property Initiative Portal
  - http://hs-corpcolab/process/spi/ip/
- For Client Sensitive IP Help
  - Contact Paul Tuton, Marjorie Summers (US) or Chamindra de Silva (Asia)
- Send your feedback on the initiative to:
  - Chamindra de Silva, GTO
  - Navneeth Nayagam, Head Process
  - Chandika Mendis, Head GTO
- Content Authors
  - Anudi Nanayakkara
  - Chamindra de Silva

The End

Questions?

Virtus™

Conceive. Transform. Optimize.

References and Citations Taken From

[1] Understanding software license and services agreements – J. Riely, P. McGuigan

[2] Software License Agreements, Ignore at your own risk - Edward Desautels

[3] The Rise of Open Source Licensing – M. Valimaki

[4] Primer on Intellectual Property - Foley Lardner

[5] Wikipedia references on Intellectual Property

[6] Virtusa GIP Process

The Inception of Software Licensing

- 1950: Software Contractors
  - Working on mainframes to build instance specific software
- 1969: IBM’s Unbundling decision
  - Generally an evolution due to the demand for software, programmers, anti-trust issues with IBM
  - Mass market Software Industry Took off
  - Software Licensing Really Starts
- 1981: IBM’s Introduces the PC
  - Based on an Open Architecture
  - Software becomes decoupled from hardware

Free and Open Source License Inception

- 1975: Berkley Software Distribution (BSD) of AT&T Unix
  - AT&T Gives Unix to educational Institutions with source code for educational purposes
  - Users send patches and Fixes especially in academic circles
  - It is redistributed at cost though
- 1983: GNU Manifesto by Richard Stallman
  - Objective to write a completely free Unix
- 1988: Emacs/GNU General Public License (Copy left)
  - After a dispute on Emacs
- 1989: BSD Network Release 1
  - Liberal license and redistribution terms of source code
  - Dispute with AT&T and settled in 1993 when Novel bought rights
- 1991: GNU GPL version 2 released
- 1992: Linux released under GPL and GPL takes off