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THE IrDA BULLETIN

The Smart Wireless Link

Infrared Data Association SM
www.irda.org

IrDA's Fiendish Plot!

By: Lee Goldberg, Sr. Editor ChipCenter Online

Until now, I've been a big fan of infrared data. It has been one of those quiet technologies, like magnetic stripes, duct tape, and Spandex, that makes life easier or more pleasant for the people who use it without making a big whoopla about it. Think about it, there are a few million Palm Pilot owners who think nothing of exchanging business cards, calendar dates, and applications with any other device using the Palm OS. They don't know or care that IrDA technology is tucked inside the 21st century equivalent of a pocket protector, they just know that now they can share the latest version of Palmtop Doom with their friends.

Now that palmtop computing is firmly taking hold, the folks at IrDA are also just about to make life a little easier for us again by letting us pay for our groceries with the same devices we store the shopping list on. That's right, we're probably pretty close to having several major credit processing companies approve the use of the Infrared Financial Messaging (IrFM) protocol. It will let you write a "check" on your handheld and beam an encrypted version over to a dongle on a standard Verifone-type point-of-sale terminal.

For somebody like me, who seems to have a genetic flaw that makes it impossible to keep the balance in my check register within $100 of my account statement, this will be a huge blessing. When I synch my Palm to my

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New Communications Protocols Improve Local Connectivity

By: Lawrence Faulkner, Executive Director of IrDA

Local connectivity is getting better! The 1394 and USB standards represent advancement in the hard-wired arena, IrDA and Bluetooth in the wireless space, and Salutation and Plug-n-Play with transport independent protocols that allow devices to discover each other. Each of these protocols adds some intelligence to connecting devices. Users no longer have to set baud rate, start bits, stops bits and parity since the devices determine the best physical signaling method at the beginning of each connection.

These protocols allow Plug-n-Play to automatically search for and install drivers and can even bind applications to the connection. For example, using IrTranP, you can push a picture from a digital camera to a Windows 2000 computer. Without touching a key it will accept the picture, create a folder using today's date, put the picture into that folder, and open a picture viewer. This is built into Windows 2000 so the user doesn't have to buy or install anything new. This device-to-application binding is true with ActiveSync, where a relationship is created between two devices and they perform the predefined task, in this case synchronization, automatically upon connection.

These new capabilities are made possible by the new communications protocols that can exchange information about the device's physical capabilities as well as application level services. So where are the applications that leverage the new capabilities? Good question. There are some out there to be sure. File transfer, printing and synchronization are the most obvious tasks that use a device-to-device connection but applications that use the new connectivity are not common.

I believe the reasons why include unstable drivers, unfamiliar APIs, inconsistent support across operating systems, and lack of awareness. Application writers want to be sure that a specific transport will be present in the devices before they take the time and money to try and use that transport. This is natural, of course, but it creates a problem where demand for the hardware is low, with no user pull, because there are no applications that can use that hardware because there is not enough hardware to write applications for. This is where we are today. Add to this the perception that each new connectivity protocol will replace those that already exist and we have a formula for failure. Failure, in that new connectivity technology is ahead of the consumer's ability to access that technology through applications.

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IrPRO

IrPro(TM) by EMBEDnet, Inc. is a complete IrDA infrared communications application software development kit for portable devices. Our kit provides you with all the tools and software you will need to develop and test your IrDA application on your target CPU. IrPro is scalable and has been used in resource constrained environments. IrPro is offered at an affordable non-royalty based pricing schedule. Contact us at: www.embednet.com, info@embednet.com, 503-645-4034.

IrDA OFFICERS

Mike Watson, President
Zilog, 408-558-8333
Robert Stuart, Vice President
Sharp, 360-834-8948
Michael Nelson, Treasurer
Extended Systems, 541-758-6123
Daphne Terrell, Secretary
IrDA, 925-944-2933
Lawrence Faulkner
Executive Director
IrDA, 925-944-2930

Committee Leaders

Dr. Lichen Wang, Technical Chair, ACTiSYS, 510-490-8024
Gontaru Kitazumi, Protocol Co-Chair, Link Evolution
81-3-5301-2700
Wee-Sin Tan, Physical CoChair,
Agilent, 650-279-2087
Dr. Keming Yeh, Test/Interop Chair, ACTiSYS, 510-490-8024
Yoshinobu Akimoto, Test Co-Chair
Open Interface, 81-3-3440-9101
Glade Diviney, Interop CoChair,
Extended Systems/Counterpoint
541-758-6123 x11
Robert Stuart, Mktg Chair
Sharp Electronics, 360-834-8948
Ernest Abyetia,Mkgt. Development CoChair,
Novalog, 714-427-6959
H.R. Damon Gonzalez Jr.
Mktg. Requirements Co-Chair
CrossCheck, 707-586-0551

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Letter From The Executive Director

Dear Members,

Here's one that will bring your seats to the full upright position! A committee of the Worldwide Airline Entertainment Association is debating the question of connectivity in commercial aircraft. The result will be a recommendation about which technology should be used when passengers want to download email or surf the web from the sky.

You probably already know where I'm going with this - I think IrDA is a perfect choice. An IrDA port on the back of every seat would change our industry in a dramatic way. It would provide a target for laptop designers to aim for. Users would make darn sure that the port was enabled and their software could access it. What if your mobile phone could give you a voice connection via Ir leaving the radio "in the off position for the duration of the flight"? Impossible, I hear you say. No one will use a phone they have to point, but you forget about those cute little earphones that all the serious road warriors use anyway. They can put the phone anywhere they want as long as they have their headsets. Now what do you think about it? The same model is being used in cars, in some countries by law, and in others by choice, with the "hands-free" cradles. That's all it is!

Don't get me wrong! I'm not at all sure that I want a cabin full of software salesmen calling in their leads to the home office. But in reality, they want to! And they want their email too. So the airlines are going to do this, whether or not we like it. There are 350 million frequent flyers in the world, most of them carrying electronics and wanting to get some work done from the air. Of course the airlines are anxious to give them what they want, they account for considerably more than half the profits on ticket sales. The question is how to go about it. IrDA is the ideal solution. The port won't break with repeated usage; it won't corrode from cleaning fluids; it electrically isolates the network from the devices that are connected to it; it's fast and the ports are on most of the airborne electronics already.

So what are they waiting for? They are waiting for us. Let's study this issue and come up with a solid set of recommendations that they can use. We have the opportunity to make our case, let's recognize it for what it is and get busy.

Lawrence Falkner
Executive Director, IrDA
Lawrence@irda.org

The IrDA Taiwan Implementers' Forum

The official ceremony of the formation of IrDA Taiwan Implementers Forum was held on July 27th at the International Convention Center, Taipei. Many government and industry dignitaries were present and gave congratulatory speeches. Dr. Keming Yeh, Chair of IrDA Test and Inter-op committee welcomed the Forum members and the press and outlined the relationship between IrDA and the Taiwan Consortium. A full house of attendees listened to the keynote speeches by Mr.Hon Chang, Deputy General Manager at Chung-San Institute of Science and Technology, and Dr. Keming Yeh, President of ACTiSYS.

The first term officials of this consortium were introduced. President of the Forum is Mr. Wei-San Lin, President of the Tatung Group which encompasses the CRT, LCD, cellular telephone, consumer device businesses. Three Vice Presidents are: Mr. Hon Chang of CSIST, Dr. Yeh of ACTiSYS, and Mr. Wu, chairman of Unity Opto Electronics, IrDA components manufacturer.

Dr. Hon Chang gave a speech on "IrDA e-Cash". Dr. Yeh talked about IrDA's status and road-map, and its a thriving opportunity in the midst of Bluetooth publicity. Three managers from the Taiwan Credit Card Joint Verification Center who attended were very interested in the topic and demo by Dr. Yeh and were invited to join the consortium.

Taiwan manufactures 55% of the world's notebook PCs and by 2001, 65% of the PDAs, 45% of cellphones, and many consumer products will all feature IrDA. This is a very large market for IrDA components and testing tools which is why the IrDA Implementers Forum is needed and welcomed there.

The consortium is active with the following plans:

1. Taipei hearing on August 21 on the IR application in Electronic Toll Collection system(ETC) and Beacon of the Intelligent Transportation System(ITS) program. Taiwan has operated the field trial IR ETC project at two toll booths on its freeway for one year with 99.9% accuracy rate, despite direct sunlight on dashboard and metallic sun screen on most front windows. This is the only major trial project in Asia, and it is closely watched by China, Europe, Japan.

2. IrDA Technology day in October after the IrDA Japan meeting with speakers from IrDA leadership.

3. One hour TV special on IrDA technology and application will be aired on the local all-business station. Mr. Chang, Mr. Wu and Dr. Yeh will be interviewed on September 16 with on-site demonstrations. ♦♦♦

"Just My Opinion..." Guest Editorial

By: Charles Knutson, Ph.D. Assistant Professor, Computer Science Dept., Brigham Young University

I was recently asked to teach an IrDA class at the Embedded Systems Conference in San Jose which drew an audience of around 150 attendees. To put that in perspective, it's by far the largest class I've ever seen in the three or four years that I've been teaching IrDA classes. To further put this in perspective, my participation in this class was not the result of having submitted an abstract. Rather, the ESC people called me and asked if I would do it. I presumed they had some sense for the demand, and the attendance certainly bears that out.

The Bluetooth class at ESC was taught by a representative from Questra Consulting, and it was a good presentation. The speaker was very respectful toward IrDA. We finally seem to be settling into a position of mutual respect, allowing the particular technologies to shine where they fit best. For IrDA, that's clearly ad hoc point and shoot (including financial messaging, IMO).

My sense at this point is that all the Bluetooth hype is actually serving to raise the awareness of short-range wireless connectivity in general. Many of the people in my class were drawn to wireless by Bluetooth because of the hype, but then realized that maybe IrDA would more effectively meet their needs. I believe this is a trend that will continue, particularly when the BT "spec euphoria" begins to wear off and customers begin using real products, which always have limitations not included in the marketing literature. That doesn't mean Bluetooth won't be successful, because I believe it will. But it does mean that the "news of IrDA's death are greatly exaggerated."

Let me make the following pleas to the membership. 1. Point and Shoot is still critical. Pocket PC (formerly Win CE) finally followed the spec and can now interoperate with a Palm. The need for customer "pull" is absolutely essential to the spread of this technology. Market pull comes from an effective user experience. 2. We really need to continue and expand our enforcement of interoperability. Bluetooth's trump card is that those who use the technology must agree to implement the usage models via the appropriate application profiles or else not use the technology at all. We pushed for IrReady 2000 and other programs to try and create inducements for compliance. I would strongly suggest we look at requiring all those who use IrDA to be compliant all the way up through the application profiles in order to deliver products to the market using IrDA technology. I think there is another window coming in which IrDA can really shine. But it won't shine without full interoperability, and that has to come through manufacturers consistently implementing the application profiles.

Highlights of the July General Meeting

The July 2000 General Meeting was held at the Westin Horton Hotel in San Diego in conjunction with the 3rd Infrared Communications Conference. Member companies –from the U.S., Europe, Japan, and China attended.

Highlights of this 3rd meeting in 2000 focused on the rapid expansion of the IR marketplace, the status of the various workgroup efforts, and the appointment of the Marketing Committee Requirements Co-Chair.

IrDA's marketing chairman, Robert Stuart of Sharp Microelectronics reported that industry growth indicates that by year-end there will be more than 320 million IrDA enabled devices sold. It is estimated that a total of 1.3 billion units will be shipped by the year 2003. Consumer awareness of the technology is increasing along with the product adoption. Wireless connectivity using infrared has been prominently featured on television commercials and in articles published by Times Magazine among others. Leading TV personalities, Martha Stewart and Oprah Winfrey recently demonstrated infrared products on national television. Interest in IrDA's specifications and products has increased measurably. Since January, over 530,000 visitors have accessed IrDA's web site (www.irda.org).

H.R. Damon Gonzalez, VP of Business Development at CrossCheck was appointed Marketing Committee Co-Chair of Market Requirements. Mr. Gonzalez has led the IrFM special interest groups activities over the past yearThe IrFM specifications draft achieves directional status. IrDA's Financial Messaging Special Interest Group, the IrFM, presented the initial draft of their specifications to the voting members and received approval to continue towards a final document. CrossCheck and other IrDA members formed the SIG in 1999 with the goal of defining an open architecture for future payment processing through infrared financial messaging protocol.

During the IrDA general meetings. Simon Ellis of Intel, representing the Bluetooth Special Interest Group, presented an update of their activities As radio technology continues to develop, the first products will deliver basic capability of file transfer, synchronization, and dial-up networking and voice. Simon reported that by end of year 2000, Bluetooth devices will be on the market, and more devices, qualification, and availability will grow through 2001. The first products will be add-on devices, such as PC cards and USB dongles. Intel will be developing a built-in module for the PC incorporating USB and Bluetooth. Intel has created a division to work on Bluetooth wireless devices as a new business initiative. ♦ ♦ ♦

Recent Announcements from IrDA Members

ZiLOG ACQUIRES CALIBRE AND WIRELESS CONNECTIVITY EXPERTISE

This summer, ZiLOG Inc., the Extreme Connectivity Company, announced that it acquired Calibre Inc., which specializes in wireless connectivity solutions that enable universal wireless connectivity be-tween portable computers, mobile information appliances, and the network infrastructure. Now ZiLOG's Wireless Connectivity Business Line, Calibre and its wireless technology expertise add another key segment to ZiLOG's Extreme Connectivity strategy to design and deliver embedded networking, connecting and control solutions. IrDA President Mike Watson is now Director of Software Business, and IrDA Chair of VFIR Ray Chock is now Director of Software Marketing for the Wireless Connectivity Business Line. Contact Watson 408-558-8333, mwatson@zilog.com; Chock at 408-558-8406, rchock@ZiLOG.com; www.zilog.com/ www.riverwave.com.

ZiLOG IrDA-COMPATIBLE TRANSCEIVER CUTS COMPONENT COUNT, TRANSMITS UP TO 4MB/SECOND

Miniaturized Device is Footprint-Compatible with Infineon Transceiver

ZiLOG recently announced the release of a fast infrared (FIR) transceiver that reduces by half the number of external components required to implement short-range, high-speed infrared connectivity in notebook PCs, portable printers and other information appliances. In addition to broadening ZiLOG's FIR product offering, the new ZHX2010 is the first FIR transceiver on the market to offer footprint compatibility with Infineon's IRMS6400.

Compliant with the Infrared Data Association 1.3 standard for data transmission up to 4 megabits per second, the ZHX2010 FIR Transceiver provides a current source and differential front end for improved noise rejection, eliminating the need for up to three external filtering components — including a hard-to-obtain tantalum capacitor.

The ZHX2010 is the first transceiver to be introduced in connection with an arrangement under which ZiLOG and Infineon will dual-source selected devices in their IrDA-compatible data transceiver product families. For more information, contact ZiLOG at www.zilog.com or 408-558-8473.

WELCOME TO OUR NEW MEMBER

Transmeta Corporation

Transmeta corporation develops, in concert with OEM customers, platform solutions for the Mobile Internet Computing market.

Transmeta's premier product is the Crusoe microprocessor, a revolutionary x86-compatible family of low power solutions with high performance. For more information, go to: www.transmeta.com.

IrDA HostsTechnology Conference and Product Showcase

IrDA's third Technology conference and Product Showcase which featured printing, imaging, financial messaging, and telecommunications technologies was held at the Westin Horton Plaza Hotel in San Diego on July 20th. Product showcase exhibitors included ACTiSYS, Agilent, Calibre, CrossCheck, Extended Systems, Hewlett-Packard, Infineon, Nokia, Motorola, Sharp, and Vishay Telefunken.

Guest speakers for the conference included Dave Bursky, Editor-in-Chief of Electronic Design Magazine who presented the keynote address, and Bob Boeller, Home Imaging Division of Hewlett-Packard.

Lawrence Faulkner introduced the conference sessions with a review of what IrDA can do today with Point and Shoot file transfer, floppy replacement, walkup printing, synchronization, and network access. Lawrence discussed the latest advancements for IrDA: 150 million IrDA ports worldwide; IrDA is the smallest, fastest, lowest-cost I/O port, the most scalable port available, and IrDA protocols being incorporated into TTC, JEDIA, 3GPP, Bluetooth, and WAP standards.

Lawrence also reviewed hardware developments reporting that FIR is now standards in notebooks, and 16Mb/ps transceivers are now available. Other IrDA-enabled hardware available today includes adapters for the COM port, ISA board with FIR, motherboard connectors, USB dongles, printer and network adapters. There is 100% IrDA technology adoption by Palm Computer, Handspring, and CE platforms, and all major mobile phone manufacturers have released at least one IrDA enabled phone. Support and applications are now available for all major operating systems, and IrDA support in Windows 2000 includes VFIR, IrOBEX, IrTranP, Sync with CE, IrDial, and Peer to Peer networking. Continued development of mobile communications with IrMC driving more communications usage between mobile phones. Today, Nokia, Siemens, Qualcom, Motorola, and Ericsson all feature IrDA enabled mobile phones. Future efforts will be focused on more applications, testing procedures, and combined standards with Bluetooth. The IrREADY 2000 program will focus on its goals of providing more usage models, and publishing application profiles which define interoperability and testing for certification, and the logo certification program.

Lawrence Faulkner Presents Gift to Keynote Speaker Dave Bursky

Keynote speaker, Dave Bursky's presentation theme was "The Movement Toward Anywhere, Anytime Communications." Dave pointed out that the enormous growth in cell phones, PDAs, and information appliances offers a huge opportunity and many challenges for the various types of short-range communications schemes for data synchronization and data transfers. While laptop computers have long offered IrDA ports, desktop PCs and many peripheral manufacturers have not done much to support this technology. The PC industry really hasn't done a good job in promoting IR usage with the result that few users are actually using it. Dave discussed the various advantages and drawbacks to both IrDA and Bluetooth technologies and how the different approaches can compliment each other. A look at the future included higher speed IrDA interfaces, continued improvements in WLANs, continual cost reductions, continued proliferation of all interfaces – some systems incorporating multiple interfaces, and new devices that will use wireless connections of all types.

Bob Boeller, R & D Manager for Home Imaging at Hewlett-Packard presented a new look at the infrared enabled products today, and some of the issues that persist in holding back the widespread adoption of the technology. Bob summarized the new products coming from Hewlett-Packard including IrDA-enabled cameras and printers. All HPs cameras to be introduced this Fall will feature IrDA. Bob pointed out that as Internet appliances proliferate there is an even greater need for infrared connection. Digital imaging today provides a transformation of the user experience, and while it does not replace conventional photography, the simplicity and speed in producing and transferring digital images will become increasingly popular in this electronic age. Complexity is the greatest barrier to the digital solution in cameras. Hewlett-Packard has investigated the user experience with digital imaging solutions and has made some interesting findings. Many users are not aware of the different protocols and file formats for cameras and -people like the ability to use infrared in remote locations; they like being in control, and users also prefer the line-of-sight connection when personal information is being sent. ♦ ♦ ♦

Attendees at Sharp's Exhibit Table

COMMITTEE & SPECIAL INTEREST GROUP UPDATE

IrFM SIG Update:

The IrFM Special Interest Group for Financial Messaging announced the achievement of the first step in a new retail digital payment application. The group demonstrated the digital transfer of financial information using an infrared messaging system to complete a check authorization transaction. CrossCheck, Inc. and Personal Solutions Corp., co-leaders of IrFM, demonstrated this digital transfer of financial information at IrDA's quarterly meeting in July.

Using a Palm computer and an IrDA-enabled Libretto, a request for check authorization was beamed to a POS device, the VeriFone Tranz 330 terminal, retrofitted with an infrared device from ACTiSYS and a custom cable developed by CrossCheck. The request from the terminal was then sent to CrossCheck's main processing center through a dial-up server and, after verification, a check authorization message was sent back to the terminal in less than 4 seconds.

This demonstration represents an important first step in the IrDA-approved pilot program, which has the following objectives:

1. Establish an Infrared Financial Messaging protocol
2. Use existing equipment and connections to send an infrared payment message.
3. Employ existing network infrastructure to pass the message through standard clearing and settlement
4. Ensure that settlement can be made using credit card or deposit accounts

Digital payments are the future of financial transactions. What makes this project so exciting is that we are using equipment that is already out in the marketplace and in use. More importantly, the hassles of paper checks and plastic cards will be replaced with a one step process - the customer simply beams the instructions from their personal information appliance. The customer and the merchant will have much less to do, records are instant, precise and easily managed. The entire transaction process will be much faster. ♦♦♦

NEW MEMBER ANNOUNCEMENTS

New Security System from Redstrike BV

Redstrike BV announced the Mamba key, the first universal wireless, multi-purpose mobile and enterprise user authentication, data protection and theft deterrent security system that protects notebooks, desktops and PDAs. Security systems are only effective if implemented properly and the Mamba key is designed to fit into the user's regular work habits. The Mamba key provides total elimination of passwords, virtual disk with "On-The-Fly" encryption, digital shredding utility and an optional IrDA mouse. The mamba key provides the ultimate in front-end reliable user authentication and identification as users need the key's unique encrypted 1024-bit rolling code, and a PIN code to access the Intranet, extranet, or Internet. www.redstrike.com

SNAZ Commerce Solutions

SNAZ™ Commerce Solutions℠ is the global leader of wireless based single click commerce solutions. SNAZ m-wallet is its flagship offering to carriers, financial institutions, banks, portals, merchants and network operators. The Server side mobile wallet provides a powerful wireless shopping experience through its proprietary technology, enabling our partners to offer their customers buy multiple products with a single click. The customers can buy directly from their mobile phones, PDAs and pagers. This off-line Wallet will be opening a new market through IR communication between devices. Contact Sreedhar Unnamatta, Director, Mktg. & Product Management at Tel: 212.943.1822.

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SPECIAL INTEREST GROUP LEADERS

Financial:
Ron Brown, Personal Solutions
brownmktg@aol.com

Hardware
Chee-Zen Chin, Agilent
chee-zen chin@agilent.com

IrDA Control:
Michita Katayama, Sharp
Michita@slab.tnr.sharp.co.jp

IrMC:
Rob Lockhart, Motorola
rob.lockhart@motorola.com

IrOBEX:
Doug Kogan, Extended Systems
dougk@extendsys.com

IrWW:
Ken-Ichiro Shimokura
k.shimokura@east.ntt.co.jp

MP3
Lawrence Faulkner, IrDA
lawrence@irda.org

Point-and-Shoot:
Bryce Jeppson, Hewlett-Packard
bjeppsen@hp.com

IrDA Feature Article

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What is the solution? As an example, let's take a look at IrDA and Bluetooth. **IrDA uses infrared light to transmit data.** The basic protocol negotiates connection parameters such as speed, data size, disconnect time, and the application services available. It allows a one-to-one pairing of devices. Products first started to appear in 1995 with the LaserJet 5MP and host adapters, and by the end of 1999 over 150 million IrDA enabled products were in the market.

The data transmission distance is a range of 0 to 1 meter, line of sight, the range of speeds cover the traditional RS-232 rates from 9.6 to 115.2 kbps and above that at 1, 4 and 16 Mbps. Bit Error Rate (BER) re-quirements are very high at 1 in 10^8 (one bad bit in ten billion). Cost ranges from less than $1 for the low speed to around $2 for 4Mbps with 16 Mbps targeted at less than $5. The projected growth of IrDA ports is most dramatic in mobile phones with a projected 90 million units in 2000.

The total number of ports is expected to reach 1.3 billion in 2003. Native support in most Operating Systems including Windows 2000, ME, 98, CE and PocketPC from Microsoft, Palm, Linux and many real-time O/Ss like VxWorks, PSoS, OS9, et al. Applications include file transfer, modem, peer-to-peer networking, printing, picture transfer, network access and synchronization.

Enter Bluetooth which uses radio waves to transmit data (2.4 GHz band). It has a longer range at 10 meters and is omni directional, and supports a maximum data rate of about 750 kbps with the possibility of multipoint connections. Its specified BER is 1 in 10^3 (one bad bit in one thousand) and cost is around $20 per port with a volume price target of $8 - $10 per port. Bluetooth is expected to be most common in mobile phones to provide modem access and hands-free headsets; adapters for PCs will also appear in 2001. Projections for wide deployment predict one billion devices by 2005.

Will Bluetooth replace IrDA? The answer, clearly, is no. IrDA's cost, speed, scalability, low interference, wide deployment represent advantages that will keep IrDA as a competitive choice for local connectivity.

Bluetooth represents a great opportunity to extend the range and remove line-of-sight restrictions, but those capabilities come with a price - complexity. The challenge in implementing either of these technologies is to add intelligence to the devices and simplify the steps needed to establish a connection. Not an easy task. With the increase in distance comes the greater possibility of interference.

In an office setting the media could become congested with a maximum of 750 kbps to share and, because it is omni directional, there is no simple way of shielding a device from a permanent interference source. Fo many applications, especially voice, Bluetooth will offer interesting new possibilities for connectivity. I see the greatest potential in relatively low data rates and persistent connections.

IrDA has a great advantage of simplicity when it comes to connecting to a device you don't own, sometimes referred to as "ad hoc" connections. With IrDA you choose your connection partner by pointing. The beam is directional enough that you can choose between devices even when they are close together. With Bluetooth, or other radio-based protocols, pointing doesn't help and you must find another way to help the user select its connection partner either by typing in numbers or selecting from a list. Whatever the method, it will add keystrokes, time and complexity to the task. IrDA does not lend itself to persistent connections but rather to quick, high-speed transfers. Bluetooth and IrDA are complimentary technologies and we have a great opportunity to define ways that they can, not just co-exist, but co-operate.

With IrDA it is easy to identify a connection partner, you point at it, so why not use IrDA to begin a connection and then, if the alignment is lost, switch to Bluetooth to maintain the connection? Or if you have a Bluetooth connection and need extra speed align the IrDA ports to gain extra bandwidth. This makes much more sense than hoping that one technology will provide all the answers.

As a long term strategy for local connectivity, I would like to see us develop a transport independent API and management layer that would allow application vendors to write to a single API and then have the manager find the "best" way to get that data to its destination. "Best" could mean fastest or cheapest or whatever other quality of service (QoS) priorities the user specifies. The manager could monitor QoS on the different ports and route the traffic over the one that is working best at the time.

Such a long-term solution would eliminate the burden of having to learn new APIs for new connectivity protocols and allow application writers to take advantage of the latest technology, even if it is deployed after the application is written. If the port is on the platform then any applications should be able to use it. Ideally, as new types of connectivity are developed they will be designed to fit into the system and would then be able to carry traffic from older applications without modification.

Bluetooth is the latest connectivity solution, but it won't be the last. We need to think about how connectivity should evolve. Moving toward a unified API is a good first step, and IrDA and Bluetooth will share at least a portion of an API since they both use OBEX for file transfer applications. The ability to hand off a connection from one port to another is a significant challenge. If we accept the idea that no one protocol will serve all connectivity needs and the idea that being connected will be increasingly important, then we owe it to

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computer, the data (including amount, date, check #, and quite possibly an electronic receipt for the stuff you bought) will automatically update my financial management software. Once they get the capability to do credit card transactions the same way (it's in the works), I may actually know how much money I really have for the first time in my adult life.

With all this great stuff that they are doing, I am shocked, no, horrified that Lawrence Faulkner, his cohorts at the IrDA seem to have gone over to the "dark side" and turned this wonderful technology against the very users that have embraced it. This tale of woe and intrigue starts with a discussion I had recently with Mr. Faulkner where he revealed that he had plans to put IrDA ports into the seat backs of commercial aircraft to let travelers connect to the Internet while they are in flight.

Now, I'll admit that at first glance hooking up to a good, fast Internet connection as you hurtle across the skies seems like a nice alternative to munching the peanuts and reading in-flight magazines, but there is a terrible hidden danger lurking here. Until now, airlines have been the last place you could actually rest and catch up on your life without feeling guilty.

With the current cost of an air phone hovering at around $2-$3 per minute, and data connections not much cheaper, I've never had a problem justifying treating my flight time as a chance to disconnect from the computer catch up with the rest of my life. This will change as in-seat power connectors and IrDA-enabled data ports connecting each seat to an in-plane network make it possible to leave a trail of e-mails trailing behind me from cramped economy section seat. As I struggle to answer the next "urgent" memo from the laptop jammed into my belly, I'll be frittering away the last chunk of time I can call my own.

No longer will that tiny seat be a haven of rest, where I can catch up on my sleep, pay my bills, write a letter or two (you know, those quaint pieces of paper you write on and put into envelopes) and maybe, if the flight was long enough, do a little work on my next editorial. Instead, it will be transformed into a cramped, mobile cubicle in that rivals the working conditions of the average third-world garment worker.

I'm alarmed that Mr. Faulkner's misguided collaboration with Boeing Aerospace, IrDA technology will destroy the last bastion of rest and solitude available to the working masses. Perhaps though, it's not too late if we all take action immediately. Please, if you value your health and sanity, contact Mr. Faulkner at (925) 944-2930, and ask him to preserve the great unwired skys as a precious natural resource.

Lee Goldberg,
lgoldberg@chipcenter.com

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THE IrDA BULLETIN

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users to make it simple and appear seamless. These technologies take time to mature. We will lose our investment if we continue to think in terms of replacing older technology with newer technology, even before the old one has really had all the bugs worked out. We run the risk of losing the good faith of our customers if we don't get the current technology working before introducing new technology.

The savvy user waits until the second or third update of software before they switch as they know that there will be bugs in the new software.

IrDA or Bluetooth? If one clearly meets all your needs then the choice is easy. If they don't, then consider how the two might work together to create something even better. I think the more interesting and important question is about a long-term strategy for connectivity that doesn't put too much burden on the application development community or the end user. If we can work that out then a significant barrier to market growth will be overcome.
Lawrence@irda.org

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FUTURE IrDA MEETINGS

IrDA January 2001
General Meeting & Board Mtg.
Santa Clara, California
January 29-31, 2001

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EDITOR:
Janet L. Courtenay
jcourtenay@rcn.com
CONTRIBUTING EDITORS:
Lawrence Faulkner
Lee Goldberg
MANAGING EDITOR:
Daphne Terrell
daphne@irda.org
CIRCULATION/ADVERTISING:
Rebecca Murray
rebecca@irda.org

Membership includes a copy of the IrDA Bulletin. If you would like subscription information, contact Rebecca Murray

P.O. Box 3883 Walnut Creek California 94598 Tel: 925-943-6546