Renault Drives Advancement of IDB-1394 Standard Delivers First Demonstration using 1394 over POF

Renault, an international automotive leader, has played a major role during 2004 to advance the IDB-1394 standard, and in initial deployment of FireWire technology in new vehicles.

Members of the Renault team served as the editor and the driving force behind approval of the IDB Forum specifications, which focus on power management, FOT standardization, and related technical issues. It is expected that these standards will be included into the IDB-1394 specifications, which over time, will enable multiple product sources. The new specifications by number and description are as follows:

1. IDB-1394/1 – Audio/Video Profile for DVD
2. IDB-1394/2 – Audio/Video Profile for DVB-T
3. IDB-1394/3 – Audio/Video Profile for Camera
4. IDB-1394/4 – Audio/Video Streaming and Control Profile
5. IDB-1394/5 – IDB Power Specification, Physical Media Dependent for wake-up on LAN

Future IDB Forum work includes developing detailed IDB-1394 specifications for in-vehicle camera applications for ITS, along with support of the joint work on developing IDB-1394Cu (the copper physical layer) with the 1394TA.

Renault has applied IEEE 1394 as a vehicle local area network (LAN) information system interface, and demonstrated an S200 high-speed bus multi-media Espace vehicle equipped with plastic optical fiber to validate the concept.

A video produced by Renault shows the transport of three simultaneous video streams, DVD player, Digital TV, and a camera that can be used for rear view parking assistance. All use IDB-1394 over POF. Navigation and hot plug-and-play access to an Apple iPod is included, along with three displays. One display is for the front seat and two for back seat passengers. The concept of the demo is simple: to show how to entertain rear and front passengers according to each individual choice. The IDB-1394 POF network enables a reduction in the shielded wiring, and offers a cost-effective solution when compared with existing analog system technology. The touch screen displays allow selection of entertainment sources, while a CAN-IDB-1394 gateway allows the display of the uncompressed video rear camera when the vehicle is in reverse gear.

This comprehensive video is now available on the 1394 Trade Association web site at www.1394ta.org

“As a 1394TA member I am delighted to see this type of implementation. This is the true proof of networking over 1394 and shows the convergence of home and car networks over polymer fiber. It is great to see Firecomms devices implemented in such a system,” said Declan O’Mahoney, a member of the 1394 board and CEO of Firecomms, Ltd.
Nissan 1394 Automotive Demo at ITS in Japan Illustrates Major Progress for FireWire in Vehicles

Nissan Motor Corporation has taken a pole position in the implementation of 1394 in automobiles, with the debut of a new multimedia demo vehicle at the annual ITS show in Nagoya, Japan last October.

Nissan displayed a new prototype vehicle built on its El Grande platform during the 11th World Congress on Intelligent Transport Systems (ITS). The vehicle incorporated a multimedia platform capable of showing as many as four moving images at the same time -- on a single onboard screen.

Fitted with one monitor in the front and another in the rear seating area, the El Grande’s front monitor displayed four images at a time from seven different cameras mounted at the vehicle’s front, side, and rear. The rear seat monitor showed DVD images.

1394-automotive POF is able to provide more than 10 times the bandwidth available from any competing automotive networks, enabling multiple streaming of high definition video and audio, along with the possibility of connecting home consumer devices such as MP3 players, DVD players, camcorders, and even PCs in the vehicle network.

The multimedia capabilities were enabled by adopting high-speed 1394 optical fiber networking communications systems that allows data transmission at 400 Mbps. The POF-based network system allows transmission of the four images; conventional analog cables are capable of transmitting only one image at a time.

“Nissan’s multimedia demonstration vehicle in Nagoya, Japan showed the world what is truly possible using 1394 and plastic optical fiber in an automotive networking environment,” said Max Bassler of Molex, a member of 1394 TA board. “Nissan has been working with AMI-C and the 1394 Trade Association to develop this automotive standard and they have led earlier work in Japan to show ‘embedded proof of concept’ using an POF network operating 1394 automotive devices.”

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1394 TA Joins Homefibre in Networking Demo at Net-atHome Show in Nice, France

The 1394 Trade Association joined with Homefibre of Europe to demonstrate the latest and most advanced home entertainment network at the annual Net-atHome™ Conference in Nice, Nov. 30 through Dec. 3.

The 1394 TA-Homefibre demo featured 1394 networking over POF operating at 250 Mb/s over a distance of 50 meters. It incorporated a digital television, set top box, two PCs, hard disk drive, digital camera and DVD-S all connected using the 1394 FireWire standard over CAT-5 and plastic optical fibre. Also featured in the booth were the latest in FireWire cables and connectors from industry leaders such as Molex, Inc., FireComms, Ltd., and MiniFlex.

Pre-conference seminars and sessions open Nov. 30th, and included a presentation from Declan O’Mahoney, CEO of Firecomms Ltd. and a TA board member, on the current status of 1394 and plastic optical fiber applications.

Net-atHome is the largest international conference and exposition covering the connected home marketplaces. It is supported by the European Commission, and sponsored by a blue chip group of organizations and companies from around the world, including the 1394 Trade Association, Agilent Technologies, Echelon Corporation, OPERA, Via Technologies, Renesas, TEAHA (the European Application Home Alliance) and many others.

“The 1394 TA’s participation in Net-atHome could not have come at a better time,” said Max Bassler of Molex. “All of the groups vying for a place in our European homes were there, and the event was a gathering of EU groups and companies developing the networking standards for Europe. It is an excellent opportunity to engage with these groups to get our 1394 message out loud and clear.”

Coordinating for the 1394 TA were Bassler, O’Mahoney, Josef Faller of Homefibre, and Michael Scholles of Fraunhofer IPMS, who currently serves as chair of the TA’s Industrial Instrumentation Working Group.
INDUSTRY NEWS

Strong Demand for PVR and HD Boxes Boosts the Cable Set Top Box Market

Hi-tech market research firm InStat/MDR reports that total worldwide digital cable set top box unit shipments this year are projected to reach 10.87 million, an increase of 11% over 2003. North American cable TV operators, who have been continually increasing their order for both Personal Video Recorder (PVR)-enabled boxes and high-definition (HD)-enabled boxes, are fueling the majority of this growth.

Worldwide demand for digital cable set top boxes is expected to remain steady during the next five years. As rising demand for digital cable set top boxes in a few select Asian and European countries makes up for moderating demand in the all-important North American market, especially during the 2006 - 2008 time period.

Motorola Broadband remains the leading manufacturer of digital cable set top boxes, although its market share lead over second-place Scientific-Atlanta has slipped during the past two years. However, the famous "duopoly" continues to dominate the cable set top box market: Through the first six months of 2004, the two companies accounted for 85% of all worldwide digital cable set top box unit shipments.

In-Stat/MDR has also found that:

• One in every five digital cable set top box unit shipments this year has been a PVR-enabled box. The popularity of products like Scientific-Atlanta’s Explorer 8000 has propelled PVR-enabled cable set top box unit shipments to record levels in 2004.

• HD-enabled cable set top boxes are also in high-demand, and manufacturers are on track to ship over 2 million HD cable set top boxes this year. In comparison, cable set top box manufacturers shipped just 750,000 HD boxes in 2003.

• The market for digital cable set top boxes in China, which is the largest cable market in the world with 100 million cable TV subscribers, is finally beginning to show signs of life. During the first half of 2004, cable set top box manufacturers shipped an estimated 235,000 digital cable set top boxes to cable TV operators throughout the country.

NEW MEMBERS

Fiberfin

Established in 1993, Fiberfin has become a full service supplier of plastic fiber optic products for industrial, video, lighting and data applications. FiberFin Inc., with their cost efficient methods and personal attention to their customers, has developed a positive reputation of reliability, quality, cost efficiency, and on time delivery. For more information visit: www.fiberfin.com

Pulse~LINK

Incorporated in June of 2000, Pulse~LINK has grown to one of the top of the Ultra Wideband field. Their focus is UWB communications field; they have an early prototype capabilities of a 400Mbs wireless UWB and coexistence across Hybrid Fiber Coax Networks, as used in the Cable Television Industry. They are far above the competition and are recognized as the world’s first company to demonstrate and patent ultra wideband over wire. For more information visit Pulse~LINK’s site at: www.pulselink.net

Digeo

Digeo was founded in 1999, and in the spring of 2002 merged with Moxi to become the industry-leading provider of advanced media center platforms and iTV services. Digeo is devoted to empowering the nation’s broadband network operations to take a digital home entertainment to a whole new level. With offices across the nation, Digeo has around 250 employees striving to accomplish the objective of shaping the future entertainment industry. For more information visit: www.digeo.com

Wavefront Semiconductor

Wavefront Semiconductor provides high-performance, cost-effective digital, and mixed-signal ICs designed for audio applications. Headquartered in Seattle, Washington and with additional offices in
California, Rhode Island and Taipei, Wavefront’s products can be found in professional audio and musical instrument products from leading product manufacturers worldwide. Please visit Wavefront Semiconductor’s website: [www.wavefrontsemi.com](http://www.wavefrontsemi.com)

**Congruent**

Congruent, established in 1994, is a service and contingent staffing company and with the help of the founder and owner, Mani Krishnamurthly, has made its way to the top. The standards set by Mr. Krishnamurthly have helped the company expand their services to: business and productivity applications, offshore software development, IT consulting, and networking services.

With the cost efficient product, industry knowledge and services offering, Congruent has become the leading technical solutions provider in Washington State. Congruent was also named one of the top 100 fastest growing private companies in Washington State for the past three years and was also selected as one of the 25 best small companies to work for in 2002. Please visit Congruent’s website: [www.congruentsoft.com](http://www.congruentsoft.com)

**UNIREP**

Established in 1985, UNIREP is a stocking rep, which means both a distributor and a rep. This allows them to support both the customer and manufacturer according to their expectations and needs. They are seen as an extension of the internal sales and marketing organization of the companies they work with. They also offer full services with field application engineering, customer dedicated stock, sales and commercial administration staff, and of course dedicated principals managers. They are affiliated with several companies and associations such as, 1394 Trade Association. For more information visit Unirep website: [www.unirep.fr](http://www.unirep.fr)

**Pace Micro**

A leader in digital television technology, Pace Micro, founded in 1982, has placed over 18 million set top boxes in homes worldwide. Pace Micro was the first company with DVB MPEG-2 set top boxes for satellite, cable and terrestrial broadband TV platforms. Located all over the Worlds’ and with over 30 operator customers globally, the company has become the worlds most advanced digital market. For more information visit: [www.pace.co.uk](http://www.pace.co.uk)

**ZYNET**

ZYNET, a Dynamic System Electronic Corporation is a computer storage accessories manufacturer. They specialize in research and development, manufacturing, and marketing. They have products on the market such as: flash drive, external enclosure, card reader, and are in the process of developing a multimedia storage product. In becoming a leader in their field, the company is improving and expanding their products to ensure success. For more information on Zynet visit their website: [www.zynet.com.tw](http://www.zynet.com.tw)

**Vrije Universiteit Brussels**

The Vrije Universiteit Brussels is a two-parkland university found in Brussels Capital Region. It contains over 40 programs leading to second degrees and 58 postgraduate specializations. Several of the classes are taught in English and even the undergraduate college, Vesalius College, offers classes taught in English. The campus also gives to the community by offering their University hospital with more then 2,700 members on staff. To learn more about the Vrije Universiteit Brussel visit their website: [www.vub.ac.be](http://www.vub.ac.be)