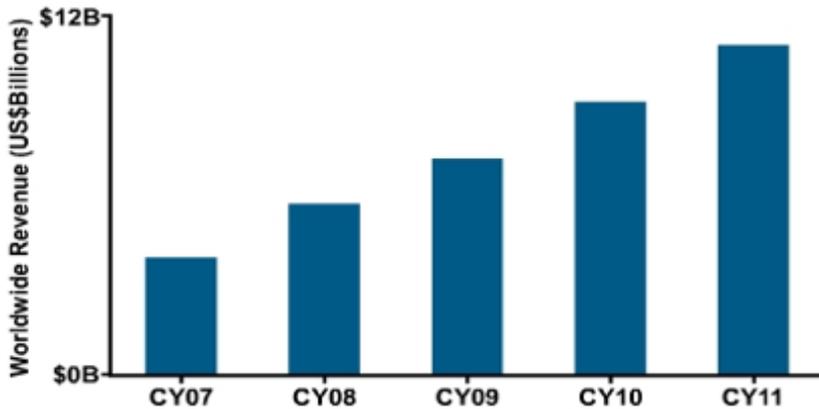


**IPTV and Switched Digital Video Revenue
from Telcos and Cable Service Providers**



Infonetics Research, *IPTV & Switched Digital Video Equipment, Services & Subscribers Market Share & Forecasts 1Q08*

TOP NEWS

Romtelecom to conduct IPTV trial this year

Romanian incumbent telecom operator Romtelecom's TV business manager, Miroslaw Smyk, said that the firm has decided to conduct an IPTV trial this year. But he did not mention the place where the trial would be conducted. Romtelecom currently runs a DTH platform called Dolce, which has already attracted more than 500,000 subscribers. Despite the fact that IPTV has yet to take off in Romania, Smyk believes that the

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IPTV Newsletter is published monthly by Information Gatekeepers Inc.

320 Washington St., Brighton, Massachusetts 02135, USA; Fax: (617) 782-5735; Editorial telephone: (617) 782-5033; Circulation telephone: (617) 782-5033, (800) 323-1088 (Outside MA); Email: info@igigroup.com; Web: www.igigroup.com

Publisher: Dr. Paul Polishuk **Editor:** Dr. Hui Pan **Managing Editor:** Bev Wilson

Circulation Mgr: Jaime Perez **Subscription rates:** \$695 per year, US and Canada; \$745 per year elsewhere.

Discounts available for multiple subscriptions and licenses (see back page).

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country offers great opportunities for the development of this service. Currently, there are small-scale IPTV operations in the country, including Ines.

Sony, NTT, and several others decide agree upon unifying technical standards for IPTV services

Nippon Telegraph and Telephone Corp. (NTT), Sony Corp., and several other companies said that they have decided to unify technical-based standards for Internet Protocol television (IPTV) services. A forum formed by three telecommunications companies — KDDI Corp., NTT and Softbank BB Corp. — would lead this standardization process. Around 15 organizations and business, in addition to two individuals, have joined this forum. The members include the likes of Matsushita Electric Industrial Co, Sony, Toshiba Corp., Hitachi Ltd., and Sharp Corp. and also five commercial television broadcasters in Tokyo and Japan Broadcasting Corp.

On Telecom unveils IPTV in Greece

Greek telecommunications operator On Telecom has unveiled its ON TV IPTV service in the country. This service includes a video-on-demand (VoD) service with over 1,200 titles each month, On Multiplex movies channel, pay-television packages including Discovery (comprising Discovery Science, Discovery World, and Discovery Travel and Living), National Geographic (NatGeo Wild, NatGeo Music), Baby TV, adult channel Dorcel TV, and On sports (NASN, EXPN Classic, Extreme Sports). Users would be able to play eight games via On TV Games using the remote control.

On Telecom will also provide all the channels of Greece-based satellite service provider NOVA. The pay-TV packages will cost between EUR2 (\$3.11) and EUR8 (\$12.47), whereas the entire On TV package is available for EUR15 (\$23.38) a month.

CARRIERS

South Florida gets AT&T U-verse IPTV

AT&T has launched its U-verse TV and U-verse High Speed Internet in parts of Miami-Dade and Broward counties. AT&T U-verse services will be launched in Palm Beach County on July 28. AT&T U-verse brings together your TV, broadband, and AT&T wireless services all on one bill, with unique features that provide a new level of integration, convenience and control. AT&T U-verse TV and High Speed Internet services are delivered over AT&T's advanced IP network.

Customers can currently order AT&T U-verse services in parts of dozens of communities in Miami-Dade, Broward, and Palm Beach counties. U-verse services will be installed for Palm Beach County customers beginning July 28. AT&T will make U-verse services available to more homes throughout South Florida on an ongoing basis.

ETB to unveil IPTV in Colombia by March 2009

Colombia-based telecom operator ETB is intending to commence the trials of its IPTV service in November 2008 and plans to commercially launch the service by March 2009. ETB CEO Fernando Panesso said that the telecom firm plans to put in \$51 million to launch the IPTV service in Colombia in spite of regulatory ambiguities. Although ETB does not own a pay-TV license (needed by the National Television Commission), it certainly has a license for operating IPTV as a VAS (value-added service). Meanwhile, the operator's broadband user base is expected to increase to 800,000 by 2012 from the current 300,000.

Slovenia's T-2 to launch IPTV in Croatia

Slovenia's alternative telecom carrier, T-2, is contemplating entering the Croatian market to launch an IPTV services in that country. According to media reports, the carrier, which

is owned by Zvon Ena Holding, has already invested around \$0.32 million for its Croatian operations, which are likely to commence this autumn. T-2 currently operates a triple-play service in Slovenia. Unlike Slovenia, Croatia has a well-structured IPTV market with T-HT's MAXtv being the No. 1 player.

PTCL to launch IPTV in Pakistan

Pakistan Telecommunication Company Limited (PTCL) is preparing to launch its Internet Protocol television (IPTV) services in the country. Dr. Sadiq Al-Jadir, commercial SEVP, said that the telecom operator would provide this service using advanced technologies. IPTV is a multichannel TV service that is brought to users' homes through the Internet Protocol. This new service by PTCL will enable its customers to get many digital-quality television channels as well as voice telephony and high-speed broadband over a single connection. PTCL is currently the biggest converged services provider in Pakistan. It provides telecom services like data and basic voice telephony, Internet, and videoconferencing, among others, to residential as well as business customers.

Kingston Park to become the first housing community project in New Zealand to get next-generation broadband and phone service

New Zealand-based firms Telecom Wholesale and WorldxChange Communications are participating in a joint project to provide next-generation broadband and phone services on fiber-optic cable linked to households in a housing community project, Kensington Park, located in Orewa, north of Auckland. Kensington Park would thus become the first housing development project in the nation to access this service. The service would subsequently be expanded into an additional 13 developments and 3,500 homes across New Zealand where the deployment of fiber-optic cable takes place over the next one year. This project forms a

significant part of Telecom's \$1.4 billion investment plan towards the development of next-generation broadband technology.

Telecom Wholesale chief executive Matt Crockett said that the advanced broadband services will enable its users to access several applications like video calling, HD (high-definition) calling, IPTV, and video-on-demand, among others. Telecom will test two variants of broadband-on-fiber, which would be delivering a voice-only service or broadband capable of supporting download speeds of 30Mbps.

NEW PRODUCTS

OKI develops Audience Rating Information System for IPTV

Oki Electric Industry Co., Ltd. announced it has developed "Audience Rating Information System" for IPTV, which will be offered to the Japanese market. The system collects viewership data to enable broadcasting companies to improve their services.

"We are pleased to introduce OKI's Audience Rating Information System using our eVideo technology to efficiently deliver high quality video over IP networks," said Masa Saito, general manager of IP Systems Division at Oki. "We have been proposing the technology to handle audience rating information to ASTAP, Asia's communication standard organization and FG-IPTV in ITU, the UN's agency for information and communication technologies, as we believe open standards are important in improving IPTV service and technologies. We will continue our activities within IPTV-GSI, the IPTV standardization initiative, to promote international standardization to enrich IPTV services."

IPTV service is expected to grow as telecom carriers in Japan will increase their IPTV service provisioning with the start of next-generation network (NGN) services, and the ITU working on setting international standards. Current ground-based broadcasting systems

have functions to collect viewership data such as user preference and viewer history, as it is important for broadcasting companies to collect such information. However, with current IPTV services, there are no equivalent user information collection functions.

To respond to such needs, Oki has developed IPTV Audience Rating Information System to enable service providers, with the authorization of users, to obtain information about when and which channel and programs the users watched. The system will collect the viewership data in the form of an "audience rating library" on the user's device, which will then be encrypted and sent to and registered in the database server at the IPTV distribution center. This information will then be printed out as viewership reports which service providers can offer to program producers.

The server offers scalability enabling service providers to increase the number of servers as viewership increases. The audience rating library can be embedded in the set-top-boxes (STB) or in the IPTV. Those who have STBs or IPTVs without the embedded library can connect a home gateway (HGW) that has the audience rating library to collect viewership data. This system has already been tested in IPTV applications that utilize multicasting.

While recognizing user concern about maintaining privacy, Oki will include opinions from both IPTV service providers and users as it works towards standardization. Oki will add the system to its product lineup that includes Oki MediaServer, the video distribution server for IPTV, home gateways and set-top-boxes.

Telchemy announces over 30 million units of VQmon shipped

Telchemy Incorporated, a provider of voice-over-IP and IPTV fault- and performance-management technology, announced that over 100 equipment manufacturers have successfully integrated Telchemy's VQmon software into a wide range of products, such as IP phones, VoIP

gateways, routers, session border controllers, probes, and analyzers. Over 30 million units of VQmon have been shipped, representing an annual growth rate of over 200 percent. This number does not include an estimated 100 million additional shipments by a number of large ISPs who license VQmon on a subscription model basis.

"Telchemy's market leading position is based on solid technology, a deep understanding of VoIP and IPTV performance and an excellent product," said Olga Yashkova, an industry analyst with Frost & Sullivan. "They have a clear vision of the future of multimedia performance management and a proven ability to execute this vision."

The VQmon product family incorporates the following:

- VQmon/EP, ideal for IP Phones and Gateways to provide real-time VoIP performance measurement and reporting. VQmon/EP generated QoE reports can be analyzed using a "collector" such as Telchemy's SQmediator.
- VQmon/SA, designed for Routers, Probes and Analyzers to provide in depth analysis of VoIP traffic and IP performance
- VQmon/SA-VM and VQmon/HD, integrated into Routers, Probes, Analyzers, and IP Set Top Boxes, providing a rich set of real time IPTV and IP Videoconferencing performance metrics.

VQmon products are compact, reliable, efficient, and highly portable software agents that are integrated into a wide range of software and hardware platforms, producing accurate real-time, actionable, performance and QoE metrics for IP voice and video traffic. VQmon is unique in its ability to model the impact of time varying impairments on user perceived quality, which has been shown to materially improve the accuracy of QoE metrics.

“We are pleased that VQmon has achieved such a strong market position, deployed through our OEM customers into Carrier, Cable and Enterprise networks internationally,” said Alan Clark, president and CEO of Telchemy, “We work hard to ensure that we provide the great technology and support that enables our customers to be highly successful and to enable network operators and network managers to provide reliable, good quality services to their users and subscribers.”

TVO launches video player using Brightcove Internet TV platform

TVO presents its new online video player, created using the Brightcove Internet TV platform. TVO has initially launched the player on its Web site for kids, tvokids.com. Kids opening the tvokids.com video player are greeted by colorful menus that enable them to choose channels of full-length curriculum-based video content, broken down by user-friendly categories like Music Videos, TV Shows, and Extras. Key features include a full-screen video option, superior video and audio quality, and direct links to related games and activities.

Using Brightcove’s open API, TVO’s Flash developers were able to create a highly customized player experience for tvokids.com, which already features 160 Flash-based games and activities and has been nominated in the Excellence in Children’s category for the upcoming 2008 Canadian New Media Awards.

This fall TVO will be rolling out Brightcove’s Video Player technology for its adult, prime-time audience in a new, centralized video console on tvo.org.

Alcatel-Lucent evolves its Triple-play Service Delivery Architecture

Alcatel-Lucent announced several new enhancements to its Triple-play Service Delivery Architecture, which pave the way for new, sophisticated, and innovative multimedia services. Going beyond the initial, mass-market

solution requirements for IPTV, voice, and Internet services, the new architecture enhancements now enable consumers and business partners to choose the quality of experience they want, for the content they care about and at a price they are prepared to pay. As service providers evolve their network architectures to support triple-play consumer broadband services, their focus is shifting to maximizing the return on investment. The new features being introduced— including new hardware and software enhancements for Alcatel-Lucent’s Service Router portfolio — will enable service providers to offer their subscribers a high quality of experience for an expanded portfolio of broadband content and applications.

CONTRACTS

Telekom Austria selects Alcatel-Lucent to enrich IPTV offering

Alcatel-Lucent announced that it has been selected by Telekom Austria, Austria’s major service provider, to enrich Telekom Austria’s IPTV offering. The operator is launching two state-of-the-art features — time-shift TV and high-definition TV (HDTV) — enhancing the service experience of its aonTV subscribers. One week prior to the start of the European soccer championship (Euro 2008), aonTV customers will be able to stop live broadcasts, take a break, and then continue to watch the transmission of the program, thanks to Telekom Austria’s time-shift TV capabilities. Additionally, the launch of Telekom Austria’s HDTV service brings to the Austrian households the next level of visual quality and TV experience.

“From June on, we can offer the aonTV users the newest Time shift TV functionalities without additional investment. Our customers can now enjoy a higher degree of convenience and freedom to watch the programs they want,” said Hannes Ametsreiter, chief marketing officer,

Telekom Austria TA AG and chief officer marketing, sales & customer services, mobilkom Austria. "Alcatel-Lucent is our trusted partner for the delivery of IPTV middleware and the related integration services, enabling us to enrich our aonTV offering with a range of innovative applications."

China Telecom selects Alcatel-Lucent for IP metro area network expansion

China's biggest landline operator, China Telecom, has inked a multimillion-Euro contract with French vendor Alcatel-Lucent for expanding a countrywide IP metro area network. Alcatel-Lucent bagged this contract via Alcatel Shanghai Bell, its flagship firm in China. Under the terms of the deal, Alcatel-lucent will be responsible for providing IP routing solution to China Telecom, which will allow the operator to deliver IP services to business and residential users. China Telecom would also be providing multiple IP-based services like IPTV, 3G broadband wireless, and virtual private network (VPN) services on one network infrastructure. Alcatel Lucent Shanghai Bell president Olivia Qiu said that the deal reflects the confidence shown by China Telecom in the vendor's service routing portfolio.

UTStarcom to provide IPTV equipment to SLT

UTStarcom Inc. announced that it has inked a multimillion-dollar deal for providing its Internet Protocol television (IPTV) equipment to Sri Lanka Telecom Public Ltd. Co. (SLT). The firm said that the new deal with SLT's ally, Just In Time Holdings Pvt. Ltd., will expedite the provision of Internet, voice, and TV services to SLT's 1.3 million customers in the island nation. The initial deployment of the IPTV equipment from UTStarcom is capable of supporting around 100,000 subscribers in the next couple of years. The rollout will also allow the Sri Lankan firm to deliver video services on copper lines over the next three to four years.

Guangxi Telecom selects UTStarcom's RollingStream IPTV platform

Guangxi Telecom has chosen UTStarcom's RollingStream IPTV platform to deploy a new interactive advertising system. Guangxi Telecom is the first service provider in China to deploy IPTV for building-based video advertising.

UTStarcom will provide Guangxi Telecom with 3,600 concurrent IPTV streams for the initial deployment of the interactive advertising system in 14 Guangxi cities. In the first phase, set-top boxes will be deployed in supermarkets, department stores, office buildings, and Guangxi Telecom's facilities in Nanning, Liuzhou, Guilin, Qinzhou, Guigang, Wuzhou, Beihai, and Baise.

UTStarcom's RollingStream end-to-end IPTV system currently supports more than 850,000 live IPTV subscribers globally and maintains a current total system capacity of more than 2.5 million subscribers as a result of recent successful deployments in China with China Netcom and China Telecom; in India with Bharti Airtel, MTNL/Aksh and United Telecoms Limited; in Sri Lanka with SLT; in Japan with Softbank; in Latin America with Brasil Telecom; and in Taiwan with Markwell.

BNS to design HD IPTV platform for Indonesia's Multi Kontrol Nusantara

BNS has been appointed by Indonesian telecommunications provider Multi Kontrol Nusantara to design and procure a turnkey HD and SD IPTV service platform. BNS's IPTV Service Platform design will enable MKN to deliver high- and standard-definition video services, including multicast, VoD, network PVR, timeshift TV, e-shopping, games, and others.

Built on a core fiber backbone, metro Ethernet, and various broadband access network technologies, the network's infrastructure will enable cost-effective and highly reliable delivery of multimedia services to residences, office buildings, and hotels.

Central to BNS's IPTV solution is the design of an IP-centric IPTV headend that will enable MKN to seamlessly and cost-effectively migrate to future-generation IP video systems.

BNS's vendor-agnostic approach will provide MKN with best-of-breed equipment from BNS's global partners to cover all major IPTV components of the platform, including video encoder, ingestion system, streaming server, content security, middleware, and IP set-top box.

Through its Content 360 business division, BNS will also provide a content strategy and roadmap that will enable MKN to differentiate its service with unique content that is specifically relevant to the Indonesian market.

The service is set to be launched in the Rasuna area in Jakarta by the end of 2008 before being rolled out nationally within three years.

StreamGuys Inc. delivers ABS-CBN broadcast TV from the Philippines globally through IPTV and Internet distribution

StreamGuys Inc., a streaming media and content delivery provider based in northern California, is now handling content delivery for ABS-CBN's IPTV service in Canada, Europe, Japan, and South Korea. ABS-CBN Broadcasting is the largest integrated media and entertainment corporation in the Philippines, with 35 television stations, 19 owned-and-operated AM and FM radio stations, and 10 affiliated radio stations throughout the Philippines. The broadcaster has been using StreamGuys for content delivery for four years, mainly for on-demand streaming and downloads of ABS-CBN programming over the public Internet through its pioneering service, TFCnow!

According to Enrique Olives, director of business development for ABS-CBN Global, there are approximately 8 million Filipinos living abroad. To ensure global delivery of its programming, ABS-CBN has employed the Internet to penetrate markets where satellite and cable delivery is cost-prohibitive or unavailable.

StreamGuys recently won the IPTV business after four years of providing cost-efficient streaming broadcasts and backend server infrastructure management for the Internet streaming and download service at now.abs-cbn.com.

"There is a huge market for ABS-CBN programming outside of the Philippines, and it's important to make our content available on as many platforms as possible," said Olives. "Content delivery networks like StreamGuys are ideal for IP-based broadcast distribution because you are essentially leveraging on their relationships with ISPs around the world instead of just purchasing raw bandwidth. This relationship allows ABS-CBN to focus on its core competency of producing content instead of managing the network."

StreamGuys delivers ABS-CBN programming as MPEG-4 standard-definition video for IPTV and Windows Media for Internet streaming and download services. For the growing IPTV service, StreamGuys built out a cluster of servers in the United States, Japan, and the Netherlands to ensure plenty of network capacity. StreamGuys designed the IPTV server infrastructure to communicate directly with IP addressable consumer set-top boxes, allowing consumers to view content immediately on demand.

"StreamGuys has proven valuable as a CDN that adjusts to our changing requirements as we scale our network," said Eugene Paden, head of IT operations for ABS-CBN Global. "They clearly understand the different quality requirements for watching content on TV as opposed to a computer, and manage the network to maintain those various requirements. The network management has been critical as we grow our customer base, and the positive aspects of the scalability vs. cost ratio become increasingly evident as we boost network capacity."

Olives added that StreamGuys has always offered very competitive pricing as a

content delivery network. “The flexible pricing they offer has always been attractive from a business point of view,” he said. “The 24/7 network management is essentially built-in to the overall price, which is nice for both our bottom line and the engineering side. We can go to sleep at night knowing they will take care of things if there is a connectivity issue into a specific country or another problem with the greater network.”

“The rise of the Internet and IPTV delivery platform for distributing high-quality broadcast content makes it possible for broadcasters to reach almost every corner of the globe. The relationships between broadcasters and content delivery networks have grown stronger as IPTV network infrastructure management becomes more complex,” said Jonathan Speaker, COO of StreamGuys Inc. “We are proud to assist ABS-CBN for reliable and cost-effective delivery of its broadcast content worldwide, allowing them to focus on producing content.”

Sigma media processors power Advanced Communications’ IPTV STBs across Japan

Sigma Designs, a provider of digital media processing and wireless system-on-chip (SoC) solutions for consumer electronics, and Advanced Communications Co. Ltd. (Adcom), a Japanese communications technology company, announced that Sigma’s highly integrated SMP8654 media processors will be used to power Advanced Communications’ IPv6 set-top boxes (STBs) currently being deployed by major telecom companies, cable providers, hotels, convenience stores, restaurants, and Karaoke centers throughout Japan. Furthermore, the companies have entered into a collaborative relationship to develop next-generation IPTV set-top boxes for the Japanese market based on Sigma’s SMP8654 media processor and Adcom’s iSense IPTV software platform solution.

As part of this collaboration, Sigma’s chips are integrated into Adcom’s new iSense

platform, which power the IPv6 STBs. The iSense also comes with a software development kit (SDK) for next-generation networking (NGN) where all home telco-based and consumer electronics will communicate in an “all-IP” fashion. The iSense platform is also being used to power and build in IP-based functionality for set-top boxes manufactured by Japanese consumer electronics companies.

“We are pleased that Sigma’s media processors power the new iSense platform and IPv6 STBs and help us further expand into the Japanese IP STB business and consumer markets,” said Yukihiro Yamada, CEO at Advanced Communications. “We recognize Sigma’s world leadership in the IP market and wanted to be certain our highly flexible, expandable solutions used the most experienced, advanced audio/video and multimedia processing technology on the market today.”

“We are excited about our continued expansion of IPTV customers in Japan,” said Ken Lowe, vice president of strategic marketing at Sigma Designs. “We work closely with worldwide telcos and set-top box manufacturers in the development of our industry leading system-on-chip IPTV solutions. We intend to continue that focus to ensure their successful use by Advanced Communications and the company’s Japanese-based consumer electronics customers.”

Advanced Communications’ IPv6 STBs — powered by Sigma’s SMP8654 media processors — support multicasting, video-on-demand (VoD), recording and playback functionality, and digital rights management (DRM) requirements. The solution handles multitask performance by processing multiple streams of content in tandem at speeds up to 20Mbps, and advanced encryption technology for enhanced copyright protection. In addition, the product is supported by the Association of Radio Industries and Businesses (ARIB), a standardization organization in Japan

designated as the center of promotion of the efficient use of the radio spectrum and frequency change.

Sigma's SMP8654 media processor integrates a complete complement of next-generation capabilities for a single-chip system-on-chip (SOC) solution with powerful multimedia processing, robust content security system, multiple on-chip CPUs, and a full complement of system peripherals. Its combination of on-chip processors and memory controllers yield an impressive 50 percent increase in overall performance to provide the headroom needed for next-generation IPTV service features. At the same time, taking advantage of the latest memory components and integrated peripherals, the SMP8654 can reduce subsystem cost by around 30 percent compared to its predecessor, the SMP8634.

From a media processing standpoint, the SMP8654 offers a full complement of advanced decoder engines with high-definition video decoding, including H.264 (MPEG-4 part 10), Windows Media Video 9, VC-1, MPEG-2 and MPEG-4 (part 2), and the new AVS standard. High-performance graphics acceleration, multistandard audio decoding, advanced display processing capabilities, and HDMI 1.3 output round out its multimedia core.

Powerful content security is ensured through a dedicated secure processor, on-chip flash memory, and a range of digital rights management (DRM) engines for high-speed payload decryption. The SMP8654 also features a full complement of system peripherals, including a dual Gigabit Ethernet controller, dual USB 2.0 controller, NAND flash controller, IR controller, and SATA controller.

SERVICES

UUSee lands Internet TV broadcasting rights to Summer Olympic Games

UUSee has secured the Internet TV broadcasting rights to this summer's Olympic

Games and is on the verge of orchestrating one of the world's largest real-time interactive TV events. UUSee is partnering with CCTV.com, China's largest TV network and the only authorized Olympic TV channel in Greater China.

UUSee will broadcast live the opening ceremony, closing ceremony and all the important sporting action of the 2008 Olympic Games via the Internet in China.

In addition to the broadcasting rights for the Olympic Games, UUSee was recently awarded an Online Video Broadcasting License from SARFT — China's State Administration of Radio, Film and Television — becoming one of the first online P2P video platforms to legally broadcast TV programs and video content via the Internet. Featuring the first product to add a video search function to Internet TV, the newly released client platform,

UUSee 2008, permits users to quickly find and record favorite video content from various online video sites and enjoy customized lag-free streaming video.

BUSINESS

S4C Digital Media, Wesley Clover invest \$18.78 million in IPTV firm Inuk

S4C Digital Media and investment firm Wesley Clover have reportedly invested £9.5m (\$1.78 million) in IPTV player Inuk, which is planning to use this amount to develop the Firewire triple-play service. This service enables users to access broadband, telephony, and high-quality television services on their PCs. This technology can currently be accessed only at student accommodations. Inuk had signed a deal with academic communications network Janet for providing students with a 50-channel package for 9.99 pounds per month. S4C believes that Firewire Technology will become an acceptable digital TV platform. Around 40,000 users have signed up for this service to date.

Thomson joins Open IPTV Forum

Underscoring its commitment to open standards in emerging technologies and media platforms, Thomson has become a full member of the Open IPTV Forum.

The aim of the Forum is to promote IPTV by making it easy for consumers to experience and enjoy it, ensuring interactivity between all devices, networks, and technologies. Taking advantage of its expertise in end-to-end IPTV solutions including network platforms and home devices, Thomson joins forces with other telecom industry leaders in defining standards for delivering new advanced multimedia services and shaping the future of the broadband market.

The Open IPTV Forum is a pan-industry initiative, formed in 2007 by the world's largest operators and equipment vendors, to produce end-to-end specifications for IPTV, enabling a "plug-and-play" experience for users, without concerns about the underlying technologies. This includes interoperability of devices within the home environment and with third party applications to enable a wide range of interactive services for the user. To achieve this ease of use in a complex application such as IPTV is challenging, and depends on comprehensive, well-specified, and open standards.

Thomson is committed to the development and propagation of open standards in all its activities, and currently has a participating role in more than 60 international standards development organizations including the ETSI's TISPAN for IPTV standardization in IMS, the DVB Project and the HD Forum. Large, scalable IPTV deployments have become a reality, and compliance with internationally recognized open standards has been a key success factor for Thomson.

Thomson is unique in being able to provide a complete end-to-end solution for IPTV and triple-play, from headends to consumer premises equipment. Thomson's SmartVision is, according to analysts MRG Inc, the market

leader in IPTV video service platforms and video servers. Thomson is positioned as an industry expert with the most comprehensive and advanced package of triple-play solutions.

USTelematics announces affiliate agreement with Netflix

USTelematics Inc., at the forefront of the connected-car revolution, announced a revenue-producing affiliate agreement with Netflix Inc.

Users of USTelematics' Voyager Automotive Mobile IPTV, while using Voyager connected to the Internet, will become able to order DVDs for play on Voyager in areas of limited wireless coverage. The Netflix library consists of over 100,000 movie and video titles for physical delivery, to either a home or a vacation destination.

Voyager offers many features to families on the road including a GPS-based gas price finder linked to MSN Autos Gas Price Finder from Microsoft and live TV programming from several sources, wirelessly, while in motion. USTelematics CEO Howard Leventhal said, "We are frequently asked about the presence or absence of wireless broadband EVDO data coverage in certain areas and the related effects on Voyager's ability to deliver live video reliably. While well over two thirds of the U.S. population is covered by EVDO, there are some travel destinations that are not — like the bottom of the Grand Canyon for example. Voyager has built-in DVD and hard drives. In areas of limited wireless coverage, it's easy to just pop in a DVD movie and keep the kids entertained without interruption using Voyager on the road."

Diva.AG puts entertainment at the fingertips of consumers

Diva.AG is a digital distribution solutions for award-winning independent movies and classics. In 2007 Diva.AG was spun off its mother, Vendema, a Swiss publishing house established in 1951, in a management buyout

and offers a distribution solution to independent studios and distributors wishing to access emergent digital distribution opportunities.

Building on its legacy Diva.AG today has offices in Berlin, Beijing, Nagpur, Paris, and its head-office in Zurich. Its licensors and distribution partners are in Europe, North America, and Asia, making Diva a truly global organization.

Globally, there are hundreds of digital content retailers operating with different business models. Independent content producers and distributors value the assistance in getting their content to video-on-demand, IPTV, and mobile TV platforms to be viewed by new audiences globally.

Diva.AG's technical platform normalizes and manages all acquired content and metadata and makes it available in the various content formats specified by its distribution partners.

This makes Diva.AG the interface between two extremely diverse and heterogeneous sectors: content originators and distributors, and emergent digital retailers. By pooling the rights of many smaller rights owners and offering them to a large number of digital retailers, Diva.AG adds value to both sides that would otherwise have a hard time managing one-on-one relationships and the corresponding technology.

The video-on-demand market is currently worth EUR2 billion growing at an average of 33 percent annually with the USA and advertising financed viewing growing at more than double that rate.

Diva is managed by Kai Henniges, who has previously been responsible for Web TV and mobile entertainment services for companies such as Cablecom, Switzerland's largest cable network, as well as Vodafone, the world's largest mobile operator.

Mr. Henniges has 14 years of digital media and marketing expertise and holds an MBA and LL.M. from the University of St. Gallen, Switzerland.

His partner and co-founder is Jörg Boksberger a graduate in chemical engineering from the Swiss Federal Institute of Technology (ETH) Zurich, who has more than 20 years' experience in software development in the finance and banking industries.

EVENTS

Rapid convergence of broadcast and telecoms drives growth of mobile, IPTV, and digital signage at IBC 2008

The rapid growth in the consumption of broadcast content on devices other than the traditional TV screens is reflected across the exhibition, conference, and business briefing programs at IBC2008.

IBC covers all aspects of the creation, management, and delivery of content. Recent years have seen a steady rise in attendance from the telecoms sector as carriers and mobile operators seek a better understanding of the broadcast sector and evaluate IPTV and mobile multimedia revenues as a supplement to stagnant or declining voice ARPU.

This year, the opening theme day of the IBC Conference on Thursday, September 11, is dedicated to "Content Access via the Web" and will explore how consuming content across devices as diverse as mobile phones, PCs, multimedia players, and games consoles is affecting the traditional broadcast value chain.

"The Digital Dividend: HD, mobile, broadband or new media?" the theme on Saturday, September 13, will examine the options, opportunities, and issues that may arise when telecoms operators compete for spectrum released by the transition from analogue to digital terrestrial TV transmission.

Sunday's theme, "Content production: technology, creativity and business in an era of headlong change," will provide invaluable insight into the broadcast sector's perspective of the creative and commercial implications of the rapidly changing media landscape.

Elsewhere in the conference program, Thursday's Technical paper sessions will include an in-depth look at technical innovations in the area of "IPTV and the networked home."

Mobile will also be the focus of "What Caught My Eye," in which an expert reports on the notable innovations to be found on the exhibition floor.

For Sunday's "What Caught My Eye" session at 11.00 a.m., Mike Short, VP R&D at Telefonica O2 and president of the Mobile Data Association will unveil the most exciting mobile-specific innovations to be found at IBC2008.

Monday's program includes tutorials from DVB & ETSI on "Open Standards, Technology & Implementation," outlining the evolution of the Digital Video Broadcast standard to accommodate a number of distribution scenarios including DVB-H for handhelds. IET hosts another tutorial on "Digital delivery & getting content to the consumer."

Mobile, IPTV and Web TV products, services, and applications can be found across the IBC exhibition. In addition, dedicated Mobile and IPTV Zones bring together innovative application developers, content providers, and technology companies pioneering in these important new fields. More than 30 companies are exhibiting in the Mobile Zone, including industry leaders such as Qualcomm MediaFLO, MobiTV, and Nagravision, while nearly 50 organizations from Aceedo Broadband to ZyXEL Communications Corp. feature in the expanded IPTV Zone.

Digital Signage — the use of IP-networked flat screens to distribute information, advertising, multimedia, and TV content in retail environments, transport hubs, and stadia — will have its own Zone in response to the interest generated by an overflowing seminar on the subject at IBC 2007.

Mobile, IPTV and Digital Signage will also feature in the 2008 IBC Business Briefing Programme. Conceived to complement the peer-reviewed IBC Conference, the free-

admission Business Briefings provide a platform for content providers, application developers, and technology companies to share their experiences of the impact that mobile, broadband, and IP worlds are having on the creation, management, and delivery of content. Early confirmed speakers include Qualcomm MediaFLO and Nagravision on Mobile; Dolby, Edgeware, Miniweb Interactive, the Open IPTV Forum, and Tandberg on IPTV; and Sony on Digital Signage.

MARKET INTELLIGENCE

IPTV middleware spending spree expected

Communications market research firm Infonetics Research reported that the combined Internet protocol television (IPTV) and switched digital video (SDV) equipment market increased 12% sequentially to \$1.3 billion worldwide in 1Q08.

Infonetics' report, IPTV and Switched Digital Video Equipment, Services, and Subscribers, indicates revenue growth is being driven by growing numbers of service providers rolling out new IPTV networks or expanding existing networks to support more subscribers. The market is also getting a push from cable MSOs introducing switched video capabilities into their digital TV networks to free up bandwidth and offer more high definition (HD) content to their subscribers.

"While most of the segments we track in the IPTV market are seeing consistent quarterly growth, IPTV middleware is going to be an especially interesting segment to watch. We're expecting an IPTV middleware spending spree over the next few quarters because a lot of the early IPTV service providers are running into scaling issues with their off-the-shelf middleware.

Those providers are going to have to replace their IPTV middleware with a more robust solution to replace or augment their first-generation deployments.

Middleware issues are one of the main root causes of IPTV rollout delays, so early hiccups have to be addressed quickly,” said Jeff Heynen, directing analyst for IPTV at Infonetics Research.

Other report highlights:

- The number of IPTV subscribers is forecast to hit 93 million worldwide by 2011
- Worldwide IP set-top box revenue grew 10% in 1Q08 over 4Q07
- Motorola continues to lead the worldwide IP set-top box (STB) market in 1Q08, although its closest competitors made major inroads this quarter, reducing Motorola’s lead
- ADB takes the lead in 1Q08 in worldwide hybrid IP/over-the-air STB market share
- Cablevision was the first to roll out switched digital video; it will soon be followed by other MSOs in North America, then those in Europe/Middle East/Africa (EMEA) and Asia Pacific (APAC), who face an uphill battle for triple play subscribers
- France remains the hotbed of IPTV activity, with Orange, Free, and neuf all battling for IPTV subscribers
- Telco IPTV operators in Western Europe, particularly France, Sweden, and Italy, continue to give away their IPTV service to hold on to their broadband subscribers

Infonetics’ report provides market size, market share, and forecasts for IPTV equipment, including integrated digital headend platforms, video on demand (VOD) and streaming content servers, IP video encoders, universal edge QAMs, IPTV middleware and content delivery platforms, and IP STBs. The report also tracks IPTV, cable IPTV and cable SDV service revenue and subscribers.

Companies tracked include ADB, Alcatel-Lucent, Amino, ARRIS, Celrun, Cisco, Dasan Networks, Ericsson, Huawei, Microsoft, Motorola, Netgem, Nokia Siemens, OptiBase, Pace, Phillips, Sagem, Samsung, Scientific Atlanta, Sumitomo, Tatung, Telsey, Thomson, Tilgin, UTStarcom, Yuxing, and others.

According to In-Stat, PC-TV tuner market to get boost from European and Asian shift to Digital TV, US move to Mobile ATSC M&H services

The adoption of digital PC-TV tuners will accelerate in Europe as digital terrestrial TV (DTT) services continue to expand there. Asia, China, and India will present strong growth opportunities. North America is expected to see a surge during 2009, when analog TV is cut off and new mobile digital broadcast TV (MDTV) services are introduced by major US TV stations. The high-tech market research firm In-Stat (<http://www.in-stat.com>) cautions that the uptake of PC-TV tuners is not guaranteed, as they face challenges from a wide variety of options, consumers now have to use computers to gather and view a wide range of video content.

“The challenges to PC-TV tuner adoption include easy-to-use Cable, TelcoTV and satellite TV services that provide high-quality Video-on-Demand, Internet distributed video content, IPTV services and mobile broadband, such as 3G, Wi-Fi, and WiMAX,” said Gerry Kaufhold, In-Stat analyst. “While some European cable and satellite operators allow the use of digital PC-TV tuners with conditional access to receive premium content, the U.S. market will take some time to implement CableLab’s tru2way technology. Microsoft also needs to improve their internal support for multiple tuners in a PC.”

Recent research by In-Stat found the following:

- By 2012, there will be 30.8 million PC-TV tuners sold annually, with a total retail value of US\$1.7 billion.
- Western Europe and Japan lead in the uptake of digital PC-TV tuners.
- In 2005, 60.1 percent of PC-TV tuners shipped were analog, but the analog tuner market share dropped to 48.3 percent in 2006, and then to 39.7 percent in 2007.

The research, “Worldwide PC-TV Tuners: Driven by Digital Broadcasting”

(#IN0804070ME), covers the worldwide market for PC-TV tuners. It provides unit shipment, revenue, and average selling price forecasts for analog and digital PC-TV tuners by region through 2012. Regional market drivers and barriers are analyzed, along with industry trends. For more information on this research or to purchase it online, please visit: <http://www.instat.com/catalog/mmcatalogue.asp?id=162> or contact a sales representative: <http://www.instat.com/sales.asp>.

The price is \$3,495 (US).

Facing competition, operators take more STB risks, according to ABI Research

Faced with stiff competition in the cable market and from telcos vying for TV viewers, traditionally risk-averse cable operators are becoming increasingly “bipolar,” supporting a roadmap that may require the deployment of new STBs with more advanced features and functions, while also apparently aiming to drive the ubiquitous STB to extinction. Meanwhile, STB vendors are offering a variety of new features to entice operators. When it comes to STBs, operators have traditionally treaded carefully, and have largely been unwilling to “shop around” much for new technologies. According to ABI Research analyst Paulhwa Lee, “Because some operators are facing stiffer competition, they are now willing to experiment a little more, venturing into offerings such as Electronic Program Guides, wireless support, home networking support for MOCA or HomePlug, and expanded hard drives — all at increasingly affordable prices.” There is also a growing trend toward partnerships and

consolidation. For example, STB giant Motorola has acquired a Chinese STB vendor, Dahua Digital; decoder manufacturer Broadcom has partnered with Chinese STB vendor Coship; and decoder manufacturer NXP has acquired Conexant’s STB operations. Some operators, too, are partnering with new STB manufacturers. This is because as the United States market matures, subscriber growth slows and evolves towards STB replacement. STB sales may still be driven by one-off developments such as the CableCARD mandate, the digital to analog transition, and the unification of data and video. But operators know that these transitions are CapEx-intensive. At every opportunity, operators are trying to standardize and commoditize STBs by formulating standards and consortia such as tru2way and CableLabs, so many STB manufacturers are looking to fresh markets in Asia, Europe, and Latin America. ABI Research has released newly updated Set-top Box Market Forecasts (http://www.abiresearch.com/products/market_data/Set-Top_Box_Market_Data). The information covers STBs of all kinds, including those for IPTV, satellite, cable, and digital terrestrial TV. It product forecasts, shipments, average selling price, and market value through 2013. It also contains data on CATV and IP gateways, decoders, and subscribers. It forms part of the firm’s Multi-Channel Video Research Service (http://www.abiresearch.com/products/service/Multi-Channel_Video_Service), which also includes Research Reports, Research Briefs, other Market Data products, Online Databases, ABI Insights ABI Vendor Matrices, and analyst inquiry support.

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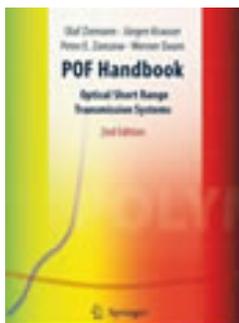
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Day 1: Active Components and Fibers

Wednesday - August 20, 2008

Transmitter and Receiver for POF Systems

Olaf Ziemann, POF-AC Germany

- LED and laser for data communication
- Large area photo detectors
- Comparison of different wavelengths for POF transmission
- Coupling technologies for active components

Wed. AM Tutorial 9:00 a.m. - 1:00 p.m.

Large Core Diameter Optical Fibers

Olaf Ziemann, POF-AC Germany

- Polymer Optical Fibers, hybrid and glass fibers
- Standards for POF
- Optical and mechanical properties of POF
- Measurement techniques for large core diameter fibers

Wed. PM Tutorial 2:00 p.m. - 6:00 p.m.

Day 2: Passive Components and System Design

Thursday - August 21, 2008 Thu. AM Tutorial

Design of POF Systems

Olaf Ziemann, POF-AC Germany

- Review of published transmission systems
- Power budget calculation for POF systems
- Commercial available systems

9:00 a.m. - 1:00 p.m.

Passive Components for POF

Karl-Friedrich Klein, FH Gießen/Friedberg, Germany

- Connectors
- Attenuators, filters and mode converters
- POF surface preparation
- Measurement and calculation of connector losses

Thu. PM Tutorial 2:00 p.m. - 6:00 p.m.

Day 3: Test and Measurement, Environmental Tests and Status

Friday - August 22, 2008

Measurements on POF

Olaf Ziemann, POF-AC Germany

- Attenuation and bandwidth measurements
- POF-OTDR
- Climatic behavior and lifetime measurements

Fri. AM Tutorial 9:00 a.m. - 1:00 p.m.

Specialty Optical Fibers

Karl-Friedrich Klein, FH Gießen/Friedberg, Germany

- Microstructured POF
- Silica glass and conventional glass fibers
- Fibers and light guides for power transmission
- UV fibers
- Specialty POF

Fri. PM Tutorial 2:00 p.m. - 6:00 p.m.

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