

TeleSoft

FIRST QUARTER 2005

NEWS

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Save the Date

OCTOBER 27-29, 2005

TeleSoft Partners' Annual EcoSystem Meeting

The Ritz Carlton
Half Moon Bay, California



Juice Box, a personal media player from Mattel, utilizes Matrix Semiconductor's 3D memory to enable the playing of MP3 music files and viewing of digital photos.

PRODUCTS FROM OUR PARTNERS

For more news and product updates from our partners, see Portfolio News



Aarohi's FabricStream Intelligent Storage Controller

A WORD FROM THE FIRM

TeleSoft is delighted to announce new investments in Knowledge Adventure and LiteScape Technologies. TeleSoft and Azure purchased Knowledge Adventure from Vivendi Universal Games. A leader in children's educational software, Knowledge Adventure develops and publishes interactive content for PCs and console systems. The studio is best-known for its acclaimed educational software franchises, JumpStart Learning Systems and Blaster Learning Series. LiteScape secured \$7.5 million in its first institutional venture round, co-led by TeleSoft and SOFTBANK Capital. LiteScape develops communications software applications that automate business processes enabled by enterprise VoIP adoption. Greg Shenkman, ex-CEO and co-founder of Genesys Telecommunication Labs, has also invested and became a director of the company.

Congratulations to Aarohi, CreekPath, and Matrix for closing new

financings. Aarohi Communications closed the first tranche of a new round of financing led by a new investor, in which TeleSoft and others participated. CreekPath raised additional capital from new investor Lehman Brothers Venture Partners and existing investors TeleSoft, NEA, Sequel, and A.G. Edwards. New investor Duff Ackerman & Goodrich led a new round



of financing for Matrix Semiconductor, in which TeleSoft, Benchmark, and others participated.

Thanks to everyone who made our 2004 Annual EcoSystem one of the best meetings to date, and please save the date for the 2005 meeting to be held on October 27-29. It should be a key time to reflect on the service provider consolidations, the deployment of wireless and broadband infrastructures, and rising digital consumer markets, all of which should make 2005 an interesting year!

— Arjun Gupta

TeleSoft Partners

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From the Front Lines

Location, Location, Location

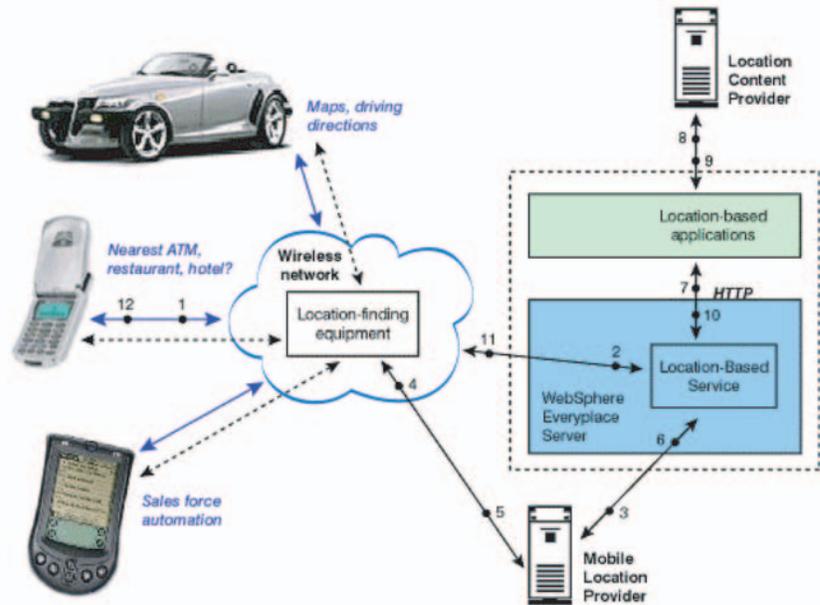
Early navigators looked to the sky and the horizon to determine where they were and where they were headed. Today's navigators need only to look at their handhelds or dashboards to discover their location and direction. As the use of mobile data applications increases, several vendors believe market awareness and technology supporting location-based services have sufficiently advanced over the last several years for it to begin a push into mainstream business and consumer markets. As a result, service providers are starting to investigate how to leverage the need for understanding physical location in order to generate new revenue. This issue of From the Front Lines provides an overview of the emerging market for location-based services.

Lost in Space

Location-based services (LBS) refers to applications that utilize geographical data. An application would use this geographical data (location) to provide additional value to a user of the service. To deploy the services, location determination equipment (LDE) is required to determine the location of the handsets. LDEs can be handset based (GPS chip based), a combination of network and handset (GPS assisted), or completely network based (such as cellular networks).

GPS (Global Positioning System) refers to a network of orbiting satellites and ground stations that provide freely available signals showing the location of a receiver anywhere on earth. GPS is also referred to generically as Global Navigation Satellite System (GNSS) and was originally established by and

FIGURE 1 LOCATION-BASED SERVICES ARCHITECTURE



SOURCE: IBM

for the U.S. military. In the 1980s, the system was initially opened to commercial use, and in 1998, the decision was made to increase the accuracy of commercial applications by allowing the unscrambling of GPS signals (known as selective availability). Alternative GPS systems are the Russian GLONASS (not available to the public) and the GALILEO project being developed in Europe, which is due to be operational in 2008. GPS positioning has become more available as GPS receivers, now miniaturized to just a few integrated circuits, have become increasingly economical.

Network-based positioning relies on various means of triangulation of the signal from cell sites serving a mobile device. An example is the OnStar system, which currently uses analog cellular networks maintained by separate

cellular companies. Network positioning uses various techniques to determine location—Cell-ID, Time of Arrival (TOA), Angle of Arrival (AOA), and Enhanced Observed Time Difference (E-OTD). The most common technique today is based on the information of the cell (sector) and a calculated distance between the subscriber and the base station. Network-based positioning has gotten a boost in the U.S. due to the Federal Communications Commission's e911 initiative, which has mandated that operators be able to locate users to effect emergency services. In Europe, commercial ventures are poised to drive LBS technology, as the European Union pushes legal requirements forward.

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From the Front Lines

Location, Location, Location

Finding Yourself

Once the location of the handset is determined, applications access the location information through location servers (see figure 1). Location servers also provide services such as yellow pages, driving directions, and digital maps. Companies such as Tele Atlas and NAVTEQ have developed Geographic Information Systems (GIS) to provide the tools to provision and administer base map data including man-made structures (streets, buildings) and terrain (mountains, rivers). GIS is also used to manage point-of-interest data such as locations of gas stations, restaurants, nightclubs, etc. GIS information also includes information about the radio frequency characteristics of the mobile network. This allows the system to determine the serving cell site of the user. It is not enough to be able to position the mobile user and know the map data around that position. There must be a location management function to process positioning and GIS data on behalf of LBS applications. The location management function acts as a gateway and mediator between positioning equipment and LBS infrastructure.

On the Horizon

Since the inception of the e911 mandate, location-based services have been mentioned as a “killer app” that sits just over the horizon. However, major telecommunications carriers have been slow to add applications that utilize auto-location determination. Nextel (TeleNav) and AT&T (m-mode Friend Finder) were the first to add LBS applications in 2002. Over the last two years, Verizon, ALLTEL, and

KDDI introduced initial location applications from NaviTime; in addition, T-Mobile introduced NaviGate in Europe. Beyond these few applications, most carrier mass market offerings are downloadable maps and traffic applications that do not require knowledge of a subscriber’s position. Factors contributing to the limited application availability can be attributed to uncertain business models for carriers (i.e., take rate and acceptable pricing), lack of consumer awareness, low data accuracy, and a low penetration of affordable handsets that can support LBS applications.

While LBS applications are not expected to emerge as popular as e-mail or messaging applications in the

enhanced safety service, real-time turn-by-turn directions, navigation and traffic assistance, more efficient e911 services, and other lifestyle services. Accurate data correlates to improved user experience.

Handhelds such as cell phones, PDAs, and navigation devices are becoming more powerful and available. Deutsche Bank is projecting that the number of GPS-enabled handsets worldwide will grow from 132 million in 2004 to 516 million in 2008. Many of these devices will be smart phones with high quality displays and positioning chipsets from vendors such as Qualcomm, SiRF, and Texas Instruments. As the penetration of LBS-capable devices increases, carrier

“**While LBS applications are not expected to emerge as popular as e-mail or messaging applications in the near future, there are reasons to believe LBS subscriber growth is on the horizon.**”

near future, there are reasons to believe LBS subscriber growth is on the horizon. The infrastructure for LBS has improved with a number of vendors contributing software, systems, and components (see figure 2). With an ecosystem in place, application developers are more apt to develop compelling applications. With more powerful components and software, data accuracy is improving. Content providers such as Tele Atlas are providing up-to-date geospatial data by a number of methods including aerial imagery and sending out teams to drive routes to verify changes. Beyond providing more relevant information, content providers and their partners are expanding the availability of dynamic content for

interest in LBS applications should increase as a means to increase subscriber revenues and to improve their return on investments in higher bandwidth networks that are currently underway—that is, if carriers can get comfortable with subscriber demand for LBS applications.

The good news is that awareness of LBS applications is increasing through solutions such as those from telematics service providers like OnStar and ATX. According to data from CSFB, 18.5 million automobiles were sold in North America and 16 million in Europe in 2003. Approximately 25% of the cars in North America, and 80% of the cars

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From the Front Lines

Location, Location, Location

in Europe offered navigation assistance as an option. With take rates of 13% in North America and 8% in Europe, the market for in-vehicle navigation was 1.7 million units in 2003. The market is expected to grow 30% per year to 6.6 million units in 2008 with increasing user take rates.

Over the last several years, end users have continually listed location-based services as being among the most interesting and compelling applications in surveys. IDC surveys showed users rating mobile traffic and navigation, family location tracking, and traffic alerts as among the most compelling applications for mobile networks. In a Yankee Group survey, one-third of all U.S. wireless users are interested in receiving location-based information such as driving directions. A Driscoll-Wolfe survey found that nearly two-thirds of those questioned would pay a monthly fee to have telematics services that gave them driving directions and other location information. IDC estimates that the number of location-based application users in the U.S. will grow at a rate of 126% between 2004 and 2008, from 230,000 to 6 million. Strategic Analytics forecasts global service revenues at more than \$8 billion by 2008.

Four Dimensional Applications

Location and time add a new dimension to business and consumer applications. LBS adoption rates will be determined by applications that provide genuine value to users, a quality of service that the application requires,

FIGURE 2 PARTIAL LIST OF LOCATION BASED SERVICES VENDORS

Company	SOLUTIONS						MARKETS				
	Server	Middleware	Applications	Components	Device	Service	Vehicle	Personal	Government	Energy/Utility	Enterprise
Autodesk											
DMTI											
ESRI											
Genasys											
Hewlett Packard											
Intergraph											
Intrado											
Microsoft											
Petris											
RedKnee											
Tekel											
TomTom											
@Road (ASP)											
Aligo (ASP)											
ALK Technology											
Andrew											
AT&T											
ATX (telematics)											
Garmin											
Homeland Security Techn											
Kudzu											
Lowrance											
Magellan											
Mapsolute-Map24 (ASP)											
MDSI											
Navman											
Navteq (map database)											
Nextel											
OnStar (telematics)											
Openwave											
Pharos											
Qualcomm											
Rand McNally											
RIM											
Sendero											
SiRF											
Space Machine											
Symbol											
TCS (Kivera/Aether)											
Telcontar											
Tele Atlas (map database)											
TeleType											
Texas Instruments											
Trimble Navigation											
TruePosition											
Verizon											
Xora (ASP)											

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SOURCE: TELESOFT PARTNERS

From the Front Lines

Location, Location, Location

and applications that are usable. The highest value applications are likely to be location-centric utilizing auto-location such as navigation, real-time traffic and alerts, and concierge services. These are likely to be the earliest locations services to be adopted, and user satisfaction will be correlated with higher degrees of data accuracy as well as higher network and device requirements. Additional applications with location dependent applications will also require data accuracy, but are most likely to appeal to specific market niches. These include business asset tracking (e.g., field personnel, fleet vehicles, customer service), personal tracking (e.g., children, pets, patients),

roadside and emergency assistance, and vertical businesses (e.g., utilities, network planning, government). Finally, location information is likely to turn up as enhancements to existing applications (such as messaging, mobile entertainment and gaming, and mobile commerce) plus mobile marketing and advertising.

Finding Direction

Although it may not turn out to be the mythical “killer” application that vendors and service providers are seeking, location-based services do hold the promise of new and interesting services. Beyond increasing customer awareness and e911 requirements,

there are a number of reasons this year could be an interesting one for hardware, software, and service providers in the market. Wireless broadband and 3G build-outs are underway. Mobile messaging is already hitting the mainstream. There is an increasing penetration of more powerful, multifunction handhelds. The recent merger activity between Nextel and Sprint, as well as AT&T and SBC/Cingular, will add existing location-based service expertise to the resulting larger service provider. As a result, 2005 could be the year that you will begin to be able to find yourself.



Aarohi Communications

www.aarohi-inc.com

■ Aarohi's AV150 intelligent storage processor wins the Network Storage Conference "Interconnect Outstanding Product of the Year" award. The annual award program, in conjunction with Computer Technology Review and Peripheral Concepts, comprises a panel of industry experts who recognize outstanding achievements made by pioneering companies within the network storage industry (3/15/05).

■ Chris McBride joins Aarohi as executive vice president of sales. He will be responsible for building out the Aarohi sales infrastructure and driving revenue (11/16/04).

■ Aarohi demonstrates intelligent SAN services using the Aarohi FabricStream Intelligent Storage Processor and FabricStream Intelligent Storage Controller at Storage Networking World (10/25/04).

AmberWave Systems

www.amberwave.com

■ Dave Mooring, a board member and former president of Rambus, joins AmberWave's Board of Directors. Mooring's addition to the board brings to AmberWave a deep familiarity with the global issues of intellectual property (IP) development and licensing (3/8/05).

■ Korean semiconductor materials manufacturer LG Siltron signs intellectual property license agreement with AmberWave, obtaining rights to AmberWave's full suite of advanced materials intellectual property, including "bulk" strained silicon, strained silicon-on-insulator, and III-V heteromaterials. In addition, AmberWave will provide LG Siltron with technical support on strained silicon processing and metrology, and will assist LG Siltron's marketing efforts (1/13/05).



Aarohi's FabricStream Intelligent Storage Processor

■ Applied Materials will license AmberWave's strained silicon intellectual property for use in its Applied Centura RP epitaxial (epi) system. Applied Materials has used the system to sample 300mm strained silicon epi wafers to a leading semiconductor manufacturer for advanced device development (12/14/04).

BayPackets

www.BayPackets.com

■ Verso Technologies, an integrated communications solutions company, has selected BayPackets as the provider of IP-based voice-mail and unified communications solutions for its service provider customers. BayPackets' Agility Voicemail and Unified Communications applications are now integrated with Verso's line of softswitch products. BayPackets' scalability, robustness, openness, and ability to support a variety of endpoints in a multi-switch configuration were a key requirement for Verso's existing customer base. BayPackets' Agility Voicemail is an enhanced network-based voice messaging solution that provides an alternative to less scalable and flexible CPE-based voicemail solutions (3/9/05).

■ Brooktrout Technology and BayPackets jointly develop a highly scalable IP-based network prepaid calling card solution for service providers. The application runs on BayPackets' Agility Network Services Platform (NSP), which has been designed to scale to support millions of subscribers (2/23/05).

■ Epana Networks, an international telecommunications carrier and prepaid calling card service provider, selects BayPackets' Agility NSP to scale the company's prepaid calling card services business. Epana and BayPackets have worked closely to jointly develop and deploy a prepaid calling service based upon BayPackets' Agility Prepaid Application. The service is now running on the Agility NSP in Epana's voice-over-IP (VoIP) network (1/10/05).

■ AudioCodes and BayPackets join forces to deliver comprehensive voice-over-IP routing and messaging solutions to the cable MSO and DSL market. These solutions, which include Single Number Service (find-me follow-me), integrated Visual Voicemail, Personal Communications Manager, and Advanced Toll-Free, enable broadband operators to deploy advanced telephony services across IP, TDM, or hybrid networks (10/18/04).

■ BayPackets is named to the Pulver 100 for the third consecutive year. The Pulver 100 highlights private companies in the communications sector that represent the future of the communications ecosystem (10/14/04).

Calient Networks

www.calient.net

■ Dr. John Bowers, Calient's chief technology officer, is elected to the National Academy of Engineering (NAE). Dr. Bowers was elected for his contributions to the development of high-speed semiconductor lasers and other optical devices for optical switching and communications systems (3/1/05).

■ Calient expands support for the growing base of "IP-over-optics" networking in research, government, and commercial applications. The company is adding sales teams and expanding industry partnerships to address rising demands in the service provider market and among the world's 100+ national research and educational networks (NRENs) (1/24/05).

■ DiamondWave photonic switching and GMPLS network control systems have been deployed in the UltraLight 10 Gigabit Grid network. The UltraLight Grid network will use Calient DiamondWave switching systems and Calient GMPLS controllers to enhance and extend the Cisco Systems ONS 15454 and 15540 multiservice provisioning platforms to support massive, globally distributed datasets, petaflops of distributed computing and storage, and collaborative data analysis across the U.S., Europe, Asia, and South America (1/24/05).

■ Cisco Systems and Calient coauthor an article on IP-over-optics in the December issue of *Lightwave Magazine*. It reinforces the value of optical switching and GMPLS in next-generation optical networks (12/04).



Calient Automated Fiber Management (AFM) solution integrated into ADC Telecommunications fiber management rack.

Calix

www.calix.com

■ Pioneer Telephone, the country's third largest telephone cooperative, deploys IPTV service network-wide using Calix's C7 Platform. Calix has completed the first three phases of Pioneer's eight-region network upgrade to high-speed ADSL2+ and IPTV services, and entered the fourth phase to be deployed in April 2005. Pioneer is using the Calix systems to provide both high-speed residential and business access over the existing copper plant, as well as to aggregate, groom, and backhaul traffic from multiple access points for fiber-based transport to regional Pioneer facilities (3/15/05).

■ Calix announces the availability of standards-based broadband passive optical network (BPON) optical line terminal (OLT) line cards for the Calix C7 multiservice platform. The Calix approach to FTTP—simply adding a card to existing systems—represents a stride forward for service providers that are minimizing risk and maximizing flexibility as they evolve their access networks toward a more service-rich, ultra-broadband future. With 200 Gbps of backplane capacity, the Calix C7 is well positioned to facilitate the migration from BPON to GPON and active optical approaches from a system that also provides transport functionality and the slot capacity for eventual migration to 10 Gigabit Ethernet trunking and services (3/1/05).

■ D&E Communications is converging its entire broadband access network on the Calix C7 multiservice access platform. D&E has already installed twenty Calix platforms, and will complete installation throughout its operating territory in central and eastern Pennsylvania by the beginning of 2006. The rural local exchange carrier (RLEC) will use its Calix broadband access network, which is capable of offering broadband data, voice, IPTV, and other high-speed services, to better serve its 177,000 lines, largely in rural and small-town areas (2/7/05).

■ Calix conducts a large-scale, multivendor showcase of the most advanced video services deployable today at TelcoTV. The mix of video services incorporated solutions from fifteen CalixCompatible partners and illustrated the significantly expanded array of information, communications, and entertainment offerings now marketable by RBOCs, ILECs, and IOCs (11/16/04).

CreekPath Systems

www.creekpath.com

■ CreekPath announces full support for the Cisco MDS 9000 Family of multilayer fabric switches and directors. This support allows CreekPath customers to manage their entire networked storage environment through a

single, independent storage management system. The CreekPath Suite can now automatically discover and visualize advanced features of the Cisco MDS 9000 Family, including virtual SAN (VSAN) technology (3/8/05).

■ CreekPath appoints Matthew Baginski as senior vice president of worldwide sales. Baginski was senior vice president of worldwide sales for Vivecon, an enterprise supply chain software company (2/16/05).

■ CreekPath appoints Swamy Viswanathan as senior vice president of marketing and business development. Previously, he was vice president for the content and integration products at Vignette Corporation (1/11/05).

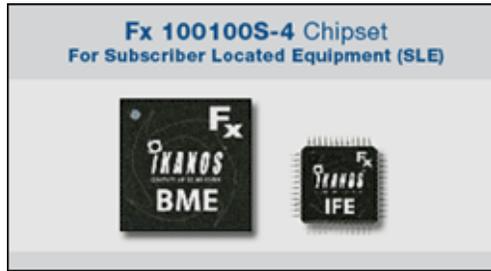
■ CreekPath broadens its support for the Storage Management Initiative Specification (SMI-S) standard and currently has the most extensive support for storage array vendors in the industry. Extensive work with SMI-S has allowed CreekPath to build functionality that includes the creation and deletion of storage volumes across a wide range of vendors including EMC, Hitachi, Engenio, and NetApp (10/26/04).

■ CreekPath appoints Todd Blackmon as vice president of professional services. He comes to CreekPath from Vignette, where he established a Strategic Consulting Division within the Vignette Professional Services Organization (10/25/04).

Ikanos Communications

www.ikanos.com

■ Ikanos adds the Fx™ 100100 to its family of fiber-extension products. The Fx 100100 is the first programmable silicon solution to provide speeds of up to 100 Mbps in both upstream and downstream directions over a single copper line. The Fx 100100 is designed for optical network units (ONUs) and optical line terminals (OLTs), while the Fx 100100S-4 is designed for subscriber located equipment (SLE) and optical network terminals (ONTs) (2/22/05).



Ikanos Fx™ 100100S-4 is the industry's first subscriber located equipment (SLE) chipset solution to enable carriers to quickly and cost effectively deliver symmetric 100 Mbps services over existing copper.

- Netopia plans to use the Ikanos CleverConnect™ 600 very-high-bit-rate digital subscriber line 2 (VDSL2) chipset in its next-generation CPE. Carriers deploying the Ikanos-based Netopia solutions can offer their subscribers a high-bandwidth solution to deliver high quality triple-play services—voice, video, and data over a single copper line (1/25/05).
- Ikanos introduces two new programmable chipsets, the SmartLeap9400 for central office (CO) and remote terminal (RT) equipment and the CleverConnect600 for customer premise equipment (CPE), to enter the market for VDSL2 equipment (12/6/04).
- NEC Magnus Communications, Ltd. of Japan develops IP-based, fiber-fast access concentrators and subscriber located equipment (SLE) based on Ikanos's 100 Mbps programmable Fx™ and FxS™ chipsets (10/18/04).
- Sumitomo Electric Networks (SEN) uses Ikanos's 100 Mbps programmable Fx™ and FxS™ chipsets to build a new range of carrier products for delivery of fiber-fast broadband services to the home (10/18/04).



Ikanos SmartLeap™ 9400 chipset is the industry's highest density, highest performance, and lowest power solution for VDSL2 and VDSL based broadband access concentrators, remote units, mini-RAMs, ATM, and IP DSLAMs.

IP Unity (empowerTel)

www.ip-unity.com

- WestTel launches a new unified messaging service using IP Unity's MS6000 for its current and prospective business subscribers throughout the Cayman Islands (3/7/05).
- BCS Global, a Canadian provider of IP-based voice, video, and data services, begins offering a new unified messaging service using IP Unity's HMS6000 media server (3/7/05).
- NuVox Communications, an integrated communications provider (ICP) serving business customers, deploys IP Unity's HMS6000 enhanced services platform to deliver unified messaging services (3/7/05).
- BSNL, the largest telecommunications provider and public agency in India, deploys systems from IP Unity in its wireline network in Baroda, India (2/14/05).
- HFCL Infotel Ltd., a large wireless and wireline carrier operating under the CONNECT brand in the Indian state of Punjab, deploys advanced messaging and conferencing features from IP Unity and systems integrator ORG Telecom (2/14/05).
- IP Unity and ORG Telecom announce plans for the deployment of IP Unity's systems in Tele Barta's new voice-mail feature set throughout Bangladesh (2/14/05).
- Excel Switching Corporation and IP Unity announce plans for an integrated solution combining IP Unity's HMS6000™ Media Server and Excel's AnyGen family of media and signaling gateways (2/14/05).
- SiteScape, a provider of secure Web-based workflow and collaboration solutions, announces a strategic OEM partnership with IP Unity (1/25/05).
- Augie Cruciotti, former executive vice president of network services with Qwest Communications and a noted network executive at SBC/Pacific Bell, is named IP Unity's chief operating officer (1/10/05).
- IP Unity announces a strategic investment from TELUS Ventures (12/15/04).

■ IP Unity and Atrius Systems complete a joint marketing agreement to automate the provisioning of advanced IP features for top-tier carriers worldwide (12/14/2004).

■ IP Unity and Leapstone Systems complete a joint marketing agreement to provide both IP features and automated provisioning for top-tier North American and international carriers (10/18/2004).

Jungo Software Technologies

www.jungo.com

■ Jungo introduces its multiprotocol carrier grade converged voice and data software platform. This VoIP solution is comprised of software from Jungo and a hardware reference platform from Intel. The newly introduced solution is one of the most complete and integrated software platforms commercially available today for voice/data business gateways, supporting a full set of voice, data, and security applications (3/9/05).

■ PLX Technology, a supplier of standard I/O interconnect silicon, agrees to include Jungo's WinDriver toolkit with PLX® rapid development kits (RDKs) for the PLX NET2272 and NET2280 high-speed USB 2.0 peripheral controllers (2/17/05).

■ Jungo and Micrium announce a partnership wherein Jungo's Embedded USB software supports Micrium's μ C/OS-II real-time embedded operating system and μ C/FS file system (1/18/05).

■ Jungo and StorLink Semiconductors team up on a new fully integrated software and hardware reference design targeted at OEMs and ODMs designing Home, SOHO, and SMB NAS systems. Jungo's field-proven and widely deployed software suite bundled with StorLink's highly integrated silicon enables vendors to bring to market competitive NAS devices in less than three months from early stages of design into mass production (1/4/05).

■ Aladdin Knowledge Systems and Jungo partner on a turnkey gateway-level e-mail filtering solution that service providers can

easily offer to home and small business customers. The partnership combines the Aladdin eSafe proactive content security solution with the Jungo OpenRG software platform for Home, SOHO, and SMB broadband access devices (11/17/04).

■ Jungo announces the availability of its OpenRG Linux-based software platform specifically optimized for the Intel® IXDPG425 Network Gateway Reference Platform (11/16/04).



Jungo OpenRG provides production-ready integrated reference designs with leading silicon vendors such as Intel, Texas Instruments, Conexant, IDT, and Samsung.

Knowledge Adventure

www.knowledgeadventure.com

■ Knowledge Adventure moves into its new headquarters in Los Angeles, CA (2/1/05).

■ Vivendi Universal Games (VU Games) sells its Vivendi Universal Games educational software business, including titles JumpStart and Mathblaster, to Knowledge Holdings, Inc., a company formed by Azure Capital Partners and TeleSoft Partners (10/5/04).

LiteScape

www.litescape.com

■ LiteScape releases a new software application for Cisco and Avaya IP phones called LiteScape's ServicePoint for Retail.™ It combines the intuitive interface of IP phones with existing business rules to deliver enterprise applications such as product lookup, notifications, and employee training with the IP phone's always-on capabilities and real-time collaborative communications (2/7/05).

■ LiteScape secures \$7.5 million in its first institutional funding round. The Series A Preferred Stock investment was led by SOFTBANK Capital and TeleSoft Partners with participation by Blumberg Capital and several prominent industry entrepreneurs (1/25/05).

■ Cisco Systems selects LiteScape to jointly participate in the NRF X05 “Bookstore of the Future,” a prototype of a “Smart Store” constructed on the show expo floor. The “Bookstore of the Future” allows customers and sales associates to look up products for availability, locate them in the store or order, and even play music samples from the convenience of an IP phone (1/19/05).

LogLogic www.loglogic.com

- LogLogic appoints Christopher Allen as vice president of channel development. He joins LogLogic from Radware, where he leveraged both single-tier and two-tier distribution models (2/15/05).
- LogLogic expands its sales operations to Mexico through a partnership with Lógica Aplicaciones Soporte y Servicio S.A. de C.V. (2/15/05).
- LogLogic announces the availability of its next-generation log management appliances. The product release includes new features purpose-built for resolving network security, availability, and compliance issues, including rate-based anomaly detection, root-cause correlation, domain virtualization technology, and support for virtual private network (VPN) log analysis (2/8/05).
- Network Equipment Technologies selects LogLogic’s log management appliance for the aggregation, analysis, and management of its network log data. LogLogic’s log management solution will be used to provide granular insight into Network Equipment’s network log data to assist with network security, availability, and performance (2/8/05).
- LogLogic’s Log Management appliance-based solution is selected as a finalist for the prestigious 2005 annual *SC Magazine* Reader Trust Awards. LogLogic was nominated in the “Best Network Security Solution” category. The Trust Awards honor the most innovative and advanced products in information security (1/10/05).

■ LogLogic names Alan D. Hahn as vice president of worldwide sales. Hahn previously was vice president of sales at Tumbleweed Communications (11/8/04).



LogLogic's new vice president of worldwide sales, Alan D. Hahn.

Matrix Semiconductor www.matrixsemi.com

- Matrix joins the Symbian Platinum Program to support smartphones based on the OS. As a platinum partner, Matrix is extending its first product, Matrix 3-D to the Symbian OS ecosystem (3/15/05).
- Matrix appoints Tom Goodrich to the company’s board of directors. Goodrich is co-founder of Duff Ackerman & Goodrich, a private equity firm. Over the past decade, Goodrich has focused primarily on providing strategic guidance to companies in the cellular/PCS, cable television, and media industries. His other current board appointments include CallVision, Deer Creek Radio, Horizon Tower, mBlox, Motorsport Aftermarket Group, and Sagamore Hill Broadcasting (12/15/04).
- Sharp Electronics uses Matrix 3-D Memory (3DM) to store multi-language dictionary content in three handheld “e-Dictionary” models. Already shipping in Japan, these e-Dictionaries are the latest in a highly successful line of personal productivity products from Sharp (12/13/04).
- Matrix announces volume availability of its Matrix® 3-D Memory (3DM). Offering up to 64 megabytes of storage per chip, Matrix 3DM is available as a standard semiconductor component and can also be incorporated into standard memory card formats such as MultiMediaCard (MMC) (11/8/04).
- Matrix teams up with System General to develop content programming solutions for Matrix 3-D Memory (3DM). Together, Matrix and System General help digital content publishers accelerate their time-to-market for delivering their properties to the mobile phone, handheld computing, toy, and game console industries (10/18/04).

■ Mattel selects the Matrix 3-D Memory (3DM) as the means to store and share entertainment content for the Juice Box™ personal media player. The 3DM-based cartridges, dubbed Juiceware™, can contain up to 64 megabytes of on-the-go music and video entertainment (10/11/04).

NP Photonics

www.npphotonics.com

■ NP Photonics offers a high-power, wide bandwidth 1-um ASE source for biomedical applications, especially in the area of optical coherence tomography (1/18/05).

OnFiber Communications

www.onfiber.com

■ OnFiber increases revenue for a fourth consecutive year as strong growth continued throughout 2004. Also in 2004, OnFiber expanded its network footprint to a total of sixteen metropolitan areas and diversified its customer base to include some of the largest media companies, financial services firms, healthcare providers, software developers, and retailers in the U.S. (2/22/05).

■ OnFiber and EasyStreet Online Services, Oregon's largest independent Internet service provider, announce the availability of new, high-speed Ethernet-based network services that provide local businesses with a faster, more cost-effective way to transmit and manage critical data and network applications (1/20/05).

Sierra Design Automation

www.sierra-da.com

■ Sierra Design expands its presence in Europe by opening a sales and support office in Grenoble, France. Christophe Guittard, general manager Europe, will head Sierra Design's European headquarters. Sierra Design also has appointed new distributors in the Asia Pacific—Maojet Technology, Corp. and Davan Tech Co. Maojet is the leading EDA and IP distributor in Taiwan. Davan Tech in Korea is a recognized provider of leading edge EDA solutions and also has strong relationships with the high-end SoC

design companies and leading foundries worldwide (3/7/05).

■ Sierra Design expands its presence in Japan and the U.S. by opening regional offices in Tokyo and Dallas, Texas (2/15/05).

■ Fujitsu Microelectronics America uses Sierra Pinnacle™ to produce first-pass functional silicon on a design with 11 million gates, 130nm technology and running at 165MHz. Sierra Design has entered into a multi-year, multi-license agreement with Fujitsu (1/25/05).

■ Sierra Design has entered into an agreement with ATI Technologies to license its flagship product Sierra Pinnacle for use on ATI's industry-leading designs (11/30/04).

Tele Atlas

www.teleatlas.com

■ Tele Atlas announces significant improvement in 2004 results over the prior year. Overall revenue grew 48% to EUR 127.7 million. European revenues rose by 26% to EUR 98.7 million largely due to the rapid growth in the personal navigation market. North American revenues increased by 261% to EUR 29 million. Approximately EUR 15.7 million of this increase was the result of the acquisition of Geographic Data Technologies Inc. (GDT) during the year (3/15/05).

■ DaimlerChrysler selects Tele Atlas data and Harman/Becker navigation systems for Mercedes A and C class vehicles. Tele Atlas's DVD provides a huge resource of instantly available navigation data covering more than 6 million kilometers of road in eighteen European countries, including, for the first time, Poland, Greece, and the Czech Republic (2/15/05).

■ MI International announces a strategic alliance with Tele Atlas to provide points of information (POI) data for sixteen European countries and will extend the roll-out of Tele Atlas geographical coverage (2/15/05).

■ Wayfinder launches a Java-based Mobile MapGuide, Wayfinder Cities™, that will greatly increase the number of mobile phone users able to benefit from phone-based navigation using digitized map and location data from Tele Atlas (2/15/05).

■ ScanSoft, Wayfinder, and Tele Atlas announce a three-way partnership to deliver a state-of-the-art speech-enabled personal navigation system accessible from a mobile device, designed for use in vehicles or on foot (2/14/05).

■ Tele Atlas and Shanghai ChangXiang Ltd (SIS), a Chinese specialist in information processing and digital mapping, establish a joint venture partnership to be called "NaviAtlas." It combines the advanced mapping technology of Tele Atlas with the local market knowledge and detailed know-how of SIS (2/14/05).

■ Gate5 launches its first all-in-one mobile navigation solution based on Tele Atlas data. The smart2go™ Personal Navigator is the first mobile navigation system to combine satellite navigation with an extensive travel guide. At the push of a button, the Personal Navigator calculates a route, provides turn-by-turn directions, and displays a 3-D map, provided by Tele Atlas (2/14/05).

■ Tele Atlas adds two key new members to its executive team: Bruce D. Radloff as chief technology officer and Michael J. Mitsock as chief marketing officer. Radloff most recently served as vice president, CIO, and CTO at the OnStar division of General Motors Corporation. Mitsock comes to Tele Atlas from Lightbridge, where he was vice president of worldwide marketing and product management (1/13/05).

■ Tele Atlas and Wanderlust Media announce a joint promotion and marketing agreement for Tele Atlas's dynamic mapping data and Wanderlust's Starboard Navigation, a celebrity voice content for navigation systems (1/7/05).

■ Pryme Advance and Foryou General Electronics incorporate Tele Atlas's turn-by-turn directions and digital mapping data for personal navigation systems in their consumer navigation systems (1/6/05).

■ Tele Atlas provides Clear Channel-Tele Atlas dynamic traffic content to Audiovox navigation solutions through the use of RDS/TMC, the standard radio broadcast technol-

ogy for the distribution of traffic and travel information to motorists (1/6/05).

■ Tele Atlas announces the initiation of service with Wayfinder Systems and MobileGates to integrate Tele Atlas real-time mapping and traffic data onto Cingular Wireless and Nextel phones, respectively (1/6/05).

■ Tele Atlas announces an agreement with iBiquity Digital Corporation to provide dynamic traffic content utilizing HD Radio™ technology. The alliance aims to bring convenience and time savings to motorists around the country, who will be able to access real-time traffic feeds regarding accidents, road construction, and other travel events through digital HD Radio technology (1/6/05).

■ Tele Atlas's revenues increased by 37% in the first three quarters and revenues in Europe increased by 22%. Excluding the effect of the GDT acquisition, worldwide revenues grew by 25%. This increase was primarily the result of higher sales in the in-car navigation and personal navigation segments, which were partially offset by declines in revenues from the company's aftermarket data products revenue. Revenues in North America during the first nine months of 2004 increased significantly to EUR 16.4 million from EUR 6.1 million for the prior year. This sales increase was the result of the acquisition of GDT and initial sales of Tele Atlas's North American data into the in-car navigation market. Excluding the effect of the GDT acquisition, North American revenues grew by 44% (11/10/04).

VoiceObjects

www.voiceobjects.com

■ VoiceObjects is awarded the Leon Lerman Best of Show Award at the SpeechTEK West conference. The award, presented by AVIOS, honors VoiceObjects' latest release, VoiceObjects X5. VoiceObjects X5 combines powerful options for the creation of voice applications, a server-based architecture for voice application deployment and execution, and sophisticated management and reporting capabilities (3/10/05).

■ VoiceObjects announces the next-generation of its Voice Application Management Systems (VAMS). The integrated environment enables enterprises to create, test, deploy, and analyze sophisticated voice applications. VoiceObjects X5's unique server technology offers full multiservice, multitenant capabilities and cluster management, and because it is based on open standards, companies' IT infrastructure investments are protected. VoiceObjects X5's server architecture provides effortless scalability and its integrated IDE ensures best-quality voice user interfaces (3/9/05).

■ VoiceObjects is selected as one of the best-performing and innovative high-tech private companies of Europe and Israel in the fourth annual Tornado100 list. The 2004 Tornado100 list can be found at www.tornado-insider.com and identifies the elite of Europe's high-tech entrepreneurial vanguard, appreciating excellence both in innovative, commercial, and financial performance (1/26/05).

■ VoiceObjects has entered into a strategic partnership with Softlab. The cooperation includes joint projects in the European Union and Switzerland. Softlab, a BMW Group company, has expanded its CRM solution portfolio to include voice-controlled applications for the efficient use of the telephone as a means of customer contact: so-called voice self-service. Softlab has been using VoiceObjects Factory to develop voice applications. The cooperation has already enjoyed early success: in October, Softlab won the Voice Award 2004 for a voice portal solution, developed with VoiceObjects Factory (12/21/04).

■ VoiceObjects signs a worldwide software license and distribution agreement (OEM) with SAP AG. As part of the agreement, SAP will use VoiceObjects' Voice Application Management System (VAMS) VoiceObjects Factory as a development and deployment option for voice solutions based on the SAP NetWeaver™ integration and application platform (9/1/04).

Xpedion Design Systems

www.xpedion.com

■ Xpedion releases GoldenGate 3.4 further increasing RFIC designer productivity. This latest release offers improvements in capacity, convergence, and capability over other RF simulators (10/25/04).

■ Xpedion extends sales and support to Chinese customers through a distributor agreement with Crescendo Technologies (10/25/04).

Zantaz (iWitness)

www.zantaz.com

■ Lucid8 and ZANTAZ team up to deliver a true end-to-end maintenance, and e-mail and file management solution for Microsoft Exchange. As part of the agreement, Lucid8 and ZANTAZ will offer GOexchange 3.1, the latest release of automated, preventative maintenance software, with ZANTAZ Enterprise Archive Solution (EAS) for Exchange to deliver a more complete suite enabling Exchange administrators to conduct data archiving, maintain e-mail and file compliance, and safely run maintenance (2/14/05).

■ ZANTAZ announces the availability of ZANTAZ EAS for Notes, the Lotus Domino version of the company's Enterprise Archive Solution. ZANTAZ EAS for Notes is a highly scalable, policy-driven e-mail archiving and management solution for storage optimization, message retention, and compliance (2/1/05).

■ Zantaz is named the e-mail archiving market leader based on 2003 revenues worldwide. According to IDC's Worldwide E-mail Archiving Applications Report (December 2004), Zantaz had a leading 35 percent revenue market share for its hosted and on-site solutions (1/11/05).

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(Los Angeles, CA)
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- Vice President, Business Development

Lynx Photonic Networks
(Los Angeles, CA)
www.lynx-networks.com

- Vice President, Business Development

Conference Calendar

ACM INTERNATIONAL SYMPOSIUM ON PHYSICAL DESIGN 2005

April 3–6
San Francisco, CA
Participating: Sierra Design

METROCONNECT

April 5–6
Miami, FL
Participating: OnFiber

SANS2005 ANNUAL CONFERENCE/ VENDOR EXPO

April 7–8
San Diego, CA
Participating: LogLogic

VON CANADA

April 19–21
Toronto, Ontario
Participating: BayPackets

NETWORLD+INTEROP

May 3–5
Las Vegas, NV
Participating: LogLogic

INFORMATION SECURITY DECISIONS

May 9–11
Chicago, IL
Participating: LogLogic

GARTNER SYMPOSIUM ITXPO 2005

May 16–18
San Francisco, CA
Participating: Zantax

CLEO/QELS

May 22–27
Baltimore, MD
Participating: Calient

2005 NASD SPRING SECURITIES CONFERENCE

May 24–26
Chicago, IL
Participating: Zantax

STORAGE DECISIONS 2005

May 25–27
Chicago, IL
Participating: Zantax

SUPERCOMM

June 6–9
Chicago, IL
*Participating: Calient, Calix, Lynx
Photonic Networks*

TERENA

June 6–9
Poznan, Poland
Participating: Calient

IEEE MTT-S 2005 INTERNATIONAL MICROWAVE SYMPOSIUM

June 12–17
Long Beach, CA
Participating: Xpedion

DESIGN AUTOMATION CONFERENCE (DAC) 2005

June 13–17
Anaheim, CA
Participating: Sierra Design, Xpedion

NECC (NATIONAL EDUCATIONAL COMPUTING CONFERENCE)

June 27–30
Philadelphia, PA
Participating: Knowledge Adventure

INFORMATION SECURITY DECISIONS

October 19–21
New York, NY
Participating: LogLogic

SANS NETWORK SECURITY 05

October 26–27
New Orleans, LA
Participating: LogLogic

SUPERCOMPUTING '05

November 12–18
Seattle, WA
Participating: Calient