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Industry Buzz from GSM World Congress

This year's show was the first in its new Barcelona home, with exhibitors up almost 50% from last year to 900. Over 50,000 visitors met in the hopes of swapping visions, ideas and information about how mobile markets will develop. The wireless industry is back on its feet as a whole and prepared to face new challenges with respect to technology and service delivery.

Mobile TV was one of this year's hottest emerging trends. But questions remain: Where do regulators stand? Will mobile companies or TV stations run these networks? How will revenue for content be charged and shared? HSDPA, which can already deliver download speeds of up to 1 mbps, will prove to be a major enabler of new data streams for operators, especially in the case of music and video streaming and downloading.

VoIP, WiFi access to wireless networks and convergence between mobile and fixed networks remain high on the agenda as enabling technology catches up

with business opportunities. Next year you can expect to see in this arena large numbers of handset and network equipment suppliers and service providers.

The big media companies finally emerged this year with a bang. Content is king in the new data services world and incumbent media companies have plenty of content under their wings. Look for increased cooperation between big firms and major operators as the content delivery model matures.

The trend is clear: constantly rising operator revenues will come from mobile data and content services as the industry seeks a cure for tumbling voice and messaging prices. This sector represents fertile ground for the development of the innovative wireless companies that supply the leading-edge technologies permitting such a changeover.

Portfolio Company Profile

OnMobile is the market leader in value-added service, mobile content distribution, interactive media portals, 1-to-1 direct marketing on mobiles and m-commerce in the vast and fast-growing Indian telecom market. We enjoy direct interactive reach to more than 120 million telecom subscribers in Asia today, with over 45 million unique users of our mobile and landline VAS services (growing at 50-60% per year). We power more than 55-65% of the Indian VAS market and handle in excess of 1 billion calls each month on our in-network deployed systems. OnMobile has recently expanded overseas with operations in Singapore and Australia. Several other international projects are in advanced stages of development.

OnMobile offers its telecom operator clients end-to-end, turnkey solutions, including platforms, applications, aggregated content, and professional services to launch and operate high-margin, high-revenue, value-added services via our managed services model. OnMobile's multimodal solutions maximize the use of a telecom network's capabilities. Carriers can deliver rich text, audio and video content to mobile and landline phones using multiple modes (SMS, voice, WAP, 3G) all from within a single platform or application. Carriers can also leverage end-user location information and take advantage of the OnMobile VAS platform's flexible billing capabilities. OnMobile uses speech recognition as our primary user interface to achieve the widest market reach. The OnMobile technology solution is handset and network agnostic and has been deployed and proven on GSM, CDMA and landline networks.

OnMobile's current VAS multimodal suite includes:

- 1. RingBack Tones:** live with over 2 million active users and integrated with Nokia, Siemens and Ericsson MSC.
- 2. Voice Portal and WAP:** Ring tones, music jukebox, sports, jokes, horoscopes, contests, FM radio-on-mobile, musicards, karaoke, contests, etc. Videotones are under development and a search function is being deployed.



OnMobile
TRUE MOBILITY

Mr. Arvind Rao
CEO & co-Founder

- 3. Corporate Value Added Services:** Email, VAD, corporate mobile portals, vertical market solutions, mobile m-advertising and promotions.
- 4. M-Commerce services:** Ticketing, lead generation, inventory liquidation, direct marketing, bill payment, prepaid top-up and post-paid bill payment.
- 5. Media Portals and Interactive TV Programming:** Star, Sony Idol, ESPN, MTV, Dainik Jagran (newspaper), Yahoo, V Channel, televoting.
- 6. In-Call Network Solutions:** Missed call alerts, dynamic voicemail, sponsored calls, auto dialers, voice SMS.
- 7. Customer Care:** Use of speech recognition to automate routine call center interactions with high customer satisfaction, low hold times and the freeing up of substantial toll-free network capacity for reuse.

OnMobile is a privately held company incorporated in 2000 and incubated by Infosys Technologies (NASDAQ: INFY, \$19 billion market cap and 45,000+ IT professionals worldwide). OnMobile is US VC funded, profitable and financially strong, with global product deployment and managed service delivery capabilities.

OnMobile is headquartered in Bangalore, India, where it has a large development center and a Research and Testing Lab. OnMobile also has offices in Mumbai, Delhi, Singapore and Sydney. OnMobile has a team strength of over 250 and draws freely on Infosys technical and delivery resources whenever and wherever required around the globe.

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UPDATE on Portfolio Companies

CAMBRIDGE POSITIONING SYSTEMS, LTD.

Cambridge Positioning Systems, Ltd., SiGe Semiconductor and Shanghai Simcom ("Simcom"), a wholly owned subsidiary of SIM Technology Group Limited, announced the world's first enhanced GPS (E-GPS) multimedia handset solution for GSM. The S788 handset solution, designed by Simcom, is a lightweight, palm-sized device delivering advanced multimedia features, including high accuracy location based services (LBS), while optimizing performance, cost and battery life.

DIGITAL ROUTE

Versatel, a German telecommunications operator, has launched production of a convergent mediation system implemented by Digital Route and Flexagon. Flexagon implemented Digital Route's convergent mediation platform, MediationZone® for flexible charging of Versatel's telecommunications services. Digital Route and Flexagon were selected following a detailed evaluation process, including on-site proof-of-concept. Selection criteria included a proven track record in voice and data mediation, ease of deployment and use of the mediation system, scalability and hardware efficiency.

GENERAL WIRELESS

General Wireless has been selected by Iceland Telecom (Landssíminn) to supply its eSMS technology. The eSMS solution allows Iceland Telecom's end users to send SMS from standard email programs such as Microsoft Outlook and Lotus Notes. The service is called Tölvu SMS. The eSMS service is available for desktop email users running Microsoft Outlook and Lotus Notes. End-users can download client software at no cost from Iceland Telecom's website and are only charged when actually using the service.

I-PLAY (DIGITAL BRIDGES, LTD.)

I-play, the mobile games company, announced the North American and European launch of Torino 2006™, the Official Mobile Phone Game of the Olympic Winter Games. I-play secured the exclusive license to develop a mobile phone game based on the 2006 Olympic Winter Games in Torino, Italy from International Sports Multimedia Ltd. (ISM), exclusive licensee in turn of the International Olympic Committee (IOC) for Interactive Entertainment Software. This is the first mobile phone game title ever to be officially licensed by the IOC.

I-play announced that it had published half of the games appearing in O2's 2005 Top 10 mobile games download chart. At the Mobile Games Forum in London, Antony Douglas, O2's Head of Games, UK, announced the Top 10 O2 downloads of 2005: Number 1: 3D Pool, I-play; Number 2: EA Sports Tiger Woods PGA Tour® 2005, I-play; Number 6: The Weakest Link, I-play; Number 7: Space Invaders, I-play and Number 9: Colin McRae Rally 2005(TM), I-play.

I-play announced the launch of its I-play branded games channel, which allows TeliaSonera's mobile customers to download mobile games directly from the I-play portfolio. I-play's direct-to-consumer service has launched on TeliaSonera's mobile portal SurfPort and is available to mobile users in Sweden, ahead of planned rollouts in Norway, Denmark and Finland.

EMPOWER INTERACTIVE GROUP, LTD.

Empower Interactive Group, Ltd. announced that UK mobile operator 3 has selected its rich next generation messaging platform, allowing 3 to deliver message services to its subscribers in a more cost effective manner. Empower Interactive's Message Delivery Platform (MDP) and Message Service Platform (MSP) architecture will increase 3's network capability to deliver SMS messages to its subscribers more rapidly and to effectively handle growing messaging volumes. Empower Interactive's platform should allow 3 to slash operating expenditures, with significant messaging interconnect fee savings.

NARAD NETWORKS, INC.

Narad Networks, Inc. a provider of high-performance switched broadband access solutions and Axerra Networks, the Pseudo-Wire Company™ and a leader in providing circuit emulation and service emulation solutions over packet access networks, announced the availability of its combined Pseudo-Wire solution for delivering T1 voice and data services to business customers over the cable operator's hybrid fiber coax (HFC) network. This combined solution meets American National Standards Institute (ANSI) T1 specifications and offers operators a highly scalable solution for delivering business class T1 services in dense business nodes supporting up to 200 T1s per node initially (and up to 500 later this year).

NEURAL TECHNOLOGIES

Neural Technologies announced a global partnership with Sevis Systems, a provider of next-generation signaling solutions. The partnership extends Nt's fraud and revenue assurance portfolio to include active signaling probes used to provide a real-time response to fraudulent activity. By combining Nt's end to end fraud management solutions with Sevis's active signaling probe technology, service providers for the first time now have the ability to instantly stop fraud upon detection.

NUERA COMMUNICATIONS, INC.

Nuera Communications, Inc. announced that Vidéotron is deploying Nuera ORCA® media gateways to provide telephone service to its cable television customers in Quebec. Vidéotron is using Nuera media gateways to interface with traditional switching systems. The network is designed to deliver the service, security features and 911 capabilities that allow Vidéotron to meet consumer and regulatory requirements, while positioning Vidéotron to take advantage of switched technologies.

SURFKITCHEN

SurfKitchen, a leader in mobile usability and data solutions, announced its global partnership with Converse, a unit of Converse Technology, Inc., the world's leading provider of software and systems enabling network-based multimedia enhanced communication services. The two companies will work together in the worldwide development, marketing and sale of On-Device Portal (ODPs) solutions. The industry is currently witnessing increased adoption of ODPs, a new generation of solutions that deliver content to mobile devices using an intuitive client application. ODPs have evolved from traditional WAP portals and boost handset capabilities to deliver a truly compelling user experience.

UREACH TECHNOLOGIES, INC.

uReach Technologies, Inc., a leading provider of converged communication solutions for fixed line, mobile and broadband service providers, announced it has been selected by Verizon to provide a next-generation messaging solution for consumers and small businesses in the Dominican Republic. This latest deal is Verizon's third with uReach Technologies, which previously supplied enhanced voice messaging for Verizon in the Western US and unified communications in the Eastern part of the nation.

UPDATE on Portfolio Companies

WEBRASKA MOBILE TECHNOLOGIES SA

Webraska Mobile Technologies SA, a leading provider of mobile GPS navigation solutions and high-end geospatial software platforms for wireless carriers and major service providers worldwide, announced that Orange has expressed its renewed confidence in Webraska by selecting Webraska's new Webraska Navigation 6 software for the upcoming version of its Orange Navigation solution.

WORLD WIDE PACKETS

World Wide Packets, a leading provider of Carrier Ethernet solutions, announced that its LightningEdge® suite has been selected for widespread deployment in North Kansas City, Missouri to provide the first Gigabit-to-the-Premise broadband access solution. North Kansas City will utilize the city's existing fiber-optic network with new construction, to create a benchmark-setting residential and businesses services network.

NewsFlash

12SNAP AG

NeoMedia Technologies, Inc., an innovator in wireless services and patented technologies providing automatic links to mobile Internet-based information announced that it has agreed to purchase 12snap AG, a Munich-based award-winning leader in marketing and entertainment applications and programs via cellular phones.

CAMBRIDGE POSITIONING SYSTEMS, LTD.

Cambridge Positioning Systems, Ltd. announced that wireless visionary and entrepreneur Simon Wilkinson is to join its board as a non-executive director. Mr. Wilkinson is currently Senior Vice-President and General Manager, Content and Services Organization at Openwave.

GENERAL WIRELESS

General Wireless announced the launch of eMMS Toolbar, a toolbar that enables SMS and MMS to be sent easily from Internet Explorer to mobile phones. eMMS technology can also be integrated into other toolbars such as Google, Yahoo, Skype, with the potential for use by other platforms. The toolbar supports easy transmission and forwarding of text, pictures, sound and video from Internet-connected PCs to mobile phones.

General Wireless and Starhome have signed a contract with mobile operator Mobiltel in Bulgaria to deliver General Wireless's eSMS solution, which integrates desktop e-mail with SMS services. Mobiltel is Bulgaria's leading mobile operator. Mobiltel has launched eSMS service for end-users. Integrated with MS-Outlook, and Outlook Express, eSMS adds a Mobiltel branded icon to end-user menu toolbars to facilitate SMS message transmission. Meeting reminders can be sent as SMS messages. Automatic message splitting is provided for longer messages.

I-PLAY (DIGITAL BRIDGES, LTD.)

Mobile game company I-play announced that Skipping Stones, the most compulsive "one thumb play" title has won "Best Made for Mobile Game" category in the GSM Association Awards.

I-play announced that Jewel Quest™, I-play's mobile adaptation of iWin's hugely popular online puzzle game has won the award for the "Best Puzzle Game" of 2005 from Mobile Game Faqs.

I-play, a strategic Fox Mobile Entertainment partner, unveils one of the market's most desirable 24™ licenses following the widely anticipated launch of the hit TV series' fifth season.

I-play announced the appointment of David Gosen as its Chief Executive Officer. Mr. Gosen left Nintendo, Europe in 2004 to come on board as I play's COO.

LGC WIRELESS, INC.

LGC Wireless, Inc., the leader in advanced construction of wireless systems, announced that Hartsfield Jackson Atlanta International Airport has installed the company's InterReach™ Unison system to deliver cellular and public safety wireless coverage throughout the airport's 5.8-million square foot facility.

NARAD NETWORKS, INC.

Narad Networks, Inc., a provider of high performance switched broadband access solutions, announced its membership in the Metro Ethernet Forum (MEF). The MEF is a nonprofit organization comprised of leading service providers, major incumbent local exchange carriers, top network equipment vendors and other prominent networking companies dedicated to accelerating the worldwide adoption of carrier Ethernet networks and services through standardization.

SURFKITCHEN

SurfKitchen, the market leader in on-device portal applications, announced its latest SurfKit™ Mobile product portfolio addition—SurfKit™ Offline Portal. SurfKitchen's new on-device client enables mobile network operators, content providers and brand owners to easily extend their online portal to mobile end-users, allowing content to be delivered and stored directly on equipment that offers instant access without a full-time data connection.

SYLANTRO SYSTEMS CORPORATION

StarHub launches business and consumer VoIP services powered by Sylanro Systems Corporation. StarHub, Singapore's integrated info-communications provider, announced the availability of a range of SIP based Voice-over-IP (VoIP) solutions known as Digital Voice Business and Digital Voice Travel for the business and consumer markets. Both services are designed to cut over-sea call costs, offer portability and mobility anytime, anywhere in the world and are delivered on the Sylanro Application Feature Server over StarHub's Next Generation Network.

WORLD WIDE PACKETS

World Wide Packets, a leading provider of Carrier Ethernet solutions, announced the LE-135, a new addition to the Lightning Edge® product family, which brings flexible and cost-effective delivery of simultaneous telephony, business and entertainment video, broadband data and Internet access services to the Multi-Tenant Unit (MTU) and Multi-Dwelling Unit (MDU) and mixed-use markets.

World Wide Packets announced that its Lightning Edge® suite has received technical acceptance from the Rural Utilities Service (RUS). Technical acceptance of this system by the United States Department of Agriculture permits independent telephone and utility companies to purchase World Wide Packets equipment, with the assistance of funding from RUS grants and loans which, for many service providers, serves to enhance ROI opportunities. The LightningEdge suite was accepted for optical and copper deployments in both indoor and hardened installations.

Mobile Enterprise Services: A Shift from Traffic to Service

MOBILE OPERATORS, AND PARTICULARLY THOSE BASED IN EUROPE, ARE INVESTING MUCH TIME AND MONEY IN FINDING NEW REVENUE STREAMS TO OFFSET LOWER VOICE TRAFFIC PROFITS. THEIR MAIN FOCUS IS MOBILE CONTENT TO CONSUMERS, ACCOMPANIED BY DEVELOPMENT OF THE REQUIRED INFRASTRUCTURE FOR DELIVERING AND BILLING SERVICES, COORDINATING HANDSET CAPABILITIES, SECURING THE USER EXPERIENCE AND FORMULATING SUSTAINABLE BUSINESS MODELS.



Mobile operators, and particularly those based in Europe, are investing much time and money in finding new revenue streams to offset lower voice traffic profits. Their main focus is mobile content to consumers, accompanied by development of the required infrastructure for delivering and billing services, coordinating handset capabilities, securing the user experience and formulating sustainable business models.

Despite current high levels of corporate expenditures in areas of communications and information technology and the forecast growth of these sectors over coming years, European mobile operators generally do not seem to be concentrating on opportunities in the mobile enterprise space, apart from voice and some data traffic.

The need to optimize spending on fixed, mobile and broadband communications is increasing for enterprises of all sizes in both the US and Europe. Fast-moving players are starting to address this need, often with the intention of acquiring new customers or altering their respective market positions.

Virtual operator Vanco in the UK is selling carrier-independent turnkey communications services to international corporations. Vanco's service portfolio includes fixed and mobile communication for voice and data services, VoIP, PBX and VPN functionalities, unified billing and reporting. Vanco also offers hosting services and the sale and support of customer equipment. British Airways, Virgin Megastore and Siemens are among the firm's customers and 2005 turnover totaled £104 million, with operating profits of £11.1 million (up 99.8% from 2004).

In Scandinavia, Sweden's fourth largest GSM operator, Spring Mobil, started off its 2004 operations by exclusively targeting the SOHO and SME company segment with a W-PBX solution that uses an "indoor" GSM network designed at the customer's own office. Spring Mobil is pursuing replacement of fixed lines with mobile connections with the main pitch that no competing Swedish mobile

operator can provide better indoor coverage to SOHO and SME companies. The customer base in the relatively small Swedish market has been growing at an impressive new-company-per-month rate over the last few months.

Enterprises are spending money on vertical solutions for business process improvements that include mobility and they will continue to do so. As traffic is often not the core factor in the principle value and revenue of a vertical solution, operators must carefully weigh if they want to invest in enhancing their abilities to perform integration and customization services or if they would prefer to serve as facilitators through partnerships aimed at winning more traffic and reducing churn. Such companies require clear strategies for balancing spending on internal capabilities with partnership efforts.

No European operator has yet acquired US-based Nextel's focus on vertical enterprise services. inCode, however, has seen signs of players in other regions moving to fill this gap.

Significant movements can be expected and industry players need to determine their individual strategies and position themselves to square off with dynamic new players that can combine the operational skills of "traditional operators" with the capabilities of "traditional system integrators" in areas of both customization and customer services.

EZIO CRISTOFOLI AND PETER BERGENWALD
inCode Strategy & Technology Group (Northstream)

About inCode
Focused exclusively on wireless, inCode provides integrated, end-to-end solutions—from business and technology strategy to engineering services. inCode helps clients stay ahead of the market with high-quality, comprehensive solutions to complex business and technology problems.
www.incodewireless.com

Upcoming Events

GlobalComm 2006
June 4-8, 2006
Chicago, IL
USA

CommunicAsia 2006
June 20-23, 2006
Singapore
Asia

Global Messaging 2006
May 24-25, 2006
Business Design Center,
Islington, London
UK

CTIA Wireless I.T. & Entertainment 2006
September 12-14, 2006
Los Angeles, CA
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