

The United States has been relatively slow to adopt mobile technology, so the small yet advanced home markets of leading mobile device manufacturers, like Japan, South Korea and Scandinavia, have been the proving grounds for cutting-edge applications and services. There will be serious competition for user mind share as Silicon Valley and Hollywood start to flex their muscles – as digital convergence seriously goes mobile. The bottom line: Large, rapidly growing, diverse markets equate to huge opportunities for fast and nimble companies.

Some recent news from the market indicates that mobile communications (and mobility overall) is a large and rapidly growing market – it also is changing some communication behaviour. For example, according to a study of Korean youth, they are abandoning email for SMS and IM, a shift pegged to “lack of immediacy” and “mobility of email.” Imagine this, taking place in the country with the world’s highest penetration of broadband Internet!

Another data point suggest that the Finns also have passed a milestone – on a national level, they have had their first day of more phone calls being made on mobile phones than using traditional land lines.

Looking ahead

Mobile users will soon share not only the problems, but also the most successful applications of the PC world. Interesting spaces to watch include mobile Internet search, with



“The mobile industry has begun to uncover the true potential of its innovations.”

both Google and Yahoo having introduced their first efforts. As such, their offerings clearly indicate that there will be ample room for innovative start-ups to enter the scene, as the mobile search market in its different forms could become one of the single largest market opportunities in mobile. Another promising opportunity is to protect mobile users from spam and from viruses – another market ported from the PC world.

Mobile devices will continue to incorporate new hardware capabilities, the most prominent being video

functionality, high-resolution cameras, and displays. In November 2005, the European Telecommunications Standards Institute announced the adoption of DVB-H (Digital Video Broadcast - Handheld) as the standard for mobile TV services in Europe. With mobile TV a reality in Japan, the new standard will pave the way for European commercial mobile broadcasting, which is expected to begin in 2006. Add to this the gigabyte capacity of micro drives – soon we will have a complete entertainment system in our pocket.

We are delighted to welcome you to this first issue of Nexit Mobile Insights, and to introduce to you some of the innovative companies that will bring forth the next generation of mobile technologies and solutions. Through this newsletter, we hope to bring value to you, to our portfolio companies and to the mobile community at large. ■

Thanks for your time and interest.

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The Future of Mobile Messaging

With some two billion SMS messages sent every day, one can safely say that messaging has become both an everyday feature of our lives and a burgeoning business. However, the future direction of mobile messaging is anything but clear.

In Europe and Asia, where consumers focus more on cell phones than PCs, SMS messaging has become a natural method of instant communication between friends and colleagues. By contrast, in the United States, e-mail and Instant Messaging (IM) are the communication methods of choice. In the business community, e-mail has been extended to mobile environments through Blackberry and other mobile e-mail devices.

Leading Instant Messaging service providers including Yahoo, AOL and MSN have introduced IM to mobile phones. In this way, IM is set to bridge the PC world and mobile telephony.

Zero tolerance for glitches

Multimedia and camera phones have made a strong entrance in the last year, and the penetration pace has exceeded earlier estimates of many analysts. However P2P (person-to-person) messaging -- such as sending pictures or other MMS messages -- has been slow to catch on. The main activity covers A2P (application-to-person) and P2A messaging, where content (such as screensavers and ringtones) have attracted more interest. Users are clearly still hesitant to send pictures to each other; perhaps the conclusion is that they haven't found the application valuable enough. Reasons for slow pick-up for P2P picture messaging are not clear, but might include problems with ease of use, reliability and quality of service.

In the US, the first barrier may have come from unreliable services that resulted in lost messages -- proving,

once again, that consumers expect complete reliability from their mobile phone services. However, operators are still investing in and hoping for growth in this segment, as exemplified by US-based Cingular Wireless, which recently signed a large deal with Mobile 365 for MMS interoperability and delivery services.

It is clear that the applications or services that bring the most value for end users are the ones that will be the most successful. The list of potentially valuable applications for mobile messaging is endless, ranging from eBay bidding updates to calendar reminders. In order to speed up the P2P MMS messaging between people, more innovative concepts and packaging need to be created. Irrespective of the application, the key to success will be the ability to make messaging ubiquitous, highly reliable and easy to use. ►►

The prime area for market growth and new applications in mobile messaging lies in so-called PTX (Push to X) applications where voice and data can be seamlessly integrated, and where both features are fully controlled by the user (both the sender and receiver terminals are intelligent and sensitive) The first instance of this is Push-to-Talk (PTT), which allows you to connect with someone on your "buddy list" instantaneously, without having to dial, wait for the call to connect, and then be answered. PTT allows you to open a voice channel to your party with the single push of a button.

Using the same paradigm, a subscriber will be able to send a voice, picture, video (or basically any kind of data) message instantaneously, without having to go through laborious menus or keypad sequences. At the same time, a subscriber will be able to manage what to receive, when and from whom. For example, during a meeting a user might accept calls from his or her family and manager, but restrict reception to text messages from others.

The key to the success of new mobile messaging applications is for messages to be instantaneous and absolutely reliable -- unlike current e-mail or SMS services that still occasionally result in messages being

“Successful messaging applications must be instantaneous and absolutely reliable”

delivered minutes (or even hours) later. As a result, it seems likely that PTX will only come to full fruition in next-generation networks based on Session Initiation Protocol (SIP) and IP Multimedia Subsystem (IMS).

technology, where the subscriber's phone number and e-mail address can remain the same.

On the device side, there is still plenty of opportunity for innovation. The instantaneous and multimodal messaging paradigm is not ideally suited to either current mobile phones or to Blackberry devices, so the stage is set for the next generation of mobile products.

In fact, new, innovative devices may be the catalyst needed for PTX services to take off. A prime example is the effect that the Apple iPod has had on music downloading. A previously established service took a step function up in volume and became a legitimate business through the introduction of a device that combined existing features with an innovative service. ■

RELATED NEXIT POTFOLIO COMPANIES

Mobile 365 is the company created by the merger of InphoMatch and Mobileway. Mobile 365 is the global leader in the delivery, billing, and settlement of mobile messaging services. Their service is to reliably deliver messages, premium content, and value-added services for leading mobile operators, content providers, corporate brands, and media companies worldwide. Headquartered in Chantilly, Virginia, USA, Mobile 365 has offices in a dozen cities around the world. The company has more than 200 employees worldwide. Major customers include Verizon Wireless, Vodafone, AT&T Wireless, Telefonica, Disney, Yahoo, MasterCard, MSN, to mention a few. Nexit Ventures invested in the first institutional round of Mobileway.

www.mobile365.com

Ecrio provides a suite of Instant Communication software to the mobile industry. Ecrio's software enables deployments of 3G services such as Push-To-Talk, Push To See and other IMS based communication services across fixed and mobile networks. Ecrio is headquartered in Cupertino Calif and has development centers in India. Customers include Lucent, NEC, Panasonic.

www.ecrio.com

The topic of mobile video is often greeted with a mix of interest and skepticism; both attitudes are well founded. The criticism is typically based on the claim that video telephony has been an up-and-coming trend for nearly two decades, and that it is perfectly justified to question whether it is going to achieve massive success this time around. In order to make a well-founded prediction, one must evaluate the key factors that would enable a mobile video revolution.

What the analysts say

Analyses by In-stat/MDR (May 2004) and Frost & Sullivan (January 2004) predict that by 2009, over 31 million Americans will use video messaging,

generating revenues of \$5.4 billion. Similar success is foreseen in Europe, with 192 million European subscribers (55% of the total) expected to be video-enabled by 2007.

Technical synergies

The key to the breakthrough of mobile video may lie in technical synergies between video and “still imaging” camera phones. Camera phones are already massively popular, with some 150 million handsets sold in 2004 (UBS). This annual sales volume is expected to grow to a staggering 646 million units by 2008 (Info Trends Research Group).

It is reasonable to assume that most of these handsets will be video-enabled. This assumption is based on the analysis of the manufacturing costs of a camera phone. Adding high-quality video capability in form of hardware IP (intellectual property) adds only 1 to 2% to the cost of the handset, since the key hardware components are already present.

As a result, one can predict that video will eventually be available in all

camera phones, irrespective of the perceived added value of the function, since the impact in handset cost is negligible.

New applications

In many people’s minds, mobile video equals video calls, and development predictions are generally based on this assumption. Without a doubt, video calling will be one of the applications of mobile video, but many other uses exist as well.

broadcasting with their mobile handsets. The indisputable benefits of this application are the low cost of bandwidth and a massive content base. Since MobileTV services can use non-cellular networks for broadcasting the signal, the cost of use can be very low. Furthermore, service providers do not need to become experts on mobile media content, since any digital television program source can be used. MobileTV is already a reality in countries such as Korea and Japan, where the first devices and services are now available.

In summary, mobile video technology is finally poised for a true breakthrough, but this breakthrough may not result from novel ways of implementing old concepts such

as video calls. Instead, we may expect the new, truly impacting applications – the next SMS message – to develop logically from synergies with existing technology, and from the eagerness of consumers to embrace innovative applications once the availability of video-enabled next-generation hardware reaches critical mass.

Keep your eyes open. ■

R MOBILE VIDEO Revolution

In fact, it is likely that these “other applications” will be the true driving force behind the evolution of mobile video. At the moment, the most widely adopted video application is a camcorder function that allows users to record short video clips with the built-in camera, and to send that video message to another mobile device or a PC.

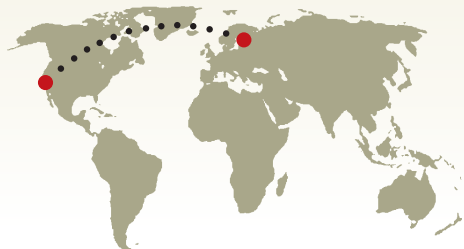
Since the recording is done in a standard video format, the initial take-off problem of “to whom can I send this?” is solved; even the first video messaging user in the world had hundreds of millions of potential receivers for the newly created message – namely, every PC on the planet. Naturally, the massive adoption of MMS-enabled phones will only add to the possibilities. Hantro Camcorder was the first video messaging application in both Europe and the US, and the application has been deployed in over a dozen countries to date.

Another application worth keeping an eye on is MobileTV, which allows users to receive digital television

About Hantro Hantro specializes in mobile video technology for handsets. The company’s product portfolio consists of complete video applications such as Camcorder, video streaming and MobileTV video coding technology. Hantro’s customers include Nokia, Motorola Semiconductor/Freescale, Sanyo, Agere, Vodafone, T-Mobile, TIM and Alcatel.

www.hantro.com

ABOUT NEXIT VENTURES



”Focused on wireless innovation”

As a global, but tightly technology and market focused venture capital firm, Nexit has its finger on the pulse of innovation in mobile and wireless. Investments are made primarily in Scandinavian and US based early stage companies, with products and services for a global market.

Using its relevant operational experience, the Nexit team supports the growth and development of the portfolio companies with a pragmatic, hands-on approach. With knowledge and contacts across the wireless ecosystem, the Nexit team opens up and creates opportunities for its portfolio companies.

Nexit’s transatlantic bridge is of significant value-add, linking together the technology hotbeds in Scandinavia and Silicon Valley. For Scandinavian companies, Nexit’s network of business contacts in Silicon Valley, provide a bridge to markets, partners, experienced management and investors at an early stage. U.S.-based ventures get an opportunity to profit from Scandinavia’s market-leading wireless network infrastructure, technology, insight, and advanced user base.

Nexit has offices in Helsinki and Silicon Valley.

For further information, please visit www.nexitventures.com.

THE NEXIT PORTFOLIO



www.bitfone.com

Bitfone provides innovative software solutions for customer care automation and mobile device management to wireless operators and handset providers. Bitfone’s products improve usability of mobile devices by diagnosing and repairing software problems and delivering software updates and configuration settings over the air. Bitfone is a global company headquartered in California, with offices in Canada, Japan, China Korea and the UK. Other investors: St. Paul Venture Capital, 3i US, Nokia VP, Prism Ventures, Orange Ventures, Motorola Ventures, KTB Ventures, CIR Ventures and Qualcomm.



www.conformiq.com

Conformiq Test Generator is a solution for dynamic model-based test generation and automatic test execution. The technology is based on test cases generated from high-level system models enabling automated, thorough and cost-effective testing of complex software systems. In addition to quality improvements and increased test case maintainability, this also results in direct savings in development costs. A special version has been released for Symbian environments. Other investors: erVentures



www.ecrio.com

Headquartered in Cupertino, California, Ecrio is the leading vendor of next generation communication software for mobile phones. Ecrio provides interoperable and standard compliant software to Mobile Phone Manufacturers and Mobile Operators. Ecrio offers solutions for Instant Messaging and Presence Services (IMPS), IP Multimedia Subsystem (IMS) and Push to Talk over Cellular (PoC). Ecrio’s customers include Mobile Industry leaders such as Lucent, NEC, Panasonic and Siemens. Other investors: CIR Ventures, CDB Webtech.



www.ekahau.com

Ekahau, Inc. is the industry leader in location-enabling Wi-Fi networks. Ekahau's customers are realizing the benefits of accurate and real time Wi-Fi-based location services and innovative network planning tools. Ekahau partners include wireless software developers, leading system integrators, and international OEM partners developing next generation location-based applications. Ekahau is a U.S. based corporation, with its headquarters located in Saratoga, CA, and offices in Helsinki and Hong Kong.



www.exidio.com

Exidio Oy is dedicated to combining extensive, first-hand treasury expertise with enabling technologies to provide treasury service tools. Trezone is a web-based system that opens up the treasury bottlenecks and ensures automatic information flow throughout corporations. It widens the reach of treasury management to give tools to internal customers, such as controllers and subsidiaries with substantial cost savings and improved forecasting services. Other investors: CapMan, Metso Corporation.



www.fathammer.com

Fathammer is a pioneering leader in Advanced Mobile Gaming, providing high quality 3D games and development tools for mobile platforms. Fathammer provides its industry-leading X-Forge 2 Game Development System to game publishers and developers as well as mobile device manufacturers and wireless operators. X-Forge Powered games bring console quality 3D gaming to a wide range of mobile devices. Fathammer Ltd has offices in San Jose, Helsinki and Seoul. Other investors: 3i, angel investors.



www.futuremark.com

Futuremark is known around the world for its PC and smart phone products and value-added services. 3Dmark benchmark is used by more than 250 computer magazines and major PC hardware manufacturers (like AMD, ATI,

Intel, nVidia) and recognized as the world de-facto standard. SPMark has become the industry's most widely used benchmark for Symbian OS based smart phones. Other investors: Conventum Oyj.



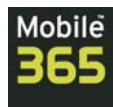
www.hantro.com

Hantro is the leading provider of hardware and software based MPEG4/H.263 and H.264 video solutions specifically tailored for handheld devices. The product portfolio also includes video applications for video capturing, playback, messaging, streaming, and telephony. Combined, Hantro is uniquely positioned to provide complete solutions for silicon providers, device manufacturers and network operators. Other investors: CapMan, Startupfactory, Menire, 2M Invest.



www.hybrid.fi

Hybrid develops graphics technology solutions for consumer devices and is the leader in embedded graphics standards. The new 3D API's like OpenGL ES and M3G are bringing advanced visual capabilities enabling even more compelling games, entertainment and other content. Hybrid's clients include Nokia, Ericsson, Symbian, Sony Online Entertainment, Discreet, Tao, Synergenix, Texas Instruments, Criterion and Renesas. Other investors: Investor Growth Capital.



www.mobile365.com

Mobile 365 is the global leader in the delivery, billing, and settlement of mobile messaging services delivering reliably messages, premium content, and value-added services for the leading mobile operators, content providers, brands, and media companies worldwide. Headquartered in Chantilly, Virginia, USA, Mobile 365 has offices in a dozen cities globally and more than 200 employees worldwide. Nexit Ventures invested in the first institutional round of Mobileway. Other investors: 3i, Draper Atlantic, Draper Fisher Jurvetson, IVP, and Mayfield, and strategic investments from Citigroup, Intel, and Visa International.



www.skypilot.com

SkyPilot is a broadband wireless last mile access solution for ISPs serving suburban consumers. Using a patent-pending architecture operating in the 5 GHz band, SkyPilot's mesh network approach results in a self-installing home unit, creating a self-managed and fast penetrating network. It will enable multiple ISPs to provide cost effective broadband services, including wireless T1 access and video on demand. Other investors: Mobius Venture Capital, Invesco Private Capital, AOL Time Warner Ventures, Softbank Asia, Selby Venture Partners, Palo Alto Investors.



www.thetamicro.com

Theta is a fabless RF semiconductor company focusing to the next generation of cost-effective multi-band and multi-mode wireless systems. The products will facilitate cost-effective, high-performance Wi-Fi implementations for customers worldwide. Theta is deploying its unique design IP and specialized local knowledge of the diverse requirements of US and European markets, to provide products for emerging volume wireless applications. Other investors: Telos Venture Partners, NBG Technology Fund, Cadence Design Systems, Commercial Capital Group.



www.zonepay.com

ZonePay is a Remote Commerce company enabling one-step ordering and paying for consumables and services from a mobile phone or internet connected device. ZonePay's WaitLess system eliminates the need for cash payment, minimizes human errors and removes virtually all of the barriers to a fast, efficient and enjoyable consumer experience. The initial deployment is for "build to order" fast food restaurants. ZonePay's headquarters are located in Dulles, Virginia and the company also has mobile development activities in Finland. Other investors: Angel investors.

RECENT NEWS FROM NEXIT PORTFOLIO COMPANIES

Futuremark has released SPMark04, the world's first industry-grade Symbian benchmark measuring and comparing the performance and power consumption of the increasingly complex mobile platforms.

NEC, the leading Japanese manufacturer of mobile handsets and infrastructure, has licensed **Ecrio's** Embedded Push to Talk Over Cellular (PoC) solution. This enables NEC to deliver interoperable and standards compliant PoC handsets to its customers worldwide.

InphoMatch and **Mobileway**, the leading providers of global mobile messaging interoperability and value-added wireless data services, announced a merger of their companies. By uniting InphoMatch's mobile carrier business with Mobileway's wireless marketing and entertainment services, the combined entity occupies a unique position at the core of the mobile industry.

Fathammer has partnered with Tapwave® to offer a Zodiac-optimized version of the X-Forge 2 engine. Tapwave developers who want to create cutting-edge games with stunning visual quality can use X-Forge 2 to develop 2D and 3D games in any genre.

Bitfone demonstrated mProve™ for the BREW solution, a version of its flagship mProve product optimized to provide firmware upgrade capabilities to QUALCOMM's extensive community of BREW operators and OEMs worldwide.

Agere Systems incorporates **Hantro** multimedia solutions in reference platform for mobile phone. Hantro has licensed a suite of hardware and software products to Agere Systems, a leading supplier of silicon and software for GPRS, EDGE and UMTS mobile phones.

Hantro's next generation hardware accelerated video decoder is the first in a family of multi-format codecs specifically tailored for mobile System-on-Chip designs. A single solution for 3GPP, DVB-H and DMB based mobile video applications, the decoder enables up to D1 resolution H.264, MPEG4 and H.263 video.

Mobile 365 announced that Cingular Wireless has selected Mobile 365 to provide inter-carrier Multimedia Messaging Service (MMS) interoperability services for their subscribers.

Ekahau announced that Proxim Corporation, has selected the Ekahau Site Survey 2.1 (ESS 2.1) WiFi network planning and verification tool as one of the key components of Proxim's new ORiNOCO Smart Wireless Suite software package.

Ekahau announced that Birmingham Heartlands hospital in the UK is trialing a patient location tracking system based on Ekahau Positioning Engine 3.0 software and Ekahau T101 Wi-Fi tags. Birmingham Heartlands and Solihull NHS Trust is one of the largest acute hospital Trusts in England.

Bitfone has initiated a pilot project with Orange SA, one of the world's largest mobile communications companies, to provide convenient software maintenance capabilities for new 3G devices.

Mobile 365's Chinese subsidiary has been awarded a National Wireless Value-added Service license by the Ministry of Information Industry in China. Under new regulations, this license authorizes service providers to offer mobile services nationally in China.

Telabria, the award-winning UK wireless network provider, partners with **SkyPilot Network** and has announced plans to build the first WiMAX network in the United Kingdom. The network to be launched by mid 2005 will deliver high-speed wireless broadband services.

Nokia has licensed **Hybrid's** OpenGL ES implementation as the baseline 3D technology for Nokia's Series 40, 60, 80 and 90 platforms and M3G implementation. Through the deal, Hybrid becomes the chief supplier of software 3D technology for Nokia's mobile phones.

Ekahau will be collaborating with Oracle Japan in providing Wi-Fi Location Based Services (LBS) and Real Time Locating System (RTLS) solutions for Asian market.

Conformiq has released a Symbian specific adapter for Test Generator, a unique innovation enabling dynamic model-based test generation and automatic test execution for complex software systems. The first customer deployments have been made to companies developing Symbian based software and hardware solutions.

Esmertec will integrate **Hybrid's** Mobile 3D Graphics API for J2ME to its Jbed platform. M3G brings advanced 3D graphics capabilities enabling even more compelling games and entertainment content for Java phones. Esmertec is a leading provider of software solutions and technologies for mobile phones, PDAs and embedded devices.

For more information, please visit www.nexitventures.com.