

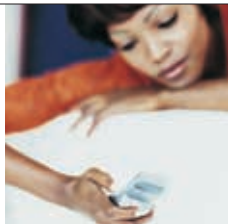
# argoscorecard

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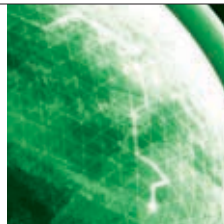
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## PARTNERSHIP AT WORK

For the second consecutive year, Argo Global Capital, in cooperation with France Telecom Research & Development and Innovacom, FT's investment arm, hosted a seminar focusing on wireless innovation and the contribution of start-ups to the overall success of large operators such as France Telecom/Orange.

More than 50 people attended one of the two half-day workshops. All participants were enthusiastic about the quality level and depth of discussion on the Mobile Office Concept and the evolution of new service platforms. The seminars gave representatives from France Telecom, FT R&D, Orange and Wanadoo the opportunity to hear about the latest

developments from some of Argo's promising portfolio companies.

These meetings provide all stakeholders with a unique forum for sharing their views and goals with regard to the future of the wireless industry. Such partnerships enable Argo to ensure that our companies continue to respond to the carriers' most critical needs and that we, as investors, continue to support the best investments possible.

We at Argo, are building our investment strategy on such fruitful initiatives. Since the "Innovation Gap" has expanded following two years of R & D cuts, Argo takes pride in its ability to

understand the needs of its operator partners and to help bridge the gap between well established telecom vendors and the powerful ideas of talented entrepreneurs.



## SOFTWARE DEVELOPER OF MOBILE MEDIA VIEWER TECHNOLOGY

Christer Simrén  
CEO



## Portfolio Company Profile



Mediabricks is a leading provider of a wireless client server platform that enables the use of rich media content on a mobile phone.

With Mediabricks' patented wireless technology, mobile operators and other service providers are able to already offer a new generation of powerful "3G-like" interactive multimedia services today. With one single client server solution, it is possible to supply multiple branded media services, such as news, sports, entertainment, ringtones and screensavers.

The broad introduction of open mobile devices creates numerous opportunities for data-centric revenues, with Mediabricks providing the vehicle for realizing this potential. The company's platform enables service providers to expand the mobile service offering with rich premium content services, boost GPRS and 3G usage, and accelerate M-Commerce. This format-independent platform allows a rapid and flowing presentation of text, pictures, animations, audio and video.

Mediabricks' services work both offline and online, and a viewer application on the mobile handset automatically adapts the presentation to the terminal on which it has been installed. Content creators are attracted to this powerful tool, with its support of all forthcoming open

handsets on the market, due to its cost-effective and automatic publishing capabilities in the mobile channel.

To date Mediabricks has been launched commercially by T-Mobile, Aria and Jamba!, while several other operators and service providers are currently deploying the technology for launch. In-depth partnerships have been forged with CNN, Reuters, Nokia, Siemens, Motorola and Sony-Ericsson, all of which promote Mediabricks.

Mediabricks was founded in Sweden in mid-2000 by a team with extensive expertise in the mobile industry. In addition to ArgNor, Mediabricks' investors include Siemens Mobile Acceleration, Centrecourt and Real Venture Group.

For further information or to contact Mediabricks, please call +46 8 20 39 05 or visit [www.mediabricks.com](http://www.mediabricks.com).

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## HOTSIP AB

Hotsip AB announced the commercial availability of its end-to-end solutions developed on the J2EE framework, which fully enables international language support and provides interoperability with Windows® Messenger. With their Unicode support and language preparation, Hotsip products enable anybody in the world to see a friend's presence status, send instant messages and more, regardless of country dialect or language. On the operator side, the language preparation powers easy language translation as well as dialogue transition for menu and title support for the user's interface. Operator benefits include improved operations and maintenance for faster deployment of interoperable real-time communication services.

## CAMBRIDGE POSITIONING SYSTEMS, LTD.

Cambridge Positioning Systems, Ltd. (CPS) unveiled Cursor™ Matrix, the world's first software-only, high-accuracy location technology for mass-market GSM phones, at the 3GSM World Congress in Cannes. Cursor Matrix offers sub-50 meter accuracy without the costly handset modifications and additional network hardware required by rival technologies. Based on fully GSM-standardized technology, Cursor Matrix will significantly lower the cost barrier for operators seeking to exploit the predicted \$20 billion high-accuracy location-based services market.

## EMPOWER INTERACTIVE GROUP, LTD.

Empower Interactive (EI) Group, Ltd., a leading application messaging infrastructure provider, has launched its Message Delivery Platform (MDP). The MDP enables application and peer-to-peer messaging traffic to bypass costly Short Message Service Centers (SMSCs), dramatically reducing the operator's cost per message, increasing network efficiency, and extending the life of the SMSC capex investment. The MDP offers the dual benefit of increasing capacity and lowering operating costs, while delivering powerful new revenue-generating functionality.

The MDP allows operators to manage SMS with greater speed and efficiency, and to avoid well-publicized issues of network congestion or SMSC failure due to high volume and spiky traffic at peak times. EI's platform is designed to boost network capacity and resilience by enabling both application and peer-to-peer messaging within a GSM network with one solution.

## EFTIA OSS SOLUTIONS, INC.

Eftia OSS Solutions, Inc., a provider of world-class telephony software solutions, announced it has signed a partnership agreement with TATA Infotech Ltd., a leader in telecommunications consulting services. Signed at the Canadian High Commission in Delhi, India in January 2003, the agreement will help reinforce the two organizations' position in the Asia/Pacific region. In the growing OSS arena, Asia/Pac offers an abundance of opportunities to telecommunications software providers looking to expand their global service offerings, and strong alliance partners such as Eftia and TATA are well positioned to realize a significant return on investment. As one of the foremost providers of software consulting and systems integration services, TATA is a pioneer in the field of information technology, with an international reputation for being a highly competent solutions provider.

## PROQUENT SYSTEMS CORPORATION

ProQuent Systems Corporation, the premier partner for mobile operators and billing, mediation and prepaid system vendors seeking to generate a profit from wireless data, announced the market readiness of its industry leading open services platform, the Mobile Services Switching Point (MSSP™). The MSSP is a new class of network element that makes existing GPRS, UMTS, CDMA and WLAN infrastructure content aware, giving billing, mediation, real-time rating and prepaid systems the ability to recognize, discriminate and control user data sessions in real time. ProQuent's solution allows operators to develop innovative revenue-generating products and services, and real-time flexible content charging solutions for both prepaid and postpaid environments that can be applied seamlessly across mobile networks and WLANs.

## DIGITAL BRIDGES, LTD.

Digital Bridges, Ltd. has produced a premium-branded Java mobile phone game entitled Tiger Woods PGA TOUR® Golf for Electronic Arts Inc. (Nasdaq: ERTS). Digital Bridges is also making the new Java title developed by iomo Ltd. available via TV, Web portals, mobile phone retailers and mobile phone operators. The game features a challenging reward system — just like its PC and PlayStation® 2 counterparts — that includes the possibility of posting high scores as well as special rewards such as upgrading a player's set of clubs. If players need a little practice to reach the top of their game, they can run through any of the 18 holes before continuing on the course.

## NORWOOD SYSTEMS, LTD.

Norwood Systems, Ltd., the leader in Bluetooth™ short-range wireless in-building networks, and OnRelay, the pioneer in mobilizing corporate mobile voice systems, announced that they will be integrating Norwood Systems' EnterpriseMobility™ with OnRelay's Mobile Branch Exchange (MBX). The integration of the two communications platforms will provide corporate customers with seamless communication for their mobile workforce.

This groundbreaking end-to-end solution extends the reach of the PBX so that employees can be connected to it, wherever they are. PBXs have long been the mainstay of voice communication in the office. However, with more employees working in a mobile mode, it is increasingly difficult to benefit from the PBX functionality. This partnership will allow the PBX to be leveraged fully for all mobile users: Norwood Systems providing the Bluetooth link to the PBX when in the office and OnRelay providing the link to the PBX when outside the office. Corporate customers will now be able to benefit from total "mobile call management" — the ability to manage all communication via the PBX wherever their employees are located.

## NOVATEL WIRELESS, INC.

Novatel Wireless, Inc. announced that the Merlin C201™ Wireless PC Card Modem meets the quality standards of Microsoft Corporation's "Designed for Windows XP Logo" program. The Merlin C201 supported Microsoft Windows XP at launch and now has successfully passed the stringent compatibility and performance testing established in the Designed for Windows XP Logo program to ensure a high-quality computing experience with the Windows XP operating system.

The Merlin C201 is a wireless PC card modem that operates on CDMA2000 1X networks, including the enhanced Sprint Nationwide PCS Network. Featuring an embedded antenna to reduce the risk of breakage and repair costs, the Type II PC card provides access to email, corporate databases and the Internet at peak speeds of up to 144 kbps, with average speeds of 50 to 70 kbps. The Merlin C201 is also compatible with Windows 98, Windows 2000, Windows Millennium Edition operating systems, as well as Windows CE 3.0.

## KABIRA TECHNOLOGIES, INC.

Kabira Technologies, Inc., a provider of infrastructure software for the creation and deployment of network-based applications and services, signed a commercial partnership agreement with GFI Informatique, a European IT services group listed on the Paris Stock Exchange. Kabira Technologies granted GFI Informatique the right to use Kabira's technology (previously named ObjectSwitch) to produce and sell specific developments to its customers. These solutions will allow complete automation and improved procedures management from the operators' information systems up to their services and network platforms.

Kabira will provide GFI Informatique with the skills needed for correct operation of its technology as well as training and maintenance support. The agreement also includes a user's license for Kabira's KIS software, mediation and provisioning applications, adapters and corresponding maintenance services.

### LGC WIRELESS, INC.

LGC Wireless, Inc., a market leader in in-building wireless networking solutions, continues to advance its expertise in wireless solutions for airports with the selection of its InterReach™ Unison product by Honolulu International, Denver International and Dallas Love Field Airports. Both passengers and airport employees will enjoy enhanced wireless communications throughout these airports. LGC Wireless products provide enhanced wireless voice and data service at airports around the world, including, but not limited to, Austin Bergstrom Airport, Gatwick Airport, Heathrow Airport, John F. Kennedy Airport, LaGuardia Airport and Oakland International.

### SENSESTREAM, LTD.

SenseStream Ltd. announced that **One2Free**, the leading lifestyle brand of Hong Kong CSL, has launched 'My funk note' powered by SenseStream. "We are delighted to work with CSL in providing MMS services 'My funk note' to Hong Kong CSL subscribers," stated Kiok Tan, CEO of SenseStream. "'My funk note' contains ready-to-use templates that communicate different mood-representing graphics, fonts and music. These templates are selected by consumers to best represent their communication need and enhanced by users with their personal message on top of the selected templates, making the entire MMS experience one of a kind."

### VOLUBILL

VoluBill has launched a solution to address the challenge mobile operators face in analyzing and charging for MMS and WAP services with its new MMS Accounting Monitor. This real-time solution operates in both prepaid and postpaid mobile environments. It is designed for operators that have implemented transaction-based pricing for MMS usage and data volume pricing for GPRS usage.

### WATCHMARK CORPORATION

WatchMark Corporation, a global provider of service assurance solutions for current and future wireless networks, announced that, through Teleca, it will cooperate with 3, a new 3G operator owned by Hutchison Whampoa Ltd. and Investor AB. 3 is using WatchMark as part of an agreement with Teleca, which will install and integrate WatchMark Prospect® 7 and visualization solution WatchMark Pilot®, across its entire network in conjunction with other operations support systems.

### ALICE SYSTEMS AB

Alice Systems AB has signed an agreement with Italian mobile operator Vodafone Omnitel, which currently serves 18 million GSM subscribers, to deliver its GPRS software client Alice Connect and associated services. Alice Connect will be branded as "Connect Me". Connect Me radically simplifies the task of connecting laptops and PDAs to the Internet over the Vodafone Omnitel GPRS network.

### GENERAL WIRELESS

General Wireless has concluded an agreement for corporate SMS services with NetCom, the Norwegian mobile operator. The agreement covers SMS Executive, the General Wireless product that enables SMS messages to be easily sent from Microsoft Outlook and Lotus Notes email programs.

### MASKINA

Maskina announced the release of the Wireless Service Builder (WSB), a complete solution for mobile services creation and management. WSB consists of an internal portal for mobile operator management of mobile services, a Web-based environment for service creators, a runtime environment and application server for the mobile services, and a choice of mobile deliveries for browsing and using mobile services.

### CAMBRIDGE POSITIONING SYSTEMS, LTD.

Cambridge Positioning Systems, Ltd. has entered into a joint marketing agreement with LocatioNet, Inc. to promote the benefits of high-accuracy positioning services to wireless operations in Brazil. CPS and LocatioNet will work together to drive business opportunities and collaborate on specific LBS projects within Latin America with the possibility of extending the agreement to other regions as needed.

### CEREBRUS SOLUTIONS, LTD.

Cerebrus Solutions, Ltd., a leading provider of fraud management and revenue enhancement solutions for the global telecom industry, announced that many of its customers have successfully upgraded to, or are in the final stages of upgrading to, version 4.1 of its flagship product CerebrusRE. CerebrusRE customers include leading wireless and wireline operators across five continents.

### DIGITAL BRIDGES, LTD.

Digital Bridges, Ltd., a world leader in the creation and distribution of mobile entertainment solutions, announced that Taito has developed a Java cellular phone version of Space Invaders®, which is being hosted and delivered by Digital Bridges. Available now to AT&T Wireless mMode(sm) customers, Space Invaders is one of the world's most successful games.

## Increasing ARPU with Mobile Office Services

STIMULATING USAGE OF NON-VOICE SERVICES AND INCREASING AVERAGE REVENUE PER USER (ARPU) ARE KEY OPERATOR CHALLENGES IN TODAY'S MATURE MOBILE MARKETS. IN THIS CONTEXT, IT IS EXCEPTIONALLY IMPORTANT TO IMPROVE THE OFFERING — AND THUS THE USAGE — IN THE UNDER-EXPLOITED ENTERPRISE SEGMENT.

MOST TECHNICAL ENABLERS ARE AVAILABLE TODAY TO OFFER SECURE REMOTE INTRANET ACCESS SOLUTIONS OVER WIRELESS. ON THE ONE HAND, GPRS NETWORKS AND TERMINALS ARE BECOMING WIDELY AVAILABLE, ALLOWING EASIER AND MORE COST-EFFECTIVE MOBILE DATA ACCESS. ON THE OTHER HAND, VIRTUAL PRIVATE NETWORK (VPN) TECHNOLOGIES HAVE MATURED AND ARE USED BY MANY CORPORATE USERS CONNECTING TO THEIR INTRANETS VIA DIAL-UP OR FIXED BROADBAND ACCESS (E.G. ADSL, CABLE).



### THE TECHNICAL OPTIONS

At a high level, technical options available to operators when implementing mobile office services can be classified into one of the following three families: end-to-end VPN solutions, network-based VPN solutions and application-specific solutions.

An end-to-end VPN solution is characterized by a secure connection between the end-user device (e.g. laptop or PDA) and his corporate network. Examples include IPSEC-based solutions, offering high-quality security-based on cryptography and supported by a wide range of vendors (including Cisco, Axent, Check Point, and Nortel) and PPTP-based solutions, supported by Microsoft and bundled with every version of Windows.

With network-based solutions, the end user trusts the GPRS network and the secure connection (i.e. leased line, Frame Relay or ATM PVC, IPSEC tunnel or IP-VPN-based on MPLS) is only between the operator's GPRS network and the customer's corporate network.

Application-specific solutions cannot be considered as providing true VPN functionality. They implement the security function at the transport or application layer using protocols such as SSL. As a result, these solutions only apply to a specific application. Typical examples include secure mobile email solutions (such as the one provided to users of BlackBerry devices) and secure enterprise portals.

### THE PLAYERS

Since end-to-end VPN solutions as well as application-specific solutions are not dependent on any elements inside the mobile operator network, they can be offered by other players such as system integrators or ISPs. By contrast, network-based solutions correspond to the traditional way operators sell services: the end user pays for some functionality provided by the network. Operators are thus in a good position to offer this type of solution, either through their own infrastructure, through that of a company inside the same group, or via a commercial agreement with a third party.

The mobile office services market encompasses a range of players, including mobile operators and, of course, all the companies providing remote access solutions over fixed access. In this complex market, mobile operators have the choice between several options. One possible strategy is to promote the use of mobile office services, even when provided by others, as it generates data traffic on their networks. On the other hand, some operators will insist on

offering mobile office services themselves in an effort to avoid being reduced to mere pipe providers.

### THE STRATEGIES

The choice of VPN technology depends on the specificity of the mobile operator as well as the requirements of targeted business segments. For example, an operator already offering a network-based VPN service, for instance through its ISP branch, may find offering mobile access a natural extension. In another scenario, if a company is only interested in one specific application such as email, then a "simple" security solution specific to this application may be more appropriate, at least in the short term.

Northstream believes that the strong security concern expressed by most business customers indicates that an end-to-end VPN solution based on IPSEC is, in many cases, the most suitable solution. In addition to its strong security, an IPSEC-based solution carries the advantage of not requiring any dedicated connection to the mobile operator network. Furthermore, while companies often use network-based VPNs to interconnect their different offices, IPSEC-based solutions are the most common for individuals remotely accessing their Intranet through a fixed connection. It is natural for customers to reuse these solutions in a very similar fashion over wireless access.

Beyond the choice of technology, operators should have flexible offerings taking into account the needs of the various corporate segments. At the same time, the overall offering to businesses should be clear and not appear too fragmented. In addition, a mobile office offering can only be successful if the overall service package is attractive: service simplicity, pricing, quality of service and roaming assurance are all key in this formula. Finally, it is essential that operators gear up their delivery channels for mobile office services, including the very important customer interface towards IT managers of the targeted companies.

By Jerome Privat, Strategic Advisor, Northstream

### About Northstream:

*Northstream provides operators, manufacturers and other players with independent and unbiased advice on opportunities presented by GPRS and 3G. In addition, Northstream offers recommendations on key technical and commercial issues in mobile data services as well as advises industry players on their strategic position and value proposition.*

[www.northstream.se](http://www.northstream.se)

## Upcoming Events

**Argo Global Capital Annual Meeting**  
April 23-24, 2003  
Montreal, Quebec  
Canada

**Wireless Ventures 2003**  
April 30 - May 1, 2003  
Redwood City, California  
USA

**Wireless Java**  
May 8-9, 2003  
Amsterdam,  
The Netherlands

**CommunicAsia 2003**  
June 17-20, 2003  
Singapore, Asia



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