FROST & SULLIVAN

MOBILE IM: THE NEXT BIG OPPORTUNITY IN REAL-TIME MOBILE APPLICATIONS

Prepared for:

NEUSTAR®

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EXECUTIVE SUMMARY

Mobile Instant Messaging (Mobile IM) will likely be the next big mobile application market, eventually exceeding the SMS market. While that may seem hard to believe today, the ingredients are all in place to provide for an explosive growth in Mobile IM much like what we experienced in SMS a number of years ago. Once operators all agree to exchange Mobile IM messages, then the technology is in place to allow for hundreds of millions of people to use Mobile IM much like they use Web portal based IM today.

Followap has developed one of the industry's leading solutions to Mobile IM. NeuStar has the directory management services in place that assist in internetworking for number portability. These directory services can be applied to other internetworking applications like IM. Mobile IM will eventually become more popular than SMS due to unlimited length of message, presence (knowing who's online) and message threading. Wireless operator internetworking of Mobile IM will begin in 2007 and quickly spread worldwide by 2009.

As a result of NeuStar's acquisition of Followap, NeuStar will is poised to become the leading supplier of Mobile IM solutions in the world.

BACKGROUND

NeuStar is best known as the number portability company, whose directory services are used to route all calls, signaling, messaging, and other inter-carrier transactions in countries such as US, Canada and Taiwan. The directory of mobile phone numbers is used so that when a user wants to move their mobile phone number from one wireless operator to another, NeuStar's software makes the change in the phone directory defining what number is assigned to which operator and subscriber. While directory services for number portability have generated impressive year-over-year growth for NeuStar, they have had a strong interest in applying this expertise to new services, such as IP/SIP. This led NeuStar's management to focus hard on the next big growth market in which their internetworking directory services might put to good use.

SIZE OF THE WIRELESS SUBSCRIBER MARKET

The mobile market is continually growing. Frost expects the mobile market to reach two billion subscribers in 2007 and then three billion in 2010 as shown below.
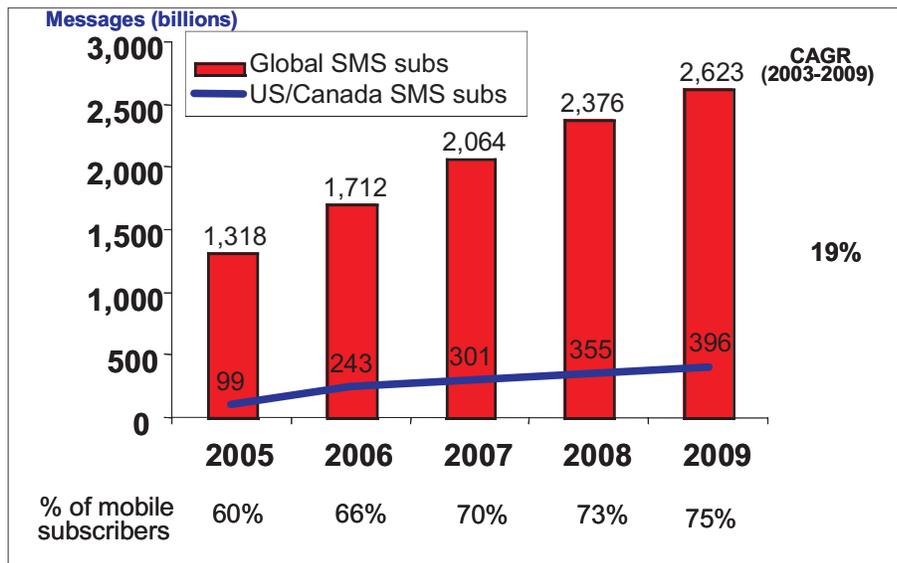
Frost estimates that SMS is a $63B revenue opportunity revenue and $10B/year infrastructure market for 680+ wireless operators representing more than two billion users and over a trillion messages a year. It's the second largest mobile application market behind basic mobile voice services.

But, SMS has a number of limitations that will prevent it from surpassing voice services, most notably the limitation to 160 characters per message, the lack of message threading in most phones (where you can see the exchange of messages between two people in one folder), lack of presence (you never know if the other person is online) and lack of message threading.

MOBILE IM: A SIGNIFICANT INDUSTRY INITIATIVE

Mobile IM is the first major mobile IP service deployment in the wireless industry. It is scheduled for launch in 2007 by a number of wireless operators in Europe. Mobile IM will be deployed as an upgrade to SMS services and gradually replace its legacy (SS7) infrastructure with all-IP.

Mobile IM is will find easy adoption due to high adoption rate of more than 70% penetration among mobile subscribers where their mobile phone number is their universal SMS address. Plus, many of these subscribers already have one or more IM accounts on their desktop.

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Mobile IM is the first Mobile IP service utilizing an all-IP phone number-based directory. NeuStar has developed the core SIP protocol standards used for IM, as well as the interoperability and directory standards. Followap has developed the IM application. Together, NeuStar is able to provide a wireless operator with a total solution.

Mobile IM will potentially form the basis for new types of real-time mobile communication services including multimedia such as voice, video, pictures, music, files. And, all other industry segments (fixed, cable, internet) interoperating with mobile will need access to these same directories.

Last year at 3GSM, a number of wireless operators made a commitment to support inter-operator compatibility for mobile IM. Thus, with this commitment, subscribers on one wireless operator's network could IM subscribers on another wireless operator's network seamlessly. NeuStar developed the core SIP protocol standards used for IM, as well as the interoperability and directory standards. And, London-based Followap is the leader in doing IM application on mobile.

Wang Jianzhou
China Mobile President

"This project shows how operators can cooperate with one another to ensure that even new services will work across networks and internationally. China Mobile believes the know-how and experience gained from this IM internetworking project will be useful for the rollout of other new services."

The acquisition of Followap puts NeuStar right at the core what will undoubtedly become one of the next big mobile application markets. Mobile IM will likely eventually become more popular than SMS. This is simply due to the inherent advantage of Mobile IM over SMS for most mobile subscribers, including unlimited message length, buddy lists, presence (so you know if they are available to chat) and extension from desktop IM which is already surpassing email as the messaging medium of choice for young people.

INTEGRATION OF MOBILE IM WITH DESKTOP PORTAL IM

A subscriber on any one wireless operator's network is able to IM with any IM portal user that has set up a partnership with that wireless operator. For example, if one wireless operator had a partnership with Yahoo, all of Yahoo's IM subscribers would be able to IM with that wireless operator's wireless subscribers, thus extending the IM portal's value. The inter-operator agreements do not extend cross operator to the portal partnerships held by other wireless operators. Thus, AOL IM users (AIM) may have a partnership with one wireless operator but they couldn't IM with Yahoo IM users which might have a partnership with another wireless operator – at least not yet initially.

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Inter-portal IM still seems like the Holy Grail in IM: where all users on all IM portals will be able to IM without interference. We truly have "walled gardens" today in portal IM which doesn't make a bit of sense. Think if AOL users could only send email over the Internet to other AOL users but not to someone with an EarthLink account.

WHY MOBILE IM WILL SUCCEED

Mobile IM will succeed in wireless because:

- All mobile users know the SMS messaging paradigm evidenced by the 70% penetration of mobile subscribers today using only the mobile phone number as a universal form of address.

- Most mobile users likely also have one or more IM accounts, and, hence, they already know how the IM paradigm works.

- Buddy lists will include presence just like on the desktop so that you'll know if someone is online and can chat. (You can always send them an SMS if they are not online asking them to get back online so you can chat).

- Most mobile users know about "social networking" and, as a result, understand the benefit of doing IM.

Note that mobile IM will also become more popular as feature phones adopt QWERTY keyboards similar to what you find in SmartPhones today such as the RIM BlackBerry, Palm Treo and Nokia E-Series. You see it happening already with a number of "pull out" keyboards in lower priced phones.

Watch for major developments in mobile IM beginning in 2007. It's going to happen first in Europe and then Asia and, finally, in the US. Again, the US is behind and not part of the first round of inter-operator agreements. Users throughout Europe will be able to establish Buddy lists and IM with other wireless subscribers.

MARKET FORECAST FOR MOBILE IM

Through the forecast period, Frost estimates solid organic growth associated with Mobile IM at a CAGR of 55.9%. However, there is a likely possibility of uplift in the CAGR starting in 2008 due to:

- The introduction of IMS that will benefit the Mobile IM industry by providing additional wireless operator infrastructure that will support all Mobile IM applications.

- The burgeoning youth market that will enhance the adoption of mobile IM as a key communication tool, over voice and SMS.

- The advantages of IM including presence, long message length and Buddy Lists.

- The interoperability between Mobile IM services providers.

- The interoperability between desktop portal IM providers and the wireless subscribes of their partner operators.

- The extensions of social networking sites to the mobile platform.

- The adoption of enterprise IM that will drive the subsequent adoption of Mobile IM.

Thus, while the Frost forecast is based on current mobile IM systems in place, there is substantial upside to this early Mobile IM market forecast. Within five years (2012), it's entirely possible that Mobile IM will experience explosive growth just like SMS did once the internetworking capabilities were developed.

Worldwide MIM subscriber Growth: 2006 - 2011

Year	Subscribers (Mn)
2006	7.2
2007	9.8
2008	18.7
2009	38.4
2010	54.7
2011	66.3
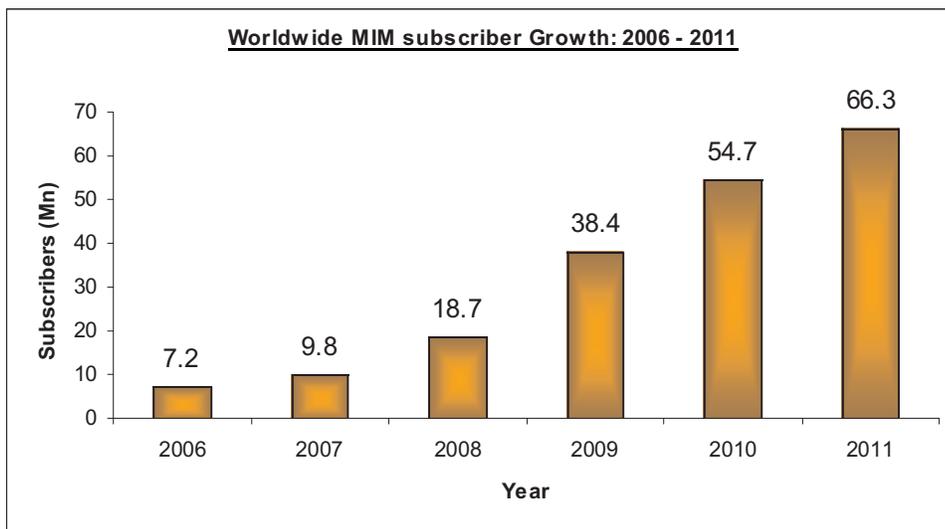
Source : Frost & Sullivan

As a result, NeuStar's acquisition of Followap should result in true synergy where both companies benefit greatly from the combination. And since mobile IM is all IP-based, you can expect to see multimedia services such as file transfer, voice, video, pictures and music added to mobile IM before too long.

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NEUSTAR MOBILE IM PRODUCTS

Here are the products that Followap provides to the market:

- **IMSC (IM Service Center)** - is an end-to-end service suite, enabling operators to deploy their own, branded real-time IM service
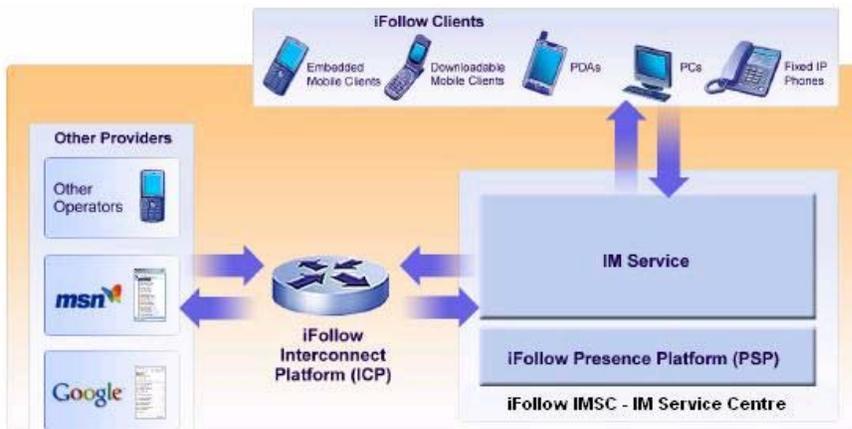

- **ICP (Interconnect Platform)** – Allows carriers to build white label IM communities within their mobile network or with an IM portal
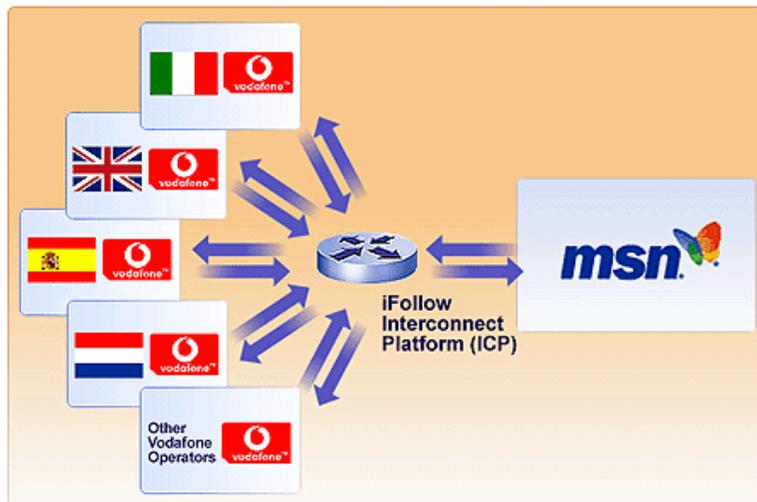
- **PSP (Presence Platform)** – A presence aggregation, management and distribution platform that monitors which people in a subscriber's address book are on-line
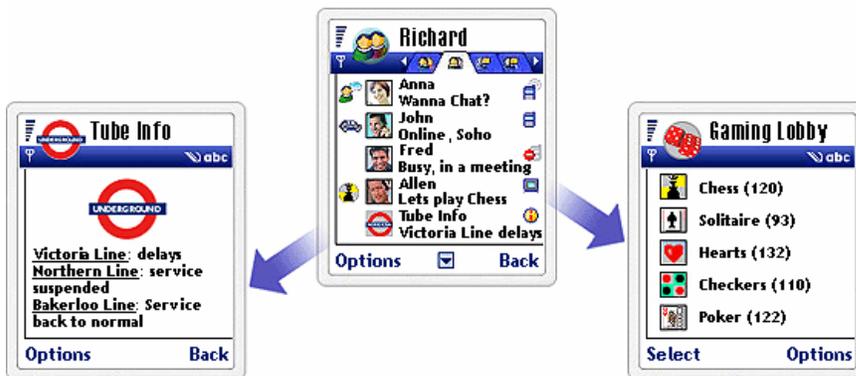

- **MMG (Mobile Messaging Gateway)** - enables mobile subscribers to access their Internet IM communities (MSN, Yahoo, AOL, Google, etc.)
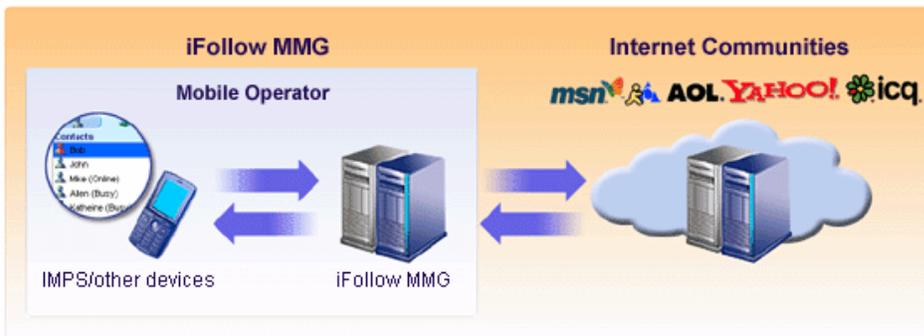
- **Clients** – IM clients/applications that can either replicate the look, feel, and functionality of the users desktop IM portal
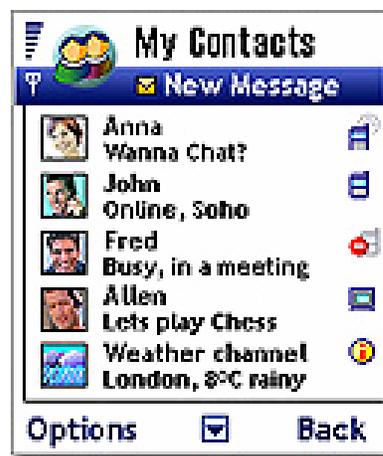
- **EGW (Enterprise Gateway)** - enables mobile operators to provide subscribers with seamless connectivity to their corporate presence and IM environments
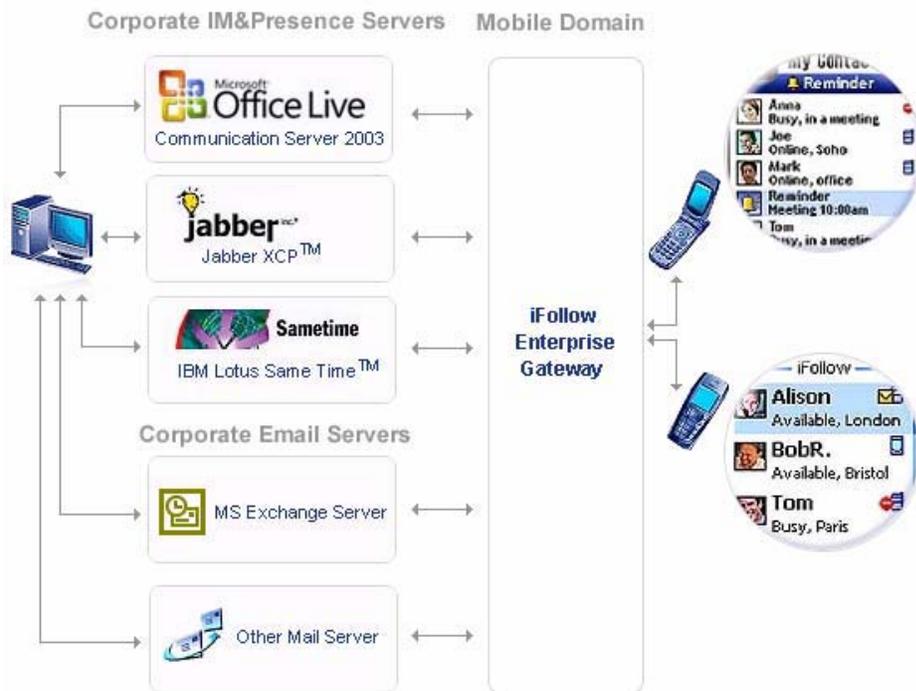
CUSTOMERS

Followap's major customers include Vodafone (a provider of voice and data services to approximately 140 million customers in 26 countries), Turkcell (the leading GSM operator in Turkey with over 23 million customers), Orange (one of the world's largest mobile communications companies and a subsidiary of the France Telecom group, with operations in 16 countries across Europe and beyond, with more than 52 million customers worldwide).

Followap works closely with the popular Internet-IM providers, such as MSN™, AOL™, ICQ™ and Yahoo™ and specializes in seamlessly connecting the operator network with mobile devices, following OMA IMPS specifications.

It is the combination of the Followap Mobile IM applications combined with the directory management services already created by NeuStar that enable a synergistic effect for the two companies to become a leader in Mobile IM.

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CONCLUSIONS

Frost believes the current market conditions are similar to the initial market for SMS when internetworking standards were initiated. Following that, the SMS market took off. Now, Mobile IM internetworking standards has similarly been created and the market for Mobile IM should similarly take off. Frost believes that the market for Mobile IM could eventually be larger than SMS due to Mobile IM providing unlimited message length, presence (so you know when someone is online) and interoperability with desktop portal IM as well as mobile users.

Eventually, Frost anticipates that economic incentives, perhaps facilitated by NewStar's directory and IM services, will allow for all desktop and mobile IM users on different networks and different portals to eventually conduct IM in a totally open environment as the Internet was intended to enable.

AUTHOR BIOGRAPHY

J. Gerry Purdy, PhD - VP & Chief Analyst, Mobile & Wireless

J. Gerry Purdy, Ph.D. is the VP and Chief Analyst with the Frost & Sullivan North American Information & Communication Technologies Practice. As a nationally recognized industry authority, he focuses on monitoring and analyzing emerging trends, technologies and market behavior in the mobile computing and wireless data communications industry in North America.

Since joining Frost & Sullivan in June 2006, Dr. Purdy is specializing in mobile and wireless devices, wireless data communications and connection to the infrastructure that powers the data in the wireless handheld.

Prior to this, Dr. Purdy was Principal Analyst at MobileTrax. He also spent five years as a Venture Advisor for Diamondhead Ventures in Menlo Park where he identified, attracted and recommended investments in emerging companies in the mobile and wireless.

For more than 16 years, Dr. Purdy has been consulting, speaking, researching, networking, writing and developing state-of-the-art concepts that challenge people's mind-sets and developing new ways of thinking and forecasting in the mobile computing and wireless data arenas. Often quoted, his ideas and opinions are followed closely by industry watchers who read his insightful column, "Inside Mobile & Wireless."

Dr. Purdy holds a B.S. in Engineering Physics from the University of Tennessee (December 1965), an M.S. in Computer Science from UCLA (June 1968) and a Ph.D. in Computer Science and Exercise Physiology from Stanford University (June 1972).

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