



## GPRS is ideal bearer for IM, but Asian ops still rolling it out over SMS

IN A MOBILE industry flustered by high hopes for advanced messaging services, such as EMS and MMS, instant messaging has gotten somewhat swamped in the messaging debate.

While relatively few cellular operators have launched or announced mobile IM services (see fig. 1), that doesn't mean it's not on its way to a handset near you.

The first services were launched in the Asia-Pacific region, followed by North America and Scandinavia. The rest of western Europe is now beginning to catch up, with several announcements in late-2001 and 1H02.

Mobile instant messaging remains a nascent industry, however. It builds on the legacy of fixed-line IM services, which have proved immensely popular, with fixed-line IM traffic now larger than e-mail traffic.

Sanjay Goyal, CEO of Indian IM vendor ACL Wireless, estimates there are about 200 million registered fixed IM users worldwide and about 75-100 million regular IM users.

In Asia, MSN Messenger and Yahoo! Messenger dominate PC IM, with the exception of AOL Time Warner-owned ICQ, which leads in China, Taiwan and Thailand, says Goyal. Each company attracts about 4-5 million unique users per month, he says.

Presence information is just one application of IM, but it is a service some operators say will change person-to-person communications. It can be as basic as whether a device is switched on or off, or can incorporate more complex states, such as the user's availability.

"[The industry] was so excited about location that it kind of ignored presence," says Mark McDowell, president and COO of U.S.-based Invertex, a messaging-solutions vendor. "Only in the last two years has presence had value as a stand-alone piece of information."

Additionally, location adds another dimension to messaging services: proximity. Many services now avail-

able or planned to launch include "find a friend" applications, in which location and messaging are combined with the goal of enabling friends who are nearby to get together.

In these applications, users create a list of contacts – a "buddy list" – that enables them to make status requests regarding their contacts' availability. They then make messaging decisions based on that information. Some services also enable users to see whose buddy list they are on. To protect customer privacy, and in some countries to comply with legislation, users may opt to block access to their presence and location information to some or all users.

Mobile IM services can be delivered in a number of ways, with or without an embedded software client in the handset. Current services focus on SMS and/or WAP as a bearer, with WAP-over-GRPS offering additional functionality and an improved user experience. The emergence of Java-enabled handsets also increases the possibilities for enhanced interfaces and downloadable clients.

Systems will have to support multiple devices and bearers to reach the maximum user base, in addition to back-end integration with PC-based services.

"Unified communications has been a goal for 15 years," said McDowell. "Presence is a much more modest version of unified communications."

One of the primary markets for IM services is the youth sector, largely because of the success of SMS and fixed-line IM in this segment.

ACL's Goyal adds that interest from desktop IM users and non-desktop IM users is equal. "It is a complete misconception that people that use PC IM services will be the main users of mobile IM since they already are using IM all day for free," he says.

Several players also see opportunities in the corporate space. Many companies use unsecured public IM services for project management and

remote team building.

Baskerville predicts that IM revenues generated in Asia-Pacific will approach US\$1 billion by 2006 (see figs. 4, 5).

### Interoperability

The fixed-line IM solutions – AOL's Instant Messenger (AIM), ICQ, Yahoo! and MSN – are on the whole not interoperable. A user wishing to communicate with subscribers of more than one service must have a client for each provider. On a desktop PC, that is not too great a problem because the screen size is large enough to cope with a number of windows and moving from service to service is relatively straightforward.

Mika Suomela, senior marketing manager at Nokia Networks, says there is no way such a multiplicity of services can be mastered on a mobile device. "It's not acceptable to have different clients for different service providers," he says. "[We] need interoperability."

Eventually, the goal is for interoperability to be established both between existing fixed-line IM solutions and between fixed-line and wireless solutions. International roaming should also become available for mobile IM users.

### Contacts

#### ACL WIRELESS

17 Community Centre  
East of Kailash  
New Delhi 110065 India  
© (91) 11 643 8813 16  
fax (91) 11 643 8825  
www.acl-wireless.com  
**Sanjay Goyal:** CEO

#### ANTEPO

333 West 52nd St.  
Suite 802  
New York, NY  
U.S.  
www.antepto.com  
**Max Segueineau:** CEO

#### COLIBRIA

Hoffsveien 1A  
N-0275 Oslo  
Norway  
© (47) 23 25 41 00  
fax (47) 23 25 41 01  
www.colibria.com  
**Anders Teslo:** chief business development officer

Manila office:  
Karmela Bldg. 2590  
Venecia St., 1205, Makati City  
© (63) 2 890 8875  
fax (63) 2 897 1230

Fig. 1: Selected mobile IM contracts

Country	Operator/mobile portal	IM provider
Asia:		
China	China Unicom	Openwave
China	China Mobile Guangdong	Black Octopus
Hong Kong/India	Hutchison	Yahoo!
Japan	NTT DoCoMo	K Laboratory (Java based)
Malaysia	TM Touch	Yahoo!
Singapore	M1	Yahoo!
Taiwan	Far EasTone	ICQ/Black Octopus
Taiwan	KG Telecom	Black Octopus
Taiwan	Mobitai	Black Octopus
Rest of world:		
Canada	TELUS Mobility	MessageVine
France	Orange	Jabber/Antepo alliance
Global	Genie	Openwave
Global	Vodafone	Followap
U.S.	AT&T Wireless	AIM

Source: Baskerville

# Sector Profile: Instant Messaging

## Contacts

### ECRIO

10121 Miller Avenue  
Suite 100  
Cupertino, CA 95014  
U.S.  
© (1) 408 366 7900  
fax (1) 408 366 8817  
www.ecrio.com  
**Georges Smine:** VP of strategic marketing

### EMPOWER INTERACTIVE GROUP

5-7 St. Helen's Place  
London EC3A 6AU  
UK  
© (44) 20 7920 9400  
fax (44) 20 7920 9402  
www.eigroup.com  
**Ian Wood:** CTO

### FOLLOWAP

Beit Carmelim  
8 Hayozma St.  
P.O. Box 48  
High-Tech Park  
Tirat HaCarmel 39100  
Israel  
© (972) 4858 0625  
fax (972) 4858 0624  
www.followap.com  
**Tal Rayman:** VP of product management

### JIPPII GROUP

Annankatu 44A  
FIN-00100 Helsinki  
Finland  
© (358) 9 4243 0001  
fax (358) 9 4243 0829

### INVERTIX

5285 Shawnee Road  
Suite 401  
Alexandria, VA 22312  
U.S.  
© (1) 703 813 2100  
fax (1) 703 813 1740  
www.invertix.com  
**Mark McDowell:** president and CEO

Mobile IM is certainly not there yet.

While AOL has joined mobile-data standards body Wireless Village, it says its mobile IM solution is going to be a proprietary one.

Recently, UK's O<sub>2</sub> pulled its Openwave IM solution because it wasn't interoperable, but it hasn't said which new solution it will run with.

Many mobile IM solutions are interoperable, but through lateral means, such as a server managing multiple accounts. So far, there is no true interoperability, in which a user on one service can interact with a user on another without the need for multiple accounts.

A number of bodies are working on IM standards. They are geared toward resolving the interoperability problems for mobile IM solutions but may not be able to force integration between wireless and the fixed-line IM providers.

The Presence and Availability Management Forum has been working on specifications for transport protocols for the provision of the presence information that is vital to IM services.

Meanwhile, a consortium of vendors has come together (membership includes a few operators) to form the Wireless Village initiative to develop a standard mobile IM client. The initiative, with more than 100 supporters, is about to merge with the Open Mobile Alliance, which set standards, and it ensures that members' handsets/networks are capable of running applications the same way across different phones and networks. ACL Wireless' PC-to-mobile, mobile-to-PC and mobile-to-mobile IM solution, Wireless Instant Messaging 2.0 (WIM), is compatible with Wireless Village's client-to-server protocol (CSP – version 1.0), released in February.

ACL is also incorporating Wireless Villages' newer server-to-server protocol (SSP – version 1.1) in WIM 3.0, due for release in November.

Wireless Village 1.0/1.1 enable true IM interoperability between mobile networks and between mobile and Internet IM networks.

"I only see serious usage of SSP in the next nine to 12 months in Asia," says Goyal. "At the moment, it [SSP] is more important for the European scenario, where more people are likely to messaging between different countries, than Asia."

ACL Wireless is a supporting member of Wireless Village, and WIM 2.0 is interoperable with MSN, Yahoo! and ICQ's Internet IM solutions.

### Service providers

There are three principal groups of IM service providers: fixed-Internet IM players, such as AOL, ICQ, Yahoo! and MSN; white-label IM providers, which host solutions under the operators' own brands; and operators that license solutions from white-label IM vendors or develop them in-house and manage their own service. White-label IM vendors include Israel's Followap, Norway's Colibria and the U.S.' Antepo and Invertix. With the exception of Followap, these companies offer licensed and hosted solutions, sometimes with the aid of third-party hosting partners.

The majority of the white-label providers and solutions vendors are startups established with the purpose of exploiting either the mobile-messaging field generally or IM specifically. Some of the big handset and equipment vendors, however, are also offering solutions in this space. For instance, AOL worked with Nokia and U.S. operator VoiceStream to launch handsets with an embedded IM client in November.

White-label or operator-owned solutions, meanwhile, are attractive because they tend to offer wider interoperability and a lack of conflict in terms of brands, states Baskerville's recent executive briefing *Mobile Instant Messaging*. But service providers will have to recruit subscribers to the IM services because they will not have an installed base of fixed-line users.

Those users familiar with IM will already have a relationship with one or more fixed-line players. Service providers are then faced with the challenge of integrating an account with a fixed-line player with a mobile account or encouraging customers to

start anew with the mobile offered solution. The time and effort required to build a buddy list might be a barrier to adoption, adds Baskerville.

Operator-owned solutions, on the other hand, offer benefits in terms of security, privacy and control over services but incur higher capital expenditure and potentially higher operating costs, requiring a degree of in-house expertise or a subcontract and therefore reliance on the supplier. There are also limited economies of scale.

Baskerville says white-label solutions from a service provider bring services to market faster than operator-owned installations, but mean that operators might lose some control over services and customer data. In particular, if services require presence or location information generated by the cellular network, there may be issues of security or privacy in supplying it to a third party. Outsourcing in this way can reduce the operator's financial risk, concludes the report.

Tal Rayman, vice president of product management for IM provider Followap, makes a strong case for licensed solutions over hosted – even white-label hosted – solutions. He outlines many advantages for operators having solutions on-site, including control, customization and integration.

In all probability, Baskerville concludes, a mixture of solutions will inhabit the market.

### Asian case study: ACL Wireless

If an operator has 1 million subscribers, ACL predicts within three years 10-15% subs will use wireless instant messaging over SMS and GPRS, and the operator will be US\$10 million better off in that year.

In other words, a sole subscriber will bring in additional revenues of US\$10 per year, explains ACL's Goyal.

At year three, ACL reckons that 75% of an operator's IM users will use GPRS as a bearer and that the average number of SMSes originated and terminated per day per user will be 2.4 and 3.7, respectively.

IM vendors from around the globe, such as Yahoo!, ICQ and Openwave, have been pushing their products in Asia-Pacific for about the past year.

This space, according to Goyal, is

Fig. 2: Consumer usage of ACL's WIM over SMS

	Launch	End of year 1	End of year 2
Registered users	20,000	40,000	80,000
MO SMS per day	20,000	60,000	120,000
MT SMS per day	30,000	100,000	240,000

Note: for 1 million-sub base

Source: ACL Wireless



**Fig. 3: Consumer usage of ACL's WIM over GPRS**

	Launch	End of year 1	End of year 2
Unique users/month of total GPRS subs (%)	25 within 3 mo.	35	50
KB/message	5.0	7.5	10.0
Messages/user/day	10	12	15

Source: ACL Wireless

one of the most competitive markets to be in.

"Being smaller, we are faster and more flexible than our larger rivals," he claims.

ACL was established in early-2000 with an initial paid-in capital of US\$1 million, securing a second US\$1 million from Asia's oldest venture-capital fund, Inter Asia Venture Management, whose chairman is Lewis Rutherford. ACL is fully funded for the next year and can draw more funds from existing investors if required, Goyal says.

"We were the first in Asia and probably the world to build this product over SMS," he adds. "We've taken advantage of our first-mover position and launched our first commercial product in Indian in October last year."

ACL Wireless has 50 employees and is headquartered in New Delhi, where it has its research-and-development facilities. Its sales office in Malaysia services the rest of Asia.

Goyal claims that ACL's solution is "25-50% more cost effective" than products from its European and U.S. competitors because of its lower overheads.

"We are very focused on the Asian market," he says. "Asian operators have specific needs that European operators do not."

ACL has eight customers in Asia that together have more than 12 million mobile subs, including Thailand's AIS, which had 7.5 million subs as of June, while its rival TAC has a deal with Yahoo! for IM over SMS. In Indonesia, third-ranked GSM operator Excelcomindo, with 1.4 million subs, has also signed up with ACL, as have six operators in India. Goyal says those six Indian cellcos, including Bharti Cellular and Idea Cellular, represent 60% of India's mobile-subscriber base.

In India, all six operators have launched services over an SMS interface, while AIS and Excelcomindo are testing ACL's IM over SMS solutions with a "small number of people."

"Operators weren't looking at

GPRS at the time when we signed these deals," explains Goyal. "Now we see more interest from operators for IM over GPRS than SMS."

India's Bharti Cellular launched its solution Oct. 1 2001.

"Since then we've been marketing our product to Singapore, Hong Kong, the Philippines and Taiwan," Goyal continues. "By the end of the year, we hope to be commercially up and running on at least one network in Malaysia, Philippines, Hong Kong, Singapore and Taiwan."

If successful, that would take ACL's customers to 15 by December and make WIM available to 20 million+ subs, up from 11 million+ today, according to Goyal. He forecasts that by 2006, ACL could have deals with cellcos in Asia with 150 million subs between them. Of these, 10% could be "actively using our IM applications," says Goyal.

He adds the operators in India that have deployed ACL's commercial IM service are exchanging 2 million messages a month collectively, with the most popular services being "finding friends" and mobile/PC IM chatting.

Based on ACL's Indian experience to date, the company has crunched some numbers of expected consumer take-up of WIM over SMS. The figures show that an operator with 1 million subscribers can expect about 20,000 registered WIM users (2% of its subscriber base) within 30 days of launch. ACL sees it doubling by the end of year one (see fig. 2).

On the GPRS side, ACL forecasts that within three months, 25% of an operator's GPRS subs should also be "unique users" of WIM, sending 10 IM messages each per day, growing to 50% by year two (see fig. 3). In other words, a GPRS user should be sending 10 IM messages per day within three months of rolling out WIM and 15 messages per day by year two.

In the vast majority of cases, ACL has revenue-share arrangements with its IM customers, but Goyal says "some customers prefer a license arrangement."

"We are an ASP," he adds. "We host our operation entirely from our setup in the U.S."

ACL runs 15 servers from its data center in the U.S., from where it integrates its software into the operator's network - its WAP gateways, SMSC Internet servers, etc.

To become an ACL customer, there is a small setup fee, which is "almost insignificant," says Goyal. For the customer, they need only use their existing handsets.

On its revenue-share deals with operators, Goyal says ACL takes "closer to 50%" of the revenue generated per application, as opposed to a 5-10% share.

"The operators appreciate the intellectual property that has gone into developing the product. If we licensed it to them, it would cost US\$500,000+," he says as to why revenue share deals with Asian operators are more popular than straight licensing deals.

"We provide our product to mobile operators, customize it to suit their brand, and expect them to market it to their subs," explains Goyal.

"We have promoted a common service mark (MM), which stands for Mobile Messengers. We encourage our customers to use it, and also provide a full marketing support plan to shorten time to market."

ACL has plans to tap Europe, the Middle East and Africa with its IM solution but only after it has explored all opportunities in Asia.

It is developing a Thai-language solution.

"We haven't developed a product with Chinese characters, which is the main reason we haven't ventured

## Contacts

### MOBILEWAY

124 rue de Verdun  
92800 Puteaux  
France

☎ (33) 1 4144 9560

fax (33) 1 4144 9561

www.mobileway.com

**Remi Provender:** senior business development manager

Mobileway Asia-Pacific office:

1 Jalan Kilang Timor  
08-03 Pacific Tech Centre  
159303 Singapore  
Singapore

☎ (65) 6836 4430

fax (65) 6836 4450

info.singapore@Mobileway.com

### NOKIA MOBILE PHONES

P.O. Box 100

FIN-00045 NOKIA GROUP

Finland

☎ (358) 7180 08000

fax (358) 7180 45782

www.nokia.com

**Janne Kilpelainen:**

technology marketing manager

### NOKIA NETWORKS

P.O. Box 300

FIN-00045 NOKIA GROUP

Finland

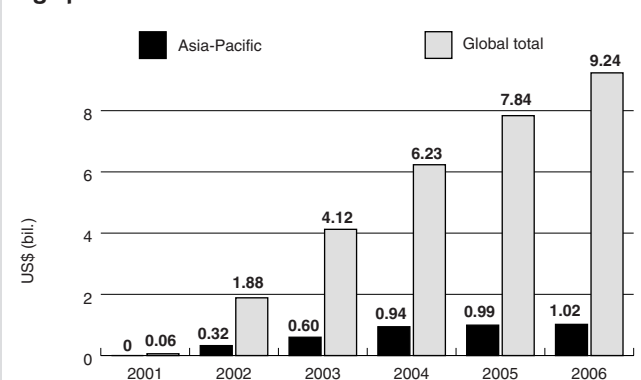
☎ (358) 7180 08000

fax (358) 7180 38200

**Mika Suomela:** senior marketing manager

### OTM-TECHNOLOGIES

**Fig. 4: Asia-Pacific IM revenues**



Source: Baskerville



## Contacts

Herzliya Business Park  
85 Medinat Hayehudim  
P.O. Box 4004  
Herzliya 46766  
Israel

© (972) 9 970 1800  
fax (972) 9 970 1801  
www.otmtech.com

**Magnus Jacobsson:** business development manager

### AOL INSTANT MESSENGER

www.aim.com

### ICQ

web.icq.com

### YAHOO! MESSENGER

messenger.yahoo.com

### MSN MESSENGER

messenger.msn.com

### PAM FORUM

2840 West Bay Drive  
No. 104  
Belleair Bluffs, FL  
33770  
U.S.

© (1) 727 596 0500  
fax (1) 727 596 1545  
www.pamforum.org

into China,” explains Goyal. “We plan to do this. For China, we see GPRS being the main solution rather than SMS, as menu-driven interfaces are less cumbersome for Chinese characters.”

He says menu-driven, color screens and quick messaging (i.e. being able to save messages sent rather than retyping them in) are conducive to more revenue-generating IM services.

He adds that IM will “be the killer app on GPRS” and that IM-over-SMS has some severe interface limitations and lacks immediacy.

“We believe we can reach a mass market through this medium [GPRS],” says Goyal. “For a while, WAP-over-GPRS could be the most ideal platform to be working on.”

As for Java, “we were very excited about it, but when we found how it works on mobile phones, we changed our mind,” Goyal says. “You have to make an application for each device. Application developers don’t have time to do that.”

Baskerville points out that handset upgrades are also required for Java users, creating an initial barrier to adoption.

Goyal notes that Asian operators are concerned about the slow take-up of GPRS and realize the need to offer compelling GPRS applications, which indicates operators are not worried about SMS traffic being cannibalized by IM, although that was the initial perception among operators.

“WIM with GPRS means operators may end up getting more revenues because subscribers will end up sending more messages and operators can charge for outgoing and incoming messages,” he notes. “Richer

content means operators will use more data capacity than SMS.”

“I think GPRS [per se] is now the primary focus of most operators, even in the Philippines and Singapore.”

Idea Cellular is testing WIM on its WAP-over-GPRS service with some subscribers. Most networks in India are GPRS-ready, and Goyal expects some commercial launches by year-end.

He also believes MMS will drive GPRS and operators will seek additional MMS opportunities. As such, ACL is leveraging MMS into its IM solutions.

To be included in WIM 3.0, ACL is developing a feature whereby users are able to send MMS messages to their buddies from personal albums stored on ACL’s server and even share their personal content with a group of people or publically.

It follows that operators can charge premium prices for such services and for others, including location and presence information and PC/GPRS originated messages.

Other revenue streams can include inserting ads on incoming messages. That leads to the issue of billing.

### Billing and pricing

This is perhaps the greatest area of contention when it comes to mobile IM services implementation.

For SMS-based services, billing systems support per-message billing and usually bulk message billing – that is, charging a fixed rate for a given number of messages. Increasing numbers of operators have now upgraded their billing systems to support reverse billing or SMS-terminated billing. Baskerville says that capability may be necessary in order to charge for providing presence information, although alternatives such as users sending an SMS, possibly to a premium-rate number, also generate revenue.

Reverse billing can be key for generating revenue from chat groups, too. “Listeners,” those watching the discussion without participating, receive SMS messages, and with reverse billing can be charged for receipt. Most chat services that support reverse billing have asymmetric charging, with sent messages being priced higher than passive use, which entails simply fol-

lowing the discussion by receiving SMSes.

ACL’s Goyal says the majority of Asian operators’ existing billing systems can support WIM 2.0, but he says “this limits to some extent the premiums that can be charged for certain IM services,” since there are few differentiated billing mechanisms for SMS throughout the region. For its WIM-based IM service, Bharti Cellular in India is charging the same to send an IM as an SMS.

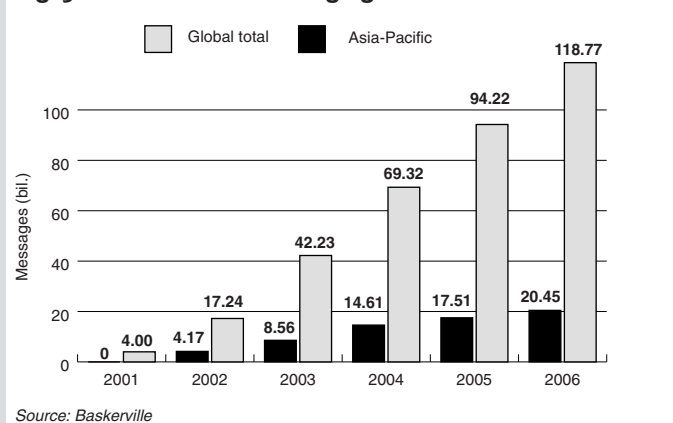
Turning to GPRS, Baskerville highlights that the IM traffic from any one user will represent a relatively low volume of data. Consequently, the per-megabyte billing structures typical for GPRS will not yield particularly high revenues for the service.

Some operators have committed to event-based billing for GPRS. That would enable per-message charging. Alternatively, the IM server can generate CDRs based on the traffic being processed, and these can be passed to the billing system to enable charging per message.

Service providers can also charge a subscription, either for providing presence information or for access to the service itself. That charge can be incorporated relatively easily into the general monthly mobile subscription, but it creates problems for prepaid customers since the general trend has been toward higher per-minute/per-SMS tariffs and no standing charge, states Baskerville. In Asia, Goyal says there are no prepaid GPRS services yet because operators’ billing systems can’t support such services, but that prepaid GPRS services are coming in the next three to six months. Anders Teslo, Colibria’s chief business development officer, supports the one-at-a-time charging method.

“Experience and market surveys show that billing per message is the preferred user method, especially since the youth market is the lead user group for mobile IM,” he says. ▲

Fig. 5: Asia-Pacific IM messaging volumes



The background information used in this article is sourced from *Mobile Instant Messaging*, a Baskerville executive briefing, published at the end of February.  
Contact: olivia.gibney@informa.com.