OPERATOR STRATEGIES FOR MOBILE INSTANT MESSAGING

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Abstract
Instant messaging has become a huge success in the fixed Internet. Simultaneously, other forms of messaging are also popular in the mobile world. This suggests that mobile instant messaging may well be a latent customer need. This paper studies the current state of instant and mobile instant messaging market, and analyzes the possible strategies for a mobile phone operator to employ in it. The balance between cooperation and competition with the other players (other operators, fixed Internet IM services and manufacturers) is very delicate in this market.

Key Words
Mobile instant messaging, instant messaging, operator strategy, network effect.

1. Introduction
Instant messaging (IM) means such communication service in which the users are able to communicate with each other in writing in real-time. Communication may happen either between two users or within a bigger group. Most IM services also include presence information features, meaning that they are able to show status information about the users, for example, whether a particular user is available for a chat or not, or if she is not even online at all.

IM complements the palette of other communication mechanisms, allowing faster response than e-mail but yet not requiring as intensive attention as a telephone call. It is little by little establishing a permanent position as a means for communication. IM’s strongest position is in the consumer market even though the number of business users is increasing. In the consumer market, IM is mostly used for keeping in touch with friends or family, even though the IM services also have different search tools for searching new friends (that e.g. share same hobbies) to chat with.

IM has become one of the most popular applications in the fixed Internet. In year 2004, the user base of IM reached 260 million and was still rapidly growing (Salin 2004). Simultaneously, also short messaging system (SMS) messages have gained huge popularity in the mobile telephone networks. Popularity of SMS suggests that also a more advanced mobile messaging service like mobile instant messaging (MIM) may well be a latent customer need.

As the mobile phone network operators are currently very focused on finding new services to the mobile market, they would be more than happy if MIM turned out to be the new SMS. Hence, this paper will study different possible operator strategies for competing in the MIM service market.

The paper is structured as follows: First, section 2 explains the current situation in the IM market. After that, section 3 presents the possible operator MIM strategies, section 4 further discusses the strategies, and finally, section 5 give our conclusions.

2. Landscape
This section explains the current situation in the IM market, covering both the fixed Internet IM market and the existing MIM market.

2.1 Fixed Internet IM Market
Currently, the most significant competing fixed Internet IM services are AOL Instant Messenger (AIM), ICQ, Yahoo Messenger, MSN Messenger and Google Talk.

AIM and ICQ are both owned by AOL. Originally ICQ service belonged to Mirabilis, but the company was acquired by AOL in 1998. Nowadays, AIM and ICQ both employ the same proprietary OSCAR protocol and are compatible with each other. In 2004, the active user base of AIM is 53 million whereas ICQ’s is 15 million (Nielsen/Netratings 2005). Together it means user base of nearly 70 million for AOL.

MSN Messenger is the IM service of Microsoft. It uses a proprietary Mobile Status Notification Protocol (MSNP). Its active installation base is 29 million (Nielsen/Netratings 2005).

Also Yahoo Messenger uses its proprietary standard, YMSG protocol. User base of Yahoo Messenger is about 21 million.

Google Talk is an exception from the other IM services with its open XMPP/Jabber protocol. Current user base of Google Talk is still small, but its strategy is to gain user base by encouraging other XMPP/Jabber compatible IM services or clients to interoperable with its network.

Finally, Internet Engineering Task Force (IETF) has developed an open Session Initiation Protocol (SIP) based IM standard called SIP for Instant Messaging and Presence Leveraging Extensions (SIMPLE).
Table 1: Active user bases of fixed Internet IM services

<table>
<thead>
<tr>
<th>Alliance</th>
<th>Service</th>
<th>User base of service</th>
<th>User base of alliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOL</td>
<td>AIM</td>
<td>53</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>ICQ</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Microsoft and Yahoo</td>
<td>MSN Messenger</td>
<td>29</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Yahoo Messenger</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Google</td>
<td>Google Talk</td>
<td>small but growing</td>
<td>small, but growing</td>
</tr>
</tbody>
</table>

All the IM companies have been very reluctant to let others to interoperate with their service (and hence to profit from their user base). However, the companies are starting to realize the importance of a large total IM user base. Microsoft and Yahoo have announced that their MSN and Yahoo Messengers will be compatible in summer 2006 whereas Google is establishing interoperability with AIM and ICQ.

2.2. Existing MIM Market

As we argued in the introduction, the potential need for MIM is very clear. The IM companies are already formulating their mobile strategies, most of them having introduced a mobile version of their IM service.

Yahoo has launched its Yahoo Mobile, offering an SMS based and a mobile web browser based Yahoo Messenger client. The service works independently from operators. Charging is based on operator wireless data plan. In other words, an operator is a plain data carrier and gains no extra revenues for enabling the MIM service. (Yahoo Mobile 2006)

Similarly AOL offers an SMS based mobile access to its AIM network and also a real mobile AIM client. AOL is also cooperating with some US mobile operators, which provide a pre-installed mobile AIM client. Basically pricing is based on wireless data plan. (AIM 2006)

For Google Talk, third parties, like BlackBerry, have launched compatible (XMPP/Jabber) MIM clients. Mobile Google Talk is likewise independent from the operators.

Simultaneously with fixed Internet IM service mobile expansion, Open Mobile Alliance (OMA) has introduced a set of specifications for MIM called Instant Messaging and Presence Service (IMPS) (OMA 2006). The standard is often referred as “Wireless Village” (WV). OMA is a standards body formed by many large mobile operators, mobile equipment manufacturers and software vendors. IMPS as well as SIMPLE are applicable for both mobile and fixed environments.

3 Operator Strategies

IM is a classical example of a technology in which network effect takes place. Network effect means that the more a technology has users the more it has value for them. Telephone network is a good example of technology with network effect; the more users a telephone network has, the more persons one is able to reach by means of telephony. Hence, the technology is the more valuable for the users as they can reach many people with it.

However, the case MIM is just a bit more complicated. As in the previous example, the more MIM users there are, the more people they are able to reach by using MIM. Yet, possibility for interoperability with fixed Internet IM makes competitive environment more complicated.

We believe that the MIM users would not only valuate communication with other MIM users, but also with the fixed Internet IM users. Hence, an operator has two different dimensions on which to seek interoperability: other operators and IM services of the fixed Internet.

Figure 1 summarizes the four possible strategies resulting from the dimensions. An operator can seek interoperability purely with other operators, purely with fixed Internet IM services, simultaneously with both of the previous, or it can establish its own closed proprietary MIM standard. These are rather components of strategies than strategies to strictly follow, as will be explained later. Next, we will cover the different strategies with more details.

3.1 Interoperability with Other Operators

The most natural way for the operators to expand user base of MIM is to establish interoperability between each other. Firstly, the total connectivity offered by MIM increases when customers of different operators can reach each other, and hence, the service is found more valuable by the customers. However,
interoperability between operators is attractive also for other reasons.

First of all, the operators employ similar business models. It is easier for two mobile operators to establish a common service, than it would be for an operator and a fixed Internet IM company. Many IM companies get their revenues indirectly from advertisements unlike the operators that employ direct charging.

Secondly, a purely mobile IM service would also allow developing the service from a mobile perspective. The mobile environment differs from the fixed Internet also in the device capabilities. On the one hand, the mobile devices are limited in their I/O capabilities, but on the other hand, they also have capabilities like mobility and ability to produce location data, which could enable versatile services. It is easier to develop a service for a relatively homogenous user interface.

The work for MIM interoperability has already begun, OMA IMPS being the most visible effort towards it.

### 3.2 Interoperability with Fixed Internet IM

There are two aspects in interoperability between MIM and fixed Internet IM. Firstly, if a MIM service is compatible with existing IM services, it gains the advantages of a large network for free. There is already a large amount of fixed Internet IM users to communicate with even if the amount of mobile users were small.

Secondly, it is likely that those same people that are already using normal IM are the ones who are also the most promising target group for MIM services. In situations like this, Varian et al (Varian 1999) emphasize the importance of offering a smooth migration path for consumers. In other words, an operator could gain the existing IM users to its customer base by offering sufficient interoperability with their existing service.

Because of these two factors, interoperability with fixed Internet IM can offer competitive advantage for an operator.

The most basic form of this interoperability would be naturally the ability to send messages between mobile and fixed networks. Examples of other elements of interoperability are:

- Using same account
- Using same buddy list
- Passing presence information between fixed and mobile networks

The easier it is to migrate from fixed Internet IM to MIM, the more users will choose to do so. Yet, the strategy has still its challenges.

First of all, as mentioned earlier, mobile devices are still very limited in their capabilities (e.g. small display and slowness of text input). It is unrealistic to assume that the fixed Internet IM users would completely migrate to MIM in the near future. For them, MIM is rather such addition to the normal IM service that allows usage of service also in mobile settings, not a substitute to the original service.

Secondly, establishing interoperability may be difficult, as there is no single dominant fixed Internet IM service (Salin 2004, Nielsen/Netratings 2005). Instead, an operator should separately seek compatibility with each service.

The companies offering IM services have been very reluctant to establish compatibility even between their services, and so this strategy may be difficult. It is unlikely that after refusing to establish interoperability with each other, the IM companies would suddenly all accept to interoperate with some mobile IM service.

However, it is possible that one or even a few of the largest IM services would be interested in a partnership with an operator. Partnership with an operator would allow also the IM service to enlarge its user base and, most importantly, improve the service that is offered to its customers as they could use the service also in mobile settings.

There are different possible forms for the partnership:

- The operator and the partner share a standard (e.g. open standard, common proprietary standard, mobile version of fixed Internet IM service standard or operator’s proprietary standard)
- The different standards are made interoperable through a gateway/proxy

OMA has paid special attention on the ability for an IMPS network to interoperate with other IM networks. The IMPS architecture includes a gateway that can be used to connect the network to other IM networks.

### 3.3 Universal Interoperability

Naturally, an operator can also simultaneously seek for interoperability with as many other operators, and as many fixed Internet IM service, as possible. This strategy would maximize the connectivity offered by the MIM service. Universal interoperability may yet be an utopia but it is still a good goal to strive for.

As this “strategy” is only a combination of the two previous, we will not count it as a strategy of its own.

### 3.4 Closed Proprietary Standard

Instead of seeking interoperability, an operator has one final strategy left. It can establish its own proprietary MIM standard. The problem is that then the operator
cannot utilize any existing IM networks and hence gaining positive feedback from network effect is harder. On the other hand, the operator has total control over the standard, and it can gain customer loyalty (lock-in) by being the only operator offering a particular MIM service. For example, Finnish mobile phone operators have long looked for this kind of services to increase customer loyalty.

Yet, the downside of this strategy is that an operator has to carry the risk of developing and launching a standard alone. Furthermore, competition with other standards may be hard, especially if other standards have larger user bases. A larger user base means a larger value of network. Hence, an operator using the proprietary standard strategy has to either have an existing sufficiently large customer base or offer such technologically superior standard that can compete even with larger networks.

However, an operator can utilize this strategy also partially by making proprietary modules to an open MIM standard. This way it can get the best of both open standard and proprietary standard strategies: a large market but simultaneously control and customer lock-in. Varian et al (Varian 1999) recognize this delicate balancing between cooperation (open standard) and competition (proprietary modules) as coopetition.

4. Discussion

The fight for MIM market is already begun. Fixed Internet IM services as well as operators are establishing their positions in it. Due to their existing user base, the IM services are currently in a better position. Partly this is because the operators have been reluctant to cannibalize their lucrative SMS business with MIM. Now, however, as the fixed Internet IM services are going mobile, too, it is the latest moment for the operators to act if they want to be in the MIM business.

All of the strategies (or “components of a strategy”) presented in the previous section are applicable for an operator. As a matter of fact, we recommend an operator to employ all of them.

Firstly, a common standard for MIM helps to establish a true MIM market with a sufficient user base, not just an extension to the fixed Internet IM services. It also sets the alliance, as a single larger IM player, into a better position when negotiating for interoperability with fixed Internet IM services. OMA IMPS seems to be a promising candidate for a standard in this category.

However, an operator is able, simultaneously with this strategy, to seek for interoperability with individual fixed Internet IM services. If an operator succeeds in establishing such interoperability the other operators are not capable of, it can gain customer loyalty. For example the IMS architecture allows this. In addition, an operator can gain further customer lock-in by differentiating through proprietary extensions to the common standard.

4.1 Pricing

A problem for the operators is that a MIM service can be implemented over their plain data services without them explicitly enabling the service. Many of the current MIM services are operating like this.

This makes it hard for the operators to justify premium prices for their own, or especially for IM service provided by some another instance (e.g. a fixed Internet IM company). Yet, the only benefit an operator gets is increase of data traffic if premium pricing cannot be applied. An operator should strive for a position where it can apply premium prices or otherwise there is a risk that it will become a plain data carrier.

Premium pricing would be psychologically more acceptable to the customers if the operator itself provided the MIM service, or even better, provided better MIM service than the others are providing. This is another reason why an operator should primarily try to establish a common good MIM standard with other operators having similar business models, and only then seek for interoperability with the fixed Internet IM services. Yet, cooperation with the fixed Internet IM companies must not be forgotten as, open competition with their user bases may be hard.

4.2 Cooperation with Manufacturers

Another important player in MIM markets are the devices manufacturers, which affect to the market in many ways. Importantly, the manufacturers decide what kind of mobile devices there are available for the consumers. Currently, the devices support IM only sufficiently, even hardly, due to their I/O limitations. The better devices would better enable MIM and would thus have positive effect to the market.

An operator should cooperate with the manufacturers to help them to create devices that better support MIM. Also preinstalled MIM client applications could help MIM to gain user base.

5. Conclusions

In this paper, we have studied the current state of the MIM market, and strategies for a mobile phone operator to compete in it. We recognized the three strategies an operator can employ in the MIM market; establishing interoperability with other operators, establishing interoperability with fixed Internet IM services and establishing a closed proprietary standard. However, we ended up suggesting employing all of them simultaneously by combining them into a single strategy.
However, as argued, balancing cooperation and competition with the fixed Internet IM companies is a delicate issue. On the one hand, they are threat to operators’ MIM services, but on the other hand, they hold significant existing user bases which can accelerate the adoption of MIM.

The IMPS standard of OMA supports all of the recognized strategies as it establishes a common standard for the operators and enables interoperability with other IM networks. Hence, we see that of the current standards, IMPS is the most advantageous for an operator to employ.

References


