

IBC's MOBILE LOCATION SERVICES
19-20 June 2001 Rome, Italy
Report, Pasi Pekkinen, 27.7.2001

SUMMARIES OF THE PRESENTATIONS: DAY 1

1) KEYNOTE SESSION

Bilah A. Saleh LIF, Motorola

In the opening presentation Mr. Saleh first defined the key success factors for mobile location services to be 1) the evolution from technology to an industry and 2) becoming a mass market business. The latter includes issues such as interoperability, security and privacy, which need to be addressed.

The importance of interoperability is raised from the complicated infrastructure: multivendor networks, multitude of systems and legacy content systems. If interoperability of the services is not reached the user experience will be inconsistent, roaming will not be supported and no guarantees on privacy or security can be given across networks. From the technical side, the difficulties will slow down the development and deployment of solutions and together these will result in business losses.

To tackle these interoperability issues, LIF was founded. LIF addresses issues such as positioning technologies, applications and contents, billing and provisioning as well as privacy and security.

Mike Payne, Vodafone UK

Mr. Payne, the Head of Network Services, started with claiming that LBS are fundamentally important to an operator like Vodafone: world's largest mobile operator operating in approx. 30 countries, bearing 83 million subscribers, turnover of £21 billion.

On the customer's expectations for LBS, he emphasized issues like trust, ease of use, wide range of services, for low cost and with roaming capability. He pointed out, that neither they nor the customers know everything on what the customers want, and that each new technology step will open up new opportunities.

Vodafone is addressing these needs by starting a Group LBS Project to create a common gateway and to review existing applications.

2) OPERATOR CASE STUDIES:
COMMERCIAL ROLLOUT & DEPLOYMENT OF LOCATION APPLICATIONS

Implementing advanced location enabled applications

Anuj Jain, Orange Switzerland

Mr. Jain gave a presentation on the LBS provided by Orange in Switzerland. These include points of interest, routing, traffic and cinema information and they were launched in 12/2000. The services are available over a WAP call and the positioning is based on Cell ID or manual input. In the previous case the user is provided with a list of proposed streets around his location to get a confirmed position.

The POI service covers more than 60 000 POIs. The routing service supports different means of transport (car, foot, tram). The traffic information is updated every 5 minutes. The Cinema service is a special case of the POI-services.

The most popular services have been the POIs (33%) and the routing (42%). The most popular types of POIs have been restaurant (32%), disco (10%) and hotel (7%). The most typical mean of transport in the routing services has been a car (88%).

Regarding the revenues made, they have only charged for airtime with no extra charge for the actual services. The revenues have been limited since no promotion has been made so far and because of the poor takeoff of WAP itself. However 8% of WAP calls are LBS requests.

The next steps are to enhance the services, to look for new interfaces, to improve the precision, to review the charging aspects and to develop new services.

Commercial Roll-out and Deployment of MLS Services

Stefan Mattlener, T-Mobil, Germany

Mr. Mattlener gave a presentation on the T-Mobil's approach to the provision of LBS. Regarding the competition in Germany, he stated that nearly all operators in Germany launched LBS at CeBIT 2001. Typically these services are traffic, shopping and regional information applications. On privacy issues the "Federal Data Protection Commissioner" (BfD) has taken the position that push and tracking services should not be launched at all in Germany.

On the T-Mobil's approach, the key word is enabling as the core competence of an operator is mobile communications and the application service providers help the operators to enhance non-voice business.

Implementing the Killer LBS Application

Magnús Salberg Óskarsson, Iceland Telecom

The Iceland Telecom is currently state-owned but is planned to be sold out during the latter half of this year. The VAS portfolio includes messaging, news, information, entertainment and shopping services. They are highly popular, especially in the age groups 16-30 years old. According to Óskarsson, the customers demand for value, entertainment and LBS.

“My Super Offer” is a personalized LBS, that provides the bargains according to the user’s interests within a proximity of their current location. For the mobile phone, the service is pull-based and accessible via SMS, WAP and SIM Toolkit. On the web, the users subscribe to a push-based service. The user may select a Super Offer from the web page which is then sent to the mobile phone.

The mobile users get paid for viewing advertisements by the advertisers. It requires registration and provision of interest profile. Advertisers also sponsor SMSs: both the sender and the receiver get the advertisement.

The ARPU is 7€/month and 17% of users have subscribed for the service. The next services to be launched are: My Buddy Tracker (q2/2001), Mobile Warrior (q3/2001), Localized dating and I-commerce (q4/2001).

Commercial Roll-out & Deployment of Services

Miguel Mendes, Optimus, Portugal

According to Mr. Mendes there is an overlap between mobile location services, mobile commerce, mobile advertisement and M2M, which needs to be clarified. The strategy adopted by Optimus starts with the provision of proximity services based on Cell ID. Evolution to higher precision location technology possible, if a demand is identified and the return of investment is high enough. Currently Optimus is looking for maps and contents for Portugal. They plan to launch services by the end of 2001.

Mastering the Whole Value Chain of Positioning

Tapio Valli, Sonera Positioning Services, Finland

Mr. Valli started his presentation by stating that Germany has the highest rate of SMS messaging, that is 35 SMS messages/user/month, whereas in Finland the figure is 30. According to Mr. Valli for the next three years to come SMS will rule. LBS is a must feature for any operator. On positioning technology he stated that TA or Rx-levels do not work in the cities, where the customers are. Thus Cell ID is the viable solution until perhaps A-GPS is more widely adopted and supported. Regarding the business model he stated the market is not mature as all of the players seem to expect to be the king in the value chain.

Sonera Pointer Architecture covers the whole value chain of LBS. The Pointer Strategy is to support multivendor networks and be flexible for all positioning technologies, not to require major network investments, to be based on standards and open interface and to have GPRS and 3G solutions ready.

On the service provision Mr. Valli advised to start with harmless, neutral information services on the pull-basis and emphasizing privacy.

Interactive Operator Panel Session

Panellists: Anuj Jain (Orange), Stefan Mattlener (T-Mobil), Magnús Salberg Óskarsson (Iceland Telecom), Miguel Mendes (Optimus) and Nigel Shardlow (Orange)

The operator panel session concentrated on issues related to the business model. It was raised that revenue sharing is problematic because it can only be used with premium prices. Instead it was seen that operators should concentrate in creating partnerships. It was pointed out, that one should not expect to look for consumers to pay for more, rather to charge in the direction of money flow from the merchants via developers to operators. In the end of the panel discussion took place whether operators would provide and/or sell location information to third parties. The answers varied from “perhaps” to “never – due to legislation or securing the investments”.

3) ENHANCING EXISTING APPLICATIONS & DEVELOPING SERVICES FOR THE FUTURE

Driving the development of new location specific services and enhancing existing applications

David Pearce, SignalSoft Corporation

Mr. Pearce started by emphasizing that location is the essence of mobility. Signalsoft’s portfolio includes a location gateway, applications (local.info™, location sensitive billing, W911/112, B Found.com™) and maps. Signalsoft’s strategy is to create partnerships worldwide, currently they have over 100.

Mobile Location Services: Find your point of weakness

Göran Swedberg, Ericsson Mobile Position

Mr. Swedberg’s presentation outlined some of the important and changing factors while moving from 2G to 3G. He stated that value added services make the cake and location is a filter for relevant information. He claimed that high accuracy is not required for most services today, but it will be expected in the future. He pointed out that IPDL has the weakness of shutting and turning on of a electronic system is always problematic.

Examining the MLS market evolution and future potential

Simon Maslin, The ARC Group

The MLS market has been driven by commercial and regulatory drivers. Different types of players are moving into the market and the value chain is being redefined as the players roles change. The market has great potential. According to ARC Group, by 2006 there will be 1502 million mobile data users, all of whom will use MLS.

4) PRIVACY ISSUES & LOCATION SERVICES - IS BIG BROTHER WATCHING YOU?

User Privacy Issues for Mobile Location Services

Panellists: Mozelle Thompson (Federal Trade Commission), Dr Jorge Pereira (European Commission), Henri Quiniou (LIF / Zero-Knowledge Systems Inc), Bill Mieran (Telecoms Users Association), Ms Shawn Covell (Qualcomm), Mark Gisler (WLIA)

Dr. Pereira started by stating that there are two directives related to privacy in Europe, a general one and a telecom related one. He also said that the difference in the European and US approaches is that in Europe opt-in is the only acceptable way of ordering MLS whereas in US opt-out is also accepted.

Mr. Gisler defined WLIA's task as to try to come up with standards for the location-based services to secure privacy.

Mr. Mieran pointed out that it is the users who own the location information and that users would reject any attempt to sell this data. He also pointed out that roaming is an issue and that roaming charges as such are already incredibly high.

When asked if the panellists had any wishes for the future, Mr. Mieran stated that the industry should be more user aware. Mr. Gisler hoped for uniform international consensus and Dr. Pereira pointed out that an open architecture is the only way to meet user requirements.

5) LOCATION TECHNOLOGY UPDATE

How to Target High Value Mobile Location Services Based on E-OTD Location Measurement

Bernd Gross, Nokia Networks

Mr. Gross defined the quality of Mobile Location Services to be the end-user perceived value based on 1) design of the service, 2) robustness of the service and, 3) location method quality. The three location service categories defined by LIF i.e. basic, enhanced and extended could be related to Cell ID, E-OTD and A-GPS respectively.

The roadmap for mPosition showed that for legacy phones CI + TA is already available, CI +TA + RX will be available in q3/2001, E-OTD in q4/2001 and A-GPS in q1/2003. Ultimately the evolution will result in a multimethod system incorporating enhanced CI, E-OTD and A-GPS.

Nokia realised field tests together with Radiolinja in Estonia with CI +TA + RX methods. In urban area the accuracy for CI +TA + RX measurements was within 200 m for 67% of times. The Rx level accuracy improvement was about 30%. In suburban areas the accuracy was 400 m for 67 % of times and Rx improvement was about 20%.

Joint Case Study: Wireless Assisted GPS Location Solution

Bret Sewell, SnapTrack and Terry Rayburn, Sprint

Mr. Sewell started by giving a company overview. He pointed out that SnapTrack has pioneered in Hybrid Wireless Assisted GPS™ and they have so far been awarded with 28

patents, 6 allowed and 17 additional patents are pending. So far over 30 carriers on three continents have trailed SnapTrack technology.

The GPS time determination is reached via a pattern matching software solution, thus no LMUs are required. The position is calculated in the location server which combines terrestrial base station measurements for a hybrid computation.

Mr. Rayburn stated that if an operator like Sprint does not offer a top end solution like A-GPS, they would surrender the market to the external GPS service provider. He claimed that the appetite for performance is insatiable. On applications he said that services like tracking, navigation, real-time traffic information and push coupons are difficult to realise.

SUMMARIES OF THE PRESENTATIONS: DAY 2

1) L-COMMERCE

Location - A Key Mechanism of Wireless VAS and M-Commerce Services

Daniel Zhao, Yesmobile.com

Yesmobile.com is a provider and aggregator of content and a application developer. Mr. Zhao first gave an overview to the mobile and MLS situation in Asia and Greater China (China, Taiwan, Hong Kong). Currently there are over 102 million mobile users in Greater China and the expected growth rate is 25% during 2001.

On the MLS marketing status in Greater China there are legal issues as barriers in mainland China due to POIs related to national security.

Location - A key Enabler of Mobile Commerce Applications

Dr. Stefan Kuhn, Siemens ICmobile Mobile Phones

Dr. Kuhn gave a presentation on the factors for successful implementation of mobile applications. He stated that there will not be a single killer application and that one should talk about location-enhanced rather than location required applications. He stated that there are several problems related to mobile data usage: cost, small display, slow access, unreliability of the services, poor information quality, limited supply of services and privacy concerns.

On the other hand keys for success are that users want and/or need the service, it supports personalization, it is accessible, proper content an easy to use. Thus he defined "success of an application equals appeal divided by access".

L-Commerce

Panellists: Dirk Markner (Materna), Dr. Stefan Kuhn (Siemens ICmobile Mobile Phones), David Pearce(SignalSoft Corporation), Colin Bates

Markner stated that the only working business model is based on revenue sharing with the operators, not e.g. in operators selling location information. The users should pay for the services via telephone bill.

Pearce emphasized that the services must get pre-approving by the users and support profiling.

Markner continued that advertising should be included with things the users are already doing. E.g. when user asks for the route to somewhere tell what opportunities there are along the route.

2) BUILDING ALLIANCES

Building Strategic Alliances to Secure Winning Applications

Panellists: Simon Johnson (uB-mobile), Tuomo Kauranne (Arbonaut), Joe Astroth (Autodesk Inc.)

Mr. Kauranne emphasized the importance of simple killer apps to reach the mass markets acceptance for MLS and that a mobile phone is a person to person communication device.

Mr. Johnson considered that strategic alliances are required to share risks and to be innovative and bring new ideas to test the market.

Kauranne continued that roaming of applications is more important than roaming of technology.

3) MASS MARKET APPLICATIONS

Offering Location Based Content: T-Motion's Experience

Steve Page, Mobile Commerce Ltd, UK

Mobile Commerce's product portfolio contains multiple bearer "find my nearest applications". He emphasized the relevance of the information to be the key. Their experience is that 35% of users use the services mainly on weekday days, 45% on evenings or on weekends and 20% equally all the time. 33% of requests are related to the user's current position, whereas 66% to their future position.

The T-Motion's WAP service is based on self positioning and provides only limited categories of services. Nearest ATM searches is the biggest single group and 28% of all searches have been to locate them. The next biggest groups have been attractions (19%) and petrol (13%).

Pioneering Cell Broadcast Applications & Services

Tom Veldman, Cell Broadcast Forum

Mr. Veldman gave a presentation on applications and services based on Cell Broadcast. As a background he reminded that Cell Broadcast is message broadcasting by a network cell to all handsets locked to a certain cell. The handset only presents topics activated by the user. He claimed that Cell Broadcasting is cost effective in distributing to large groups, and that the control is fully within the user and it is location specific. Thus the user doesn't reveal his location to any external party.

Some of the service examples include local weather, nearest on-duty pharmacy and nation-wide information such as news. It also enables advertisement services, trigger services ("call now to get xxx") and subscribed services.

Cell Broadcast is a basic location service in its own right. It is also selected in GSM/UMTS as a mean to distribute supporting data for A-GPS and E-OTD. Global Locate has tested the use of Cell Broadcast for A-GPS.

The business models may be based on that the services are paid by the operator, the content provider or the end user. In the case of content provider paying, probably the most important is the triggered use of other services.

Evaluating the MLS Mass Market and Devising Effective Business Models for Delivering Location Based Services and Applications To the Mass Market

Johan Othelius, MobilePosition and Jorgen Jonsson, Telia Mobile

Mr. Othelius gave a presentation on the deployed location services for the mass market by mobilePosition. MobilePosition develops, sells and hosts location based applications for the operators. According to Mr. Othelius the business model used should depend on the target group, application, content and the billing capabilities and preferences of the operator. He also stated that focus group testing is an important component in the application development. They realised a SMS ad market research and over 70% of users were positive to ad-financed SMS services.

Mr. Jonsson gave a presentation on deploying mass market LBS in Sweden. He emphasized the importance of partners and being high up in the value chain. According to their experiences the perceived accuracy is important, not the absolute. The Cell site data quality is important. He confirmed that SMS is a successful interface.

4) ROAMING LOCATION SERVICES

Roaming in Rome: Launching Network-Wide Location Services

Rod Herbert, CellPoint Systems

Mr. Herbert started with an overview of current market trends and some forecasts. He presented a wish list for an operator to include items such as: all users are able to take up LBS from day one without upgrades to mobile phones, full roaming support, works in multivendor networks etc.

5) EMERGENCY SERVICES

Emergency Location Applications: Security, Rescue & Tracking Tourists

Arngrimur Hermannsson, ADD Ice and Simon Thorleifsson, Trackwell

Mr. Thorleifsson and Mr. Hermannsson gave a presentation on a tracking and fleet management application for adventure and action tours.

6) B2B LOCATION SERVICES

Development and Management of B2B Application – KEY Results from Commercial Implementation

Rafi Katz, CT Motion

Mr. Katz presented some experiences they gained with mobile operator Orange Israel. He concluded that the STK based application was well accepted by the users. Positional accuracy of Cell ID / E-Cell ID is not too bad if addressed correctly and expectations set properly. He also emphasized that the low entry level costs compared e.g. to GPS-based solutions are a key to penetrating the market.

7) SMART APPLICATIONS

Mobile Location Entertainment - Urban Games

Petter Nyborg, Pocket-IT and Anders Kjaergaard Sorensen, Unwired Factory

Mr. Nyborg started by announcing the launch of a location-based competition called treasure hunt. The users pay NOK 3 to get clues on SMS/WAP. On the web they are free but available later. When user believes he is at the correct spot he can “dig for the treasure” for NOK –in practice be positioned. The game is sponsored by big brands. He concluded that services are better accepted if both WWW and SMS/WAP are used.

He also talked about Hvor.no, a Norwegian location portal that was launched in 03/2000 on WAP and WEB. It provides find nearest services, business and address listings, as well as mapping and routing services. Currently its in top 3 WAP sites in Norway.

Interactive Panel Session: Smart Applications for Mobile Location

Panellists: Richard Hadden (nGame), Petter Nyborg (Pocket IT), Yossi Wellingstein (Celltick), Pasi Ahonen (MSLocation), Jörgen Jonsson (Telia Mobile), Joe Astroth (Autodesk Inc)

Mr. Nyborg started by defining what is not a smart application and named local weather information, since you can get the same information by just looking at the sky.

Mr. Jonsson claimed that combining different needs is smart.

Mr. Wellingstein summarised that smart applications are those that make a lot of money.

Mr. Astroth said that adding location to existing directories and/or applications is smart.

At this moment a comment made from the audience reminded that the nearest is not necessarily the most convenient solution for the user.

Mr. Astroth continued that a smart application should be personalised and actionable.

Mr. Nyborg said that if your service provides the nearest petrol stations it shouldn't provide just e.g. Shell stations.

Mr. Wellingstein considered that if the take up of the services is left only to subscribers initiative (pull) it will not create lots of use.

Mr. Ahonen reminded if the provided services need several different platforms, the user will not be willing to pay.

On the Road to 3G Location Services

Jean-Marc Perera, Alcatel

Mr. Perera started by outlining the general LCS architectures in GSM and UMTS. On which technologies to use for which services he claimed that Cell ID / Cell ID ++ will be enough for information and asset tracking services whereas navigation, emergency and road assistance applications will require more precise positioning, namely A-GPS.