

# Cannes 3GSM World Congress 2002

Report by Pasi Pekkinen 25.4.2002

The overall keyword for the Cannes congress was perhaps MMS – even regarding LBS there were couple announcements of supporting MMS. Instead of “friend finder” applications many service providers stated to support mobile community services often including buddy finders.

This report concentrates on what was presented at Cannes for the LBS sector.

## Plenitude of applications and services

The LBS market can well stated to be rich in terms of application and platform providers. **Digia** presented the Digia™ Navigator, which is a map-based personal navigation client designed for communicators, smart-phones and media phones using Symbian OS. The first version is tailored for the Nokia 9210 Communicator. **Genimap** is the first licensee of Digia™ Navigator and provides it under the Genimap® Navigator.

The Genimap® Navigator's functionality is divided between the client software and the server-side support services. Genimap® Navigator can be used autonomously relying on the advanced navigation functions and GPS support of the client software. At any point the software can seamlessly access additional data and functions from the supporting server. The client software offers map handling and navigation features such as zooming and panning, GPS support, points-of-interest (POI) and other database importing, exporting and editing functions. The Genimap.com service provides map downloading, routing, address finding and POI searching functionality for the Navigator.

**Arcus Software** produces 3D maps for web browsers and wireless devices and develops software solutions for 3D mapping process. So far Arcus Software has built several 3D virtual cities, like Helsinki, Bremen and Tokyo. London is their next project.

**Yeoman's** VoxNav™ is a voice service providing route planning, turn-by-turn directions and traffic information into any standard mobile phone. The user calls the operator and tells her the destination. The operator provides a route summary and turn-by-turn instructions as they are needed. The service was launched in Great Britain in 2001. To enhance the accuracy of the navigation a GPS receiver and antenna VoxGPS is provided. The VoxGPS is installed in the vehicle and connected to the hands free kit. Thus the position is sent over the phone.

**Siemens** presented "City on Air" demonstrations over GPRS and UMTS. Siemens' TravelAngel is a platform for mobile, personalized travel services, providing up-to-date, individual and situation specific information to the traveller on the trip. LBS will be integrated into the TravelAngel in the future. The Siemens' representative stated that they will license E-OTD technology from the **Cambridge Positioning Systems** (CPS).

**Star\*Home** provides information services. Their service is aimed at providing the international travellers the information they need, when they need it by dialling: I-N-F-O

(4636). Location-based and origin-oriented, INFO provides native-language IVR prompts and information that is personal, relevant and immediately available.

**Celltick Technologies** was the only one utilising cell broadcast technology. They develop and market interactive broadcast solutions to mobile network operators. The service can be customised, personalised and location-based.

**Intelliwhere** has concentrated in the business sector for the past 12 months, especially on mobile workforce and tracking solutions. As a relatively new product, they launched the Intelliwhere OnDemand, which is software solution for PDAs aimed at mobile workforces to access and update geodata wirelessly from corporate GIS. The other main product is the Intelliwhere LocationServer which is a software platform based on Intergraph's GeoMedia.

**Freever** on the other hand concentrates on the youth sector, especially in mobile entertainment and communities. Their system consists of chat, discussion forums, dating, infoline, voting and community games. It also supports "buddy finding".

**Valis** calls itself as the first multi channel company in the cellular arena. Each cellular channel is a complete and branded package of community interconnected services (instant locator, dating, chat, games, information etc.) designed for a specific target audience. The current channels are the cellmaZe Teen Channel which is meant to attract young users, and the Nest Family Channel for parents and their children.

The cellmaZe offers several location based services: instant locator for friend finding, location-based chat, dating system (with/without location) and location based games. In the Nest Family Channel for the parents is offered: my Nest for receiving location alerts of your children's whereabouts and Home locator – to find out who is in and who is not. For the children it provides the friend finding feature. Valis also provides the Channel SDK, which enables the creation of new channels.

**Hotsip** provides products based on Presence and the global SIP standard. Hotsip® Presence Engine, is a platform for Presence based applications. The product offers personalized, location based and automated Presence. It supports Cell ID positioning. One of the ideas is that a user can leave a location message for their friends at a specific location. The Hotsip® Active Contacts™ is the end-user's interface towards a SIP enabled infrastructure.

**Nokia Venture Partners** presented six companies among them **WaveMarket**. WaveMarket, provider of a breakthrough spatio-temporal (location-time) database custom built for location-based services, revealed its first round of venture funding for the company and announced its Wave IQ software that according to WaveMarket significantly outperforms existing GIS and relational databases.

The WaveIQ™, includes two products: the Location Intelligence™ database and the Polling Server™. The previous is WaveMarket's custom built spatio-temporal processing engine ("geoserver") to efficiently process dynamic location data for large numbers of moving subscribers. The Polling Server product uses intelligence to protect the operators networks from overloading due to location data requests. They claim that their system is 50 times more efficient than existing static GIS or spatial databases.

**Condat** has developed a map service for PDAs in cooperation with **ESRI**, called the Skyware. Skyware brings ESRI's (geography network) geodata available on the Internet to a mobile device. It optimises the display of the data according to the mobile device. It also supports personalisation of the mobile services containing GIS components. LBS can be integrated in community and enterprise portals.

**m-spatial ltd** derives sketch maps from available map data to form representation of spatial information for mass market mobile devices.

**RegiSoft** has developed the World Trade Server™ with applications for mobile marketing and mobile ticketing. According to the representative of RegiSoft, the important characteristics for mobile marketing campaigns are time, profile and location. Their server has been integrated with the Ericsson MPS.

**NAVTECH®** Real-Time Map Service was released for use in commercial LBS. The service integrates POI-information (such as store opening hours) and dynamic content (e.g. traffic information). At the moment, t-info uses this service and Renault is testing it. In addition, Mobilaris has integrated the service as part of its Pacific Ocean platform.

**T-info**, the directory service of Deutsche Telekom was launched in February. The service is a location based directory service, which provides maps, routes, white/yellow pages and local directories. The service has been designed both for PDAs and mobile phones.

**Trackwell** is an Icelandic company specialising in the development of location based applications. Their main products are the TracScape for fleet management, Mobile Warrior is a location based game and My Buddy Tracker is a friendfind solution. Trackwell is working with Radiolinja.

**Varetis** provides directory solutions for carriers and information service providers. Varetis systems comprises of solutions for directory assistance services, data management, voice automated services as well as mobile and Internet systems. For the mobile value added services Varetis provides a suite of service platform components for LBS. During the congress they launched a "voice-automated positioning service". The service is based on the user stating the name of the building number, street and city they are currently at for the service provider.

**Mobilaris'** main product is the Pacific Ocean, which is a service middleware technology. Their applications portfolio includes Find Your Buddy and Yellow pages Near You. They represent mobile workforce solutions made by **isMobile**.

**AU-System** is a mobile Internet consultancy that provides software solutions and advanced consultancy services. Their LBS application portfolio covers Find My Friend™ and Nearby Me Search. They also provide middleware called Positioning Engine.

**SignalSoft's** product line covers the location gateways, middleware and end-user applications. Location Manager™ is the location gateway that obtains the user's location from the network and connects it to the applications and services. Location Studio™ is the middleware that contains client authentication and privacy management features and toolkit capabilities to aid the creation of new applications. The applications are:

FriendFinder®, SafetyFirst™ an E911 product and IN Location™ which is for providing location-based call routing e.g. by dialling “\*café” the call is directed to the nearest cafe of a specific chain. They have partnered with approximately 300 companies.

**Webraska** presented their product suite, including applications and the Wireless Navigation Platform. The platform includes fully integrated map datasets, interfaces to location platforms and external databases and SDKs. Their product portfolio includes following solutions: IbDN Lite® which is a distributed turn-by-turn wireless navigation solution for PDA; IbDN® which is distributed turn-by-turn wireless navigation solution to be integrated in the in-vehicle terminals of the OEM; IbDN® Fleet which is an Internet based fleet management solution to be integrated in the data management software of the specialised service providers. About 15 operators in Central-Europe, Australia, Singapore and Brazil have implemented Webraska's applications.

**NTT DoCoMo** stated that E-PLUS would launch the i-mode service in March in Germany. They did not know whether i-area is included. NEC will produce the i-mode+WAP phones for the service.

**Autodesk** was one of the companies to claim to have the industry's first location MMS (location-enabled Multimedia Messaging Service). Autodesk's example for the technology was also not “killer,” describing how someone would use their location knowledgeable device to find a nearby hotel, and using the multi-media support, to see images of the facilities.

## Other platforms

**MapInfo** presented miAware, MapInfo's platform for creating LBS. It provides an XML API to operators, position determining equipment and various functionalities such as geocoding, routing, geodecoding, searching functions and finding nearest.

MapInfo announced of the first ever implementation of its miAware platform in conjunction with Vodafone's D2-NightGuide service. The service covers 1,600 German cities and provides location-based services revolving around nightlife. MapInfo also signed an agreement with Siemens Information and Communication Mobile Group to integrate miAware with Siemens Location Enabling Server

**CellPoint** presented their location platform, which is divided into two parts the Mobile Location System (MLS) and the Mobile Location Broker (MLB). The platform can be used in GSM, GPRS and 3G networks. According to the CellPoint representative, 25 operators in Europe have positioning capabilities.

CellPoint had its partners along to show off their location-based applications. UnwiredFactory demonstrated three location-based applications - a location-based battle game, a treasure hunting game, and a location-based role-playing game. Xmarc and CellPoint demonstrated a live concierge service running on Xmarc's WIISE platform. The service contains information about cinemas, restaurants, amusement parks, etc. in the London area. It runs over WAP and provides the user with maps and routes. The company also announced the launch of its Mobile Location System 6.0 (MLS) Platform, targeted toward GSM/3G operators worldwide.

**LocatioNet Systems'** main product is the LocatioNet platform. Their platform provides following functionalities: get GIS/content, geocoding, routing, get position, interfaces with the user's terminal and service applications.

**Opteway** provides the opt[e]go platform, which aggregates real-time multi-source content which then optimises the response time. It allows customers to rapidly deploy multi-access geo-localised services.

The **Alternis** platform is called Location Mediation System. It performs proximity data processing, billing and commerce, and privacy and control for the user.

**Incomit** is another platform provider. Their solution is called Movade™ and among other things it has an interface for location information.

**Mapflow** is a LBS technology and applications provider. LocationAgent is an XML and Java based middleware platform for providing location based services. Logica announced that they demonstrate with Mapflow the world's first live demonstration of location based service (LBS) over multimedia messaging (MMS) at the 3GSM World Congress in Cannes.

Mapflows applications are delivered over web, wap, sms and mms. The LocalGuide is a "where is my nearest" or mobile yellow pages type application. myTribes is a "friend finder", myBook is a context and location enabled messaging application, TeamView is for fleet&resource management and TravelAssist is a travel and traffic information application.

**CT Motion** presented Cellebrity, which is their middleware platform for LBS. Their applications are Mobile Workforce Management, Mobile Yellow-Pages and Mobile Coupons. CT Motion has partnered with SchlumbergerSema and Benefon.

**VoltDelta** is a provider of enhanced telephone directory assistance solutions and information services. OASIS is an information service platform that supports LBS.

**TeleCommunication Systems** (TCS) provides the Xypoint® Location Platform, which gathers, manages and protects subscriber location information. TCS also provides a Wireless E9-1-1 solution for the operators. TCS demonstrated their Multimedia Message Service Center (MMSC) which manages delivery of rich text e-mail messages, sound, fax, color photos, animation, video, Internet and location services to multiple device types.

## **Positioning technologies**

**Qualcomm** CDMA Technologies (QCT) and its subsidiary **SnapTrack** have tested and enabled commercial deployment of A-GPS across multiple air interfaces. Qualcomm's gpsOne is a hybrid location solution that utilizes signals from the GPS satellite constellation and from CDMA cell sites (such as TA, RTT). QCT has also developed MGP6200™, a multimode GPS processor.

**eRide** just launched a positioning solution which is a hybrid solution that combines the power of GPS, AGPS, GSM and Internet to improve coverage and accuracy. The solution includes their own chipset (sensitivity -155 dB), scalable client navigation and server software designed for high performance GPS aiding and location processing.

The **Lucent Technologies** representative said that they support Cell ID, OTDOA, and A-GPS. She felt that the A-GPS solution will initially be launched for the business market whereas Cell ID will be used by the consumer market. The location obtained from Cell ID can be refined by the user by pinpointing to the correct street.

**Cambridge Positioning Systems (CPS)** CPS' E-OTD product Cursor™ delivers accuracy better than 100m. The next generation product Cursor Matrix will dramatically cut the deployment costs as LMUs are no longer required as other E-OTD compliant handsets will act as LMUs. Matrix will be available by the end of this year. CPS has licensed their technology to several network vendors such as Ericsson, Nortel and Siemens.

**Grayson Wireless'** solution is based on AOA and TDOA. Verizon and ATT have implemented their technology in the US. According to the representative of Grayson Wireless, commercial services are not available in the states due to the uncertainty of business models and revenue sources.

Cingular Wireless, the second largest mobile operator in the US selected **TruePosition's** Wireless Location System™ as the E911 solution. The system is based on TDOA, in which receivers are installed at the cellular base stations to detect the signal sent from the mobile terminal and the position is based on triangulation.

**Agilent Technologies** launched a new positioning product called Agilent acceSS7 Location and it is based on the passive monitoring of mobile network signalling links. It is built upon the acceSS7 product for SS7 link monitoring, which has been extended so that all low level signalling are also passively monitored in real time. Applied Generics' RoDIN24 technology is then used to convert these low level reports into individual subscriber location information. RoDIN24 has initially been developed to gather road traffic information, through passive monitoring and analysis of call data. According to the Agilent representative the cost for implementing their technology is \$0,50-1 per subscriber. In the rural areas they use map information as support information.

**Septier Communication's** Sonata Where™ is an open location service platform comprising of several entities among them, the Location Determination Systems. Network mediators are added to the network to monitor the signalling links and extract the required information. The location information is extracted from the signalling traffic.

## **Bluetooth networks and positioning**

**lesswire's** LocalNavigator is an integrated platform of software and hardware components for the provision of LBS. The components include: 1) LocalNavigator PalmtopGuide, which is a generic engine for a wide variety of guide applications; 2) LocalNavigator Bluetooth Base Station, which provides a gateway to the Internet and can also be used for positioning; 3) LocalNavigator IrDA Beacon for the transmission of data over small configurable areas via infrared; and 4) LocalNavigator Platform, which enables the delivery of specific information according to a client's location, interests and information needs.

lesswire is now concentrating in the business sector mainly hospitals and industry. As there are very limited number of Bluetooth capable devices they do not concentrate on consumer market/public places.

**Commil's** Cellarion is a distributed Bluetooth network and they claim to support immediate handover as an unique feature. They concentrate in the enterprise market e.g. a worker gets phone call wherever in the building. Hospitals and mobile workers with PDAs are seen as potential first wave users. Hotspots for mass markets the expect to be a reality in the second half of 2003. As Wlan is more expensive and power consuming than Bluetooth, they do not believe it to be suitable for mobile/small devices.

**MindLoc.com's** product is called the Vendor-specific Location Server, which is a server software that provides the location information to the applications obtained via various technologies. The idea is that different position determining technologies may be used at different times but the seamless provision of the services must be ensured. GSM, WLAN and Bluetooth technologies may be used. MindLoc.com's Real Time Location Based Service Application Manager is said to make possible to set up a high performance user tracking system, with no impact on the network traffic, as it is based on SIM card applications. The MindLoc Exhibition Information System uses Bluetooth and WLAN technology. They also provide a LBS city guide which delivers information via WAP and HTTP.

**Tadlys** announced its first pilot of Bluetooth local network with a "west-European operator" during the Cannes meeting. Together with RegiSoft they demonstrated the distribution and redemption of m-coupons using push Bluetooth profiles.

**Red-M** is another Bluetooth network provider. Their products include the 3000AS access server, 1000AP access point, and Blade personal digital assistant (PDA) expansion modules.

## **Hardware: GPS chips, integration, devices**

**TTPCom** is a GSM/GPRS technology, Bluetooth and WAP supplier. They provide protocol stacks and modules for mobile phones e.g. Benefon ESC and Garmin Navtalk, both of which were available. They also have a partnership with CPS.

**Motorola** presented their 3G-phone A820, which has an add-on camera and A-GPS capacity. The GPS chip and the software for it will be provided by **Sirf**. The product will be on the market from January 2003.

**Infineon Technologies** is a semiconductor company. Infineon designs, produces and markets semiconductors and complete system solutions, including hardware and software, for a range of wireless applications including cellular and cordless telephone systems, Bluetooth and GPS solutions. Based on Trimble's FirstGPS architecture Infineon has developed its GPS chipset.

**Plextek** integrates GPS modules and they provide a stolen vehicle recovery service. They also have a "find your car in the car park" application based on AOA.

**Datatronics'** Movilcom is an onboard terminal for fleet management solutions. It uses GPS positioning and supports GSM, trunking, radio and satellite communications. Their DATAGIS product can be used for tracking and communication with the fleet. Dataweb is an Internet application for the remote fleet management via the Internet.

**PowerLOC** is a subsidiary of Paradigm Advanced Technologies. It produces enabling technologies and products in the area of fleet and asset management and personal safety. PowerLOC technology was used to manage the recovery efforts at the World Trade Center. PowerLOC offers three types of mobile devices: vehicle location devices, personal locating devices and asset locating devices. PowerLOC's location service platform is called L-Biz® Tracker. Destinator™ is a personal GPS navigation system featuring NAVTECH® data and it operates on the Compaq iPAQ™ Pocket PCs or any MS-Win CE devices.