



Banishing the blues at



Brad Shannon navigates Europe's biggest music fest with some cool technology

> Popkomm, held last year in Cologne, Germany, is Europe's premier music festival and trade show, a four-day extravaganza for the industry and music fans alike.

In 2003 and for the first time at a big cultural event, visitors were able to use mobile devices to find out when and where the 450 bands from 27 countries were performing and how to reach the 37 different venues.

Basic information was provided for free over the Internet at www.LBSservice.de and users running Windows CE with HTML 2.0 browsers were able to access this site, paying only the network connection cost.

Additionally, the organisers provided two premium services – a news ticker and Info-Catalog, a pay-per-enquiry event schedule with search and navigation features. Those with mobile media-

capable devices received a map when making use of this service, together with routing information based on their choice of transport.

To promote and explain these services to visitors, the organisers mounted a grassroots marketing campaign, deploying a small army of staffers in red T-shirts emblazoned with "Wohin? Fragen Sie Mich!" and "Lost? Ask me for the way!". Taking to the streets, mobile devices in hand, they demonstrated the system to lost concert goers and interested passers-by.

Natural progression

When long-time Intergraph partner GCWare of Prague, were involved in an earlier project to serve music on demand to a mobile audience, it seemed a natural progression to leverage its experience to take on something bigger.

With Intergraph providing geospatial expertise plus its IntelliWhere LBS portfolio, the companies shared ideas on a



Keeping cool in Cologne

Throughout the four-day Popkomm event, Cologne's population doubles to nearly two million people. Despite the crowds, finding a specific band and navigating the packed streets was easier than ever last year – visitors simply needed a short message system (SMS) or multi-media system (MMS)-enabled mobile phone, personal digital assistant or other Internet-capable device. Personalised news, live updates and query results were delivered to users in the form of text messages, graphical maps or photo imagery, depending on the display capabilities of their hand-held devices.



service that combined geospatial data with the provision of on-demand personalised news and scheduling content. Popkomm provided the perfect opportunity to implement a proof-of-concept system. A key factor was encouragement from the State of North-Rhine Westphalia (NRW) – all part of its strategy to attract established and start-up geotechnology companies to the region. Indeed, Intergraph had been in talks with NRW for more than two years on the State's wish to create a mobile LBS infrastructure and a contract to this end was awarded in December 2002.

Terra Map Server GmbH of Dortmund (since acquired by Intergraph) had also been contracted by the State government to implement a regional geodata server. The latter combines all available map and location data from public and private sector suppliers and is capable of serving more than two million map requests a day. It meant that the foundation for a Popkomm LBS



The Mobile LBS at Popkomm delivered both textual and graphical information to visitors with cellular and PDA devices

service – a complete set of geodata for Cologne – had already been acquired and was ready for use. The system could be created by combining this geodata with the festival's schedule of events, performers and locations, and then developing and integrating appropriate applications to serve the data to visitors. The result: "They would have the most current information at their fingertips, anytime, anywhere," says Horst Harbauer, managing director of Intergraph Germany.

"It was a practical example that appealed to a wide audience and also one from which we learned. It worked wonderfully," enthuses Thomas Orlik of GCWare.

LBS takes centre stage

The system was implemented by a consortium in just six months, with North Rhine-Westphalia providing funding and with numerous organisations contributing their expertise to bring the project to fruition on time.

Intergraph Mapping and Geospatial Solutions acted as the primary solution provider, employing its GeoMedia universal geographic client to create maps on the fly against user queries. The same company's IntelliWhere OnDemand and LocationServer delivered text and maps – including walking or mass transit directions – in real time to the mobile devices.

GeoMedia WebMap Professional formed the core of the Web application, rendering maps and supporting functions such as route calculation. The same product was employed to capture information (e.g. railway lines and stations) not included in the original dataset, and to check the complex topology between the street and subway networks. GeoMedia then tapped into this database of geospatial data to generate raster maps in response to queries.

Terra Map Server acted as content provider for the geographic data and hosted all applications and services using Microsoft SQL Server 2000 Enterprise Edition.

The IntelliWhere LocationServer performed address geocoding when the user entered their location as an address, and handled all interaction with the map once it was served (zooming and panning and showing additional information such as locations or illustrating the route).

The same server also extracted navigational directions from data compiled by the City of Cologne as well as from the NavStreets dataset compiled by Navigation Technologies.



Getting into the swing: with multiple - and often impromptu - events being staged simultaneously, being in the right place at the right time was important for press coverage at Popkomm. Here again, LBS proved a valuable aid for busy media teams

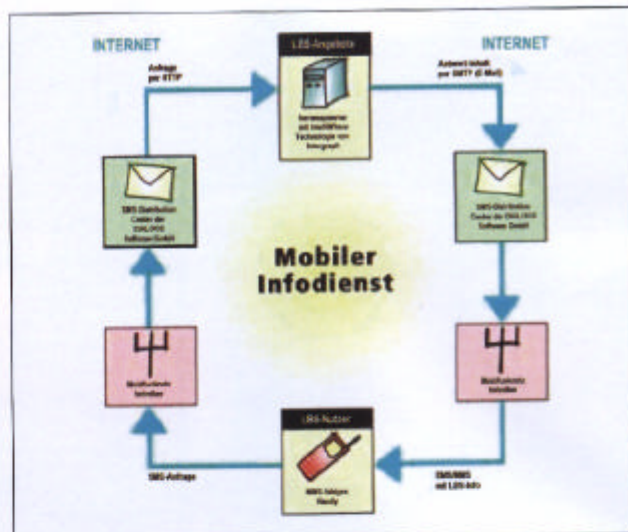
Taking part(ners)

Those participating in applications development and implementation included IVC AG of Moenchengladbach and GCWare. DIALOGS Software GmbH of Dortmund was contracted as the SMS/MMS provider, and SonyEricsson Mobile Communication of Duesseldorf provided P 800 multimedia-capable cellular phones to the on-site demonstration teams. Musikkomm, which organises the annual Popkomm event, provided a complete event schedule for the system.

Professional support for the project was furnished by CeGi (Center for Geoinformation), an industry body that co-ordinates innovative developments relating to GIS technology. Further support was lent by the Institute of Geography of the University of Aachen which held some 400 interviews with Popkomm visitors to establish their interest in mobile services.

Based on the project's success at Popkomm and the enthusiastic response from visitors, those who participated are now exploring opportunities to implement new and improved services at similar future events.

"This proof-of-concept confirms that location-based information services can offer a broad range of reasonable and interesting applications," notes Dr. Josef Kauer of Intergraph Germany. "In addition to events with large attendances, LBS can also be used to



meet everyday needs including the delivery of transport schedules traffic information and Points of Interest information."

Sporting chance

While music, film and arts festivals are obvious candidates for the new services, an area of particular interest for the partners is to provide information to organisers, spectators and participants of sporting events that ensue over days or weeks at multiple venues.

As with Popkomm, spectators will benefit by receiving news, schedules and geographic information, customised according to their interests (favourite teams or athletes, dates, venues, etc). To further enhance the system, GCWare intends to leverage project work currently underway in Dubai that allows subscribers to access traffic information and maps, as well as mass transit schedules. Updated in real time, this type of resource will help visitors plan their travel to and from events and even enjoy some sightseeing.

Users may also be able to order and pay for tickets via their mobile device. In this context, Multi-media messaging will allow the system to serve a view of the arena and indicate seat availability. Hotels in the vicinity may also be interested in integrating their reservation system to the LBS platform, thereby allowing visitors to automatically make a reservation using their mobile phone or PDA.

Event participants and team support staff will also be able to use geographic and scheduling information to plan and co-ordinate their activities such as meal and travel arrangements. To support this, the news ticker application can be used to send messages to event organisers, staff members, volunteers, specific athletes or entire teams.

Not surprisingly, an improved version of the Cologne LBS application is planned to make its debut at a major international sporting event in the near future.

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More Information

- CeGi: www.cegi.de
- GCWare: www.gcware.com
- IntelliWhere: <http://img.intelgraph.com/intelwhere>
- Intergraph Germany: www.intergraph.de
- Terra Map Server: www.terramapserver.com