

Tele Atlas Active in Geodata

Faster Updates Through Mobile Mapping

Founded in 1984, Tele Atlas is one of the leading providers of digital map data and other geographic content. Vice President Marketing Laurent de Hauwere talks about the past, present and future in geodata and geo-applications.

By Robin Wevers

Databases

Tele Atlas data are used for a variety of applications like in-car navigation, personal or portable navigation, Location Based Services (LBS) and Geospatial Information Systems (GIS) in enterprises and public sector markets. The databases of this company are also embedded in many PC applications and Internet-based services. The database covers Western and Eastern Europe, the United States and Canada and parts of Asia and South America. Tele Atlas' efforts are aimed not only at increasing worldwide coverage, but also at adding extra information and quality to the areas already covered. Tele Atlas has over 1,300 employees worldwide.

Acquisition of GDT

In the summer of 2004 Tele Atlas acquired Geographic Data Technologies (GDT), one of the leading data providers in the United States. Since then Tele Atlas has been working on the integration of its own data with those of GDT. They found that about 95% of the two datasets was identical and have been working hard to solve the differences. The first integrated results will appear soon. De Hauwere claims they now have 'the best geo-database ever in the US'. Since GDT has a solid presence in the GIS community in the US, the acquisition offered Tele Atlas the opportunity to further penetrate the GIS market. An aspect where the combination of the two

companies proved fruitful was the merging of two different styles of working. Data acquisition at Tele Atlas is largely done through field surveying but also increasingly through mobile mapping: mobile homes equipped with stereoscopic cameras driving around while video-recording all relevant data. GDT gathers its data primarily through compilation: data is acquired from various organisations, usually municipalities and other public services. This data is then integrated into the other GDT-data. Combining these two techniques enables the use of reliable data from external sources, while enhancing the data with those acquired through mobile mapping.

In Europe Tele Atlas has already been using data from external sources for many years, primarily those gathered by national geographic institutes like the Ordnance Survey in the UK.

Mobile Mapping

Tele Atlas has a long experience in mobile mapping. It all started in the early eighties. Since then the technology has improved considerably and the recording speed of changes in the real world has increased drastically thanks to mobile mapping. Previously drivers registered all relevant information manually on a tablet PC while driving through the streets. This obviously slows down the progress quite a bit because of an average speed of 5 kilometres per hour. By attaching six cameras to the cars that continuously record the environ-

ment, the speed has been increased five times. The data is taken to the office, where it is processed. This not only results in an increase in speed. It also enhances the accuracy and enables the registration of attributes that were previously not included in the database, like speed limits.

By now twenty-six mobile mapping vans are continuously driving across Europe and this number is still increasing. The data gathered is sent to India, where about 1,300 persons are continuously processing this information. Tele Atlas releases four updates of the data per year and will remain doing so. But the data will be much more up-to-date, effectively about halving the time from data acquisition to the actual release.

Coverage

Tele Atlas strives for as much coverage as possible. Western Europe is more or less completely covered. For this part of the world Tele Atlas aims at extending the number of attributes, such as speed limits and lane information. The United States are fully covered, especially since GDT was acquired. Efforts to expand coverage are directed towards Eastern Europe and China. This year the focus is on Hungary, Slovakia, Turkey, Russia, and the Baltic States.

As a strongly growing market with a lot of potential, De Hauwere sees China as a new challenge. This year 28 Chinese cities will be

Acquisition for Twenty Years

added to the database, followed by another forty cities early next year.

Core of the datasets are the street networks, but also 1.8 million points of interest are available. The planning is to increase this number to about 10 million over the coming years.

Automotive Navigation

Currently Tele Atlas has more than 300 partners, covering applications like automotive navigation, personal navigation and GIS. Automotive navigation is the well-known turn-by-turn route guidance in cars. It contains location-specific road and travel information and a range of points of interest like hotels, restaurants, service stations, airports, and parking facilities. Since its early days, Tele Atlas has worked closely with the automotive industry to ensure that all of its products meet the specifications that automotive customers need for in-car navigation systems.

Personal Navigation designates highly portable devices equipped with computing power. Whether on a dedicated device or as a key application on a PDA, digital map data and content support practical applications to help users find relevant landmarks and services quickly. De Hauwere sees a big increase in personal navigation systems: "Whereas the market segment for automotive applications shows an annual increase of about 15 %, demand for personal navigation systems shows an increase of 300 % per year."

Look Into the Future

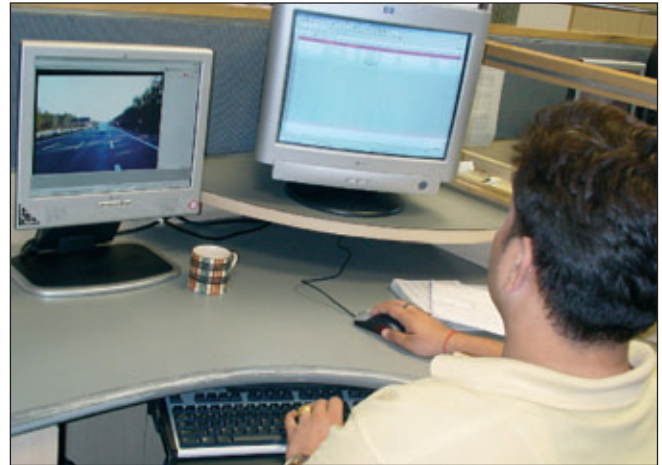
De Hauwere further states that Internet Mapping is becoming increasingly important. "With mapping and routing software, users gain access to detailed information about the world- such as information on shops, companies, tourist attractions, hotels, and restaurants- and a clear route description showing

precisely how to get to a specific location quickly and efficiently."

"Wireless applications, digital maps and other geographic data are more and more seamlessly integrated with other content. LBS allow people access to accurate information wherever and whenever they need it. Digital maps can help ensure that the information people receive is relevant. GPS is getting more important: it is used in navigation systems and will be integrated in mobile phones more and more, but GPS-chips can also be attached to pallets of goods and help in tracking those goods." There are more application fields in which Tele Atlas maps could gain popularity. De Hauwere: "Besides the possibility of making a phone call mobile phones offer an increasing number of functionalities. These range from calendar to address book management and from picture messaging to data transfer. The nature of the mobile phone providing full mobility to its user has created the need for new types of applications based on location. Getting from A to B with your phone or finding the nearest Japanese restaurant or nearest cash machine are new types of use for this intelligent device, all needing map information."

Three-dimensional

According to De Hauwere there is one more interesting development going on: the third dimension. Tele Atlas has followed up on prognosis in this field by recently announcing the release of digital map databases with 3D landmarks. Maps of the cities of Berlin, Barcelona,



Dual screens are used for processing the data gathered by mobile mapping vans.

Athens and Bern are now enriched with high-definition detail and texture to create life-like renderings of famous landmarks. Among more than 60 well-known buildings and monuments to feature in the first four maps are the Brandenburg Gate in Berlin, the Acropolis in Athens, the clock tower of Bern and the Sagrada Familia in Barcelona. In non-navigation mode or in other applications, users can zoom in or rotate the image to obtain an informative picture of the whole spatial environment of the selected item.

Jack Reinelt, Managing Director Europe for Tele Atlas, says: "The market is evolving into more realistically representations of the world as we know it. Flat maps will be replaced by enriched maps that offer more visual and displaying elements which make navigation easier. Tele Atlas maps will be enhanced with more and more 3D features, increasingly reflecting the reality of what we see, complete with landmarks and other images. Enhanced visualization will make maps more attractive, informative and interesting, not only in navigation but also on the Internet and across a range of consumer applications." Tele Atlas expects to soon publish other European cities in 3D, including Amsterdam, Brussels, London, Paris, Rome, Madrid, Dublin, Lisbon, Vienna, Stuttgart, Copenhagen, Stockholm, Oslo, Helsinki, Prague and Warsaw. The first consumer products including Tele Atlas 3D-landmarks will be available starting in 2006.

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More information can be found at www.teleatlas.com.



Using mobile homes with six cameras attached increases the recording speed five times.