



ESRI® Location-Based Services Case Studies



Wireless Carriers

Wireless carriers are concerned with enhancing value-added services, differentiating their network offerings, and increasing revenues per subscriber while reducing internal costs in the process. In this world of next-generation wireless data services, carriers launching location-based services (LBS) need vendor partners who can offer geospatial technology that can fulfill their own requirements as well as the requirements of those in their application developer community. ESRI's proven and deployed Internet mapping software (ArcIMS®) and spatial database gateway (ArcSDE®) help carriers across the world enhance their location-based service offerings, differentiate their services, and increase their revenues while minimizing internal costs, engineering downtime, and time to market.

Orange Slovensko, Slovakia

Before Orange SK developed its location-based services in 2003, Orange's due diligence team put several competitive geospatial solutions through a series of acceptance tests to validate reliability and performance. In addition, a top priority for Orange was to find an Internet mapping solution that was inexpensive, simple to maintain, standardized, easy to use, and easily replicated. ESRI's ArcIMS and ArcSDE were the answer, saving Orange SK significant engineering time and investment while meeting performance requirements.

Orange SK uses ArcIMS and ArcSDE to power a suite of location-based information and tracking services. Mobile users access these services through Orange's subscriber portal on the Web and through their mobile phones via short messaging services and mobile Internet (WAP). The company's Yellow and White Pages information services help subscribers find nearby ATMs, hotels, fuel stations, restaurants, service workshops, and hospitals as well as residence locations of their friends. Subscribers also use Orange's mobile tracking service to locate other mobile users and exchange short and multimedia messages with them.

"ESRI's software has become the supporting platform of our technological solutions for various tasks developed at our LBS department, both for the needs of our internal operations and external customers."

*— Martin Kamenský, GIS Manager,
Orange Slovensko*



VALUE-ADD

VIPnet, Croatia

VIPnet, the largest GSM carrier in Croatia, has used ESRI® software for its location-based service offerings since 2001. At that time, VIPnet's main challenge was to find an Internet mapping and spatial database solution capable of storing and accessing digital atlases for 34 major cities with 270,000 addresses and 7,000 settlements as well as geocoded information content for more than 15,000 spatial objects in 200 categories.

With ArcSDE, VIPnet was able to meet the database requirements, and with ArcIMS, VIPnet built services that allow subscribers to retrieve local information for nearby restaurants, banks, post offices, pools, and other points of everyday interest. Delivered under the VIP.navigator brand, subscribers access content through various channels including short messaging services, mobile Internet (WAP), voice, and the Web through VIPnet's subscriber portal. Today, VIPnet's location-based information services and game applications serve more than 200,000 LBS subscribers.

“Since its launch in October 2001, VIP.navigator has proven successful, which is especially visible in summer season when tourists travel to the coast. In a country such as Croatia, which is focused on tourism, LBS services such as mobile guides are a necessity, and ESRI technology helps make these services a reality.”

– Martina Gulan, LBS Product Manager, VIPnet



ED SERVICES

Infrastructure Solution Providers

Infrastructure solution providers offering suites of messaging, mobile Internet, and location technologies are helping wireless carriers around the world deploy and manage their mobile services. In addition to enabling infrastructure, some infrastructure providers also offer market-ready location-based applications to help carriers kick-start their LBS initiatives with a complete, ready-to-go package. ESRI's software and Web services serve key roles within these end-to-end offerings, helping suppliers fulfill carrier requirements quickly.

Openwave

“ESRI's Web services give us access to various types of maps and geoservices that we integrate into Friend Finder. This allows us to focus on what we do best, and it dramatically speeds up our deployment efforts.”

*— Drew Esson, Product Manager,
Openwave Systems*

Openwave Systems is a world leader in messaging, mobile, and location infrastructure and middleware for mobile networks. As part of its Location Suite family of applications, ESRI's ArcWebSM for Developers helps Openwave embed maps, points of interest, and geoprocessing services into its Friend Finder application. The result allows the development staff to focus on the application logic and subscriber privacy rules rather than on geospatial functionality.

Openwave's use of ArcWeb for Developers has resulted in significant savings of development time, software expenses, computer resources, spatial data, and ongoing maintenance costs. With ArcWeb for Developers, Openwave has access to a plethora of spatial data and geoprocessing services—all made available through easy-to-use Simple Object Access Protocol (SOAP) XML interfaces. These programmable interfaces help Openwave deploy Friend Finder to carriers easily and quickly as part of a larger Openwave location offering that includes Location Manager and Location Studio.



Telenity

Telenity is a leading global provider of open, standards-based Canvas™ multimedia messaging gateways; location-enabling servers; and a suite of market-ready mobile Internet, messaging, and location-based applications. The Canvas platform supports Parlay/OSA, Open Mobile Alliance (OMA), 3GPP/3GPP2, and Open GIS standards. ESRI's ArcSDE and ArcIMS are bundled into the Telenity Canvas Location-Enabling Server offering and serve as the main geoprocessing engine of the platform. In addition to the core Canvas Location-Enabling Server, Telenity also offers market-ready applications that use ESRI functionality. Telenity's Resource Tracking and Management System and Buddy/People Finder applications are integrated with rich map content and messaging for instant revenue generation.

Before Telenity could choose a geospatial technology vendor to complement its complete LBS offering, it needed to find a partner capable of responding to customer needs in any region of the world. Telenity's use of ArcSDE and ArcIMS helps the company manage localized requirements and deploy Internet mapping features into location-enabling servers and applications wherever business opportunities arise. The result is increased deployment efficiency, faster time to market, and higher cost savings passed on to Telenity's wireless carrier customers.

"We chose ESRI as a partner because it has an unparalleled global presence in the industry backed by outstanding and proven technology. Telenity shares synergy in these areas, so ESRI is a natural fit for us."

— Nitin Patel, Business Development Manager, Telenity



Application Developers

All application developers share common requirements for building location-based applications. They demand access to location information, and they all require supporting geoservices to process location into easily consumable and digestible contexts. ESRI's Internet mapping software and hosted Web services products include everything software engineers need to develop and deploy location-based applications.

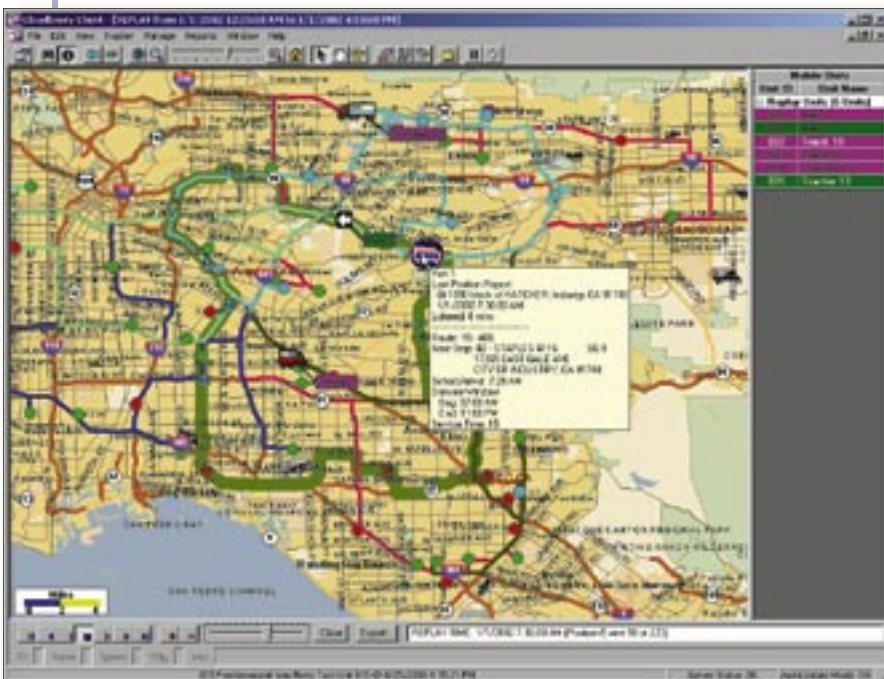
Cloudberry

“Our technical team’s experience and our proven system architecture, coupled with class-leading ESRI products, enable us to deliver our Cloudberry easy-to-use tracking, route management, and fleet management services to the Nextel network with the value and low cost that today’s users demand.”

– Dennis Clark, CEO, AirTrak

Cloudberry is a leading provider of automatic vehicle location (AVL), enterprise tracking, and mobile dispatching applications. AirTrak for Nextel, Cloudberry's inexpensive mobile tracking and dispatching application, allows enterprises and governments of all sizes to track and communicate with their mobile workers and fleets from any desktop PC with an Internet connection.

AirTrak for Nextel uses Nextel's i58sr and i88s GPS-enabled handsets for location and messaging with ESRI's ArcLogistics™ Route, used for back-office mapping, routing, dispatching, and fleet logistics. The combined solution allows Cloudberry to focus on its core business processes, systems architecture, and hosting services, thereby reducing operating costs and overhead, which subsequently drives down subscription costs passed on to Cloudberry end users. Cloudberry is a certified Nextel developer, currently serving more than 25,000 Nextel subscribers with the AirTrak for Nextel solution.



SUPPORTING

Trackwell

Trackwell is a leading provider of personal locator and enterprise tracking and dispatching applications deployed throughout several wireless carrier sites in western Europe. As part of Trackwell's architecture, ArcSDE and ArcIMS play a crucial role, providing mapping and geoprocessing functionality for Buddy Finder, Child Finder, and Fleet Tracker. These applications build upon common geographic information system (GIS) tracking and mapping capabilities but contain application-specific features for managing privacy, assigning business rules, and integrating customer relationship management (CRM) processes and databases.

Trackwell uses ESRI's ArcSDE and ArcIMS to handle all of its GIS and mapping requirements, freeing resources to focus on communication functions of the application and develop integration features for mobile messaging and gateway infrastructure. The result for Trackwell is cost savings, reduced time to market, and a satisfied customer base that trusts and depends on Trackwell for value-added services.

“ESRI's Internet mapping products serve an integral role in all of our applications. Our applications serve the mass market and business space, so we have to consider application features beyond GIS. Because ESRI software is easy to use, we are able to focus our efforts in these other areas.”

– Ágúst Einarsson, CEO, Trackwell



Navtrak

“ESRI's world-class GIS products provide core mapping functions to our products.”

– Ron Hodges, CEO, Navtrak

Navtrak offers an affordable, easy-to-use real-time AVL and mobile tracking management tool set for the enterprise and business markets. The Navtrak tool set includes vehicle status, communications, reports, playback, maintenance, and mapping interfaces. All six user interfaces are seamlessly integrated to provide dispatchers with real-time vehicle diagnostics, messaging, location and work order histories, administrative functions, and mapping capabilities.

Navtrak's use of ESRI's ArcLogistic Route for mapping and routing requirements allows the company to focus on the business



logistics functions of the application. The result for Navtrak is development cost savings that subsequently drive down end user prices, making the application affordable for any size enterprise.

GEOSERVICES



For more than 30 years ESRI has been helping people manage and analyze geographic information. ESRI offers a framework for implementing GIS technology in any organization with a seamless link from personal GIS on the desktop to enterprisewide GIS client/server and data management systems. ESRI GIS solutions are flexible and can be customized to meet the needs of our users. ESRI is a full-service GIS company, ready to help you begin, grow, and build success with GIS.

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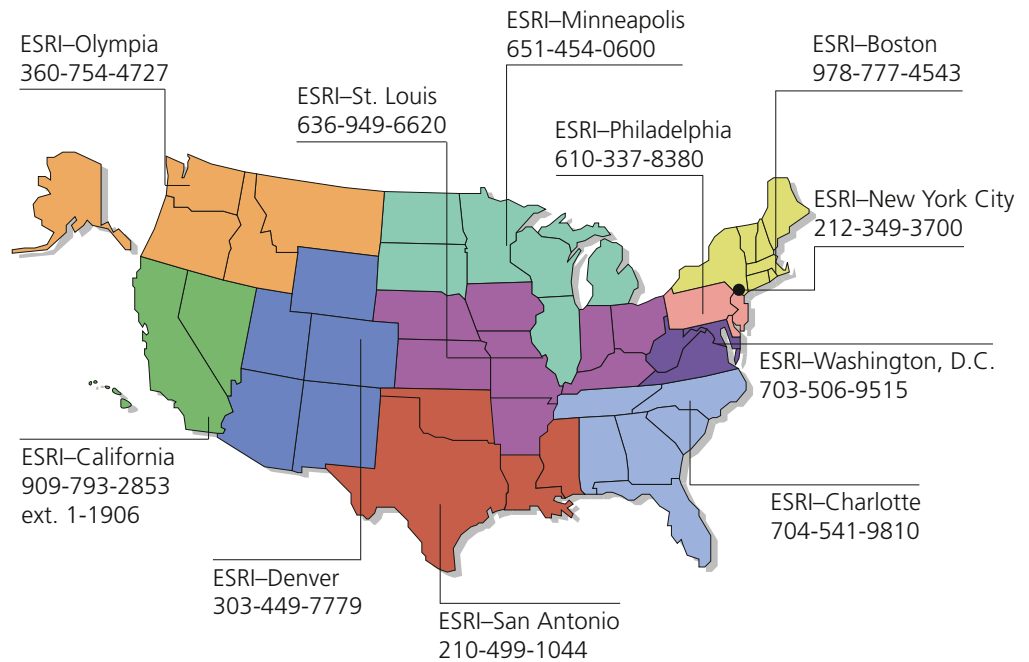
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