

Mobile Maps and Navigation

Mobile Maps and Navigation gives first-hand insights into the development of online maps and turn-by-turn navigation services for mobile handsets.

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- **Identify** new business opportunities and revenue models for mobile location based services.
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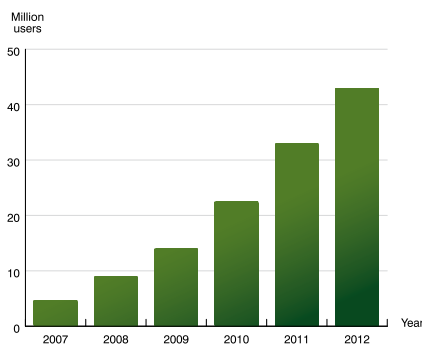


Maps and navigation enters the mobile domain

While the PND segment continues to dominate the personal navigation market in Europe as well as in North America, handset-based mapping and turn-by-turn navigation services are being discovered by an increasing number of handset owners. Whereas handset-based local search, mapping and full turn-by-turn navigation services are largely separate services today, these are increasingly being integrated into one service with a common user interface. Today, navigation services are mostly available as onboard solutions with map data stored in the memory of the handset, or off-board services that rely on maps stored on a server. Many of these solutions may well converge into hybrid services that leverage the handset connectivity to allow access to dynamic content and new services such as location messaging and sharing of geo-coded content.

In the future, handset navigation services are likely to complement other personal navigation solutions, for instance for use outside vehicles. Pedestrian navigation features that are about to be launched include improved map material and enhanced 3D views to facilitate orientation. Multimodal navigation will enable the user to plan routes that take into account all available means of transportation, including trains, busses, trams and even ferries and airplanes. New functionality that enhances everyday usefulness of navigation services that are being launched includes better traffic information and improved local search.

Although advertisement funded services are already being launched in several markets by various actors, such as mapping and directory providers, it will likely take several years before partnerships are established that will lead to significant revenues. Premium services that dominate the market today will most likely coexist with ad-funded services in the future. However, most premium services will be provided by network operators to ►



Active users of off-board navigation services (Europe/US, million users)

► stimulate ARPU by bundling navigation with service plans, or by handset vendors to encourage handset sales.

In 2006, sales of onboard navigation software for smartphones increased to nearly 0.6 million units, with the European market accounting for the majority of shipments. The year marked a breakthrough for off-board navigation services in North America. Following increased marketing by large network operators, subscriber additions increased to an estimated 1.5 million and the total subscriber base reached about 1.9 million. In Europe, where the market is more fragmented and the installed base of GPS-equipped handsets is much smaller, subscriber additions nonetheless increased to over 300,000 and the number of subscribers grew to 650,000. However, Berg Insight forecasts that the European market will overtake the North American market in 2010 when mass-market GPS-equipped GSM/UMTS handsets are likely to become widely available. By 2012, an estimated 28 million subscribers in Europe and 15 million subscribers in North America will use their handset for navigation at least once per year.

This report answers the following questions:

- Can the success for portable navigation devices be repeated with mobile devices?
- What are the business models and revenue opportunities for local search and navigation?
- What are the main differences and similarities of the European and North American markets?
- Who are the leading suppliers of digital maps and geo-content for mobile applications?
- How are industry leaders such as Nokia, TomTom, Google and Yahoo! positioning themselves on the emerging market?
- Will it be on-board or off-board turn-by-turn navigation solutions that prevail in the mobile space?
- What are the future prospects for mobile local search and mapping applications?

► Table of Contents

1 Mobile navigation solutions	2.3.4 ViaMichelin	5.4 Nav4All
1.1 Portable navigation solutions	2.3.5 Wcities	5.5 Networks In Motion
1.1.1 PNDs, PDAs, smartphones and mobile phones	2.4 Traffic information providers	5.6 PTV
1.1.2 Usability aspects	2.4.1 Inrix	5.7 TeleCommunication Systems
1.2 Digital maps and content	2.4.2 ITIS Holdings	5.8 TeleNav
1.2.1 Digital map data	2.4.3 Mediamobile	5.9 Telmap
1.2.2 POI data	2.4.4 SmartRoute Systems	5.10 Trimble
1.2.3 Rich and dynamic content	2.4.5 Trafficmaster	5.11 WaveMarket
1.3 Navigation software platforms	2.4.6 T-Systems Traffic	5.12 Wayfinder Systems
1.3.1 Functionality	3 Mapping and local search providers	5.13 Webraska
1.3.2 Onboard and off-board navigation platforms	3.1 Cityneo	6 Case studies: Mobile maps and navigation applications
1.3.3 Mapping and navigation server platforms	3.2 Google	6.1 Handset manufacturers
1.4 Enabling technologies	3.3 Mappy	6.1.1 Nokia
1.4.1 Handset performance	3.4 MapQuest	6.1.2 Motorola
1.4.2 Positioning technologies	3.5 Microsoft	6.1.3 HTC
1.5 Handset-based mapping and navigation services	3.6 m-spatial	6.1.4 Research In Motion
1.5.1 Mobile local search	3.7 NAVITIME	6.2 Mobile operator navigation services
1.5.2 Mapping and routing	3.8 Novasys	6.2.1 A1 Navi from Mobilkom Austria
1.5.3 Turn-by-turn navigation software and services	3.9 Rand McNally	6.2.2 VZ Navigator from Verizon Wireless
1.5.4 Operator navigation offerings	3.10 Yahoo!	6.3 Mobile Web 2.0 applications
2 Map data and content providers	3.11 YellowMap	6.3.1 Google Maps
2.1 Digital map data suppliers	4 Onboard navigation software vendors	6.3.2 Yahoo! Go
2.1.1 NAVTEQ	4.1 ALK	7 Market forecasts and trends
2.1.2 Tele Atlas	4.2 Augmenta	7.1 Vendor market shares
2.1.3 AND	4.3 Destinator Technologies	7.2 Smartphone and GPS handsets sales
2.2 Directory publishers	4.4 Garmin	7.3 Onboard navigation solutions
2.2.1 DasÖrtliche	4.5 InfoPortugal	7.4 European off-board navigation services
2.2.2 Eniro	4.6 Navicore	7.4.1 Off-board navigation subscribers
2.2.3 Pages Jaunes Groupe	4.7 NAVIGON	7.4.2 Off-board navigation service revenues
2.2.4 Seat Pagine Gialle	4.8 NavNGo	7.5 North American off-board navigation services
2.2.5 The Yell Group	4.9 ROUTE 66	7.5.1 Off-board navigation subscribers
2.3 Travel guide, POI data and weather information providers	4.10 TomTom	7.5.2 Off-board navigation service revenues
2.3.1 CustomWeather	5 Server-based navigation solution vendors	Glossary
2.3.2 Falk Marco Polo Interactive	5.1 Appello Systems	
2.3.3 Fodor's	5.2 Jentro Technologies	
	5.3 LocatioNet Systems	



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André Malm is a telecom analyst with a Masters degree from Chalmers University of Technology. He joined Berg Insight in 2006 and his areas of expertise include location based services, wireless M2M and personal navigation services.

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