

Summary

Executive summary

The personal navigation market continues to grow rapidly in Europe and North America. The first Personal Navigation Devices (PNDs), i.e. transferable devices with integrated GPS receivers and digital maps primarily designed for car navigation, were introduced in 2003. In Europe, the PND segment achieved a breakthrough in 2005 and gained mass-market acceptance in 2006, with sales reaching 9 million units. In North America, very strong sales during the holiday season contributed to remarkable growth in 2006, to about 2.8 million units shipped. Moreover, in 2007 sales are forecasted to reach about 16 million units in Europe and roughly 6.5 million in North America. The products have matured and following much lower prices resulting from lower component costs and product engineering, the consumer value has improved substantially. Intensified marketing campaigns, expanded distribution networks and more shelf space dedicated to PNDs in stores have also contributed to the growth.

The rapid growth of the segment has gained the attention of numerous actors in many industries. At the moment, over 60 vendors from the GPS-device, navigation software, consumer electronics, car infotainment industries are selling PNDs on the European and North American markets. While many of the major vendors, notably TomTom, Garmin, Magellan and Navman, develop navigation software in-house, others usually base their PNDs on software from white-label developers such as deCarta, Destinator Technologies, Elektrobit Corporation, NAVIGON and NavNGo. Nevertheless, the four largest vendors, TomTom, Garmin, Mio Technology and Magellan, have managed to increase their combined market shares in Europe and North America to slightly more than 80 percent in H1 2007.

However, 2007 is more likely to be remembered as the year of major reshaping of the personal navigation industry. In the beginning of the year, the Taiwanese handheld device ODM manufacturer MiTAC added Navman's PND operations to its existing Mio Technology line of devices. Although more consolidation is very likely in the future, the deal pales in comparison with Nokia's acquisition of NAVTEQ and the rivalling bids for Tele Atlas. The new

owners intend to run the new businesses as separate entities and offer the products and services on equal terms to all current and future customers. Even though the longer-term strategies are less certain, the acquisitions can well lead to improved chances for the remaining independent map providers to establish viable alternative sources for map data.

In the longer term, the PND segment will likely be affected by the increasing competition from handset based navigation services, as well as emerging low cost factory installed in-dash navigation systems. There are already over 3 million subscribers to navigation services for mobile phones in North America and the market continues to grow fast. Along with more GPS handsets being launched in Europe by major vendors, fast adoption of navigation services for handsets can be expected also in Europe. Berg Insight estimates that sales of PNDs in Europe will grow with a compound annual growth rate of nearly 23 percent from 9 million units in 2006 to 31 million units in 2012. In North America, where the competition from low cost in-dash systems and mobile phone navigation services is higher, PND shipments will grow from 2.8 million units in 2006 to 22 million units in 2012, yielding a compound annual growth rate of almost 20 percent.

To enhance the competitiveness of PNDs, vendors are continually refining the user interface to facilitate command and control, as well as improve the information presentation. New models will gradually introduce automatic speech recognition technology, 3D map features and photo-realistic textures. Besides navigation related features, many vendors are also adding multifunction capabilities such as digital cameras and digital TV receivers to complement existing media player functions. In order to make navigation services even more useful in everyday situations for more people, introducing wireless connectivity to PNDs can enable integration of online services such as local search, content sharing, enhanced traffic information and map updates.