

Bosch Sensortec and Nemerix partner to deliver revolutionary GPS multi-sensing capability for enhanced vertical accuracy

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- ▶ Improves vertical resolution with navigation systems
- ▶ Optimizes turn-by-turn navigation while driving on multi-level, stacked roads or tunnels

Bosch Sensortec GmbH, a leading supplier of MEMS sensors for consumer markets, and Nemerix, a leading fabless semiconductor company specialising in ultra low power semiconductors and solutions for GPS and location-based service devices, today announced the successful integration of their technology to deliver a leading-edge multi-sensing GPS solution. The new system, which offers significantly enhanced results for navigating urban stacked road systems, multi-level bridges and tunnels, will be demonstrated at the Bosch Sensortec stand at Sensors Expo 2007 (12-13 June, Donald E. Stephens Convention Center, Rosemont, Illinois, Booth #515).

The innovative solution integrates the high-resolution Bosch Sensortec SMD500 pressure sensor with Nemerix's high-accuracy navigation solution, offering the ability to identify if a vehicle is travelling on the upper or lower levels in a multi-level or stacked road, and significantly enhancing turn-by-turn navigation in situations where traffic is travelling in the same direction on different levels of a road system, or where two-way traffic is accommodated. By enabling fast and accurate determination of altitude in a way that is not possible simply by tracking a user's speed or direction, the technology developed by Nemerix and Bosch Sensortec facilitates timely notification of approaching exits on stacked roads, and early detection of wrong exits when two roads are separating in almost parallel

directions, but with different slopes – a very common situation in freeway “clover leaf” configurations.

Even with high-performance GPS systems, typically the vertical accuracy that is achieved is significantly lower than the horizontal accuracy. This effect can be aggravated when the lower road is obstructed by the higher road, causing very high multipath that further degrades vertical accuracy. This new state-of-the-art solution enables the vertical performance to be significantly improved to the level where a typical road-to-road vertical distance of 10 meters or more can be unambiguously resolved. By combining high resolution barometric air pressure measurement data with non-biased, lower resolution GPS-derived altitude, the two companies have delivered a solution to the altitude conundrum within performance, cost, size and power consumption parameters that have not been seen before.

The SMD500 pressure sensor developed and manufactured by Bosch Sensortec provides a very high degree of resolution in air pressure measurement while at the same time featuring very small package size and ultra low power consumption, as required for mobile devices.

“We are excited to see such an innovative application for our SMD500 air pressure sensor,” commented Dr. Frank Melzer, CEO of Bosch Sensortec GmbH, located in Reutlingen, Germany. “This breakthrough solution developed by Nemerix is aligned with our strategy to provide innovative inertial and pressure sensing solutions for new applications, and also to improve existing solutions in the consumer electronics market. Based on our well-proven MEMS technology portfolio, we are continuously extending and refining our product line to serve the most demanding customers in the consumer markets.”

Nemerix Chief Technology Officer Lionel Garin said, “This solution will allow users to accurately navigate over-lapping road systems for the first time. Our technology offers the flexibility to meet the needs of today’s GPS applications, while delivering the future of revolutionary multi-sensing capabilities for GPS navigation systems.”

About Bosch Sensortec:

Bosch Sensortec GmbH, a 100 percent subsidiary of Robert Bosch GmbH, which is the global market leader for automotive sensors, offers micromechanical sensors, application, and foundry services for consumer electronics, security systems, and logistics. Its product portfolio includes triaxial acceleration sensors as well as pressure sensors. The company was founded in early 2005 and is headquartered near Reutlingen to the south of Stuttgart (Germany). For more information about Bosch Sensortec, go to: www.bosch-sensortec.com.

Bosch has been active in the field of MEMS since 1988 and is one of the pioneers in this technology. Today, hundreds of engineers of the Bosch Group work in the field of MEMS. A wide product range from pressure and acceleration sensors to yaw-rate sensors is manufactured for the automotive industry. Annual production at Bosch amounted to more than 130 million MEMS sensors in 2006.

About Nemerix (www.nemerix.com):

Founded in April 2002, Nemerix S.A. (Manno, Switzerland) is a venture-backed fables semiconductor company specialising in ultra low power GPS and LBS integrated circuits, software and firmware for GPS and wireless applications. Nemerix's devices enable battery-power location determination anywhere, anytime, facilitating the design and manufacture of truly differentiated products for both consumer and professional markets. For more information about Nemerix, please visit www.nemerix.com.

Contact person for press inquiries:

Bosch Sensortec:
Julia Patzelt, Tel. +49 7121 3535921

Contact person for journalists:

Ulf-Malte Wunsch, Tel. +49 711 811 7204

The Bosch Group is a leading global supplier of technology and services. In the areas of automotive and industrial technology, consumer goods, and building technology, some 260,000 associates generated sales of 43.7 billion euros in fiscal 2006. The Bosch Group comprises Robert Bosch GmbH and its roughly 300 subsidiary and regional companies in over 50 countries. This worldwide development, manufacturing, and sales network is the foundation for further growth. Bosch spends more than three billion euros each year for research and development, and in 2006 applied for over 3,000 patents worldwide. The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as "Workshop for Precision Mechanics and Electrical Engineering."

The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant up-front investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

Additional information can be accessed at www.bosch.com.