China launches navigation satellite

China launched its first navigation satellite in nearly four years, moving one step closer to developing a positioning system intended to eventually rival the U.S. GPS system and Europe's Galileo system. The "Beidou" navigation satellite successfully launched on-board a Long March 3A rocket. This after China prompted expressions of concern from the U.S. by destroying one of its own ageing meteorological satellites with a missile-launched "kinetic kill vehicle".

China's plans for its satellite navigation system, known in English as "Compass," are mostly secret, with officials declining to comment on their intentions. This launch appears to be an attempt to augment a relatively imprecise system based on three Beidou satellites launched between 2000 and 2003. In a rare public discussion of Beijing's plans, the official Xinhua news agency said in November 2006 that two geostationary satellites would be launched early in 2007 allowing the system to cover all of China and parts of neighboring countries by 2008.

The expanded Beidou system would offer global coverage with the creation of a constellation of 30 medium Earth orbit satellites. The agency gave no timing for this part of the system. More precise positioning would be an important asset for China's armed forces. Some analysts suggest the expanded Beidou system will use the same radio frequencies as Galileo and possibly GPS. That would make it more difficult for adversaries to jam the network in case of war.

Beidou's development could pose a challenge to the commercial success of Galileo. China is a partner in the Galileo project and the government and companies are investing €200m (US$260 million) with related facilities and research into commercial applications at the same time it is shaping up as a potential competitor.

The Chinese embassy in Brussels says it is committed to the project to improve political ties, learn from European know-how and provide greater competition. Beijing says it will provide open access to Beidou signals allowing positioning accuracy within 10 meters. Operation of the €3 billion-plus Galileo (US$3.9 billion), will have 30 satellites and has been postponed until 2011 because of technical problems and delays in the public-private partnership needed to build the system. TIH

(continued from page 5)

navigation system will use Datatrak's extensive range of mapping products and services.

The satellite navigation for driving in Malta and Gozo is expected to be available in late March of this year.

Medcomms is internationally recognised in the marine electronics industry, providing a comprehensive range of products and services for merchant ships, fishing boats, pleasure craft and many other vessels. The company also is active in the aerospace, terrestrial and automotive sectors. TIH

SAFETY FEATURES AND RESEARCH

Safety applications of ITS in Europe

Several of the priority topics for international technology scanning to implement intelligent transportations systems (ITS) in Europe are taking shape. Travel demand in Europe is predicted to increase by 20% by 2010. The European Union has established a Code of Practice to protect implementers and manufacturers from excessive liability claims associated with the deployment of ITS technologies. This code defines the standard of care that, if met, protects providers and promotes further deployment of new systems.

An optimising system in Germany includes use of road shoulders and an aggressive use of alternative routing to add additional capacity to motorways. The operational concept is that the public sector will provide data for telematics. A joint public-private partnership has evolved to manage the program.

The European eCall system allows for more accurate and timely response by emergency personnel to crashes and other incidents on the highways. eCall is part of the EU initiative "eSafety" which is pushing for the introduction of an emergency call system for road traffic starting in 2009. As an integrated part of the vehicle's internal communication, the emergency call system will be integrated in the electronic infrastructure of the vehicle and networked with the existing communication systems

Another aspect of driver safety is the balance between technology that assists the driver with inputs in the decision making process and the basic responsibility that all drivers have to operate their vehicles in a proper and safe manner. Technology can assist, but it cannot replace, sound decisions. Ultimately, there is no replacement for the human mind and its ability to process complex inputs, render judgment and take appropriate action. Technology can, however, improve the driver's ability to make good and safe decisions. TIH