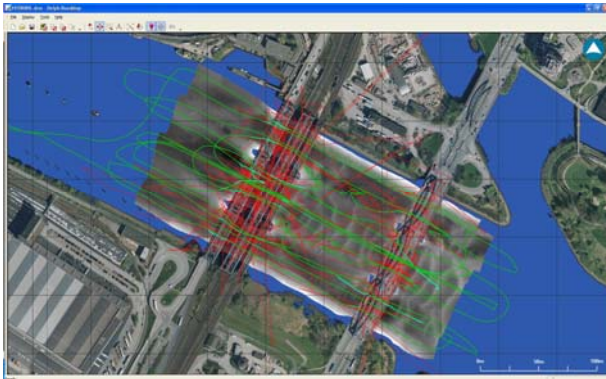
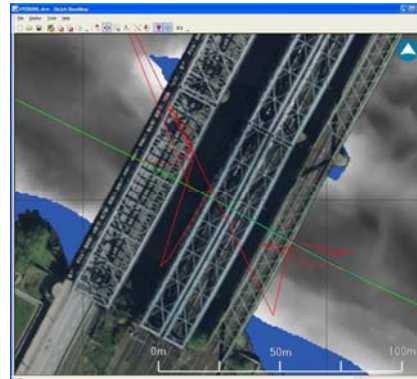


DELPH INS QUICKLY TAKES UP POSITION IN THE INERTIAL POST-PROCESSING SOFTWARE MARKET

Early applications in the hydrographic, offshore and defense sectors



GPS reacquisition after passing under a bridge
GPS, HYDRINS (real-time), DELPH INS



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DELPH INS is the latest addition to the IXSEA software product range. Introduced late last year and formally launched at OI 2010 in London, DELPH INS is a post-processing and bulk data productivity tool for use with all of IXSEA's inertial navigation systems (INS). Advanced data editing and forward-backward processing functions plus a powerful data export capability make it the ideal tool for a series of navigation enhancement tasks.

The product has been designed not only with technical performance in mind but also ease of use, even by those without too much knowledge of INS. The product has a very simple operator interface. It also readily integrates with existing processing workflows and can also be easily scaled to suit a variety of data streams.

IXSEA has sold licences for DELPH INS to companies in the offshore and defense sectors, and most recently to Hamburg Port Authority. Explaining the way the product is being used in Hamburg is a good way of illustrating its benefits.

Smoothed Best Estimate of Trajectory (SBET)

Hamburg Port Authority regularly carries out multi-beam echosounder surveys of the harbour and approaches within the limits of the City of Hamburg in order to control its dredging operations, an essential process in ensuring the safety of Navigation within its confines.

The authority used to rely on GNSS (GPS/GLONASS) to provide positional information during these surveys, which although accurate had some serious drawbacks. Notably, there was an unavoidable loss of position beneath bridges, and position jumps were common owing to multi-path effects near, for example, large ships, buildings and stacked containers or other superstructures. To overcome these problems, the authority visually inspected the position data for obvious discontinuities. It would then edit the data manually, a laborious and time-consuming process. In few cases HPA also used a polar tracking system to address the described navigation issues. But the navigation with these systems is limited in range and they required extra efforts and manpower to be mobilized and demobilized for each individual survey area.

In an effort to provide reliable navigation trajectories in the vicinity of the GNSS problem areas, without resorting to manual post-processing, IXSEA proposed a system based on the HYDRINS inertial navigation system combined with the company's new DELPH INS software. DELPH INS uses the raw inertial data logged from HYDRINS to compute the smoothed best estimate of trajectory (SBET).

Post-processing the HYDRINS data with DELPH INS has proved highly successful in providing the best-fit navigation track, within the GNSS problem areas. The result is the smoothed best estimate of the trajectory (SBET), even in the most challenging parts of the harbour. All positions are now within the authority's tight specifications even after a minute of GNSS outage, which perfectly meets the authority's overall survey needs in terms of the reliability of its soundings.

Hamburg Port Authority has purchased HYDRINS units for all four of the vessels used for harbour surveys. In addition to the benefits gained by using DELPH INS, the authority can expect to see the usual advantages of using HYDRINS over a mechanical gyroscope: faster start-up, reduced maintenance and better fundamental accuracy.

IXSEA account manager Arne Hoof said: "We appreciate the faith that Hamburg Port Authority has shown in DELPH INS software in conjunction with HYDRINS by choosing it for this important application. It has quickly proved its worth in providing more accurate information with less effort on the part of the user. The experience has strengthened our resolve to bring leading-edge products to the marketplace that solve real customer problems and offer demonstrable value."

About IXSEA

Formed in 2000, IXSEA designs and manufactures navigation and positioning systems based on its state of the art Fibre Optic Gyroscope technology, along with a complete range of seafloor mapping solutions for the scientific, offshore and defense industries.

IXSEA has more than 400 clients on five continents with a turnover of €35 million in 2009.

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