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# Ping to Chart World Tour 2006



Throughout 2006, CARIS will reach out to its users across Asia, Europe, North and South America through its first ever World Tour.

The "Ping to Chart World Tour 2006" will be a unique series of five-day hands-on workshops that cover the workflow of hydrographic information from the echosounder "ping" through to the production and distribution of the "chart".

While planning is ongoing, the tour currently includes stops in China, Chile, Malaysia, Australia, Denmark and India.

The workshop will explain the workflow stages involved in taking your acquired hydrographic survey data through to final product using the latest CARIS technology. Cutting-edge concepts like CUBE and one feature one time data management will be explored to highlight the efficiencies that are now available.

To learn more and to register, visit [www.caris.com/worldtour](http://www.caris.com/worldtour) today!

### Overview

- Multibeam and Sonar Image Processing
- Bathymetric Validation, Compilation and Visualization
- Collection of Digital Field Notes and In-field Validation
- Data Management
- Product Creation
- Data Access and Distribution

## Special Tour Stop at CHC 2006

The CARIS Ping to Chart World Tour will be making a stop at the Canadian Hydrographic Conference (CHC 2006) in Halifax, Nova Scotia, Canada where we will be hosting a special one-day workshop on June 5th.

The workshop is hands-on so registration will be limited. Registration is being coordinated through CHC organizers. Visit [www.chc2006.ca/workshops](http://www.chc2006.ca/workshops) to find out more.

Through distribution of this publication, CARIS intends to keep its users informed with the latest in development, tips, industry news and company events. If there are any features or columns that you would like to see more of, please let us know. Guest articles and contributions are also welcome. To be added to our mailing list or to submit your article ideas, contact Sheri Flanagan at:  
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# Kongsberg Maritime and CARIS sign Memorandum of Understanding



**KONGSBERG**

Kongsberg Maritime, Norway and CARIS have announced the signing of a Memorandum of Understanding to collaborate and deliver CARIS HIPS and SIPS multibeam processing software to existing and potential Kongsberg clients.

The addition of HIPS and SIPS to Kongsberg's existing multibeam processing products allows them to appeal to a greater diversity and variety of end-user needs, thus strengthening their market position.

As part of this agreement, CARIS will provide ongoing marketing, sales and training support for the HIPS and SIPS software to Kongsberg engineers and sales specialists. Further, the two

parties have committed to working cooperatively on an ongoing basis, to offer migration for Neptune users to HIPS and SIPS and to ensure that the technical needs of Kongsberg clients are being met in future planning of the HIPS and SIPS software.

"It is our objective through this collaboration with CARIS to ensure Kongsberg customer satisfaction by providing a quality multibeam processing tool that is well supported to existing and potential clients. However, our well known and well tested Neptune-B post processing software will still be available as a choice for the users" says Freddy Pohner, Vice President Sales and Marketing for Kongsberg Maritime-Subsea.

For more information about Kongsberg Maritime, visit [www.km.kongsberg.com](http://www.km.kongsberg.com).

## Look for CARIS at these Upcoming Industry Events:

### GeoSpatial Symposium

March 20 - 23, 2006, Denver, United States

### Oceanology International 2006

March 21 - 24, 2006, London, United Kingdom

### International Harbour Masters' Association Congress

April 03 - 07, 2006, Malta

### Canadian Hydrographic Conference 2006

June 05 - 09, 2006, Halifax, Canada

### GeoTec Event 2006

June 18 - 21, 2006, Ottawa, Canada

### WEDA XXVI Annual Conference

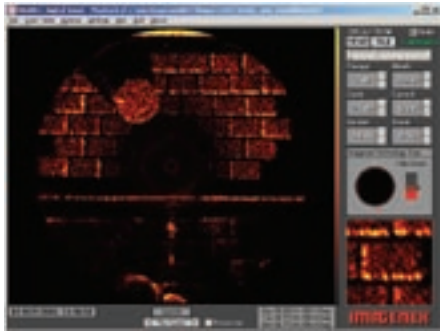
June 25 - 28, 2006, San Diego, United States

### Hydro 2006

November 06 - 09, 2006, Antwerpen, Belgium

# Imagenex Data Conversion in HIPS

*Imagenex Technology Corp., now offers compatibility with HIPS in its multibeam sonar for powerful post-processing.*



Imagenex's compact, cost-effective multibeam sonar represents one of the most significant achievements for Imagenex in recent years. Available in an imaging or profiling configuration, with optional depth ratings to 6,000 meters, the sonar head is often used in a hull-mounted configuration yet is small enough to fit on most underwater vehicles for obstacle avoidance, navigation and mapping applications. The profiling version features output for real-time plotting of 3D bathymetry which is now also compatible with HIPS for post processing.

Imagenex Technology Corp. is located in Port Coquitlam, British Columbia, Canada and was founded in 1988. It is an innovative company specializing in advanced acoustic underwater sensors, in combination with graphic visualization tools.

In 1990, Imagenex launched its first product for the commercial underwater industry and the scientific community with an imaging sonar head the size of a coffee mug. In addition to a depth rating of 300 meters, it has the ability to record and play back sonar data using consumer Digital Audio Tape (DAT). Other features were added, such as ex-

panded azimuthal range and increased depth rating, as well as an optional side scan sonar module.

During the following years, the company continued to develop new underwater sensors to operate with the original surface processor. These included profiling (pencil beam) sonar, high resolution imaging sonar, a transponder interrogator, a 2-axis profiler option and an increased depth capability to 6,000 meters.

1995 was a significant year in the history of Imagenex with the introduction of the first digital colour imaging sonar operated from a customer supplied personal computer (desktop or laptop), without the need of a dedicated processor. It allows recording and playback from the computer's hard drive, as reviewing and sharing of sonar data has become critical for many underwater operations. Based on serial interface protocol, users could develop their own control programs at no additional cost. It has become an industry standard for scientific operations.

The subsequent years saw the company develop a high-resolution digital sub-bottom profiler and a small multi-frequency sonar with an operating range of 1 to 200 metres, capable of producing resolutions down to 2 millimeters at short ranges. As an ideal obstacle avoidance sonar, it is widely in use on manned underwater vehicles, Autonomous Underwater Vehicles (AUVs), as well as inspection and work-class Remote Operated Vehicles (ROVs).

In early 2000, Imagenex introduced a side scan sonar with a revolutionary price/performance ratio, which was later complemented with a more advanced version. The later version features a greater depth rating, Ethernet communications and optional data output in XTF format. During the same period, the company added an automated azimuth drive to its product line for profiling (mapping) from stationary points, such as fixed structures.

To learn more about Imagenex please visit [www.imagenex.com](http://www.imagenex.com).

*Mosaic from two different screen captures taken with the Imagenex SportScan side scan sonar.*



# Maritime Boundaries Training for Bahamas

The Bahamas National Geographic Information Systems (BNGIS) Centre, in collaboration with the Ministry of Foreign Affairs, coordinated training on CARIS LOTS software for the delimitation of The Bahamas' maritime boundaries.

Conducted October 24-November 4, 2005 at the BNGIS Centre, the two-week training was organized as part of the Centre's mandate to provide GIS technical assistance to governmental agencies.

Through this training, policy makers and technical officers can now delineate archipelagic maritime boundaries for The Bahamas. This will not only assist the Ministry of Foreign Affairs in negotiating the best maritime boundaries for The Bahamas but also advance the use of LOTS in support of various other decision-making processes.

Participating agencies included representatives from the Ministry of Foreign Affairs, the BNGIS Centre, the Royal Bahamas Defence Force, the Ministry of Trade and Industry and the Lands and Surveys Department.



*LOTS training participants at the Bahamas National Geographic Information Systems Centre.*

## Undersea Environmental Research

Istituto di Scienze Marine (ISMAR) of Ancona, Italy has purchased HIPS and SIPS software for use as part of its undersea environmental research program.

The software license was purchased in November 2005 along with training, which will be conducted from CARIS' Netherlands office in March 2006.

ISMAR is part of the National Research Council, a national scientific and academic organization carrying out research in different fields. In particular, ISMAR includes eight seats

performing research on the Italian seas and coasts.

Ancona has a multibeam EM 3000 which is used to monitor scouring on artificial reefs and to carry out studies to evaluate and minimize the impact of human activities on the seafloor (e.g. trawling, dredging, mud disposal). HIPS and SIPS will be utilized to process multibeam and side scan data obtained in these research projects.

To learn more about ISMAR please visit [www.ismar.cnr.it](http://www.ismar.cnr.it).

## Peru HO Strengthens Data Production

Dirección de Hidrografía y Navegación de la Marina, Peru has taken further steps towards enhancing its data production operations with the purchase of additional CARIS chart production software. The purchase includes several CARIS GIS, HOM and HIPS licenses.

# Free Software!

Try CARIS Notebook Today



CARIS is offering a free six-month evaluation of its Notebook software. With minimal system requirements, Notebook is a lightweight software application for the addition of new georeferenced field survey objects, field notes and S-57 standards-based hydrographic objects to existing survey data and products.

This is a unique opportunity to explore the benefits of Notebook and evaluate it within the context of your marine and hydrographic production operations.

- Digital, standards-based alternative to the paper field book
- Built on S-57 hydrographic standard
- Reduce the need for re-survey
- Easy transfer to CARIS hydrographic production software

This is a limited time opportunity. To take advantage of this offer, please visit [www.caris.com/NotebookOffer](http://www.caris.com/NotebookOffer) and complete the online application today.

## Latin American Countries Adopt HPD

Argentina, Brazil, Chile, Mexico, Peru and Venezuela are now in the process of implementing database-driven hydrographic production systems through the acceptance of Hydrographic Production Database (HPD).

Through these systems, these countries will manage their hydrographic and related data in seamless databases, providing for simultaneous data processing and workflow by multiple users. Perhaps the most impressive benefit of these HPD implementations will be the maximization of efficiency in data storage with features being stored only once, with the ability to create multiple representations for different products.

*CARIS software dominates the Latin American market as the solution of choice for nautical chart production by nearly all of the region's International Hydrographic Organization (IHO) Member States.*



# Supporting Hydrographic Education at UNB

CARIS has conducted a semester of HIPS training as part of the University of New Brunswick (UNB) Department of Geodesy and Geomatics Engineering's Hydrographic Education program.

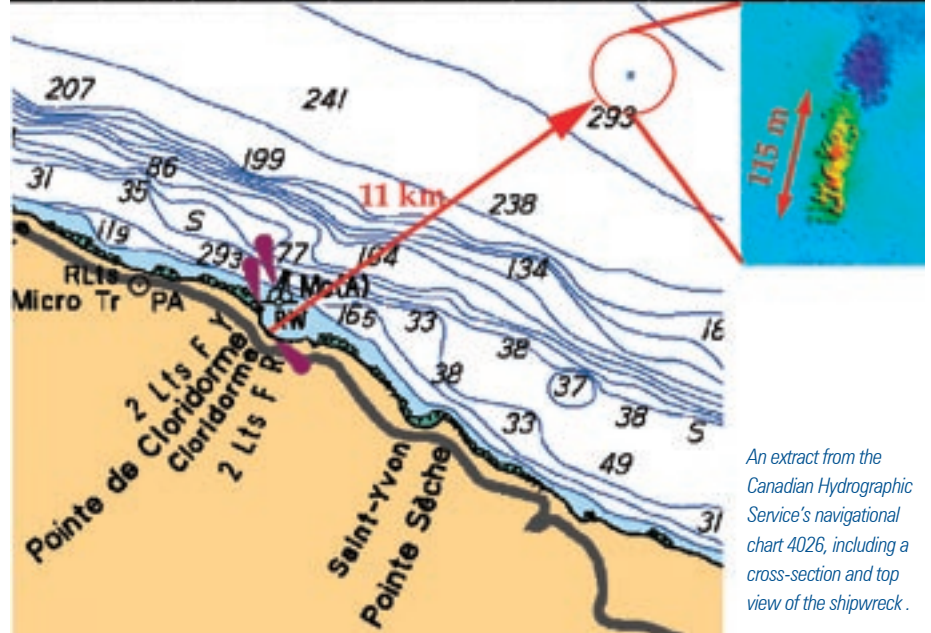
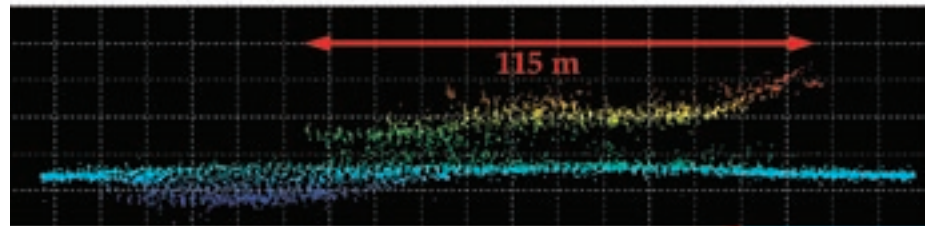
Leading two lectures per week for ten weeks, Technical Support Consultant, Corey Collins covered the latest MBES processing techniques and features available in HIPS including CUBE processing, error modeling, understanding metadata and BASE Surface creation among others.

Throughout the semester, all students were given access to the new CARIS HelpDesk where they could login and submit any questions that arose during the lectures and also see the questions asked by their peers.

The Hydrographic Education program at UNB was established over two decades ago, and has since been supplying highly trained hydrographers to meet both Canadian national needs, and those of many other nations.

Students representing hydrographic organizations from Australia, Brazil, Canada, Chile, Czech Republic, Netherlands, Portugal and Spain participated in the HIPS lectures at UNB this year.

# Discovery of a Shipwreck in Gulf of St. Lawrence



An extract from the Canadian Hydrographic Service's navigational chart 4026, including a cross-section and top view of the shipwreck.

An important shipwreck has been discovered in Canada's Gulf of St. Lawrence, while processing and analyzing data using HIPS.

While conducting research to characterize the habitat of spotted wolffish, a threatened species in the Gulf of St. Lawrence, a team of hydrographers and scientists from the Canadian Hydrographic Service and Fisheries and Oceans Canada's Maurice Lamontagne Institute, came upon a shipwreck which is believed to be the first ship sunk by a German submarine during the Battle of the St. Lawrence.

At an estimated depth of 270 metres, the data was collected using an EM 1002 multibeam echosounder. The hydrophone array detected an unusual shape, which, following data processing and analysis in

HIPS, was determined to be a shipwreck.

Located about six nautical miles (11 kilometres) northeast of Cloridorme, the wreck is roughly 115 metres long and 30 metres wide. The structure rises 15 metres above the sea floor. The shipwreck is likely to be the SS Nicoya, a merchant ship that had been requisitioned for the war and was torpedoed by a German submarine on May 11, 1942. The wreck's size and position correspond with various reports about the sinking of the SS Nicoya.

The Maurice Lamontagne Institute is part of Fisheries and Oceans Canada's network of research centres. It conducts research and monitoring activities to learn more about aquatic ecosystems and the effect of human activities on ecosystems, as well as to ensure the safety of navigable waterways.