

CARIS

HPD

Around the World



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For Release February 4, 2006

Latin American Countries Adopt HPD

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

Through this system, these countries will manage their hydrographic and related data in a seamless database, 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.

For Release August 9, 2006

CARIS Hydrographic Production Database Adopted by Ecuador

CARIS is pleased to announce that the Oceanographic Institute of the Navy of Ecuador (INOCAR) has selected CARIS Hydrographic Production Database (HPD) in order to move to database-driven hydrographic production system.

"We are very proud to have this latest addition to our family of HPD users." Said Dr. Salem Masry, CARIS President and CEO. "Ecuador represents the 18th nation to have adopted HPD in their hydrographic production workflow.

INOCAR has selected a full implementation of HPD which will include HPD Server, Source Editor, S-57 ENC Editor and Paper Chart Editor. A ten-day training session is being planned now and will be hosted in Ecuador shortly.

The INOCAR implementation will be a phased-in approach, beginning with the production of S-57 ENC then moving to Paper Charts. They intend to be in full-scale production by the end of 2006.

Using HPD, data is stored in a common database and shared by products, providing a higher degree of consistency between product types (e.g. ENC and Paper Chart). It also removes duplication of work and lowers maintenance costs. Updates to data can be done once and included into the appropriate products. New products can be introduced, such as AMLs, sharing the same common data. Status of updates can be tracked from source to product and history of changes recorded allowing better management of liabilities.



Photo1: Excerpt from one of the first paper charts produced using CARIS Hydrographic Production Database (HPD).

For Release June 26, 2006 - Photo 1

Canada, Chile and Mexico Join to Announce Publication of First Chart from HPD

Canada, Chile and Mexico joined together during the 2006 Canadian Hydrographic Conference (CHC 2006) held in Halifax, Nova Scotia on June 8, 2006 to announce the release by each of these three countries of their first paper chart produced using CARIS Hydrographic Production Database (HPD).

This announcement commemorates the successful transformation of these hydrographic organizations to a fully integrated hydrographic data management and production environment.

HPD provides a higher degree of consistency between product types (e.g. ENC and Paper Chart) because all products are derived from a common source. It also removes duplication of work and lowers maintenance costs relative

to previously separate production lines. Updates can be done once on the source data and included into the appropriate products. Status of updates can be tracked from source to product and the history of changes recorded allowing better management of liabilities. New products which share some or all of the common data can be introduced (e.g. Additional Military Layers (AML)). Work can be planned and managed in a common multi-user environment allowing the agency to overcome the limitations of a file-based or segregated approach.

This announcement is significant and indicates the success of this revolutionary concept which will help modernize the hydrographic offices' operations.

The Use of CARIS HPD at BSH

*Received from Mr. Johannes Melles
August 25, 2006*

In the year 2000, CARIS and BSH started a co-operation on the development of a production software for hydrographic offices (HOs). BSH brought in the experience as the German HO and from the project "Nautical Hydrographic Information System (NAUTHIS)". CARIS brought in its extensive experience as a software manufacturer specialized in the development of GIS Systems for HOs.

The result of this co-operation is the Hydrographic Production

Database-Software (HPD). CARIS developed the HPD-Software according to the requirements of BSH, but also tried to make it more generic so that it could also be used by other HOs.

After several years of development by CARIS, and testing by BSH, the important modules of the system have reached a state of maturity and BSH has now taken these modules into production.

BSH has started to fill the HPD-Database with all the hydrographic

data for German waters. This is an ongoing process, but a large portion of the North Sea and all the administrative data for the North and the Baltic-Sea like Navigational Aids, Wrecks, Obstructions etc. are now stored and maintained in the HPD-Database.

Another module which is used in production now, is the ENC-Product Editor. Several ENCs were produced with this software and are now available through IC-ENC. The AML-Editor is very similar to the ENC-Product Editor and BSH has undertaken the first steps towards its testing and use in production. The results are promising.

The full benefits of the system will be shown, when different products are produced from the same data

in the database. Therefore BSH is working on the production of a German paper-chart with the HPD-Paper Chart Editor (PCE). It's planned that this chart will be published in autumn 2006. Upon successful completion of this chart, the CARIS PCE will be introduced into chart production by the end of 2006.

CARIS and BSH are also cooperating on other modules. A first prototype of the Generic Product Editor (GPE) which is intended for the generation of a lot of different products e.g. Nautical Publications was just delivered and other modules like the Notice to Mariner Editor are under development.

HPD will operate in a client-server environment where all hydrographic information will be stored and managed in a central Oracle database. Besides the ability to store and maintain hydrographic source data, this database will also store and support the various products being produced by the HO such as Digital Nautical Paper Charts, ENC and AML data. The system will allow the RNLN to perform this in a controlled, traceable and efficient way. Furthermore dedicated interfacing will be provided to existing NtM system and other nautical publications (e.g. List of Lights, Wreck Register and Special Publications).

This contract was concluded after an extensive period of close cooperation between the RNLN and CARIS where evaluations as well as technical requirement sessions and software development assessments were conducted.

The delivery and implementation will follow a SHIP2 Master planning consisting of Evaluations, User Acceptance Tests, Training courses and on-site support. The final SHIP2 HPD installation including complete integration will be completed in the first quarter of 2009.

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For Release March 22, 2007

EDS, CARIS and LSC Group Selected for UKHO Hydrographic Database Solution Contract

EDS, as a prime contractor, and CARIS, as the sub-contractor, today announced their selection for the supply and support of a Hydrographic Database (HDB) system to the United Kingdom Hydrographic Office (UKHO).

(HPD) software to manage and create paper and electronic chart products. This combined solution will provide a flexible system as part of a wider program for the UKHO.

Through the HDB Project, EDS and CARIS will deliver a workflow management system together with Bathymetry Database and Hydrographic Production Database

This unique workflow-oriented and database-driven approach to data management and production will bring significant business benefits to the UKHO in production optimization and efficiency.

For Release April 12, 2007

Royal Netherlands Navy Awards Contract for HPD

The Netherlands Ministry of Defence, Defence Material Organisation has awarded CARIS a contract for the delivery and implementation of a Hydrographic

Production Database to support the production department of the Royal Netherlands Navy (RNLN) Hydrographic Office.

For Release September 5, 2007

LINZ HPD Project Kick-off

CARIS has launched a project with Land Information New Zealand (LINZ) to begin implementation of a Hydrographic Data Infrastructure.

will also be delivered as part of the project. Relevant consulting, implementation and training services will also be delivered.

Through the project CARIS will deliver HPD for hydrographic data management and chart production in a digital environment. Notices to Mariners functionality in HPD

The project was awarded to CARIS in December 2006. The Project kicked-off in June 2007 and is expected to continue into 2008.

For Release January 3, 2008 - Photo 2

Peruvian Navy Boosts Chart Production with HPD

During November 2007, the Peruvian Navy and CARIS undertook the task of integrating the HPD system to the Peruvian Hydrographic Office line of chart production.

The Peruvian team, led by Cmdr. Jose Gianella from the HO and Gustavo Puente from CARIS, spent 20 days of hands-on HPD work, from Oracle™ installation to performing Quality Controls on ENC's and Paper Charts, using the HPD suite of tools.

A long time CARIS user, the Peruvian HO has taken a long step in further moving its charting operations to a database driven environment. CARIS made available Mr. Gustavo Puente, an HPD expert, to the HO for an extended period of time. The design of a joint strategy prior to the implementation was key to the success of the integration. A series of meetings took place at CARIS and the Peruvian HO to study the current situation, determine the appropriate course of action and streamline a complete strategy. The positive outcome was only possible due to the involvement and full commitment of the HO at all levels, from the directors to the cartographers.

As a result, the HO now has a group of staff organized in three teams, each with specific responsibilities while working on the Source Editor, ENC Editor and Paper Chart Editor. Besides working on production, the teams are charged with documenting their operations, so they can have Standard Operating Procedures manual that can help lower the learning curve when new staff join the teams or staff is shifted to other departments. The Hydrographic Office expects to continue to expand their use of CARIS HPD for the coming year.



Photo 2: Cmdr. Jose Gianella and CARIS expert Gustavo Puente (centre) and Peruvian HO staff.

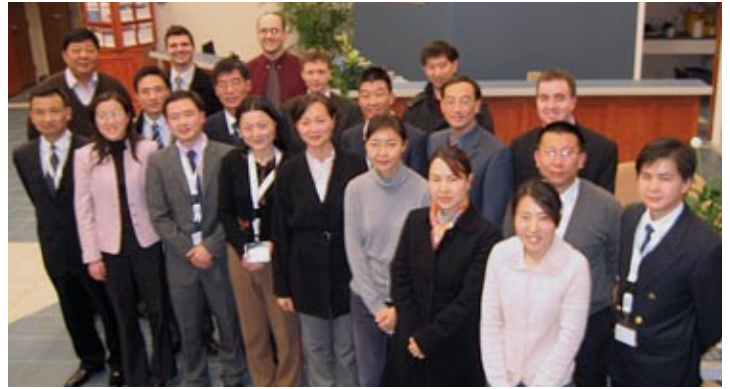


Photo 3: Sixteen delegates from the China Maritime Safety Administration (MSA) were welcomed to CARIS global headquarters in Canada for two intensive weeks of training on HPD in January 2008.

For Release February 1, 2008 - Photo 3

CARIS Welcomes Delegation from MSA for HPD Training

CARIS, a leading developer of geomatics software, hosted sixteen delegates from the China Maritime Safety Administration (MSA) at its global headquarters in Canada for two intensive weeks of training on CARIS Hydrographic Production Database (HPD) in January.

The training is part of a sale made by CARIS to MSA in late 2007. The purchase includes 112 licenses of CARIS HPD Source Editor, Paper Chart Editor and ENC Editor as well as seven

weeks of training. The balance of the training will be hosted at MSA facilities at a later date.

HPD will be implemented at all three MSA regional hydrographical centres in Tianjin, Guangzhou and Shanghai, which undertake the surveying and charting of the Bohai Sea, Yellow Sea, East China Sea and South China Sea respectively.

This initial training covered the set-up, system administration and management

of HPD across the three offices, data preparation as well as an introduction to the Source Editor and the Paper and ENC Editors. During the training, delegates also traveled to the Canadian Hydrographic Service Quebec Region office to learn about their HPD implementation and workflows.

HPD will allow MSA to move from a file-based environment to a seamless enterprise system with unique database-driven functionality that will take their hydrographic data management and production to the next level in collaboration and efficiency.

For Release March 31, 2008 - Photo 4

CARIS Marine Spatial Data Infrastructure Solution for France

CARIS, a leading developer of geomatics software, is pleased to announce it has been awarded a contract by the Service Hydrographique et Océanographique de la Marine (SHOM) to deliver a Marine Spatial Data Infrastructure (MSDI) to access its hydrographic information. CherSoft as a subcontractor will supply a tide database as part of the solution.

The launch of the project occurred in mid-February for a week, with focused meetings on project strategy and benefits. Through this contract, referred to as INFRAGEOS-H (Infrastructure Géospatiale du SHOM for Hydrographic data), CARIS will deliver a technological infrastructure built on CARIS bathymetric and hydrographic

data management software, Bathy DataBase, CARIS Hydrographic Production Database, and Web-mapping software, Spatial Fusion Enterprise, and the CherSoft tide database to produce this MSDI.

The MSDI will be a central, interoperable source for all SHOM hydrographic geospatial information. The data and information housed in the MSDI will be accessible at SHOM from the regional hydrographic units and even in the field by survey platforms.

In its beginning, this MSDI will maintain Bathymetry, Navigational Aids and Tide data in the central database. It will be accessible through thick desktop

clients for quality control purposes via industry standard formats like IHO S-57 and Bathymetric Attributed Grid (BAG), or via thin web clients for browse and download purposes utilizing Open Geospatial Consortium, Inc.® (OGC) formats like WMS and WFS.

Potential for future discovery of the data to exist in the MSDI was paramount to SHOM. To aid this data discovery ISO 19115 metadata will be captured for the information that is to reside under the MSDI.



Photo 4: The INFRAGEOS-H project was launched at the Établissement Principal du Service Hydrographique et Océanographique de la Marine (SHOM), in Brest, France in mid-February

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