NSHC 28th Conference **Explanatory Note**
Elsinore, Denmark **Item D 5.2**
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The INFRAGEOS-H hydrographic project

INFRAGEOS-H in a few words…

To fulfil its responsibilities and to make benefit of modern information technologies, SHOM is carrying out an ambitious project to supersede the current heterogeneous systems and to stock, manage and exploit collected hydrographic data (Navaids, soundings, tidal components, etc.).

The INFRAGEOS-H project aims at procuring an interoperable DBMS, capable of providing better access to optimised georeferenced databases and improved information processing.

A set of efficient tools needing to be upgraded to make the most of the existing databases

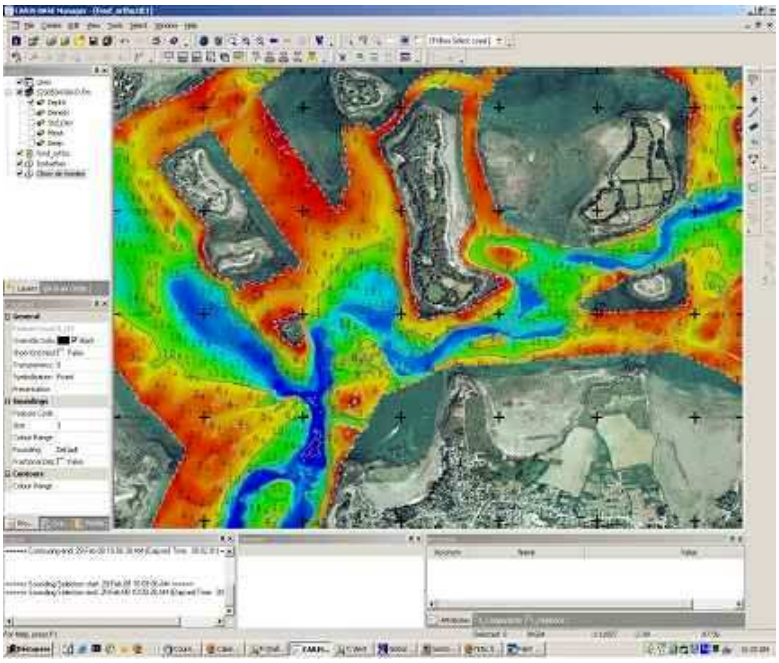
Navaid, tidal and bathymetric data are managed nowadays by a set of very efficient tools which need however to be upgraded for a better global efficiency. Amongst the inconveniences encountered daily are the lack of friendly GIS-type tools as these facilities were not available or cost-effective at the time the databases were designed, limited performances in handling large masses of hydrographic data, difficulty to perform coherence cross-checks due to the absence of systems interoperability, etc.

Towards an optimised management of SHOM geographic information

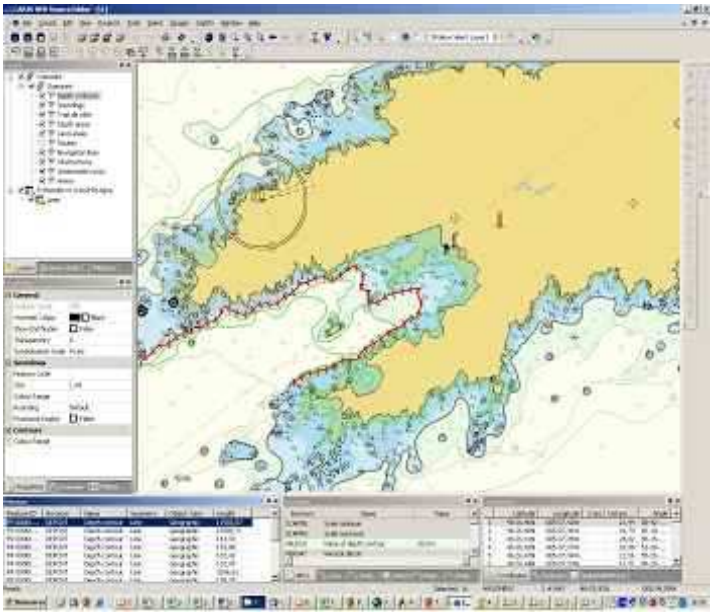
Following an open tender, and taking into account previous lessons learned provided by other HOs, SHOM has chosen CARIS to improve the present situation and set up a Geospatial Infrastructure.

Under the name of INFRAGEOS-H, this infrastructure aims at providing SHOM with a comprehensive geographic information management system covering all aspects, from data collection to archiving process (the information is then ready for further production).

In addition, INFRAGEOS-H, enables SHOM to conform to international normalization standards and adhere to data dissemination policies (Inspire directive, International Hydrographic Organisation).



CARIS Bathy DataBASE@ picture merging Golfe du Morbihan digital orthophotography and bathymetry (soundings, contours, surface)

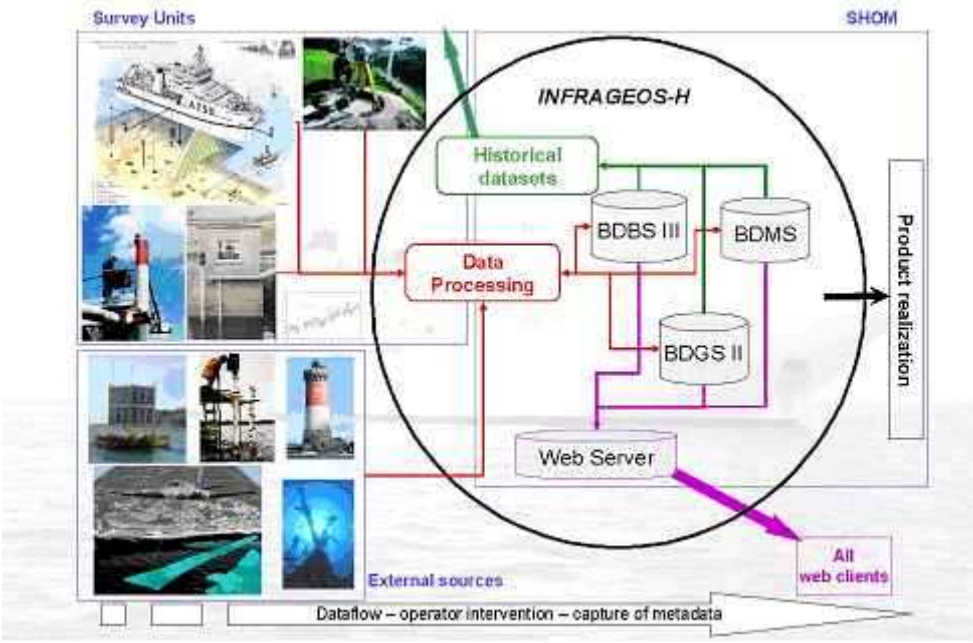


CARIS HPD Source Editor@ representation of Ouessant cartography (coastline, navaids,…)

A Geospatial information infrastructure for hydrography

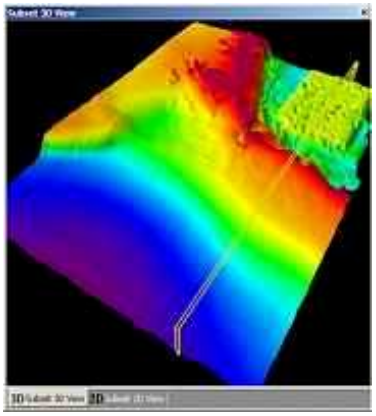
Within a controlled system, the INFRAGEOS-H infrastructure shall combine the following functions:

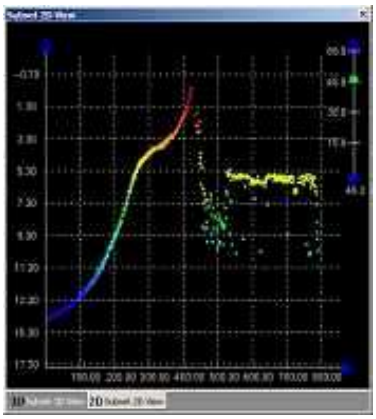
- A core of interoperable databases and high-performing, better intuitive, GIS type management and processing solutions (multilayer display, vector and raster data in various formats and from diverse sources, extended range of operations on objects, etc.);
- A control and transfer system of hydrographic information;
- A workflow control system;
- Some tools to support web publication.



INFRAGEOS-H lay-out

INFRAGEOS-H will provide SHOM with a next-generation set of tools for tackling ever-changing information and products requirements, such as new 3D developments.*3D visualization with Caris Bathy D DataBASE*





3D visualization with Caris Bathy DataBASE

Perspectives

The INFRAGEOS-H project is the first step in a broader process consisting of grouping together within a coherent system all SHOM databases (oceanography, sedimentology, etc. not limited only to hydrographic datasets). The results achieved by the hydrographic component will be capitalized and enhanced, in support of a global reflection upon SHOM future Geospatial Infrastructure encompassing all thematics.

Milestones

December 2007 INFRAGEOS-H Tenderer selection	**Summer 2009 :** Delivery and installation of core	**End of 2010 :** System final delivery and installation

Acronyms

BDBS : *Base de Données Bathymétriques du* SHOM (SHOM bathymetric database). Contents: soundings.

BDGS : *Base de Données Générales du* SHOM (SHOM general database). Contents : aids to navigation (landmarks, wrecks,…).

BDMS : *Base de Données Marée du* SHOM (SHOM tidal database).

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