NOTICE OF UNIVERSITY ORAL

GEODESY AND GEOMATICS ENGINEERING

Master of Engineering

Leonel Manteigas

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@ 9:30 am
Room E11 - Head Hall

Board of Examiners:	**Co-Supervisors:**	**Dr.David Wells, GGE**
		Dr. John Hughes-Clarke, GGE
	Examining Board:	**Dr. David Monahan, GGE**
		Dr. Lee Alexander, UNH
	Chair:	**Dr. Richard Langley, GGE**

Evaluation of the CARIS Hydrographic Production Database in the Production of Paper Charts, ENC and AML

Abstract

CARIS Hydrographic Production Database (HPD) a representative example of a new generation of software systems designed for the production of nautical cartographic products. Conceptually, it is based on a system of applications implemented over a Spatial Database and Management System (SDBMS), where each feature just needs to be stored once, and using the single data set is able to produce a range of cartographic products created in a typical Hydrographic Office (HO). The characteristics of CARIS HPD have created great interest in several HOs, including the Portuguese one, related to the possibility of significantly increasing the efficiency of its cartographic production. However, as CARIS HPD is a new product, with several functionalities that are still in development, it needs to be evaluated as to whether it can really meet the general requirements of a HO. Those requirements include the cartographic data management, data updating and the production of paper charts, Electronic Navigational Charts (ENCs) and Additional Military Layers (AML).

To execute the evaluation, the general requirements have been identified. A sample database was created and populated with data from three Portuguese ENCs cells. With these data an ENC and a paper chart were produced. Additionally the production of AML products was attempted. All the processes implicated in the data loading, management, preparation and the production of ENCs, paper chart and AML products were analyzed.

During the evaluation sixty two requirements were identified, CARIS HPD being fully compliant with forty of them. In addition forty six issues were identified and thirty six recommendations were produced. In conclusion, CARIS HPD is a system capable of positively answering the HOs expectations, especially in the data storage, management and preparation, and in the production of ENC products. Three issues do not allow the production of a paper chart completely compliant with the International Hydrographic Organization (IHO) specifications, but due to the simplicity of those issues, the system should be compliant in the very near future.

Faculty Members and Graduate Students are invited to attend this presentation.