

CARIS: The Challenges of the Modern Hydrographic World

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SUMMARY

The growing demand for hydrographic data from users beyond chart producers, the widespread adoption of the principle of “collect once, use many times”, and the trend in survey technology towards automation, are some of the challenges of the modern hydrographic world. These market tendencies highlight the importance of international geospatial standards, and their adoption by the hydrographic and geospatial community is expected to facilitate and improve data interoperability between systems as well as exchange of information between users. CARIS, a leading marine geospatial software company, offers an integrated and seamless software solution that is widely used within the hydrographic and marine communities. This solution includes survey data processing and data capture functionality, geospatial data management systems, paper and electronic chart production tools, and lastly web discovery services. A key role in the development of the CARIS software packages, is the continued support for international geospatial standards with active participation in related working groups, and continued research and development of sophisticated processing and data storage, analysis, and visualization capabilities. Examples of industry trends being observed by CARIS, include the International Hydrographic Organization’s (IHO) S-100 Universal Hydrographic Data Model, data interoperability, and the growing use of autonomous underwater vehicles for hydrographic surveys. The widespread use of standardized data formats will benefit not only the national hydrographic services, but also government agencies, research institutions and the survey industry. To promote data interoperability, CARIS is working in the implementation of S-100 compatible data models and related product specifications, the support of ISO/ TC211 standards and specifications covering digital geographic information, and the compliance with a number of protocols from the Open Geospatial Consortium (OGC) and European INSPIRE directive for discovery services. The last example refers to the use of AUVs for hydrographic surveys. CARIS has been active in the support of technology and functionality relevant for this field. Ongoing research and development includes the support for the latest sonar technology, capable of acquiring very high-resolution data over very large coverage areas.