

A Vertical Reference Surface for Hydrography – Status Report 2005

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SUMMARY

A coherent vertical reference surface is increasingly needed in a variety of marine applications. For example, in hydrography traditionally depths have been collected with respect to a local tidal datum. However with continued developments in high accurate satellite positioning hydrographers are looking to measure depths with respect to a reference ellipsoid. Similarly land and marine mappers are looking to merge topographic and bathymetric datasets and the current mismatch in vertical surfaces causes difficulties. The uses for seamless data across the land/sea interface are growing such as coastal zone management, marine boundary delimitation, flood and surge forecasting and other applications. To do this the relationship between the tidal datum(s) and a more stable reference datum needs to be established. The relationship(s) between these vertical surfaces is called a transformation model.

FIG Working Group 4.2 (WG 4.2), Vertical Reference Surface for Hydrography, has been exploring all these issues with an aim to producing guidance for those who need to develop a vertical reference surface for whatever purpose. The group is looking to provide help for those who need to secure support from senior members of their organisation as well as provide more detailed technical information for those who actually measure and develop a transformation model.

Papers from WG4.2 were presented at WW2003 in Paris and WW2004 in Athens where much debate occurred. This 2005 paper will present the latest progress of this Working Group and encourage further participation from the global audience.