Finnish Maritime Administration

Hydrographic Survey Production
M.Sc. Jarmo Ahonen

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Post processing of typical Finnish bathymetric data

The data rates have increased in the past few years considerably with the latest generation of multibeam echo sounders. The increasing amount of soundings is a real challenge to the post processing of bathymetric data. The post processing software has to be able to manage the increasing data rates and the computers have to be more powerful with larger hard disk space. Until recently data cleaning has been done mainly manually in the 3D or 2D view.

This presentation outlines the suitability of CUBE algorithm for editing bathymetric data surveyed with Reson SeaBat 7125 and Reson SeaBat 8111 along the Finnish coast and in lake Saimaa. CUBE is an algorithm developed for processing of bathymetric data. It is based on TPE values of each sounding and it calculates the best estimate (i.e. hypothesis) of a node in a regular grid.

The Finnish seafloor is characterized by a variety of bottom types and is therefore challenging to the multibeam echo sounder operator as well as to the data cleaner. In a functional production process automatic hydrographic data cleaning tools like CUBE will reduce the work of the operator but it will not eliminate the importance of the operator's personal experience and skill in quality assurance.

Kind regards,
Jarmo Ahonen

Finnish Maritime Administration/Survey Production Division

Address	Postal address	Phone	Fax	www.fma.fi
Porkkalankatu 5	PO Box 171	+358 (0) 204 481	+358 (0) 204 48 4355	firstname.lastname@fma.fi
FI-00180 Helsinki	FI-00181 Helsinki			