

Shallow Survey 2008

Seabed image processing and datacleaning of the EM 3002 Common Data Set.

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The dataset was collected in September 2007 with an EM 3002D mounted on the *R/V Coastal Surveyor*. Kongsberg's contribution to the common dataset was the raw .all files, cleaned data as ASCII xyz data and in Neptune Survey format.

All results to be presented in this paper are done in Seafloor Information System, SIS. The grid engine inside SIS can now be configured to generate high resolution seabed image data in real-time along with the grid data. The seabed image data from the echosounder is send in addition to the depth data to the GridEngine and a seabed image mosaic is created. The seabed image mosaic will be compared with gridded backscatter data from EM 3002.

The last part of the paper will concentrate on real time data cleaning. The sound speed varied over the survey area and over the time period the area was surveyed. The latest collected survey lines were fill ins between already collected lines. The sound speed measured at the sonar head is also gridded to display the sound speed variations over the survey area and over time.

In the cleaned data provided in the common dataset the outer beams were removed to reduce the effect of the sound speed variation. In addition some manual spike removal was done.

The grid engine inside SIS can also do data cleaning. The data cleaning is divided into ping and grid processing rules. The user can select which rules to apply to the data. The depth data is fed into the grid engine together with the horizontal and vertical error estimate calculated in SIS. The error estimates are used by the data cleaning.. Both the cleaned data from the common dataset and data cleaned in SIS will be presented.