

**7<sup>th</sup> Meeting of the Data Quality Working Group (DQWG)  
University of New Brunswick, Fredericton, NB, Canada, 16-18 July 2013**

**DRAFT Notes of the Open IHO Data Quality Working Group meeting**  
Rotterdam, Netherlands, 13 November 2012

registered participants:

Jan Appelman; Antti Castrén (Finnish HO); Khalid Bin Dasmal (Bayanat); Martijn van Dijk (Rijkswaterstaat); Leendert Dorst (NLHO); Peter Dugge (Atlas Elektronik); Sam Harper (UKHO); Gordon Johnston (Venture Geomatics); Daniëlle van Kuijk (NLHO); Marcel Lans (NLHO); Stephan McQueenie (Chersoft); Alec Millet (Fremantle ports); Alex Mortley (Port of London); Tom Ochman (Medway ports); John Pinder (Port of London); Simon Salter (Chersoft); Peter Schwarzberg (CARIS); Weronika Socha; Jesper Vedel (Danish HO); Hans Visser (Fugro); Robert Ward (IHO); David Wells (USM); Riejet Willemsen (NLHO).

The DQWG members Antti Castrén, Leendert Dorst and Sam Harper welcomed everyone, and referenced the presentation that Sam Harper gave just before the meeting. The presented paper is available to the conference delegates on the memory card, and online at <http://proceedings.utwente.nl/238/>. (The formal conference Proceedings will follow.)

Marc van Dijk: I am interested in hydrographic data quality for use in other sectors than nautical chart production. Are mariners represented in the IHO? Answer: yes, several nautical organizations have IHO observer status.

Peter Schwarzberg: Would it be a good idea to leave the visualisation of data quality in hydrographic products to the individual ECDIS manufacturers?

Peter Dugge: The main design criterion should be simplicity: a single one-dimensional figure should include all relevant aspects. The single intended use should be safe navigation on the water surface.

Jan Appelman: Data quality representation should also satisfy the curiosity of the mariner. Underneath a simple base representation should be an option to discover why the data quality indicator has a certain value.

Simon Salter: The biggest problem is the design of an algorithm for the visualisation. This should be encoded by the Hydrographic Offices.

David Wells: It may take twenty years until the concepts that we design at this moment have become reality.

Robert Ward: A significant number of hydrographic offices do not populate the current CATZOC data quality indicator? There are various reasons for this.

Sam Harper: The quality indicators are not populated because hydrographic offices have insufficient resources. But are these resources unavailable because CATZOC is not good enough or because the visualisation of data quality is deemed not so important?

Robert Ward: IHO Publication C55 lists the status of surveying worldwide. It should include the “survey hotspots” that need urgent attention. But IHO member states could be reluctant to admit that they have such hotspots.

Weronika Socha: It takes a well trained hydrographer to populate a data quality indicator correctly. However, well trained hydrographers usually do not work in the office. In practice, the nautical cartographer needs to assess the data quality indicator. Therefore, the DQWG should create specifications that are unambiguous and do not require any interpretation or subjective decision making.

John Pinder: Often, mariners are not aware at all of any uncertainty. Do not try to come up with something too clever, but try to find something simple, giving mariners a basic understanding of risk related to lack of data quality.

Jan Appelman: The nautical cartographer should not make his own judgment about data quality. If he does not trust the listed quality, he should send it back to the surveyor.

Alec Millet: There is a variety in usages. In order to allow for each usage, the concept should be kept very simple, like a go/no go indicator. People do not know what information about data quality they want to see, it has only limited value to ask the mariner for a preferred way of visualizing data quality. On top of that, the capacity of ship crews is going down. You need to show mariners different options in a simulated environment.

Jesper Vedel: Judgments about the quality of modern survey data are made by surveyors and their software tools in a reliable way. The real problem is judging the quality of an older survey.

Sam Harper: The S44 categories of survey quality do not equal the S57 CATZOC categories. CATZOC includes lots of other respects than the quality of the survey.

Antti Castrén: Spread the word about limited data quality to the mariner. We should all ask attention for this problem in various ways, like writing articles in professional nautical magazines.

Gordon Johnston: Mariners need to be trained better on the issue of data quality.

Robert Ward: Ships must find other solutions if there is hardly any data, or if they do not trust the data. E.g., they follow each other. A data quality indicator is especially important for poorly surveyed areas.