

**4th IHO-HSSC Meeting
UKHO, Taunton 26-28 September 2012**

Report of the Data Quality Working Group

| | |
|---------------------------|----------------|
| Submitted by: | Chairman, DQWG |
| Related Documents: | N/A |
| Related Projects: | None |

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| Chair: | Chris Howlett (UK) |
| Vice-Chair: | Leendert Dorst (Netherlands) |
| Secretary: | Eivind Mong (Jeppesen) |
| Member States: | Brazil, Canada, Denmark, Ecuador, Finland, France, Indonesia, Italy, Japan, Korea (Rep of), Netherlands, Norway, Slovenia, Sweden, Turkey, United Kingdom, USA |
| Expert Contributors Organisations: | CARIS BV, Fugro-Pelagos, Jeppesen, US Marine Academy, University of New Hampshire, University of Southern Mississippi, Warsash Maritime College |

Meetings Held During Reporting Period

DQWG6, 24 – 26 July 2012 in Silver Spring, MD, USA

Next Meeting

DQWG7, TBA but mid 2013 in Canada

Work Program

1. Following the IHC, elections were held during DQWG6 for the Chair and Vice Chair. The Chair, Chris Howlett, was re-elected. The Vice Chair passed from Rob Hare (Canada) who had retired to Leendert Dorst (Netherlands). The elections for both Chair and Vice Chair were unopposed.
2. The University of Southern Mississippi (USM) attended DQWG6 and presented their proposal for the study into the visualisation of Data Quality within ENCs. They are proposing a two stage approach: stage 1 will visualise individual data quality indicators (e.g. colour banding based upon horizontal uncertainty). Stage 2 will look at how these individual visualisations can be combined to provide a composite indicator. In both stages the visualisation will be presented to mariners so the best method can be determined.
3. USM will report progress regularly to DQWG and will also attend DQWG7 to present their findings.
4. The DQWG6 reviewed a Japanese paper dealing with how CATZOC should be changed following some extreme event (e.g. a Tsunami). The paper proposed that CATZOC should be altered to 'U' (Un-assessed) following such an event. Having reviewed the meanings of the various CATZOC categories the members concluded that after an extreme event the CATZOC of the affected areas should be altered to 'D' rather than the 'U'. This recommendation will be presented to HSSC/TSMAD for inclusion in a revision to the Use of the Object Catalogue.

5. The DQWG reviewed the IMO Model ECDIS Course as it was felt that this course did not provide sufficient emphasis on data quality. Following a review of the course content, the DQWG concluded that since the IMO document was at a very high level the emphasis on data quality within it was adequate. However, the DQWG did feel that another, more detailed, document would be useful to provide guidance to maritime colleges on how to build a course based upon the IMO framework. DQWG6 prepared a document for HSSC4 suggesting that a new WG is set up to create a document to provide guidance when creating courses based upon the IMO model ECDIS course.

6. Canada offered to host the next meeting which will be held mid 2013 probably in Burlington, Ontario.

Progress on HSSC Action Items

7. HSSC3/13: DQWG Chair to provide IHB with a summary report on the outcome on the data quality survey for subsequent distribution to MC by CL. Action completed see CL 58/2012.

Problems Encountered

8. Nil.

Any other items of Note

9. Nil.

Conclusions and Recommended Actions

10. Nil.

Actions Required of HSSC

11. The HSSC is invited to:

- a) note this report
- b) re-appoint the DQWG to continue its work under its current Terms of Reference
- c) endorse the draft work plan at Annex B

Annex A

DQWG Membership

| Member States | Name | E-mail |
|------------------------------|---|--|
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Annex B

DQWG Proposed Work Plan

Tasks:

- A** Review ISO 19113, Geographic Information-Quality Principles, ISO 19114, Geographic Information-Quality Evaluation Procedures, and ISO 19115, Geographic Information - Metadata and propose relevant enhancements and amendments for incorporation in S-100.
- B** Monitor and further develop quality indicators for hydrographic data.
- C** Review and revise as needed existing S-57 quality indicators, including the education of both the mariner and the cartographer, and the development of documentation.
- D** Review and revise as needed the presentation of data quality, as provided in S-52 and its Presentation Library.
- E** Investigate ways of ensuring that ECDIS displays provide a clear warning or indication to the mariner on the quality of the underlying survey data, through appropriate use of the attribute CATZOC and/or improvement of the existing display capabilities.
- F** Propose new data quality topics and other applications for consideration by HSSC.

| Task | Work Item | Priority H-high M-medium L-low | Next Milestone | Start Date | End Date | Status P-planned O-ongoing C-completed | Contact Person(s) | Affected Pubs/Standards | Remarks |
|------|--|---|----------------------|------------|----------|---|-------------------|-------------------------|--|
| A | Review ISO 19113, 19114, 19115 and 19157 and make recommendations for inclusion in S-100 | M | | 2010 | | O | DQWG | S-100 | Ongoing task to keep S-100 data quality in line with ISO standards |
| B.3 | Draft S-101 data quality | H | DQWG7 | | 2013 | O | USM | S-101 | Assess USM input to DQWG7 for impacts on model. |
| C.3 | Investigate with IMO how to add data quality into the training of mariners | H | | 2010 | | C | DQWG | | DQWG concluded change is not relevant. See DQWG submission on IMO Model ECDIS course to HSSC4 (Doc. HSSC4-05.6C). |
| C.4 | Investigate possible methods for how to educate practicing mariners on data quality issues | H | DQWG7 | 2010 | | O | DQWG | | Investigate via IAIN additional data quality training. |
| D.1 | Review current functionality in ECDIS with current products | H | | 2010 | 2011 | C | Sam Harper | - | See IHO CL59/2012 |
| E.1 | Develop logic tree for alarms in current and proposed approaches. | H | DQWG7 | 2010 | | P | USM | - | Logic to be discussed following USM input to DQWG7. |
| E.2 | Demonstrate methods to mariners | H | Follows USM stage 1. | 2012 | 2013 | P | USM | S-57, S-100 | Build possible methods into ENC and ECDIS to demonstrate effectiveness. |
| F.1 | Investigate areas of quality concern (other than survey / bathymetry) | M | | 2010 | - | O | Eivind Mong | - | Investigate the merit of supplying quality attributes to other elements of ENC and other publications e.g. sailing directions. |