

**3rd IHO-HSSC Meeting
IHB, Monaco, 8 – 10 November 2011**

Report of the Data Quality Working Group

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

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

Meetings Held During Reporting Period

DQWG 3, 5 November 2010 in Rostock, Germany
DQWG 4, 14 – 16 June 2011 in Helsinki, Finland

Next Meeting

DQWG 5, 14 – 18 November 2011 IHB, Monaco
DQWG 6, TBA but mid 2012.

Work Program

1. The Vice Chair (Rob Hare) and Secretary (Eivind Mong) were both appointed during DQWG 4 these appointments bring the WG to its correct organisational structure. New members have been nominated by Brazil and France.
2. Work Plan Tasks B.1 *Review what quality indicators are routinely populated in ENCs by HOs* and B.2 *Review how CATZOCs are populated by HOs for legacy data*. The analysis of the replies to two Circular Letters (CL17/2010 and CL59/2010) was completed and reported to the WG at the DQWG 4.
3. The DQWG concluded that to support future expected uses of data quality in S-101, hydrographic offices should populate POSACC, SOUACC and TECSOU in M_QUAL if these values are better than specified by the CATZOC shown for the area. This will allow S-101 to build a different (as yet undecided) composite data quality indicator from S-57 data sets.
4. Work Plan Task D.1 *Identify mariners' perception of quality and quality indicators*. The WG created and issued a comprehensive questionnaire seeking to identify the understanding of, and desire for, data quality identifiers within the marine community. The questionnaire was made available as a PDF document available from the IHO website and as an on line questionnaire. The existence of the questionnaire was advertised in various ways including a notification in both the UK and NL Notices to Mariners.

5. The response to the questionnaire was unprecedented with nearly 600 individual replies being received. Such a response clearly indicates the importance placed upon data quality by the mariner.

6. An initial assessment of the replies was carried out prior to the Helsinki meeting, and reported at that meeting. This is being followed by a more rigorous analysis as part of Sam Harper's (UK rep on DQWG) dissertation for his MSc. This analysis was available to the WG in September.

Progress on HSSC Action Items

7. Action HSSC2/10. The DQWG held a formal meeting in Helsinki, Finland 14 – 16 June which determined the way ahead and accelerated the rate of progress.

Problems Encountered

8. It has remained difficult to get all members of the WG to engage in the work and also for members to obtain funding to allow them to attend meetings. It is proposed that the WG will hold one meeting each year to consolidate the progress made via e-mail and it is requested that Member States who are represented on the WG allocate time to allow their representative to participate in e-mail correspondence and allocate funds to allow that representative to attend meetings. Apart from the extraordinary meeting being held immediately after HSSC-3 the WG proposes to hold a meeting sometime during the middle of 2012 and annually thereafter until its work is complete.

Any Other Items of Note

9. Nil.

Conclusions and Recommended Actions

10. The WG has made good progress this last year and is now better placed to take its work forward.

Action Required of HSSC

11. The HSSC is invited to:

- a. **note** this report
- b. **approve** the continuation of the WG under its current Terms of Reference
- c. **approve** the work program at Annex A
- d. **invite** relevant WGs to identify items that have a quality element and, if they feel these should be researched by the DQWG for inclusion within S-100.

Annex A

DQWG Proposed Work Plan

DQWG 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 and 19115 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.1	Review what quality indicators are routinely populated in ENCs by HOs	H	Questionnaire published to HOs	2009	2010	C	DQWG	-	Obtain base line of what attributes are captured and why others are not Completed CL17/2010.
B.2	Review how CATZOCs are populated by HOs for legacy data	H	Questionnaire published to HOs	2009	2010	C	DQWG	-	Obtain base line of what criteria for historic and current surveys result in what CATZOC allocation Draft sent to IHB August 2010.
B.3	Draft S-101 data quality	H	Report to TSMAD Feb 2012		2012	O	DQWG	S-101	Draft to be discussed during DQWG5, Nov 2011
C.1	Revise CATZOC definitions	H		2008	2009	C	DQWG	S-57	Completed CL32/2009
C.2	Review Resolution B1.2 of M-3	H		2009	2009	C	DQWG	M-3	Completed CL43/2009
C.3	Investigate via IMO how to add data quality into the training of mariners	H		2010		O	DQWG		
C.4	Investigate possible methods for how to educate practicing mariners on data quality issues	H		2010		O	DQWG		
D.1	Review current functionality in ECDIS with current products	H		2010	2011	O	Sam Harper	-	Questionnaire to understand mariners perception of data quality and how they react to it. Full analysis of questionnaire to be completed by mid September.
E.1	Develop logic tree for	H	Requires B.1,	2010	2011	O	DQWG	-	DQWG will make

	alarms in current and proposed approaches.		B.2 and D.1 to be complete						recommendations to DIPWG on how data quality can be portrayed to the mariner.
E.2	Demonstrate methods to mariners	H	Follows from E.1	2010	2012	P	DQWG	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	-	P	DQWG	-	Investigate the merit of supplying quality attributes to other elements of ENC and other publications e.g. sailing directions.

Annex B List of Members

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