

**1st IHO-HSSC Meeting
The Regent Hotel, Singapore, 22-24 October 2009**

Paper for Consideration by HSSC

Report on IEC and RTCM Work Relating to Electronic Charting System Standards

Submitted by:	USA (NOAA)
Executive Summary:	Status of IEC 62376 and RTCM 10900.4 Standards relating to electronic charting systems
Related Documents:	None
Related Projects:	None

Introduction

Two standards relating to electronic charting are under development or revision elsewhere: IEC 62376 and RTCM¹ SC10900.4. Progress has occurred on both since CHRIS 20.

Analysis/Discussion

IEC 62376, "Electronic chart system (ECS) - Operational and performance requirements, methods of testing and required test results," specifies a minimum operational and performance requirements and methods of testing for an ECS. The ECS specified in this Standard does not meet the chart carriage requirements for SOLAS vessels where ECDIS has been specified for that purpose. A government may choose to accept ECS as a primary means of navigation for vessels that are subject to their regulation. When a compliant ECS serves as a primary means of navigation, adequate back-up arrangements may be required to ensure safe navigation in the event of an ECS failure.

Three classes of ECS are defined in the Standard:

- Class "A" ECS are designed or adapted for use as a primary means of navigation on non-SOLAS vessels where ECDIS is not specified for that purpose. They may also be designed to meet the SOLAS requirements for adequate independent back-up arrangements for ECDIS set forth in Appendix 6 to IMO resolution MSC.232(82), and further specified in IEC 61174.
- Class "B" ECS are designed or adapted for use as a primary means of navigation on non-SOLAS vessels where ECDIS or Class "A" ECS are not specified for that purpose.
- Class "C" ECS are designed or adapted for use as a navigational aid intended to plot and monitor a vessel's position.

The Standard was released by the IEC as a Committee Draft on September 5, 2008. Comments were received by December 5, 2008. The adjudication and incorporation of received comments has not progressed. The United States Coast Guard, who was the original proposer for this Standard, was unable to continue their sponsorship of the work for reasons having nothing to do with the quality or content of the draft Standard. After a lengthy delay, the U.S. hydrographic office (USA (NOAA)) was able to assume sponsorship and work has resumed. Incorporation of comments is underway and submission to the IEC TC 80 Secretariat of a Comment Draft for Voting (CDV) is expected in October 2009.

¹ Radio Technical Commission for Maritime Services; <http://www.rtcn.org/>.

RTCM 10900.4, "Electronic Chart Systems (ECS)," is a major revision to RTCM 10900.3 that is intended to fill any near term need for an electronic chart system standard. The content of the RTCM Standard is identical to that of the IEC 62376 Comment Draft discussed above except for editorial changes and a few technical changes that will be submitted to IEC as comments on the IEC 62376 Comment Draft. It is intended that the two Standards be identical with the RTCM 10900.4 Standard being withdrawn when the IEC Standard is adopted.

The RTCM Standard was voted on October 15, 2008 and was approved by the RTCM membership. This Standard was published in mid-November, 2008 and is available for use.

Both the IEC and the RTCM Standards allow for ECS systems to be type-approved against a particular type of data. For example, a Class "A" IEC 62376 ECS may be type-approved using official ENC's. The type-approval is then valid only when using official ENC's. Should a national MSA elect to regulate or advise on the use of electronic charts, it would specify both a system and one or more standards-compliant data sets, e.g. ENC's, RNC's, ISO 19379 data.

Conclusions

The Standards discussed here provide high quality Standards for ECS that may be used by nation's intending to advise on, or regulate the use of, electronic charts for non-SOLAS vessels. Further, the Class "A" ECS specified meets the requirements for an ECDIS backup arrangement and may be used for that purpose should national MSA's so choose.

Recommendations

Member states should consider advising their IEC representative to vote to adopt IEC 62376 when the Comment Draft for Voting is circulated.

Justification and Impacts

N/A

Action Required of HSSC

HSSC members are invited to note the report.