

13th CHRIS MEETING
17-19 September 2001, Athens, Greece

The SENC Delivery Option
(Neil Guy, IHB)

A proposal by Germany to the 11th CHRIS Meeting held in Monaco from 16-18 November 1999 for consideration of an option for ENC's to be converted to a SENC format outside of the onboard ECDIS and then delivered to the ECDIS in a SENC format, was referred back to Germany, by the Meeting, with a request that it be submitted to the 12th CHRIS Meeting with additional information. The matter was also discussed at the 5th WEND Meeting in Monaco in March 2000 where it was also decided to refer the matter to the 12th CHRIS Meeting,

The 12th CHRIS Meeting, held in Valparaiso from 23-25 October 2000, considered this option and recommended that the proposal, with amended wording to paragraph 3.3(c) of S52, be submitted to the IHO Member states for approval. {CHRIS13/7A (Annex F)} This was conditional on the Premises and Safeguards that were agreed to at the Meeting being included.

The IHB issued CL15/2001 (CHRIS13/7A) and attached a comment from France with the CL for information. As the proposers felt that the inclusion of the French comments would unduly influence the voting, the IHB was requested to withdraw the voting paper temporarily. As this was not possible, comments from Germany were also circulated and the closing date for voting was suspended until after both the 6th WEND and the 13th CHRIS Meeting and the Industry Workshop to be held from 28-29 June 2001. In spite of the suspension of the closing date for voting 17 IHO Member States have replied to the two questions contained in CL15 /2001 (see CHRIS/13/7B). These were:

“Do you agree with the Recommendation of the CHRIS Committee that SENC distribution be accepted as an option, in addition to direct ENC distribution, providing that the basic premises and safeguards for SENC delivery, as listed in Annex E to the Minutes of the 12th CHRIS meeting be adhered to?”

“ If the answer to Question 1 is ‘Yes’, do you agree that paragraph 3.3 of IHO Publication S-52 be amended as emphasised in Annex F to the Minutes of the 12th CHRIS Meeting.

Of the 17 replies received, 11 were in favour and another one, while voting ‘No’ gave, what can be seen as, qualified support for the concept. The comments from this Member State required, for instance, that SENC distribution should be at HO discretion. Four were clearly opposed and one Member state indicated that they were not in a position to comment at this stage.

The matter was again considered at the 6th WEND Meeting held in Norfolk USA, from 18-19 May 2001. This Meeting decided that the matter should be raised at the IHO Industry Workshop to be held in the IHB from 28-29 June 2001 and it was requested that the views of this Workshop should also be considered by the 13th CHRIS meeting. After the 13th CHRIS Meeting the IHB should advise WEND Members by WEND Letter of any CHRIS recommendations and if the CHRIS Meeting was still positive about the proposal then Member States should be advised of the final date for the voting as contained in CL15/2001.

The Industry Workshop had divided views but it can be said that it was generally in favour of SENC Delivery as an additional option. The concerns of those opposed related to the fear that the concept could be used by some commercial distributors to obtain a monopoly in the field and that it was possible that confusion amongst all the role-players could result if the matter was not correctly handled.

Further discussions with some HOs and some commercial enterprises have indicated that there is some confusion over the concept. This relates to views that the new wording for paragraph 3.3(c) of S-52 allows SENC distribution as an alternative to the required ENC S-57 delivery. It should be clear however that the ENC S-57 delivery is **mandatory** and that any SENC format delivery can only be in addition to this requirement. This is indicated graphically by the IHB (Annex 1) and by the Norwegian Hydrographic Service (Annex 2).

As the requirement for official IHO data to be retained on board and for the SENC to be derived from this data has been deleted from the present paragraph 3.3(d) of S-52 and to ensure that there is no confusion on the requirement to provide data in ENC S-57 format it is proposed that the wording of paragraph 3.3(b) should also be amended as indicated below:

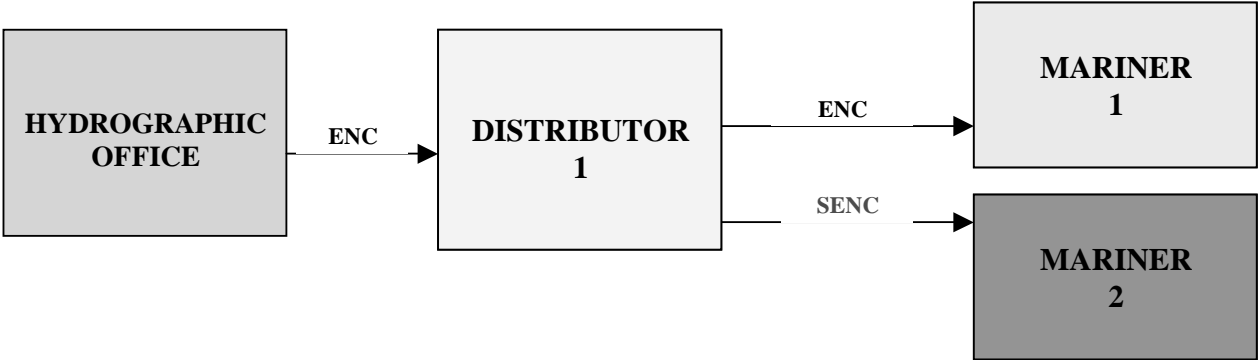
“It is mandatory that official HO data (ENC) be available and Any ECDIS ~~should~~ must be capable of accepting and converting the official HO data (ENC) to the internal storage structure of the individual ECDIS (System ENC or SENC)etc.”

This would result in the final wording of Paragraph 3.3 of S-52 being as shown (Annex 2).

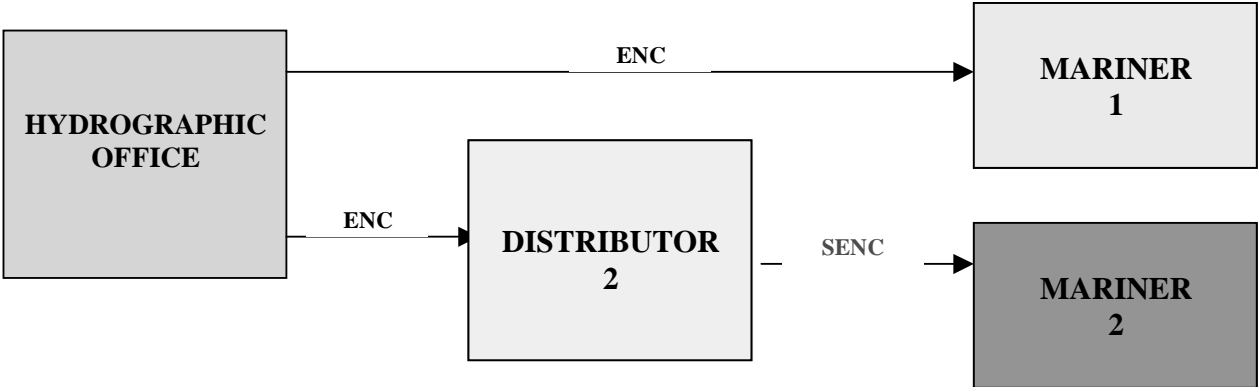
An alternative would be for the present Premises and Safeguards {CHRIS13/7A (Annex E)} to be converted into an IHO Technical Resolution (Annex 3).

Preliminary enquiries made to the Chairman of the IMO NAV Sub-Committee’s Technical Working Group is that no amendments need be made to the IMO ECDIS Performance Standard. It may be necessary however for IEC to provide additional tests in IEC 61174 to allow for the various SENC formats in the ECDIS type approval process if SENC Delivery is approved as an option.

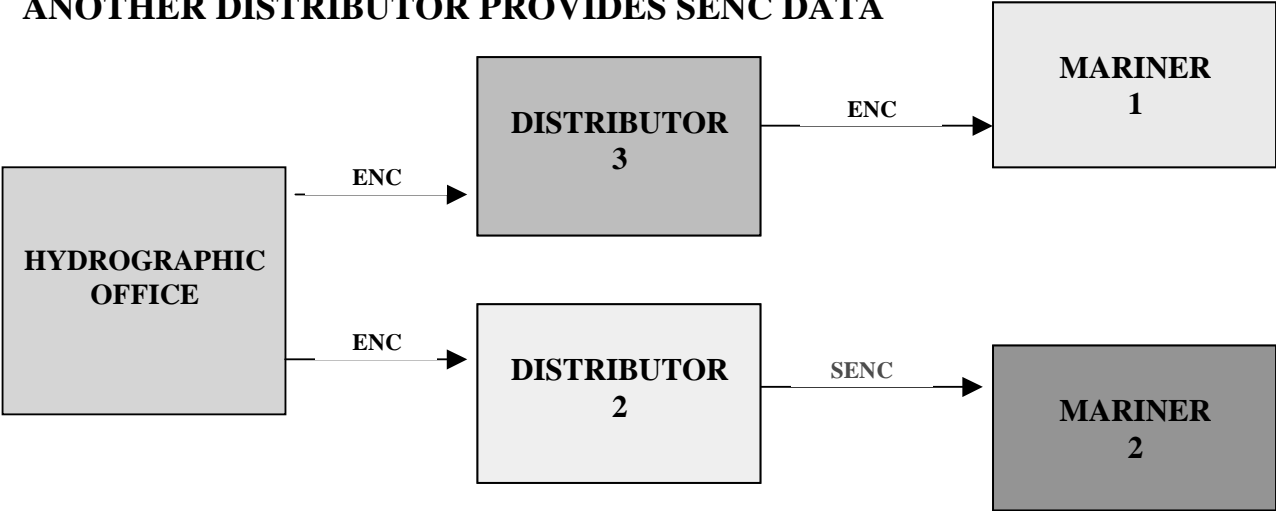
1 DISTRIBUTOR PROVIDES ENC AND SENC DATA



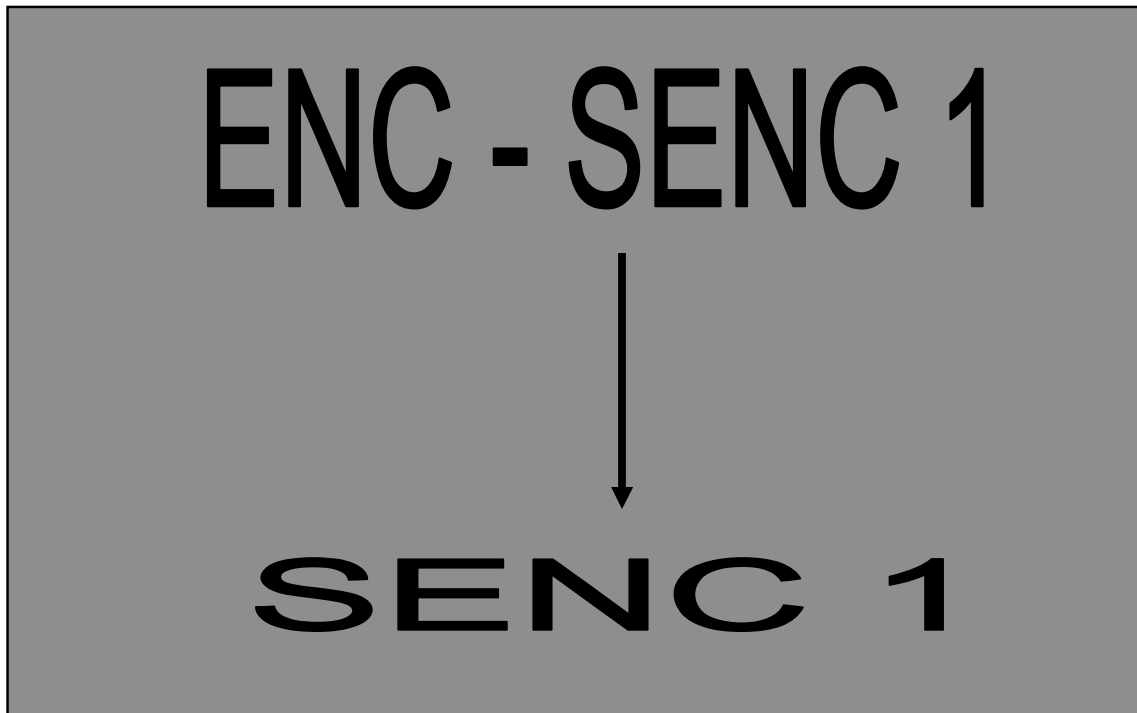
**2 DISTRIBUTOR PROVIDES ONLY SENC DATA
HO PROVIDES ENC DATA**



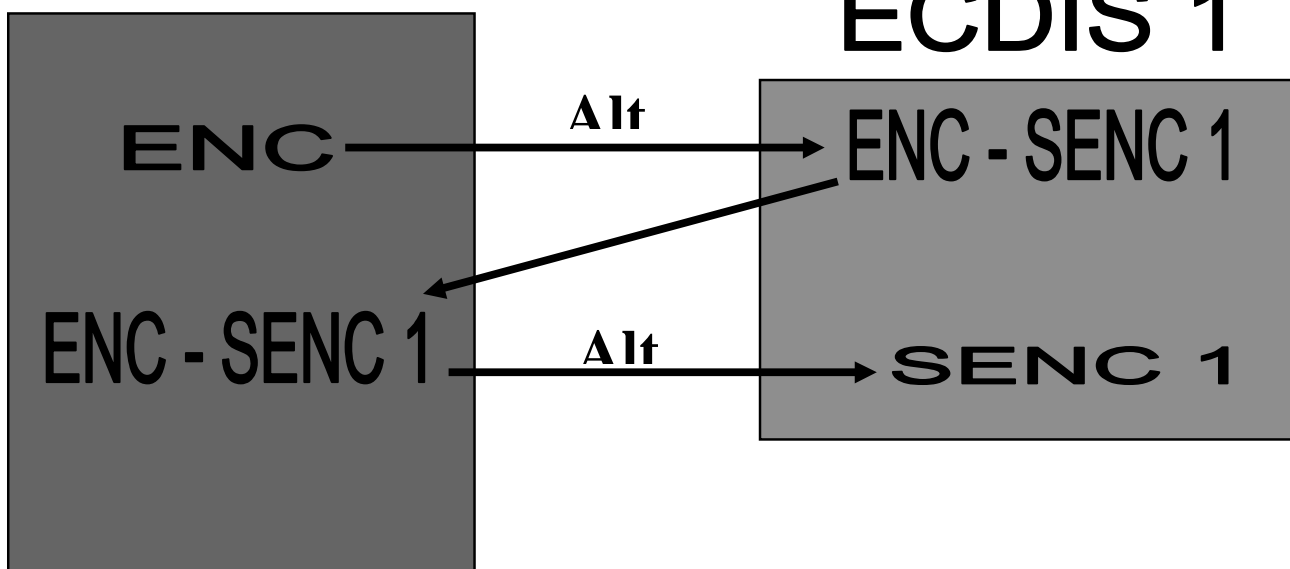
**3 ONE DISTRIBUTOR PROVIDES ENC DATA
ANOTHER DISTRIBUTOR PROVIDES SENC DATA**

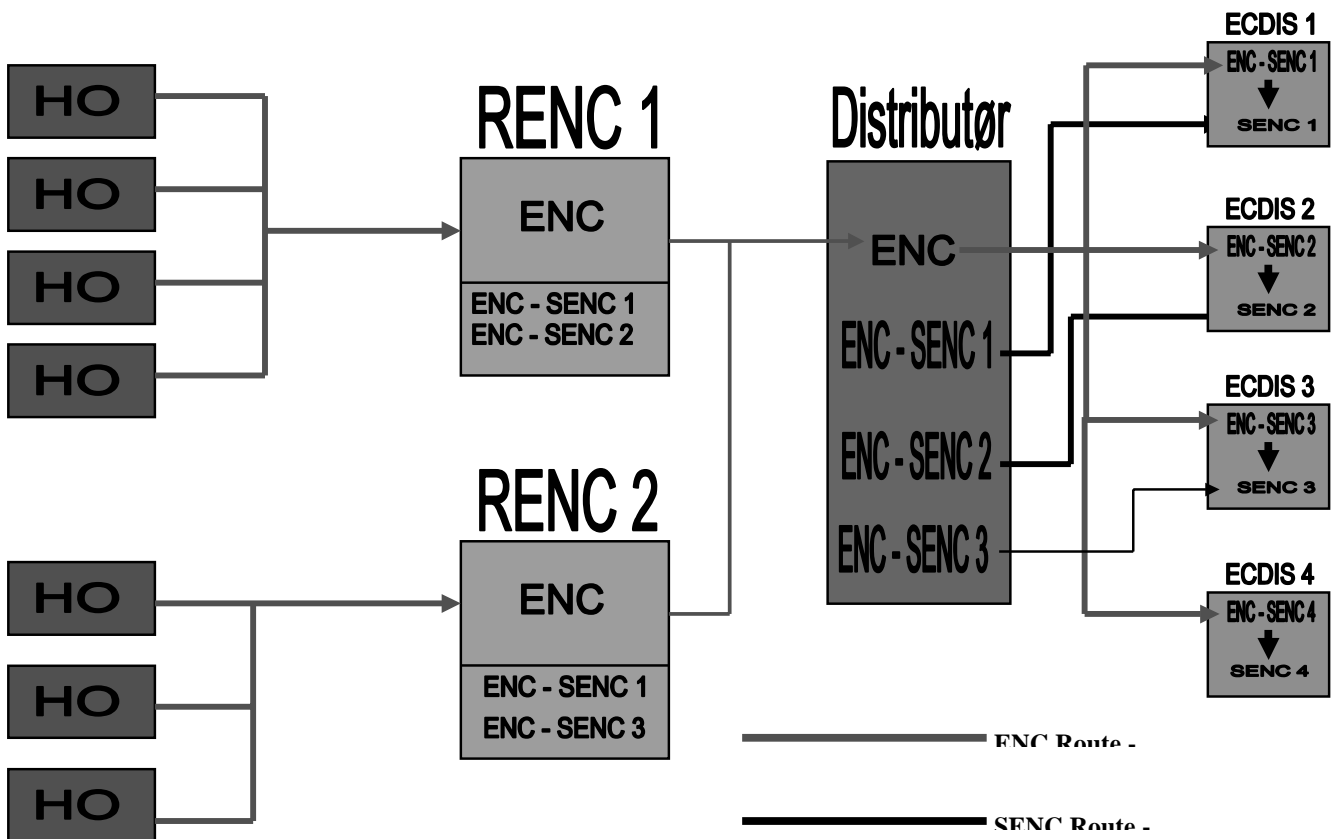
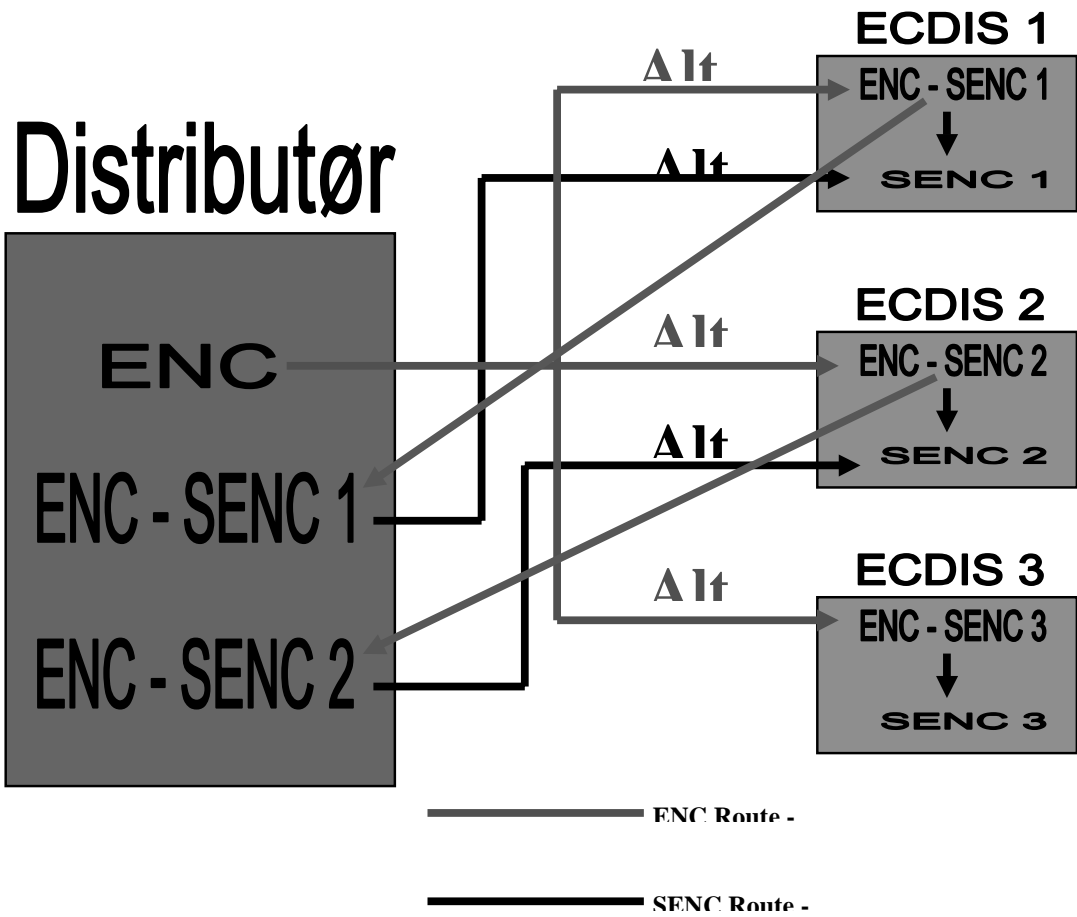


ECDIS 1



Distributør





IHO Publication S 52

3.3 System ENC (SENC)

- (a) The Transfer Standard, is designed for the distribution of digital chart data. It is recognised that it is not the most efficient means of storing, manipulating or preparing data for display. Each manufacturer of ECDIS systems may design his own storage formats or data structure to allow its system to meet the performance requirements stated in this specification. The resulting database is called the System ENC (SENC).
- (b) It is mandatory that official HO data (ENC) be available and any ECDIS must be capable of accepting and converting the official HO data (ENC) to the internal storage structure of the individual ECDIS (System ENC or SENC). Such data includes both that in the ENC and that delivered in digital format to update the ENC. This conversion process does not imply real-time processing of HO supplied data.
- (c) An official copy of the HO data, distributed as an ENC or contained within an externally generated SENC, is to be kept on board. The SENC generated on board, by ENC to SENC conversion, or ashore is used for actually operating the ECDIS. Through the same conversion process, official updates are added to the System ENC.

The information content of the SENC should include all that of the ENC corrected by official updates (see Appendix 1)

PROPOSED TECHNICAL RESOLUTION

IHO PUBLICATION M-3

CHAPTER A – SUBJECTS OF GENERAL APPLICATION

SECTION 1 – GENERAL

Technical Resolution A1.11 – ENC/SENC Distribution

It is resolved that SENC distribution can be accepted as an option, in addition to direct ENC distribution, providing that the following principles be adhered to:

1. Hydrographic Offices or Regional Electronic Navigational Chart Co-ordinating Centres (RENC) may allow the distribution of their IHO data (ENC) in a SENC format.
2. The HO should ensure that the IHO data (ENC) is also available to any user wishing to accept their data in the S-57 ENC format.
3. Service Providers who are to supply the SENC service must operate under the regulations of the issuing authority (HO or RENC).
4. Version control should not be inferior to the ENC service.
5. Update mechanism should not be inferior to the ENC-ECDIS update mechanism.
6. The distributor of SENC data should maintain a registry of its users.
7. The copyright of the ENC data should be maintained.