

INTERNATIONAL HYDROGRAPHIC  
ORGANIZATION



ORGANISATION HYDROGRAPHIQUE  
INTERNATIONALE

## ENC UPDATING WORKING GROUP (EUWG)

[A Working Group of the Hydrographic Services and Standards Committee - HSSC]

Chairman: Yves Le Franc (SHOM)  
Vice-Chairman: Richard Coombes (UKHO)

### **EUWG Letter 02/2010**

Date 30 June 2010

#### **To EUWG Members**

Dear Colleagues,

I apologize for these few months of silence. Unfortunately, I was much too busy elsewhere.

From the responses to letter 01/2010 (please read Annex B) several points have to be considered. I suggest that we focus first on the aspect “specific guidance for the ENC producer”, which is the purpose of this Letter. Note that AU kindly offers to prepare a new draft of S-65 to address this subject. Now, we need to specify some points. Your answers to the attached questionnaire (Annex A) will be very helpful for that.

For its part, France has continued to identify other items of S-52 Appendix 1 already mentioned in existing publications. A letter relating to this second aspect will be issued in the following weeks.

Please send your replies (Annex A) before **6 September 2010**.

Yours sincerely,

Yves Le Franc,  
Chairman

Annex A: Questionnaire

Annex B: Responses to EUWG letter 01/2010

**Specific guidance for the ENC producer - Questionnaire following answers received from letter 01/2010.**

Question number						
1.	<p>Should the maximum size of an ER be balanced against the maximum number of ER (see ZA question)?            Note: answers are especially expected from members in contact with end-users or EDCIS manufacturers.</p> <p><i>ZA: "Concerning the matter of the size and number of updates to an individual ENC cell. Our update files are very small in digital size, the largest recorded for an ENC update being 35kB in size. We currently have one ENC which has 28 updates issued for it. The total size of these updates is 198kB; of which the 3 largest updates total 86kB. The remaining 25 average 3kB in size each.</i></p> <p><i>My question here is this decision to be based purely on the number of updates not to exceed a certain total , or should this decision whether to amalgamate updates in a new edition be based on the agreed upon ceiling in terms of total digital size of these updates be considered? In other words can one have 30 updates that in total that do not exceed 500kB or being produced or have 7 updates say producing 500kB in total size being produced before a decision is reached to produce a new edition?</i></p> <p><i>My concern is that if we apply to low a threshold on the number of updates that can be allowed before a new edition is "forced" in time to come one could be faced an ENC which has run out of ENC update numbering - some paper charts have been around for many many years and why should it not be different with an ENC."</i></p> <p>Your answer:</p>					
		<table border="1"> <thead> <tr> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Yes	No		
Yes	No					
2.	<p>If the EUWG decides not to balance size against number of ERs (depends of answers to question 1), do you agree to include in S-65 that an ENC update should not exceed 50 Kilobytes in size as Encoding Bulletin No 31 advises?            See also question 3 below.</p>					

		Yes	No
3.	<p>If the EUWG decides not to balance size against number of ERs (depends of answers to question 1), do you agree to advise in S-65 a limitation of the number of ERs for an base ENC cell (see UK arguments)? What should be the reasonable maximum value suggested to producers (UK suggest 20)?</p> <p><i>UK: "Producers should also be advised not to issue too many updates for a specific edition. The UKHO has seen examples where there are in excess of 60 updates associated with an edition of the ENC. S-65 could recommend an upper limit at which time a NE is issued. It can sometimes take longer to install a large number of updates on an ECDIS than it does to install a new cell or a NE. This is because the ECDIS has to add, modify or remove information in the SENC for each update. This is primarily aimed at new subscribers to ENC services loading the ECDIS for the first time. To put a balanced view on this, it is probably better for users downloading updates via an online service to download update files as they are a smaller file size than NEs. The UKHO has a policy to issues a new edition of the ENC if the number of updates reaches 20."</i></p>	Value :	
		Yes	No
4.	As suggested by UK, do you agree to include in S-65 that an ER must not change the limit of data coverage for the base as Encoding Bulletin No 31 mandates?		
5.	As suggested by PRIMAR and FR, do you agree to include in S-65 advices on the use of re-issues?		
6.	When do you use a re-issue or in which instances do you think a re-issue is useful?		
	Your answer:		
7.	Announcement of a new edition (cf. S-52 app1 § 3.2 (m) and S-57 Product Specifications - § 5.7).		
7.1	Do you use ER to announce a new edition or do you know HOs who use this		

	method?		
	Your answer:		
7.2	Do you think that an announcement is actually necessary or should an alternative means of communicating a new edition be considered other than an ER?		
	Your answer:		
		Yes	No
8.	Do you agree to include in S-65 advice about new or modified Traffic separation schemes (incorporation of encoding bulletin No 25)?		
9.	As suggested by PRIMAR, do you agree that the UADT of a new edition base cell must be equal to or greater than the ISDT of the last update of the previous edition cell?  <i>PRIMAR: We have had feedback about this from a distributor saying that this (UADT of edition 2 is earlier than the ISDT of the last update to the previous edition) might cause problems loading the new edition in some ECDIS.</i>		
10.	Incorrect update <i>PRIMAR : If it is reported from a user that it is not possible to load an update properly (ER file) into an ECDIS system due to errors in the file, it is then recommended that the HO creates a new edition of the cell(not a new update). The reason for producing a new edition is suggested, is that if an error(in update 001) is fixed in a new update (in update 002) it might be a problem to load the new update because of the original problem in update 001.</i> <i>UK : We have come across instances in our AVCS service where countries have issued updates with no update information contained in the file. This is probably the result of their production software failing. Instead of creating a blank update (no add/modify/remove info) producers should be encouraged to create a re-issue or new edition. Blank update can cause some ECDIS problems as they are expecting some form of command in the 8211 file</i>		
		Yes	No
10.1	Do you agree that the producer should check updates to avoid “blank updates” (except for updates cancelling a cell or		

	announcing a new edition of a cell (see question 7.1 above))?		
10.2	If it is reported that it is not possible to load an update properly, do you agree that the producer should create a re-issue or new edition?		
11.	As suggested by PRIMAR, do you agree that after a cancel cell update is issued, the name of the cancelled cell should not be re used? <i>PRIMAR: The main reason for this is that the cancellation update that are released can be applied to newer editions as well.</i>		

**Comments:**

**Annex B to EUWG letter 02/2010**

**Responses received following letter EUWG01/2010**

**ZA**

Dear All,

A first time possibly I am contacting many of you for the first time this year, so I take this opportunity to wish you all a successful 2010.

I have been very busy here with in-house training of staff but have followed the inputs of all closely and agree that the items suggested by all are relevant and worthy of further discussion.

Concerning our implementation of the recommendations of Encoding Bulletin 31, we have never transgressed the requirements.

South African ENC's have for been maintained for T and P Notices since 2006 and we are implementing the guidelines of the work proposed by this working group with great success.

Concerning the matter of the size and number of updates to an individual ENC cell. Our update files are very small in digital size, the largest recorded for a ENC update being 35kB in size. We currently have one ENC which has 28 updates issued for it. The total size of these updates is 198kB; of which the 3 largest updates total 86kB. The remaining 25 average 3kB in size each.

My question here is this decision to be based purely on the number of updates not to exceed a certain total , or should this decision whether to amalgamate updates in a new edition be based on the agreed upon ceiling in terms of total digital size of these updates be considered? In other words can one have 30 updates that in total that do not exceed 500kB or being produced or have 7 updates say producing 500kB in total size being produced before a decision is reached to produce a new edition?

My concern is that if we apply to low a threshold on the number of updates that can be allowed before a new edition is "forced" in time to come one could be faced an ENC which has run out of ENC update numbering - some paper charts have been around for many many years and why should it not be different with an ENC.

I look forward to the work of this group in the months ahead.

Regards  
Sidney Osborne

**Jeppesen**

Hello Yves,

My deepest apologies for such a late reply, other activities had to be cleared before we could spend the necessary time to review S-52 Appendix 1. I hope it is not too late to make a submission of our comments.

These are the comments from Jeppesen;

1. First we would like to state that we fully agree with moving as much as possible of Appendix 1 out of S52, as in our opinion this document never really belonged to S-52 in the first place. So it may then seem quite natural that this information should be moved to S-65, as this document seems like a natural place for ENC updating guidance. However, we do see a possible conflict with the level of details presented in S-52 Appendix 1, fitting into the general nature of S-65 and think it must be decided to what level of detail should S-65 contain updating information. Knowing this can help us deciding if the detailed information from S-52 Appendix 1 may in part need to be moved somewhere else.

2. Current status of S-52, S-57, S-63, S-64, IMO and IEC documents; At the moment some requirements for updating of ENC can be found in different IHO and IMO documents. Here the details described are not at the level of S-52 Appendix 1 e.g., detailed description of ER profile in S-57, but higher level description. Information in these documents are unfortunately, fragmented and lacking. For example:

- In IHO TRANSFER STANDARD for DIGITAL HYDROGRAPHIC DATA (see clause 8.2) a very lacking update data flow diagram is given.

- Requirements for provision and updating of chart information can be found in IEC 61174, clause 4.4

- The goal of S-63 is detailed description of IHO Data Protection Scheme and the Participants in the Scheme, such as Scheme Administrator, Data Servers, Data Clients, OEMs.

- S-52 (other appendixes) and S-64 are intended for describing the presentation of updates and different validation checks correspondently.

- Resolution MSC.232(82) (PERFORMANCE STANDARDS FOR ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)) contains only generic requirements for ENC updating

It should be noted that that above mentioned standards seems to be complete and answer the requirements to which they were created. But as illustrated above the matter of updating remains fragmented.

3. From all above it should be noted that at present an up-to-date standard with the description of Terminology, Updating Entities, Conceptual Model, Information and Application Flow diagrams, Updating Categories etc is simply absent (S-52 Appendix 1 is obsolete). Removal of S-52 Appendix 1 altogether (or by parts) to any of existing standard seems to be challenging. Thereby ideally, an elaboration of a new standard on the basis of obsolete S-52 Appendix 1 is needed. In this standard it will be necessary to take into account and describe such new features as SENC updating in case SENC delivery and not to forget about S-100.

In addition it is necessary to describe in detail such Updating Category as Manual Updating. Manual Updating remains to be (and will be) the very important feature of ECDIS and at present detailed description (except portrayal specification) of its features is absent. Aside from a note in IEC 61174:

#### 5.10.2 Manual update

The system shall be capable of implementing manual updates to point objects and simple line and area objects such as traffic routing schemes and restricted areas, but excluding complicated lines and areas such as contours and coastlines. With that in S-64 there is the requirement for updating of 3-D (Soundings). In this case it is necessary to explain how complicated lines and areas such as contours and coastlines differ from 3-D segment

With best regards,

Eivind Mong

**JP**

Dear Mr. Yves Le Franc

I'm very sorry for late response.

Please let me comment on the size of an ER file mentioned by UK, Primer and AU.

I think ENC Encoding Bulletin No.31 may not be a strict rule but guidance. I think the size of an ER file should not be bigger than the base cell it applies to. Although EB 31 advices an ENC update should not exceed 50 Kilobytes in size, it is maybe too small compared with the acceptable limit for a base cell (5 Megabytes) by IHO S-57.

Best regards,

Tatsuo Komori

**AU**

Yves:

My apologies for the late response, which is due to an unforeseen absence from the Office.

I agree with your overview of the Work Plan in the letter.

Regarding S-52 Appendix 1, I agree with the comments of Primar, Portugal, UK and Norway, although in regard to the sections that you have highlighted to go in S-65, I am not sure how to determine the relevance of what should go in and what should stay out without an identification as to what the scope of the guidance we wish to include is, and where it will go in S-65. Are we planning to expand on S-65 Stage 9 (Maintain ENCs), or are we going to compile a separate Annex, or both (refer to Norway comments)? My initial understanding of what HSSC is asking us to do was to take Appendix 1 out of S-52 as it is, revise it, and incorporate it in S-65. From the work you have done so far, it appears that there will be a major paring down of Appendix 1, which I will be happy to work to if this is confirmed as the intention of the review.

Regarding 3.2 (m), as for Primar and Norway, AU does not make advanced announcements of ENC new editions.



AU is fairly strict in its adherence to ENC Encoding Bulletin No. 31, and would support inclusion of this in the guidance. I can only recall one occasion where we have issued an ER that has been larger than 50Kb. As far as the maximum number of updates before a new edition is concerned, we have not had occasion to consider this as yet, but personally I would consider having any more than 15-20 updates to the current edition to be excessive.

Very happy to hear that you have gone to application of T & Ps, and have reported this to our senior management to try to accelerate us doing the same, which unfortunately may not occur until the start of 2011. I will keep you informed.

Regards,

Jeff.

## **NO**

Dear Yves,

I think you have identified the relevant items from S-52 Appendix 1.

Comments:

- 1.1.5 - We must make sure that we refer to the latest version of the WEND principles.

- 3.2 (m) - As Stig (Primar) appointed, we agree that the announcements of New Editions of ENCs doesn't work like this. At NHS, we make a New Edition (NE) for different reasons. We make NE because of technical reasons, large updates and when cells have essential changes. NHS never makes announcements in advance of an NE.

What should we do about the rest of S-52 app 1 that are not going into S-65? If we can't find a place for the rest of the document, our suggestion is to attach it as an annex to S-65.

T and P status: NHS has not yet started production for T and P NMs. We will hopefully start working with this soon.

Best Regards,  
Gjermund H Bakken

## **PT**

Dear Yves,

First of all, let me welcome Stig for joining the group. Because RENCs have lots of experience dealing with data produced by different HOs and used by different systems, it seems to me that the representatives of RENCs are in a very good position to help us to understand how the real world works, and real world means OEMs, ENC Producers and mariners.

The second issue, is the fact that IHPT produces P&T updates in Portuguese ENCs since January 2009, and after the approval of the work of our WG (Guidelines) we slightly change the way of encoding ENC Updates accordingly to the guidelines. Of course, before starting the production of P&T

updates, we have a period of tests of about 3 months, from September until middle of December 2009. But at the moment the things are running, and one of the things that we thinking about is how to improve the service and supply online updates to mariners as well as how to receive information from end-users, in an automatic way, of what is different from the ENC or what light or navigational aids were removed or disappear, in order to that information quickly send to the HO responsible for that particular area to issue an update. More or less the same that happens with RNW.

Regarding the annex A of S-52 appendix 1, you refer that it should be replaced by S-4, section B600 "Chart Maintenance". But this annex contains lots of definitions and acronyms that are related wit ENCs. I agree with you when you said that section B600 has application in detail to paper charts but the general principles apply equally to paper and electronic charts. My question is: Do you intend to suggest to CSPCWG the inclusion of all the definitions and acronyms of annex A into section B600, or they will be included in S-65? Your thoughts about this issue are not clear for me, so could you be so kind and give some more feedback about what are you suggesting?

Another issue pointed by you in the EUWG Letter 01/2010, is the revision of the status of RNW in respect of ECDIS and provide recommendations. In my opinion, I don't see the need of inclusion of RNW in ECDIS as updates, because as stated in section B600, RNW are used to promulgate the most urgent information and they are not intended for updating charts directly. Anyway I think that kind of information should be included in ECDIS, but we can suggest some improvements. I believe that we should make a recommendation to NAVAREA coordinators or upper (I don't know exactly who at the moment), in order to improve the format and content of the messages sent via NAVTEX or Safetynet, because ECDIS systems has the ability to process and display this radio navigational information, with limitations of course and as text files. But, improving the format and content of messages can be a way to solve the problem. I fully agree with the inclusion of this topic in our work plan.

Meanwhile, may I remind you that S-4, section B600 is now available for IHO MS to examine and send comments not later than 28 April 2010 (see CL 10/2010). From the perspective of IHPT we are analyzing the document and we will intend to send an answer as soon as possible.

About the identification of those items of S-52 Appendix 1 relevant to the main task of EUWG, I need more 2 or 3 days to complete my work, so if you agree I will send my comments until the end of next week.

Kind regards

António Pinheiro

## **PRIMAR**

> Dear Yves,

>

> Below I have listed some items/questions that are related to updating of  
> ENCs. I am not sure if they are all relevant for inclusion in the S-65  
> document, but it is issues that involve ENC updating/ER files.

>

> Comments:

>

> • I do not think the size of an update file should be bigger than  
> the base cell it applies to? In EB31 encoders are advised that as a

guide

- > an ENC update should not exceed 50 Kilobytes in size. So this is
- > maybe the advise that should be used?
- > • Maybe more information about use of re-issues should be added to
- > the document?
- >
- > • Dates on the updates should always be equal or bigger than the
- > base cell/previous update? \*This can be deleted\*.
- >

YLF : Could you please explain the problem?

\*\*\*\*\*

Please change this one to: The UADT of a new edition base cell must be equal to or greater than the ISDT of the last update of the previous edition cell.

We have had feedback about this from a distributor saying that this (UADT of edition 2 is earlier than the ISDT of the last update to the previous edition) might cause problems loading the new edition in some ECDIS.

\*\*\*\*\*

- > • Is new edition available update necessary? It looks like most HOs
- > do not use this and I therefore do not think this kind of update is
- > necessary?
- > • If it is reported from a user that it is not possible to load an
- > update properly (ER file) into an ECDIS system due to errors in the
- > file,
- > it is then recommended that the HO creates a new edition of the cell
- > (not a new update).
- >

YLF : Could you please provide more details?

\*\*\*\*\*

The reason for producing a new edition is suggested, is that if an error (in update 001) is fixed in a new update (in update 002) it might be a problem to load the new update because of the original problem in update 001.

\*\*\*\*\*

- > • After a cancel cell update is issued, the name of the cancelled
- > cell should not be re used?
- >

YLF : Could you please explain the problem?

\*\*\*\*\*

The main reason for this is that the cancellation update that are released can be applied to newer editions as well. Maybe more information about this issue should be added?

\*\*\*\*\*

- > S-52 comments:
- >

> 3.2 (m)

>

- > Maybe the first sentence about New Edition of ENCs could be removed. I

do  
> not think it works like this.  
>  
>  
> Best regards,  
>  
> Stig

**UK**

Dear Yves,

Firstly it is good news to hear that you are now encoding T&P notices in French ENCs following the publication of the guidelines. Let us hope that others will follow your example.

The UKHO has reviewed Appendix 1 and agrees with the recommended changes highlighted by you, the chairman. The following comments are forwarded for consideration:

1. Section 1.2.2 alludes to the volume of updates of a complete update exchange set. Guidance should also be given on the size of an individual update. It would be a good idea if EB31 (see below in italics) was included in S-65 for guidance; this also mandates that M\_COV objects should not be modified in an update.

***EB31 - ENC PS Clause 5.7 Updating and UOC Clause 2.6 Updating***

*Encoders are therefore advised that an ENC update (ER application profile) data set must not change the limit of data coverage for the base ENC cell, as the update may be rejected by the ECDIS. Where the limit of data coverage for a base ENC cell is to be changed, this should be done by issuing a new edition of the cell.*

*Encoders are further advised that, as a guide, an ENC update should not exceed 50 Kilobytes in size, as some ECDIS experience problems with loading large update data sets.*

The UKHO policy is between 20 & 30 kb per update

2. Producers should also be advised not to issue too many updates for a specific edition. The UKHO has seen examples where there are in excess of 60 updates associated with an edition of the ENC. S-65 could recommend an upper limit at which time a NE is issued. It can sometimes take longer to install a large number of updates on an ECDIS than it does to install a new cell or a NE. This is because the ECDIS has to add, modify or remove information in the SENC for each update. This is primarily aimed at new subscribers to ENC

services loading the ECDIS for the first time. To put a balanced view on this, it is probably better for users downloading updates via an online service to download update files as they are a smaller file size than NEs.

The UKHO has a policy to issues a new edition of the ENC if the number of updates reaches 20.

3. Section 3.2, Issuing Authority (Regional ENC Coordinating Centre) paragraph m (New Editions of ENC's).

It was considered that the wording of this section as it is to be both unworkable and unachievable. This was written before there were any integrated ENC services available. This section should be re-written taking account of best practice of current data producers.

Kind regards

Richard

Yves,

We have come across instances in our AVCS service where countries have issued updates with no update information contained in the file. This is probably the result of their production software failing. Instead of creating a blank update (no add/modify/remove info) producers should be encouraged to create a re-issue or new edition. Blank update can cause some ECDIS problems as they are expecting some form of command in the 8211 file