

**1st EXTRAORDINARY WEND MEETING
IHB, Monaco, 30 October 2007**

FINAL MINUTES

- Notes: 1) Paragraph numbering is the same as in the agenda (Annex D)
 2) A list of acronyms used in this report is provided at Annex A
 3) All documents referred to in these minutes are available from the WEND page of the IHO website (www.iho.int > Committees > WEND > List of X-WEND1 Documents)
 4) Names of contributors are written in full the first time they appear in these minutes. Then, only the surname is shown.

1. OPENING AND ADMINISTRATIVE ARRANGEMENTS

- Docs: X-WEND1-01A rev.8 List of Documents (also Annex B)
 X-WEND1-01B rev.7 List of Participants (also Annex C)

The 1st Extraordinary meeting of WEND (X-WEND1) took place in the IHB Conference Room under the Chairmanship of Captain Abri KAMPFER (South Africa) to examine the status of global production of ENC's and to discuss and decide what actions may be required for the IHO to fulfil its commitments to achieve adequate coverage, availability, consistency and quality of ENC's by 2010, in accordance with the relevant Resolutions approved at the 17th International Hydrographic Conference. The meeting was attended by representatives from 31 Member States, both RENC's, a number of accredited Non-Governmental International Organizations (NGIOs), and the Directing Committee of the IHB.

Captain Robert WARD, the incoming IHB Director in charge of charting matters welcomed all participants and observers. The meeting was opened by Vice Admiral Alexandros MARATOS, IHB President, who stressed the need to improve ENC coverage worldwide in order to facilitate the take up of ECDIS and to support IMO considerations on the mandatory carriage requirements for ECDIS. He reminded the meeting that mandatory carriage of ECDIS would come into force for new High Speed Craft (HSC) in 2008 with consideration to extend this to other craft to be made in 2008 at IMO NAV 54. It was therefore urgent to resolve any outstanding issues related to ENC coverage, delivery, consistency and pricing. He explained that the meeting would enable general discussions on all ENC-related subjects and to draw conclusions for consideration by IHO MS. This would be followed by a meeting of IHO MS to discuss the outcomes of the X-WEND1 meeting and identify appropriate actions.

2. APPROVAL OF AGENDA

- Doc: X-WEND1-02A rev.7 Agenda & Timetable

No comment or suggestion for change to the proposed agenda was expressed.

Outcome:

- The Committee approved the agenda (see Annex D).

3. IMO DEVELOPMENTS CONCERNING ENC'S

- Docs: X-WEND1-03.1A IMO Developments regarding ENC's. – Mandatory Carriage of ECDIS for other types of ships
 X-WEND1-03.1B IMO Developments regarding ENC's. – HSC
 X-WEND1-03.1C Development of a comprehensive online catalogue of available official charts
 X-WEND1-03.2A E-Navigation

IHB (MARATOS) presented papers pertaining to ECDIS-related IMO activities. He referred in particular to the December 2006 IMO Resolutions MSC 221 (82) and 222 (82) which require mandatory carriage of ECDIS from 2008 for new-build HSC and 2010 for all other HSC (Doc. 03.1B). NAV 53 in July 2007 reviewed progress on considerations for mandatory carriage requirements for craft other than HSC (Doc. 03.1A). NAV 54 in July 2008 will decide upon this issue. The IHO has been invited to submit a report on the improving status of ENC availability and the actions that it has taken to achieve this.

IHB (MARATOS) reported that the IHB, at the request of IMO, was developing a comprehensive online catalogue of available official charts, including ENCs; RNCs where ENCs are not available; Coastal States' recommendations on appropriate folios of up-to-date paper charts to be used in conjunction with ECDIS operating in RCDS mode and those required to be carried as back-up for a single ECDIS; together with links to national online paper chart catalogues (Doc. 03.1C). This catalogue will be operational before NAV 54.

IHB (MARATOS) reported that the IMO NAV sub-committee was developing an e-Navigation strategy, with the support of IALA and IHO (Doc. 03.1D). NAV has already agreed a definition for e-Navigation, as follows: "*E-Navigation is the harmonised collection, integration, exchange, presentation and analysis of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment*". He remarked that ECDIS and ENCs would be an important element of any e-Navigation concept and reported that the IHO was participating in the work of a NAV Correspondence Group on the matter, and an IALA Committee on e-Navigation.

France (Ing. général Gilles BESSERO) noted that MSC 83 confirmed the 2008 deadlines in the NAV work programme for both items dealing with the development of an e-navigation strategy and the development of carriage requirements for ECDIS. MSC 83 also decided that the report of NAV 53 will be reviewed by MSC 84 in May 2008 and that the report of NAV 54 will be reviewed by MSC 85 in November-December 2008.

Outcome:

- The Committee noted the four reports.

4. IHO RESOLUTIONS

Doc: X-WEND1-04A *Decisions of IHC-17, May 2007, relating to ENC Coverage (IHB)*

IHB (MARATOS) drew the Committee's attention to the following two decisions of the 17th International Hydrographic Conference, addressing ENC coverage:

- Decision No. 20 : "*Member States should adhere and comply with the WEND Principles in order for the IHO, through its Member States, and the regional and worldwide bodies in which they come together, to achieve adequate coverage, availability, consistency and quality of ENCs by 2010*"
- Decision No. 21 : (The Conference) "*Strongly supports the efforts by IMO to introduce mandatory carriage requirements for ECDIS, emphasizing that:*
 - *A significant coverage of ENCs is already in place and will be further improved by 2010, as indicated in the DNV report and supported by IHO assessments, and secondly that*
 - *Acceptance of mandatory carriage requirements will further accelerate the production of ENCs*"

Outcome:

- The Committee noted the report.

5. ISSUES OF CONCERN

Docs: X-WEND1-05A	<i>Consistent Encoding of ENC's (TSMAD Chair)</i>
X-WEND1-INF1	<i>The WEND Concept for a Worldwide ENC Database – Past or Future? A Review of Progress and a Look to the Future (H. Hecht, A. Kampfer and L. Alexander)</i>
X-WEND1-INF3	<i>The Present Status of Small Scale ENC Coverage with Respect to the Allocation of cells to Usage Bands 1 – Overview and 2 – General (T. Pharaoh, IHB)</i>

IHB (Ward) presented X-WEND paper 05A on behalf of the TSMAD Chairman (Mr. Barry GREENSLADE, UK). He gave an overview brief on “Recommendations for Consistent ENC Data Encoding” which aims to support consistent ENC compilation that results in uniform and unambiguous portrayal of ENC data, thereby supporting a safer navigation environment.

Netherlands (Capt. Floor de HAAN), supported by UK (Radm. Ian MONCRIEFF) and Germany (Mr. Horst HECHT), expressed the views that the recommendations for ENC consistency should be made more robust. Germany (HECHT), referring to paper INF1 elaborating on the legal opinion from Prof. Peter EHLERS, indicated that because SOLAS V refers to IHO Specifications and Recommendations, through footnotes, it is the case that IMO member states are bound to comply with all IHO Specifications / Recommendations. Norway (Mr. Frode KLEPSVIK) did not support this view. IC-ENC (Mr. Graham SAUNDERCOCK) remarked that the recommendations for ENC consistency will be included in S-101.

Norway (KLEPSVIK), supported by Canada (Dr. Savi NARAYANAN), stated that there is a need to know the reasons why a number of HOs choose not to follow the “IHO recommendations for ENC consistency”. He suggested to refer this matter to the RENCs. Australia (Capt. R. NAIRN) believed that WEND is the appropriate body to make a statement encouraging HOs to follow the recommendations.

IHB (Ward) introduced paper INF3 on small-scale ENC coverage and highlighted the inconsistency of compilation scales used for Navigational Purposes 1 and 2. The paper proposed that allocation of NP 1 and 2 would be best addressed at the regional level.

There was general support on the importance of achieving consistent ENC coverage and the need to find a mechanism to resolve inconsistencies regionally. Following a question from UK (MONCRIEFF) on whether quality / consistency is a global or a European phenomenon, IC-ENC (SAUNDERCOCK) indicated that it was difficult to judge, because most data sales are for European data – so that is the area that has received most of the criticism.

Outcome:

- The Committee noted the report and the INF paper.
- The Committee strongly encouraged HOs to follow the IHO guidelines on consistency of ENC data, especially the use of SCAMIN and noted that RENCs and RHCs have a vital role to play in ensuring consistency of ENC's.
- The Committee agreed that coverage and consistency are of equal priority.
- The Committee agreed that overlapping small scale ENC data (Navigational Purpose 1 & 2) needs to be avoided and recommended that ENC coverage in Navigational Purposes 1 and 2 should be coordinated on a regional basis.

Docs: X-WEND1-05B	<i>ENC Coverage – Navigational Purpose / Cell coverage (IHB)</i>
X-WEND1-05C	<i>ENC harmonisation Actions within the Baltic Sea Hydrographic Commission (Denmark, Finland, Sweden)</i>
X-WEND1-INF2	<i>EAHC information paper</i>
X-WEND1-INF4	<i>ENC Coverage in the MACHC Region</i>

IHB (WARD) presented an analysis of the current global coverage of ENC and the forecasts for ENC coverage by 2010 (Doc. 05B). He noted that, from the information available to the IHB, there are currently significant gaps in the existing ENC coverage in Africa, South America, Australasia and the South West Pacific, and that significant gaps are likely to persist in 2010 in parts of the Caribbean, most of the South West Pacific and in Africa. He drew attention to a list of those States that appear likely to have less than adequate coverage by the 2010 target.

IHB (WARD) concluded that some States were lacking plans or capacity to achieve ENC coverage by 2010 and would need assistance through regional cooperation; bi-lateral assistance programmes; capacity building; or loan / grant aid. He suggested that MS can help to fill the gaps through RHC cooperation or bi-lateral assistance programmes, whilst the IHB role could assist through diplomatic and government circles, for example through direct contact with relevant authorities and government figures in States where progress or capability may be in question.

Clarifications and updates to the data presented in Doc. 05B were provided by some HOs, including Belgium, France and Australia.

France (Ing. en chef Yves GUILLAM) presented the measures adopted within the EAHC and MBSHC to develop ENC schemes and outlined the problems encountered (cell limits, data coverage, overlaps ...). Brazil (Capt. Wesley CAVALHEIRO) gave a brief overview on ENC coverage in the MACHC area (Doc. INF4). Sweden (Mr. Åke MAGNUSSON) reported on ENC harmonisation actions within the BSHC (Doc. 05C), on behalf of Denmark, Finland and Sweden. Singapore (Mr. Parry OEI) gave a presentation on ENC developments in the EAHC area (Doc. INF2).

There followed a general discussion. Singapore (OEI) felt it would be difficult to influence non-IHO MS within Regional Hydrographic Commissions. Netherlands (de HAAN) wondered how to best use the MS spare capacity. Germany (Hecht) indicated that the WEND Task Group would provide an analysis of the reports on existing and prospective ENC coverage, using the data from the coverage submissions requested by the IHB (WEND Letter 1/2007). Norway (KLEPSVIK) stressed the importance of consistent ENC coverage for the international maritime community to take up ECDIS. IC-ENC (SAUNDERCOCK) stated there was a need for comprehensive and consistent ENC coverage along the main shipping routes. Otherwise, ship owners will continue to move towards ECS charts (not ENCs).

CLIA (Mr. George ARTS), in relation to consideration in IMO, suggested that a definition was needed for what is meant by "adequate ENC coverage". Germany (HECHT) stated that the WEND TG has assumed that, for the purposes of its ENC coverage analysis, this is equivalent in general terms to INT paper chart coverage. Norway (KLEPSVIK), supported by USA-NGA (Radm. Christian ANDREASEN), objected to IHO defining "adequate ENC coverage"; believing that this should be done by IMO. Australia (NAIRN) believed that IHO MS' HOs are best placed to define what is "adequate coverage", that is; AHS for Australian waters.

There followed a lengthy discussion on whether the IHO should define "adequate coverage". The Chair proposed that a small drafting group (Germany, Australia and United Kingdom) prepare a definition of "adequate ENC coverage" to be presented to Member States on 31 October. This was agreed.

CLIA (ARTS) believed that mariners need large scale ENCs if ENCs and ECDIS are to be useful and used. Also, national needs for ECDIS training and awareness should not be ignored by national HO's.

Outcome:

- The Committee noted the two reports and the two INF papers.
- The Committee tasked the IHB to amend the "red" and "amber" lists in Doc. 05B to remove Puerto Rico, Belgium, Brazil, Djibouti and Namibia.

- The Committee agreed that a small drafting group (DE, AU and UK) be tasked to define “Adequate ENC Coverage”¹.

Docs: X-WEND1-05D *Digital Nautical Chart Report (USA-NGA)*
 X-WEND1-05E *IC-ENC Report*
 X-WEND1-05F *PRIMAR Report*

USA-NGA (ANDREASEN) briefly reported on the status of DNC production in the USA (Doc. 05D).

IC-ENC (SAUNDERCOCK) reported on IC-ENC activities over the past year (Doc. 05E). In particular, he emphasized problems related to ENC consistency, delivery and pricing. He noted that integrated services are difficult if vendors have to assemble data packages from various different sources. Guidance is required for those HO's that distribute individually rather than through RENCs. He wondered who would provide the guidance and how it can be enforced. He reminded the committee that WEND has already agreed a Resolution encouraging RENC distribution and wondered what else can be done.

PRIMAR (Mr. Jon Leon ERVIK) gave a presentation on ENC quality, consistency, delivery and availability issues (Doc. 05F). He suggested that the prices for paper charts and ENC's were roughly at the same level.

This view was supported by Norway (KLEPSVIK). UK (Mr. Mike ROBINSON) objected and believed that ENC's are about 2.5 more expensive than paper charts. IC-ENC (SAUNDERCOCK) agreed and felt that ENC cost is generally too high, adding that a possible option to lower the prices is volume discounting. Germany (HECHT) noted that the price comparison by PRIMAR included, to a significant extent, US ENC's which are available for free. CLIA (ARTS) believed that pricing models do not reflect the actual chart usage or needs. Further, he criticized a nationalistic approach on ENC pricing by some IHO Member States. Primar (ERVIK) stated that paper chart costs are shared over a much larger customer base and that mandatory ECDIS carriage requirement would increase the size of the market, which should allow the lowering of ENC costs. For CLIA (ARTS), low price, high volume will mean growth and increased overall revenue. He wondered if ENC prices will come down when the market will explode, as a result of IMO Resolutions on ECDIS carriage requirements. RTCA (Mr. Michael BERGMANN) suggested moving towards paying for the data rather than the media; price setting should involve all the stakeholders. This is the case in the aviation market. France (BESSERO) supported the view of Norway that pricing was a policy issue to be addressed at the governmental level. The question from SHOM point of view is what part of the cost of charts / ENC's should be paid by the tax payer and what part should be paid by the end user. A public service needs to be funded one way or the other; profit-making is not its purpose.

Norway (KLEPSVIK) indicated that, for a potential of 90,000 ships, 50,000 currently have ECS onboard whilst 5,000 have ECDIS.

There was general, though not universal agreement that prices should be lower.

Outcome:

- The Committee noted the three reports.
- The Committee agreed that ENC producer nations should take account of the comments made during the meeting when they next consider their collective ENC pricing and distribution policies.

¹ The drafting group subsequently proposed the following definition: *Adequate ENC Coverage is attained with “those ENC's required to enable safe port to port navigation for international shipping that correspond to the paper chart coverage for these ports and the routes between”.*

6. CAPACITY BUILDING

Docs: X-WEND1-06A CBC Input on ENC Training and Production Assistance

Chairman CBC (Capt. Hugo GORZIGLIA, IHB Director) referred to a number of courses on nautical cartography, including ENCs. He reminded the Committee that WEND 9 and 10 both agreed to investigate capacity building activities. However, no feedback had been received by CBC. Meanwhile CBC has initiated a number of ENC related training programs, based on requests via RHCs. He mentioned that ENC production courses / workshops / seminars were planned in 2008 within EAHC, NIOHC, RSAHC and MACHC. However, it would be more efficient for these regional initiatives to be undertaken under a single model, which currently does not exist, and he proposed that a Standard Practical Basic ENC Production Course be developed. This proposal received general support. He noted that hydrography is often not recognized in States as a high priority for assistance.

Canada (NARAYANAN) suggested that the private sector should be encouraged to be involved in capacity building activity. RTCA (BERGMANN) concurred and stated that private industry is interested in participating in such activities. Chairman CBC (GORZIGLIA) mentioned that private companies already contribute to training activities organized by the CBC.

Outcome:

- The Committee noted the report.
- The Committee supported the development of a Standard Practical Basic ENC Production Course. Relevant IHO body to be identified.
- The Committee invited IHB to poll MS by CL to identify who has spare ENC production or assistance capacity.
- The Committee agreed that a regional approach is fundamental to capacity building.
- The Committee agreed that ENC related projects should be considered as high priority capacity building activities.

7. OBSERVATIONS REGARDING NAV 53 AND NAV54

Doc: X-WEND1-07A *Reflections following discussions on mandatory ECDIS carriage requirements during NAV 53 and concerns expressed by different delegates that needs to be addressed by IHO, HOs and Maritime Administrations (F. Klepsvik, Norway)*

X-WEND1-07B *Mandatory ECDIS requirements – Some reflections following IMO NAV 53 (G. Bessero, France)*

Norway (KLEPSVIK), referring to Doc. 07A, reported on issues raised at NAV 53 (July 2007). He mentioned that those States against the mandatory carriage requirements of ECDIS had expressed concern about:

- The lack of ENC coverage and consistency.
- The expected high cost of ECDIS with ENCs.
- The fact that, in their views, this issue was technology-driven rather than human-factors based.
- The insufficient training of mariners in ECDIS.

He stated that the education of users needs to be addressed; however, it is a “chicken and egg” issue, as optional ECDIS implies optional training. He noted the level of ignorance from some IMO delegates. He believed that specific examples and cases must be presented to IMO rather than generalizations – how else can problems be addressed? He wondered if RENCs and IHB should be the primary input mechanisms to the NAV 54 contribution, or whether MS’s individual contribution should be sought to furthering the NAV 54 decision, e.g. through lobbying and educating their IMO delegations.

He suggested a list of actions for the IHO / HOs / RENCs to properly address the first two issues above, both before and during NAV 54 (July 2008). He felt the two remaining issues should be dealt with by National Maritime Administrations (NMA), possibly with contributions from IHO / HOs.

France (BESSERO) supported the views expressed above and that a concerted action plan leading to NAV 54 be developed during this meeting (Doc. 07B). He further felt that the logical alternative to paper charts will be ECS if ECDIS is not made a mandatory carriage requirement by IMO, and that the development of an e-navigation strategy could be seen more as a risk to delay the consideration of ECDIS carriage requirements than an opportunity; he suggested these two aspects be taken into consideration.

Outcome:

- The Committee noted the two reports.
- The Committee agreed that MS lobby and educate their IMO delegations (and their regional neighbours) prior to NAV 54 and provide feedback to IHB to assist NAV 54 preparations.

Doc: X-WEND1-07C rev.1 Notes and observations made by UKHO at IMO (I. Moncrieff, UK)

UK (MONCRIEFF) reported on notes and observations made by UKHO at NAV 53 in July 2007. Approximately 30% of IMO delegates indicated general support. He stated that the Sub-Committee was much divided about ECDIS carriage requirements and the following groupings (with percentages of those adopting each stance) were noted:

- o Those States supporting a widespread mandation in 2010 (20%)
- o Those States supporting a staged introduction by routes (the Japan option) (7%)
- o Those States positive about ECDIS; but concerned about outstanding issues (24%)
- o Negative with regard to mandation in near term (37%)
- o Generally ambivalent (12%)

He also outlined some of the reasons put forward against, or in favour of mandation. He concluded that IHO arguments should be based on facts, not emotions and that there is a need to find agreement, not only on coverage but also on quality, consistency and pricing. Further, a practical demonstration / education program is required for NAV 54 delegates, for example based on the IHO catalogue. France (BESSERO) concurred that the IHO chart catalogue is an important element for NAV 54.

Outcome:

- The Committee noted the report.

Doc: X-WEND1-07D IHO contribution to the debate about mandatory ECDIS carriage requirement – Draft action plan leading to NAV 54 (G. Bessero, France)

France (BESSERO) presented a draft plan of actions leading to NAV 54, with the following outlines:

- Review and explain the advantages of ECDIS versus the alternatives.
- Demonstrate the adequate availability of ENC.
- Simulate the impact of ECDIS carriage requirements on ENC adequate coverage for different timing enforcements scenarios.
- Review the impact for “less-developed” coastal states of ECDIS carriage requirements.
- Ensure the availability of on-line catalogues based on an operational concept for users on one hand (IMO, Maritime Safety Administrations, mariners), for contributors on the other hand (IHO).
- Review CBC initiatives/actions required to implement Decision 20 of the 17th IHC.
- Review IHO contribution to the education and training of mariners in the safe use of ECDIS.

- Review the impact on ECDIS carriage requirement of the work on e-navigation.
- Identify the forthcoming major maritime events and marine publications where IHO policy on ECDIS/ENC might be promoted prior to NAV 54.
- Submit IHO paper(s) to NAV 54.
- Interact with NMAs.

There was general support to the proposed plan of actions. UK (Capt. Joe COLLINS) stressed there should be a single IHO voice at IMO. Germany (HECHT) and UK (MONCRIEFF) supported this view and suggested that the above action plan be used as a basis for an IHO submission to IMO, to be presented by IHB. Singapore (OEI) suggested to also involving NMAs in the IHO submission. IHB (WARD) felt there is a need for IHO Member States to ensure that their country's position at IMO agrees with the IHO position. Canada (NARAYANAN) proposed that an IHO statement to IMO be drawn up, which could then be passed to national delegations to IMO. Norway (KLEPSVIK) expressed preference for another option whereby HOs would discuss the relevant issues with their national delegation to IMO, prior to the relevant IMO meetings.

Outcome:

- The Committee agreed that the draft action plan in Doc. 07D be used as a basis for an IHO submission to IMO which will be presented by the IHB.
- The Committee agreed that topics listed in Doc. 07D be incorporated in the NAV 54 action plan. In addition, the other topics covered by Norway and UK and others should be included. IHO paper to be provided to MS as soon as possible.

After a review of the day's discussions, the Committee agreed the following outcomes:

1. X-WEND1 encourages all IHO Member States to: facilitate global ENC production through:
 - Regional Hydrographic Commissions and the active monitoring of progress and the coordination of cooperative programs between members and others in their regions, and
 - through assistance programs as part of individual bi-lateral arrangements.
2. X-WEND1 invites the IHB to:
 - Contact those States that have been indicated as unlikely to achieve adequate ENC coverage by 2010 or whose intentions are unknown, and then;
 - to approach the relevant authorities (including at senior governmental levels) using appropriate diplomatic, inter-governmental or other points of contact to raise the levels of awareness and commitment to provide appropriate hydrographic services, especially ENC coverage,
 - Monitor and report on the production and availability of ENCs,
 - Foster appropriate regional cooperation through RHCs,
 - Encourage IMO delegations to liaise with their relevant hydrographic authorities concerning ENC coverage,
 - Seek assistance through capacity building measures where appropriate and available, and
 - Advise States in seeking loan or grant aid.

There being no further items to discuss, the Chair closed the meeting at 1755

LIST OF ACRONYMS

AHS	Australian Hydrographic Service
BSHC	Baltic Sea Hydrographic Commission (IHO)
CBC	Capacity Building Committee (IHO)
CL	Circular Letter
CLIA	Cruise Line International Association
DNV	Det Norske Veritas (Norway)
EAHC	East Asia Hydrographic Commission (IHO)
EAtHC	Eastern Atlantic Hydrographic Commission (IHO)
ECDIS	Electronic Chart Display and Information System
ECS	Electronic Chart System
ENC	Electronic Navigational Chart
HO	Hydrographic Office
HSC	High Speed Craft
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IC-ENC	International Centre for ENCs
IHB	International Hydrographic Bureau (IHO)
IHC	International Hydrographic Conference (IHO)
IHO	International Hydrographic Organization
IMO	International Maritime Organization
MACHC	Meso-American and Caribbean Sea Hydrographic Commission (IHO)
MBSHC	Mediterranean and Black Sea Hydrographic Commission (IHO)
MS	Member State
MSC	Maritime Safety Committee (IMO)
NAV	Sub-committee on Navigation (IMO)
NGA	National Geospatial-Intelligence Agency (USA)
NGIO	Non-Governmental International Organization
NIOHC	North Indian Ocean Hydrographic Commission (IHO)
NMA	National Maritime Administration
RENC	Regional ENC Coordinating Centre (IHO)
RHC	Regional Hydrographic Commission (IHO)
RNC	Raster Navigational Chart
RSAHC	Ropme Sea Area Hydrographic Commission (IHO)
RTCA	Radio Technical Commission for Aeronautics
SHOM	Service Hydrographique et Océanographique de la Marine (France)
SOLAS	Safety of Life at Sea Convention (IMO)
TG	Task Group
TSMAD	Transfer Standard Maintenance and Applications Development Working Group (IHO)
UKHO	United Kingdom Hydrographic Office
WEND	Worldwide Electronic Navigational Chart Data Base (IHO)
X-WEND1	1 st Extraordinary WEND Meeting

LIST OF DOCUMENTS

IHB CL 70/2007	Extraordinary WEND Meeting
IHB CL 79/2007	Revised Agenda for the Extraordinary WEND Meeting and Member States Comments
IHB CL 85/2007	Final Arrangements for the Extraordinary WEND Meeting
X-WEND1-01A rev.8	List of Documents
X-WEND1-01B rev.7	List of Participants
X-WEND1-02A rev.7	Agenda and Timetable
X-WEND1-03.1A	IMO Developments regarding ENC's – Mandatory Carriage of ECDIS for other types of ships (IHB)
X-WEND1-03.1B	IMO Developments regarding ENC's – HSC (IHB)
X-WEND1-03.1C rev.1	Development of a comprehensive online catalogue of available official charts (IHB)
X-WEND1-03.2A	E-Navigation (IHB)
X-WEND1-04A	Decisions of IHC-17, May 2007, relating to ENC Coverage (IHB)
X-WEND1-05A	Consistent Encoding of ENC's (TSMAD Chair)
X-WEND1-05B rev.1	ENC Coverage – Navigational Purpose / Cell coverage (IHB)
X-WEND1-05C	ENC harmonisation Actions within the Baltic Sea Hydrographic Commission (Denmark, Finland, Sweden)
X-WEND1-05D	Digital Nautical Chart Report (USA-NGA)
X-WEND1-05E	IC-ENC Report
X-WEND1-05F	PRIMAR Report
X-WEND1-06A	CBC Input on ENC Training and Production Assistance (CBC Chair)
X-WEND1-07A	Reflections following discussions on mandatory ECDIS carriage requirements during NAV 53 and concerns expressed by different delegates that needs to be addressed by IHO, HO's and Maritime Administrations (Director NHS, Norway)

X-WEND1-07B	Mandatory ECDIS requirements – Some reflections following IMO NAV 53 (Director SHOM, France)
X-WEND1-07C rev.1	Notes and observations made by UKHO at IMO (UK Hydrographer)
X-WEND1-07D	IHO contribution to the debate about mandatory ECDIS carriage requirement – Draft action plan leading to NAV54 (France)
X-WEND1-INF1	The WEND Concept for a Worldwide ENC Database – Past or Future? A Review of Progress and a Look to the Future (H. Hecht, A. Kampfer and L. Alexander)
X-WEND1-INF2	EAHC information paper (P. Oei, Chair EAHC)
X-WEND1-INF3	The Present Status of Small Scale ENC Coverage with Respect to the Allocation of cells to Usage Bands 1 – Overview and 2 – General (T. Pharaoh, IHB)
X-WEND1-INF4	ENC Coverage in the MACHC Region

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AGENDA & TIMETABLE

Approximate Timing		Presenter
0900	1. <u>Opening and Administrative Arrangements</u>	Chair/Pres
	Docs: X-WEND1-01A List of Documents X-WEND1-01B List of Participants	Sec
0905	2. <u>Approval of Agenda</u>	
	Docs: X-WEND1-02A Agenda & Timetable	Chairman
0915	3. <u>IMO Developments concerning ENC</u>s	
	Docs: X-WEND1-03.1A IMO Developments regarding ENC's. – Mandatory Carriage of ECDIS for other types of ships X-WEND1-03.1B IMO Developments regarding ENC's. – HSC X-WEND1-03.1C Development of a comprehensive online catalogue of available official charts X-WEND1-03.2A E-Navigation	
	3.1. IMO requirements and decisions concerning mandatory carriage requirements for ECDIS. IHB will present brief reports on the:	
	- decision taken by IMO concerning mandatory carriage of ECDIS for HSCs;	Pres
	- papers presented and decisions taken during NAV 53, for mandatory carriage of ECDIS for other types of ships;	Pres
	- progress on the development of the IHO online catalogue which will include available ENC's, RNC's where ENC's are not yet available, paper charts to be used as back-up when ECDIS is operating with ENC's or in conjunction with RNC's when ECDIS is operating in RCDC mode and a world-wide portfolio of paper charts.	Pres
	3.2. The IHB will present a brief report on E-Navigation development.	Pres
0930	4. <u>IHO Resolutions</u>	
	Doc: X-WEND1-04A Decisions of IHC-17, May 2007, relating to ENC Coverage (IHB)	
	The IHB will present the two Resolutions adopted by the XVII International Hydrographic Conference, early May 2007, concerning: <ul style="list-style-type: none"> • ENC coverage, availability, consistency and quality; and • ENC coverage in relation to ECDIS carriage requirements. 	Pres
0945	5. <u>Issues of concern</u>	

	<p>Docs:</p> <p>X-WEND1-05A <i>Consistent Encoding of ENC's (TSMAD Chair)</i></p> <p>X-WEND1-05B <i>ENC Coverage - Navigational Purpose / Cell coverage (IHB)</i></p> <p>X-WEND1-05C <i>ENC harmonisation Actions within the Baltic Sea Hydrographic Commission (Denmark, Finland, Sweden)</i></p> <p>X-WEND1-05D <i>Digital Nautical Chart Report(USA-NGA)</i></p> <p>X-WEND1-05E <i>IC-ENC Report</i></p> <p>X-WEND1-5F <i>PRIMAR Report</i></p>	
	Reports will be presented on the following topics of ENC's:	
	<ul style="list-style-type: none"> Coverage: 	Ward Hecht Andreasen? RENC
1030	COFFEE BREAK	
1050	<ul style="list-style-type: none"> Consistency: 	RENC Baltic RHC Ward
1140	<ul style="list-style-type: none"> Pricing: <p>Reports to be provided by RENCs will include discussion on problems related to the issues above and how procedures and processes can be harmonized and improved. RHCs and Member States may also provide reports. The WEND Task Group may provide a report as it considers appropriate for coverage, harmonization and delivery.</p> <p>Papers on these issues may also be submitted by Member States and participating NGOs, as they consider appropriate.</p>	RENC
	6. <u>Capacity Building and Training</u>	
1210	<p>Docs: X-WEND1-06A <i>CBC Input on ENC Training and Production Assistance</i></p> <p>The need for capacity building and training requirements for ENC issues, especially for Developing States will be discussed. A paper highlighting the main topic of interest will be presented by the Capacity Building Chairman.</p>	Gorziglia
1220	LUNCH	
1345	7. <u>Observations regarding NAV 53 and NAV54</u>	
	<p>Docs:</p> <p>X-WEND1-07A <i>Reflections following discussions on mandatory ECDIS carriage requirements during NAV 53 and concerns expressed by different delegates that needs to be addressed by IHO, HOs and Maritime Administrations</i></p>	Klepsvik
	X-WEND1-07B <i>Mandatory ECDIS requirements - Some reflections following IMO NAV 53</i>	Bessero

	<i>X-WEND1-07C</i>	<i>Notes and observations made by UKHO at IMO</i>	Moncrieff
	<i>X-WEND1-07D</i>	<i>IHO contribution to the debate about mandatory ECDIS carriage requirement - Draft action plan leading to NAV54</i>	Bessero
1500	COFFEE BREAK		
1520	8. <u>Actions required</u>		
	Discuss: <ul style="list-style-type: none"> • ENC coverage • ENC consistency • ENC pricing 		All participants
1630	Conclusions for consideration by Member States, covering: <ul style="list-style-type: none"> • ENC coverage • ENC consistency • ENC pricing 		All participants
1720	Actions required in preparation for NAV 54		All participants
1750	Summary of actions		Chair/Sec
1800	Close of Meeting		Chair
1830-2000	Cheese and Wine in the IHB chartroom		All participants