

**14<sup>th</sup> CHRIS MEETING  
Shanghai, China, 15-17 August 2002**

**USERS INTERFACE GROUP MEETING**

As a result of the views expressed during the IHO/Industry Workshop held in the Bureau during June 2002, and the subsequent initiative of a number of members from industry to form a forum which would exclude the maritime users, an exploratory meeting has been requested with a number of organisations representing international shipping through the auspices of the International Chamber of Shipping (ICS). The meeting will be held in London on the 9<sup>th</sup> August and will be attended by IHB Director 1, the Chairman and a Vice-Chairman of the SPWG and the IHB President elect. The results of this meeting will be reported to the CHRIS Meeting. An interesting users viewpoint has been submitted in advance by INTERTANKO as they regret that they will be unable to attend the initial meeting.

The Agenda, a List of Participants and the comment from INTERTANKO are attached for your information.

**Meeting on Nautical Charting and Nautical Publications  
to be held at 12 Carthusian Street, London EC1M 6EZ  
on Friday 9<sup>th</sup> August 2002 commencing at 0900**

**Proposed Agenda**

1. Welcome
2. Arrangements for the meeting
3. Areas of concern in charting and publications
  - 3.1 IHO
  - 3.2 Shipping industry
4. Means of addressing concerns
5. Future interface meetings between IHO and industry
6. Any other business
7. Arrangements for next meeting

## **Expected Attendees**

### **IHO**

Rear Admiral Neil Guy	Director IHB
Mr Frode Klepsvik	Norwegian Hydrographer and Chairman IHO Strategic Planning Working Group (SPWG)
Dr Wyn Williams	United Kingdom Hydrographer and Vice-Chairman SPWG
Rear Admiral Alexandros Maratos	IHB President (Elect)

### **Shipping Industry**

Cdr Peter Hinchliffe	International Chamber of Shipping (ICS) (Chairman)
Captain Rodger MacDonald	International Federation of Shipmasters' Associations (IFSMA)
Captain Leo Stoel	Vopak Chemical Tankers and representing Royal Association of Netherlands' Shipowners (KVNR)
Captain Iain Chadwick	Oil Companies International Marine Forum (OCIMF)
Mr Phil Truscott	Oil Companies International Marine Forum (OCIMF)
Mr John Gyles	Society of International Gas Tanker & Terminal Operators (SIGTTO)

### **Apologies**

Captain Steen Petersen	BIMCO
Mr Peter Kidman	Intercargo
Captain Howard Snaith	Intertanko
Captain Jan Ifwarrson	Swedish Shipowners' Association



# **INTERTANKO**

**International Association of Independent Tanker Owners  
- FOR SAFE TRANSPORT, CLEANER SEAS AND FREE COMPETITION -**

22 July 2002

Our Ref.: HS-18328/450010

## **IHO Meeting 9<sup>th</sup> August 2002**

Regrettably INTERTANKO will not be able to attend the forthcoming IHO meeting on the 9<sup>th</sup> August due to staff travelling out the office. However we recognise the importance of this meeting and would like to submit the following written comments to the meeting for review and discussion by the group.

Thank you in advance.

### **Electronic Charts**

**INTERTANKO has received several enquiries from members pertaining to Electronic Charts and Electronic Charts Display and Information Systems (ECDIS). In the following text we seek to explain and highlight the differences and some areas to be aware of.**

On the common paper chart type system, charts are supplied by a recognized Hydrographic office and supplemented by weekly Notices To Mariners which the officers onboard the vessel will update by way of chart corrections.

ECDIS on the other hand, is considered the primary system for a paperless chart system, interfaced with GPS and DGPS, and provides real time information. ECDIS comprises of ECDIS software and hardware and Electronic Navigational Charts (ENC).

IMO performance standards are contained in Resolution A.817 (19) and state that ECDIS will be accepted as complying with V/20 of SOLAS 1974, and should be supplied with adequate backup arrangements. This resolution also importantly states that the chart information to be used in ECDIS should be the latest edition of the information originated by a government authorized Hydrographic office and conform to the International Hydrographic Office (IHO) standards. The transfer standard for digital Hydrographic data should also follow the IHO S-57 format. Furthermore, the specification for chart content and display aspects should be in the IHO S-52 format. Therefore, it should be clearly noted that ECDIS only fulfills compliance with SOLAS V/20(4) after merging the ENC contents and updates into SENC (System Electronic Navigation Chart). The SENC format is often different between different manufacturers.

We understand the International Hydrographic Office (IHO) has been contemplating allowing the delivery of official ENC DATA in the SENC format instead of requiring that the cells be delivered to the ship in the S-57 format (encrypted or not) and to have the conversion completed on board by the system. As a result, a proposal being discussed is that the Hydrographic Offices will deliver their chart cells to Regional Electronic Navigation Center (RENC) and may allow them to deliver the data encrypted according the VAR's SENC format (VAR - Value Added Retailers). This may allow for inclusion of new features, but the danger is that in case of business interruption of the VAR (for whatever reason), or the

inability or unwillingness to provide certain ENC's for certain regions, no one else would be able to provide the necessary information because the SENC is proprietary. It is therefore essential that the rules requiring delivery in S-57 format be maintained. This is the only way to ensure that one will be able to buy ENC's from a variety of suppliers and maintain free enterprise.

The coverage in S-57 format provided by Hydrographic Offices is limited. In spite of recent improvements, coverage is in need of further development.

Increased availability of electronic chart data in the ENC S-57 format supported by nationally recognised Hydrographic Offices (HO) is a necessity because some data providers are actively promoting their own data product in direct competition with official HOs.

Accordingly, the profusion of different formats makes it difficult for system manufacturers to adapt. Most system manufacturers are reluctant to adapt their ECDIS to read a wide range of formats because of costs involved in gaining type approval.

Therefore INTERTANKO recommends that the IHO seeks to adopt a common S-57 encryption standard which will be freely available to all RENCs and their authorized distributors and individual HOs. INTERTANKO further recommends that as part of their type approval process, all ECDIS manufacturers and data providers should agree that at the ship owner's request, they will freely make S-57 to SENC conversion possible.

### **Terminology**

**ARCS** - Admiralty Raster Chart Service, The service for distributing the B.A. electronic chart in HRCF format

**ECDIS - Electronic Chart Display & Information System** - A navigation information system which with adequate back-up arrangements can be accepted as complying with the up-to-date chart required by regulation V/20 of the 1974 SOLAS Convention, by displaying selected information from a system electronic navigational chart (SENC) with positional information from navigation sensors to assist the mariner in route planning and route monitoring, and if required additional navigation-related information.

**ENC - Electronic Navigational Chart** - The database, standardised as to content, structure and format for use with ECDIS on the authority of government authorized hydrographic offices. The ENC contains all the chart information for safe navigation and may contain supplementary information in addition to that contained in the paper chart (e.g. sailing directions) which may be considered necessary for safe navigation.

**IC-ENC** - International Centre for Electronic Navigation Charts. This is the second distribution center set up by 5 countries so far after the closure of PRIMAR. PRIMAR-Stavanger will remain as the distribution center for NORWAY - SWEDEN - DENMARK - FINLAND - FRANCE and ESTONIA, the other European countries are creating IC-ENC which will be physically located in the premises of the UKHO.

**RCDS - Raster Chart Display System** - A navigation information system displaying RNCs with positional information from navigation sensors to assist the mariner in route planning and route monitoring and, if required, display additional navigational-related information.

**RENCs** - Regional Electronic Navigation Centre. PRIMAR-Stavanger and IC-ENC are RENCs, we understand that it is envisioned by the International Hydrographic Organization (IHO) to have 7 RENCs around the world.

**RNC - Raster Navigational Chart** - A facsimile of a paper chart originated by, or distributed on the authority of, a government-authorised hydrographic office. RNC is used in these standards to mean a single chart or collection of charts.

**SENC - System Electronic Navigational Chart** - A database resulting from the transformation of the ENC by the ECDIS for appropriate use, updates to the ENC by appropriate means and other data added by the mariner. It is the database that is actually assessed by the ECDIS for the display generation and other navigational functions, and is the equivalent to an up-to-date paper chart. The SENC may also contain information from other sources.

The IMO stipulates that official data must be delivered in S-57 format to the ship, where for technical and marketing reasons, the ECDIS transforms the S-57 in SENC to add value and performance.

**The SENC format is different for each manufacturer.**

IMO requires that S-57 disk must be kept on board and that the conversion must be done by the on board ECDIS. However IHO has now ruled that delivery to the ship in SENC is acceptable

**S-57, HRCF, BSB, PCX** - these are different formats of electronic charts

**System Raster Navigational Chart** - A database resulting from the transformation of the RNC by the RCDS to include updates to the RNC by appropriate means.

**VAR's** - Value Added Retailers.

Thank you and kind regards,

Howard Snaith  
Marine Manager.