**Report of joint meeting of the AIS TECHNICAL WORKING GROUP and the COMMUNICATION WORKING GROUP of the IALA e-Nav Committee**,  
 13th Intersessional meeting held 9-13 July 2012, in Norrköping, Sweden

1. **Introduction**

The AIS Technical Working Group (WG 3) and the Communication Working Group (WG4) of the IALA e-NAV Committee held a joint intersessional meeting in Norrköping, Sweden, from 9 to 13 July 2012, hosted by jointly by the Swedish Transport Agency and the Swedish Maritime Administration. The venue was Swedish Transport Agency office, Norrköping, Sweden.

The meeting was chaired by Rolf Zetterberg, Chair WG3.

The main objectives of the meeting were to finalize the draft MRCP, finalize the draft revision of ITU-R M. 1371-4 based on the results from IMO NAV 58, progress the work on the remaining Appendices of Recommendation A124, further develop the definition of VHF Data Exchange and progress the work on the draft Guideline on Harmonized implementation of ASM.

1. **Progress made**

## 2.1 General Discussions

### In the initial discussions the group agreed on the importance of presently minimizing the changes and development of the present AIS and its technical specification, ITU-R M.1371. New needed functionality and capability should preferably be part of the future VHF Data Exchange system. It was also stated that it is of importance to initiate tests and establish a usage of the frequencies that WRC 12 opened up for test of digital maritime communication. Further on are inputs needed to WRC15 indicating the compelling need for the additional allocation of frequencies that will be discussed and decided at WRC15.

## 2.2 Recommendation A 124

The plan for the remaining work was developed and is proposing that some of the initially planned Appendicies will not be developed. The structure with the numbering of Appendicies is proposed to be kept as it is expected to be common for the documentation of all e-Navigation services. The document Norrköping Output 05 gives the rationale for the proposed way forward for Rec A 124.  
  
The Appendicies 9,10,11 and 12 were completed and will be forwarded as Norrkoping Output 06 and 07 to eNAV12 for final review and possible approval. The main document of Rec A 124 where updated with consequential changes (caused by the new Appendicies), will be forwarded as Norrkoping Output 08 to eNAV12 for approval.

Appendix 0 and 3 was progressed but not finalized and is kept as Norrkoping WD 04.

***Action Item***

* *The* ***Chairman of the IALA WG3/WG4 intersessional meeting*** *was asked to forward the completed parts of Rec A 124 to the secretariat as inputs to eNAV 12.*

2.3 ITU-R M 1371The WG reviewed input related to ITU-R M. 1371, using Norrkoping-Input-06b-e-Nav11-WG3-WD1 working towards draft rev 1371-4 rev by Kenji as base document. In addition, the WG reviewed Norkopping-input-03-General comments on 1371; Norrkoping-input-04-Proposed changes to 1371; Norrkoping-input-12- LS to IMO on revision of ITU-R M.1371-4; and Norrkoping-input-14 editorial changes to 1371.

The review clarified and agreed a number of changes, many of which were editorial in nature. The work resulted in a revised track changes version of ITU-R M.1371-4 revision, with a covering liaison statement for ITU highlighting the key changes.

In the process of the review the WG identified a need to amend message 21, AtoN code, to include the Emergency Wreck Marking buoy. In this process, the need for AtoN code ‘31’ (Light Vessel / LANBY / Rig) was questioned, and an additional liaison statement was drafted for forwarding to ANM.

***Action Item***

* *The* ***Chairman of the IALA WG3/WG4 intersessional meeting*** *was asked to forward the liaison statement on changes to ITU-R M.1371-4 as Norrkoping Output 02 to e-Nav 12 for approval and then, through the electronic review process of IALA Council, as input to ITU WP5B (to be held Nov 2012).*
* *The* ***Chairman of the IALA WG3/WG4 intersessional meeting*** *was asked for forward the liaison statement regarding AIS AtoN codes in message 21 to e-Nav 12 for approval and then to the ANM Committee for response.*

2.4 VHF Data Exchange  
  
The WG reviewed input related to developments in the concept of the VHF data exchange (VDE) in light of the outcomes of the WRC-2012. The group reviewed Norkopping-input-05-e-Nav12-9-MDC and Norkopping-input-07-e-nav11-WG3/4-Plan for AIS and VDE. The group also took note of the results of WRC-2012 with regards to the allocation of frequencies for AIS and ‘VDE’ as well as the agenda item 1.16 to “*consider regulatory provisions and spectrum allocations to enable possible new AIS technology applications and possible new application to improve maritime radiocommunication in accordance with Resolution 360*”.

The group continued detailed analysis of the AIS and VDE process, and considered details of the frequency plan, modulation, ship and shore infrastructure.

A discussion document (Norrkoping WD 01 ) was developed to highlight the issues discussed, including:

* Rationale for the AIS and the VDE;
* Current situation;
* Information distribution (AIS 1 / AIS 2; additional AIS frequencies of 27B / 28B);
* The plan for ensuring protection of the VDL for AIS 1 / AIS 2 to respond to ‘core’ elements of AIS / moving ‘communications’ aspects to additional frequencies;
* Technical aspects of transmitting on the frequencies;
* Implications (operational; regulatory; technical) of the move to enhance ‘core’ use of AIS / communications aspects using AIS and AIS-like technologies;
* A tentative ‘road map’ / ‘timeline’ for the key elements that are required; and
* Other related elements identified in the discussions.

Noting the ongoing developments in this area, it was agreed that the document would, in the first instance, form a basis for an IALA Bulletin article to notify members of the outcomes of the WRC 2012, spectrum allocation and possible implications for IALA members regarding AIS shore infrastructure.

A Rationale document (Norrköping WD 02) was developed in a parallel process, which will ultimately be merged with the main document. The technical document outlines the aspects of channel planning based on the outcomes of WRC 2012, including the contiguous frequency band channels of 24, 84, 25, 85, 26, 86, 27B, AIS1, 28B, AIS2. The technical document also includes a schedule for development of work that reflects time lines required for input into the ITU meeting schedule, leading to WRC 2015.

While the current draft discussion paper requires significant development, it was agreed that this document could form the basis for IALA guidance.

The WG agreed core principles regarding development of the VDE as work progresses:

* Use of frequencies / spectrum as identified at WRC 2012 is suitable and forms the basis for the work;
* The work schedule must meet the time frames for WRC 2015 and WRC 2018;
* As the work develops, there is a need to address capability of current equipment (backward compatibility / augmented capability) and identify a migration / transition process;

A working paper (Norrköping WD 03) was developed to keep track of decisions made, indicate implications for other bodies / related documents, and any actions taken.

***Action items***

* *The* ***Chair of the IALA WG3/WG4 intersessional meeting*** *was asked to forward the discussion document on AIS / VDE developments (Norrköping WD 01) and the technical document (Norrkoping WD 02) for further work at e-Nav 12.*
* *The* ***Chair of the IALA WG3/WG4 intersessional meeting*** *was asked to forward record of decisions (Norrkoping WD 03) to future meetings.*

2.5 MRCP  
  
The whole document was reviewed and the main text was taken first. Working through there was found no serious discrepancies with the text compared with current thinking within the group. The main changes were:

* The glossary was updated and confirmed previous amendments.
* References to AIS2 were replaced, where appropriate, with VDE
* Clarification was sought regarding Loran C and the text was updated. Also regarding the correct operation of Radar SART and RACON with new technology, digital radar. These devices are not correctly triggered by the new radars due to power level and signal transmission.
* Para 3.3.3.4.1 Primary purpose of Automatic Identification System was updated to reflect the current definitions rather than the older text which indicated that the prime purpose was collision avoidance.
* MOB devices description was modified to say that these AIS devices must be regarded as location aids in emergency situations and not as distress alert systems. The clarification issued by NAV58 regarding MOB as diver devices was also inserted into the text.
* Outcome from WRC-12 were noted within the document and statements updated as required. Also tables regarding frequency usage were updated as well. It was especially noted that VHF channels 75 and 76 were approved for use as AIS 3 & 4 for message 27 earth to space ( SAT AIS)
* Consideration was given to existing text regarding the modernisation of the GMDSS and the part that IALA and e-NAV Committee can play in the process. Modification was made to clarify and make our position clearer.

Annexes and tables were also updated and particular attention was paid to Annex 5 AIS and VHF data communication.

The layout and numbering of paragraphs was tidied up and a “clean” copy provided for publication

***Action items:***

* *The C****hair of WG 3/WG4 intersessional meeting*** *is asked to forward the document Norrköping Output 04 to the secretariat as an input for e-NAV 12.*

## 2.6 Harmonised implementation of AIS ASM No progress was made on this issue.

**3. Presentations**

No presentations were made.

**4. Next Meeting**

The next meeting will take place during e-NAV 12 in St Germain en Laye, September 24-28, 2012.

1. **The Final Plenary**

This report was considered, amended and accepted as representing the actual progress made and the results of the meeting in Norrköping.

The chair thanked The Swedish Transport Agency for hosting the meeting. The chair also thanked all participants for their attendance, hard work and contributions to the discussions and wished everybody a safe journey home.

**Rolf Zetterberg**

Chair AIS Technical Working Group (WG3) of IALA e-NAV Committee**.**

**Annex A:**

**Participants.**

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| **Name** | **Organization** | **Country** |
| Arroyo, Jorge  Vice chair WG 3 | USCG | USA |
| Bober, Stefan | Federal Waterways and Shipping Adm | Germany |
| Blackhurst, Peter Vice chair WG 4 | Inmarsat | UK |
| Card, Michael | Zeni Lite Buoy Co Ltd | Japan |
| Carson-Jackson, Jillian | AMSA | Australia |
| Coutu, Jean Francois | CCG | Canada |
| Hagan, James | AMS | Australia |
| Haugen, Tony | Kongsberg Seatex | Norway |
| Heideki, Noguchi | JCG | Japan |
| Heikonen, Kaisu | FTA | Finland |
| Kempe, Philip | STA | Sweden |
| Lindborg, Johan | SAAB | Sweden |
| Magnus Nyberg | Pharos Marine Automatic Power | Sweden |
| Mikael Pettersson | SAAB | Sweden |
| Miyadera Yoshio | Japan Radio Company | Japan |
| Norsworthy, Ross | USCG | USA |
| Rissone, Christian | ANFR | ITU |
| Schultz, Johnny | L3 Comunications | USA |
| Smith, Paul | USCG | USA |
| Tetreault, Brian | US Army Corps of Engineers | USA |
| Valette, Jean Jaques | CLS | France |
| Zetterberg, Rolf Chair WG 3 | SMA | Sweden |
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**Appologies**

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| **Name** | **Organization** | **Country** |
|  |  |  |
| Borgehese, Francesco | Elman | Italy |
| Browning, Peggy | exactEarth | USA |
| Dominguez, Alfredo | Tideland | USA |
| Fabritius, Gaetan | CLS | France |
| Furyama, Kenji | JRC | Japan |
| van Gils, Jeffrey | Rijkswaterstaat Centre for Data and IT | Netherlands |
| Gouchoux, Yann | CETMEF | France |
| Jensen, Jens Kristian | Danish Maritime Administration | Denmark |
| Jones, Stephen | AMS | Australia |
| Kautz, Bill | USCG | USA |
| Martin, David | exactEarth | Canada |
| Takamasa, Yauchi | OKI | Japan |
| Oltman, Jan Hendrik | Federal Waterways and Shipping Adm | Germany |
| Siht, Alar | EMA | Estonia |
| Vollero, Antonio | Comando Generale del Corpo delle Capitanierie di Porto | Italy |
| Wotton, Richard | MCA | UK |

**Annex B.**

**Input Documents**

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| **INPUT DOCUMENTS** | **Title** |
| 01 | Draft agenda |
| 02B | List of documents Rev 1 (this list) |
| 03 | General comment on 1371 |
| 04 | Proposed changes 1371 |
| 05 | e-NAV12-9-MDC |
| 06 | e-NAV11-WG3 –WD1 working towards draft rev 1371-2 V28-03-2012. |
| 06B | e-NAV11-WG3 –WD1 working towards draft rev 1371-2 rev by Kenji |
| 07 | e-NAV11-WG3/4 - Plan for AIS and VDE |
| 08 | e-NAV11-WG4 WD1 working toward draft rev MRCP |
| 09 | e-NAV11-WG4 WD2 Guideline on Polar Communications |
| 10 | A 124 review June 2012 |
| 11 | LS to IMO and IALA on WRC15 |
| 12 | LS to IMO on revision of ITU-R M.1371-4 |
| 13 | WG15\_MTG8\_O\_002 liaison to ITU\_r WP5B on ID for AIS repeater |
| 14 | Editorial changes to ITU-R M.1371-4 |
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**Output documents**

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| **Output Document** | **Title** |
| 01 | Report of the intersessional WG 3 + WG 4 meeting |
| 02 | Liaison to ITU WP5B on draft revision of 1371-4 |
| 03 | Liaison to ANM on AIS Msg 21 AtoN |
| 04 | IALA MRCP Ed 2 |
| 05 | Plan for finalizing Rec A124 |
| 06 | Rec A124 Appendicies 9-10-11 |
| 07 | Rec A124 Appendix 12 |
| 08 | Updated Rec A 124 Main document |
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**Working Documents** (for next WG meeting)

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| **Working Document** | **Title** |
| 01 | AIS/VDE Discussion paper |
| 02 | AIS/VDE Rationale paper |
| 03 | AIS/VDE Record of WG progress |
| 04 | IALA MRCP Ed 2 with track changes |
| 05 | Draft Rec A 124 Appendix 3 |
| 06 | Draft Rec A 124 Appendix 0 |