**Report of intersessional meeting (St Germain SEPT 14) of the COMMUNICATION WORKING GROUP of the IALA ENAV Committée**,  
Intersessional meeting held September 1 – September 5, 2014, at IALA HQ,   
Saint Germain en Laye

1. **Introduction**

The Communications Working Group (WG 2) of the IALA ENAV Committee held an intersessional meeting at the IALA HQ, Saint Germain en Laye, France. The meeting was chaired by Bill Kautz, Chair WG2.

The main objective of the meeting was to further develop the Working Document Toward a Preliminary Draft New Recommendation (PDNR) ITU-R M.[VDES] for the ENAV Committee approval and submission to the October meeting of ITU-R WP5B. The PDNR is intended to support the IALA VDES channel plan and additional channels for AIS technologies at WRC-15.

The WG Chair discussed the difficulties with receiving late input documents and would consider the very late documents as time was available. Otherwise, the documents would be sent to ENAV-15. Input documents 05, 07 and 10 would likely be forwarded to ENAV-15 for detailed discussion due to the limited time available and need to progress the PDNR.

The WG2 Chair explained the unique situation of having a second intersessional meeting at IALA HQ between two ENAV Committee work programs. He also explained the change of the name and number of the WG, which is now Communications WG2. In addition, there may be adjustments required to output and working documents from the APR 14 intersessional meeting. The WG2 Chair will forward all output and working documents from both the APR 2014 and Sept 2014 intersessional meetings to ENAV-15.

**2. Progress Made**

2.1 Presentations and reports

### 2.1.1 ITU-R Working Party 5B/CPM

### Christian Rissone reported from the ITU-R WP5B on the status of the CPM text and the situation for the CPM meeting. He provided a detailed explanation of input document 08 “ITU CPM Text AI 1.16 (VDES)” and explained there is generally good support in ITU-R WP5B for an allocation of additional frequencies for AIS technologies and most administrations support the IALA channel plan (channel plan A) for VDES; however, there are other channel plans in the draft CPM text that will be considered at the CPM meeting.

**2.1.2 Draft Working Document Toward a Preliminary Draft New Recommendation (PDNR) ITU-R M. [VDES]**

Ross Norsworthy, USCG, RTCM, provided a very detailed presentation on input document 03 on the proposed draft to update the Working Document Toward a Preliminary Draft New Recommendation (PDNR) ITU-R M. [VDES]. The group had extensive discussions on the proposal and the need for alternative methods. The group decided to focus the work of the intersessional to further the development of the draft PDNR and to integrate alternative methods in the draft Recommendation keeping options open.

Jean-Jacques Valette, CLS, provided a presentation on input document 12 to introduce CLS advice and considerations on technical solutions with regards to input document 03 “Working Document Toward a Preliminary Draft New Recommendation ITU-R M. [VDES]”. He explained and identified some concerns with the approach and technical details in the proposal. The group considered the comments by CLS during the technical discussions and updating of the draft PDNR.

## 2.1.3 Design Considerations for VDES

Paul Smith, USCG, FRS, provided a brief introduction on input document 05 regarding a USCG input on the possible use of ASM channels during the transition period. He expressed the need for a transition to use the ASM channels as a first step to the full VDES. The group decided to defer the detailed discussion to ENAV-15 and send an updated working document as an input to ENAV-15.

*The* ***Chair of the IALA WG2 intersessional meeting*** *was asked to forward the document Saint Germain SEPT 14 Working Document 04 “ASM channel use during the transition to VDES” to ENAV-15 for further consideration.*

Nader Alagha, ESA, introduced a new document – input document 13 “VDES Requirements” which is a reformatting of the St Germain APR 2014 - WD02 on “Design Considerations for VDES”. The group decided to replace the existing WD02 with the reformatted version provided by ESA. The group briefly reviewed the document and made minor edits. The group also discussed the need for system requirements to provide designers and manufacturers with specific details on VDES.

*The* ***Chair of the IALA WG2 intersessional meeting*** *was asked to forward the document Saint Germain SEPT 14 Working Document 02 “Design Considerations for VDES” to ENAV-15 for further consideration.*

**2.1.4 DLR-IKN Position on VDES**

Gianluigi Liva, DLR, provided a presentation of input document 11 regarding the DLR-IKN Position on VDES. He explained the Satellite Link Air Interface and other considerations that may be applicable to Terrestrial Links, and that at the current state, there is much room for working out a highly robust combined VDE-SAT/TER standard and encouraged the group to consider existing standards when developing the VDES Recommendation. In addition, he advised that additional time is required to adapt existing standards to the VDE requirements and to prove the final system robustness; and the requirements should be clearly stated and collected in order to drive correct decisions on the waveform design.

**2.1.5 JRC Investigation of the Radio Propagation for VDES**

Yoshihiko Imada, JRC, presented input document 09, JRC’s investigation of the radio propagation for VDES. He explained the usage environment and problems experienced with maritime mobile data communication and JRC’s investigation of the propagation characteristics as one of the basic data of the system design. He further explained this investigation was to be confirmed by the propagation characteristics for the specified output power in the communication range. He explained performance is affected by signal level variation due to the surrounding environment during communications and the types of level variation including distance decay, shadowing, and Multipath fading. JRC provided the details of their study in Japan and the results are available in the document. JRC plans to study next the comparison of the measurement results and the general propagation model, construction of the propagation model from the measurement results, and the calculation of the reception characteristics by simulation. This document should be considered along with ITU-R WP5B-636/Annex 28.

**2.1.6 GLA-ITR VDES Study Proposal**

The WG Chair briefly introduced input document 11 from GLA regarding their plan for additional waveform studies. The group agreed the waveform study would be very useful for the ongoing VDES development and supports GLA’s continued study efforts.

**2.1.7 Innovative use of VDES**

The Vice Chair, Stefan Bober, briefly discussed input document 10 on the innovative use of VDES and explained that questions were raised regarding AIS and floating devices. The group decided to forward this as a working document for detailed discussion at ENAV-15.

*The* ***Chair of the IALA WG2 intersessional meeting*** *was asked to forward the document Saint Germain SEPT 14 Working Document 06 “Innovative use of VDES” to ENAV-15 for further consideration.*

**2.1.7 EfficienSea 2 Project**

Peter Anderson, Cobham SATCOM, provided a short presentation on the plan for the proposed EfficienSea 2 project.

**2.1.8 Draft Corrigendum to ITU-R M.1371-5**

Input document 07 from the United States was considered. The group agreed with the contents of the document and agreed to support. The group agreed to recommend that the US input this document to ITU-R WP5B.

## 2.2 Technical discussions

Christian Rissone explained the work ahead in ITU regarding the Working Document Toward a Preliminary Draft New Recommendation (PDNR) ITU-R M.[VDES] and pointed out that a completely new document to replace the existing PDNR in ITU would be preferred; and input from IALA members regarding the IALA technical details of the PDNR, would facilitate the decision process. He also explained that progress on the draft Recommendation on VDES was necessary to justify the IALA channel plan and need for the additional frequencies at WRC-15. He also discussed the importance of sending this immediately to WP5B for the October 27, 2014 meeting due to the limited time to progress and approve the Recommendation in ITU-R WP5B. ITU requires two meetings to approve the document.

The group considered input document 04 from the Canadian CG which is a study regarding options and impacts for VDE and AIS systems. The group appreciated the input from the Canadian CG and agreed the information was very useful to the VDES work and would consider the information in the discussions on the PNDR ITU-R M.[VDES]. The group also decided the document should be retained for reference for ongoing and future discussions on VDES.

*The* ***Chair of the IALA WG2 intersessional meeting*** *was asked to forward the document Saint Germain SEPT 14 Working Document ….to ENAV-15 for further consideration.*

The group considered the various inputs from the satellite experts as well as the desire to include alternate methods for the VDES. The co-existence of the terrestrial and the satellite components of VDES was discussed and the merits and trade-offs of time division, frequency division, and frequency re-use were considered. It was concluded that it is necessary to provide the available information and further develop the PDNR for a final submission to the May 2015 ITU-R WP5B meeting. The group agreed it is necessary to provide an input to the October 2014 WP5B meeting to allow sufficient time in ITU to develop and approve the PDNR before WRC-15. The group worked expeditiously to finalize output document 03 for submission to the ENAV Committee.

*The* ***Chair of the IALA WG2 intersessional meeting*** *was asked to forward the document Saint Germain SEPT 14 Output Document 03 “Working Document toward a Draft PDNR” to ENAV-15 for further consideration.*

2.3 Draft liaison statement to ITU-R WP5B

The WG was informed of a possibility to send a Liaison statement to the next ITU-R WP5B meeting (October 27, 2014) via an unconventional procedure. The SG Gary Prosser, DSG Michael Card, and the Chair of the ENAV Committee Omar Frits Eriksson, have agreed to seek approval of an input to ITU-R WP5B, from the ENAV Committee on the first day of the ENAV meeting (OCT 13, 2014). If approved the document will be sent to Council for approval by email correspondence (deadline OCT 17, 2014) and if approved by Council, to ITU-R WP5B (deadline OCT 20, 2014). The importance of bringing the IALA opinion to ITU-R WP5B is the motivation for the use of this procedure.

A draft Liaison Statement to ITU-R WP5B was developed to send the draft IALA Working Document Toward a Preliminary Draft New Recommendation for VDES.

*The* ***Chair of the IALA WG2 intersessional meeting*** *was asked to forward the document Saint Germain SEPT 14 Output Document 02 “Liaison Statement to ITU-R WP5B” including Output Document 03 “Working Document Towards A Preliminary Draft New Recommendation” to the ENAV Committee for approval and submission to the October 27, 2014, ITU-R WP5B meeting.*

**The Final Plenary**

This report was considered, amended and accepted, as representing the actual progress made and the results of the meeting at the IALA HQ in Saint Germain en Laye.

The chair thanked IALA 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.

**Bill Kautz**

Chair Communications Working Group (WG2) of IALA e-NAV Committee**.**

**Annex A:**

**Participants.**

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| --- | --- | --- | --- |
|  | **Name** | **Org** | **Country** |
| 1 | Omar Frits Eriksson | Söfartsstyrelsen, DK | Denmark/ Chair ENAV |
| 2 | Hideki Noguchi | JCG | Japan/ENAV Vice Chair |
| 3 | Bill Kautz | USCG | USA/Chair WG2 |
| 4 | Antti Kukkonen | Furuno Finland OY | Finland |
| 5 | Christian Rissone | ITU | France/ITU |
| 6 | Jean Jacques, Valette | CLS | France |
| 7 | Michel Imart | CEREMA | France |
| 8 | Hiroyasu Nakagawa | Furuno | Japan |
| 9 | Stefan Pielmeier | Cobham SATCOM | Denmark/CIRM |
| 10 | Jeffrey van Gils | Rijkswaterstaat, NL | Netherlands |
| 11 | Ross Norsworthy | RTCM, USCG | USA |
| 12 | Peggy Browning | Exactearth | USA |
| 13 | Peter Andersen | Cobham SATCOM | Denmark/CIRM |
| 14 | Yoshio Miyadera | JRC | Japan |
| 15 | Johan Lindborg | SAAB Transpondertech | Sweden |
| 16 | Yann Guichoux | CEREMA | France |
| 17 | Kaisu Heikonen | FTA | Finland |
| 18 | Per Berntsen | Konsberg Seatex | Norway |
| 19 | Nader Alagha | ESA | Netherlands |
| 20 | Pierre Debusschere | CLS | France |
| 21 | Paul Smith | FRS, USCG | USA |
| 22 | Johnny Schultz | L3 | USA |
| 23 | Erik Bliksrud | Konsberg Seatex | Norway |
| 24 | Takuo Kashiwa | Furuno | Japan |
| 25 | Ghislain Ruy | ESA/LUXSPACE | Luxemburg |
| 26 | Gianluigi Liva | DLR | Germany |
| 27 | Takeo Kashiwa | Furuno Electric | Japan |
| 28 | Yoshihiko Imada | JRC | Japan |
| 29 | Taiji Tsuchiya | MIC/JCG | Japan |
| 30 | Atsushi Karaki | IHI/JRC | Japan |
| 31 | Stefan Bober | WSV-FVT | Germany |
| 32 | Jillian Carson-Jackson | AMSA | Australia |

**Appologies**

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| --- | --- | --- |
| **Name** | **Organization** | **Country** |
| Arroyo, Jorge | USCG | USA |
| Takamasa Yauchi | OKI Consulting Solutions | Japan |
| Bill Cairns | American Pilots | USA |
| David Haley | ITR | Australia |
| Jan Safar | GLA | UK |
| Tremlett, Robert | Maritime Consultant | UK |
| Wotton, Richard | MCGA | UK |
| Tony Haugan | Konsberg | Norway |
| Jens Jensen | Söfartsstyrelsen, DK | Denmark |
| Haruko Takeshita | MIC/JCG | Japan |
| Nick Ward | GLA | UK |

**Annex B.**

**Input Documents**

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| **INPUT DOCUMENTS** |  |
| 01 | Draft Agenda |
| 02 | List of documents (this list) |
| 03 | Input on a Preliminary Draft New Recommendation ITU-R M.[VDES] (Teleconference) |
| 04 | Options and impacts for VDE and AIS systems (Canadian CG) |
| 05 | Design Considerations for VDES: Use of ASM channels during the transition period. (USCG) |
| 06 | List of participants |
| 07 | ITU-R M1371-5 Draft Corrigendum |
| 08 | ITU CPM Text AI 1.16 (VDES) |
| 09 | Investigation of the radio propagation for VDES (JRC) |
| 10 | Innovative use of VDES (e-NAV14-17.2.3.1) |
| 11 | GLA-ITR VDES Study Proposal |
| 12 | DLR-IKN Position on VDES |
| 13 | Design Considerations for VDES (ESA) |
| 14 | VDES REC ITU-M Considerations on Technical Solutions by CLS |

**Output documents -** All output documents will be input documents to ENAV-15

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| 01 | Report of the WG2 meeting |
| 02 | Draft Liaison Statement to ITU-R WP5B |
| 03 | PDNR ITU-R M.[VDES] |

**Working Documents** (for next WG meeting) – All working documents will be input to ENAV-15

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| **Working Document** | **Title** |
| 01 | Demonstration Objectives for VDES - updated |
| 02 | Design considerations on VDES – updated ESA |
| 03 | Test Beds |
| 04 | ASM channel use during the transition to VDES |
| 05 | Innovative use of VDES (e-NAV14-17.2.3.1) |