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| From: ENG Committee | ENG16-12.3.6 |
| To: ENAV Committee | 19th October 2022 |

LIAISON NOTE

New Technology Review

# INTRODUCTION

The ENAV Committee has been reviewing new technologies that may be suitable for use within the IALA domain and sought feedback from the other Committees to the summary table and any new technologies that should be considered.

# DISCUSSION

The ENG Committee welcomed the opportunity to comment on this work, recognising the need to review new and emerging technologies as systems evolve.

The ENG Committee would like to support the work of the ENAV Committee in this area when related technologies are considered, for example members of the Radionavigation Services working group would be interested to support the review of any PNT related technologies. Such support would help both Committees to learn and prevent duplication of effort.

The ENG Committee suggests the development of a plan to manage the reviews, recognising that the amount of information will increase over time and that it would be useful to know when such reviews have taken place and when the reports are available. Reviews will age and may require management over time in order to keep the list current and useful. The Committee also felt it may be useful to include categories of the review topics, perhaps exploring whether they are associated with communications or PNT etc. and then a sub-level of which aspect of that area.

The ENG Committee invites the ENAV Committee to consider whether a suitable caveat, perhaps provided by IALA’s Legal Advisory Panel (LAP), is required to ensure readers do not take the outcome as official IALA endorsement of any specific product or service. The ENG Committee felt that while IALA can review and comment on the appropriateness of systems it is aware of, it is not in a position to recommend as other products may be available that may be more appropriate to the member’s needs.

The ENG Committee noted the status of the table and the competed reviews on the fileshare. On reviewing the table, the Committee captured a number of comments that are shown in the Annex. These comments include some potential new review topics.

# ACTION REQUESTED

The IALA ENAV Committee is invited to note the comments provided and to liaise with the ENG Committee as appropriate when conducting reviews.

# ANNEXES

1. Commented version of the New Technology Summary Table
2. New Candidate Technology Tracker

| **No.** | **Candidate Technology** | **Action / Outcome** | **ENAV Start Session** | **ENAV**  **Planned End Session** | **Revised End Session** | **Progress Indicator** | | | **Status Overview** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Green** | **Amber** | **Red** |
|  | **WG3 Emerging Technologies** |  |  |  |  |  |  |  |  |
|  | 3GPP – 4G (including LTE) | Green | 22 | 24 | 24 |  |  |  | Completed / forward to WG3 |
|  | LoRa (Lorawan) | Green (some amber) | 25 | 26 | 27 |  |  |  | Completed |
|  | Digital VHF - dPMR | On hold | 24 | 25 | --- |  |  |  | Confirming status of digital VHF Voice |
|  | Leo Constellation Developments – initial review indicated not suitable for full template review | On hold | 25 | --- | --- |  |  |  | On hold |
|  | NAVDAT – development in progress, updates provided to IMO - deemed not suitable for full template review. May be reviewed if further input is received. | On hold | 25 | --- | --- |  |  |  | On hold |
|  | LiFi (Light Fidelity) – no input or expertise received. May be reviewed if input is received. | On hold | 25 | --- | --- |  |  |  | On hold |
|  | Resilience in PNT: GPS/GNSS (presented by Orolia, technology called M SecureSync) | Amber (some green) | 28 | 29 | 29 |  |  |  | Completed |
|  | Resilience in PNT: GPS/GNSS (presented by Orolia, GNSS antenna systems) | Green | 28 | 29 | 29 |  |  |  | Completed |
|  | 5G Precise Positioning (presented by Qualcomm) | In Progress | 28 | 31 |  |  |  |  | Commenced |
|  | AI detection of ships in ports / Synthetic images (Presented by SeerBI) | Deciding next steps | 30 | TBC |  |  |  |  | To be decided |
|  | IMT 2020 on buoys (Presented by Jet Engineering) | Deciding next steps | 30 | TBC |  |  |  |  | To be decided |
|  | Metal Surface Wave communication (Presented by KRISO/ SWT, technology called MS@MS) | Submitted  To be reviewed | 30 | 32 |  |  |  |  | Commenced |
|  | Ships Air draft remote measurement (Presented by China MSA) | Submitted  To be reviewed | 30 | 32 |  |  |  |  | Commenced |
|  | SigFox (Irish Lights) | Proposed |  |  |  |  |  |  |  |

Next steps:

1. MSM Communication (item 12) to complete evaluation for ENAV31
2. Ship air draft (Item 13) to complete evaluation for ENAV31
3. Irish Lights (Ronan Boyle) to complete SigFox evaluation for ENAV 31 (New item)