**NOTE on iala next steps regarding 3GPP**

Date: 13/08/2020 - 12.00 to 13.00 CEST

Attendees: Hideki Noguchi, Jorge Arroyo, Jillian Carson, Ernest Batty, Minsu Jeon, Jaime Alvarez

1. **OPENING**

Jillian opened the meeting and noted the work done in WG2 regarding the preparation of a draft Recommendation and Guideline that covers the use of 3GPP technologies. As highlighted during the meeting, 3GPP technology continues to develop rapidly, and many IALA members and others in the maritime domain are already implementing and / or testing, different applications using 3GPP technologies such as LTE, 4G and 5G.

As per the IALA workplan, the task of WG2 is to review and assess emerging technologies including test beds and implementations. Noting the maturity of the reviews carried out at past ENAV Committee meetings, there is a desire to review the expectations of the WG and determine the best way forward for IALA with not only the 3GPP technology reviews, but the reviews of other technologies that have established standard(s).

Initially, it was indicated that once WG2 had completed their reviews, for those technologies that were deemed appropriate for use by IALA members, WG3 would do a technical review at the implementation and standardisation of technology level. Noting many of the technologies have existing, mature, standard sets and implementation plans and the fact that WG3 is fully occupied with work elements from the ITU WRC19, there was discussion on if the additional step of review by WG3 is required.

In summary, following discussion, the meeting agreed a the process on the way forward for the outcomes of the technology reviews carried out by WG2 (notably with the 3GPP outcomes) considering the WG3 workload due to VDES, AIS and related development.

Agenda

1 – Summary of work to date (Ernest Batty)

2 – 3GPP development (documents) (Jillian to outline / all)

3 – WG2 technology reviews (all)

4 – Next steps / actions (all)

1. **Main outcomes of the meeting**

The following bullets summarise the views of attendees:

**1 – Summary of work to date (Ernest Batty)**

* ENAV WG2 looking at 3GPP technologies and the inputs documents from South Korea dealing with LTE-M (LTE in Maritime) to carry out a technology review by WG2
* ENAV22 China made a presentation in eNavigation showing the integration of 3GPP (LTE) technology
* ENAV22 John M Meredith (3GPP Specifications Manager) and Hyounhee Koo gave an introduction to explain what and who 3GPP is. Test beds and trials have been presented to the WG2.
* During WG3 Intersessional in Sydney, there was a request to update a liaison statement for 3GPP and submitted the IMO
* ENAV25 (cancelled) working on producing the Draft Rec. and Draft G. on 3GPP inside IALA environment and being and Input paper for ENAV26. Further discussions with Phillip Lane 3GPP lead in CIRM. CIRM has included 3GPP as part of the strategic plan, Phillip Lane is also the CIRM representative at IALA ENAV Committee.
* Hideki questioned about the possibility for 3GPP to present the status of the project with the latest releases in IMO. Minsu pointed out that 3GPP would like to influence in IMO through IALA.
* Jillian highlighted that 3GPP technologies are being used. This includes the work in South Korea is putting more stations based on this technology <https://www.mof.go.kr/eng/article/view.do?articleKey=28224&boardKey=41&menuKey=485> (‘MOF will complete deploying the necessary infrastructures… including 620 shore base stations of LTE-Maritime Communications network and its operation centers by December [2019] . It is a technology that is going ahead.

**2 – 3GPP development (documents) (Jillian to outline / all)**

* Following the discussions and the mindmap of 3GPP developments, the draft Rec. and G. have been developed as Input papers for review process in the next ENAV26 and then, if agreed, as an Input Document for formal approval during the next Council. Noting that 3GPP progress is very fast based on a set implementation schedule, it is felt that this guidance is required as soon as possible. These documents inform what 3GPP is and how3GPP technologies (4G, 5G, LTE…) may assist the work of IALA members, the AtoN authorities.
* Minsu appreciated this work and highlighted the necessity to provide guidance in IALA related to these technologies and how they could fit into the IALA Standards and Recommendations as Narrow band systems.
* Minsu asked if 3GPP technologies are certified. Jillian confirmed that 3GPP are certified through a robust development process and standardisation. Ernest explained that 3GPP release cycle lasts typically one year. 3GPP has just completed release cycle sixteen and heading to release cycle seventeen. Release cycle fourteen and fifteen have been implemented worldwide. Ernest also noted that WG2 is producing documents about 3GPP technologies at a high level and not going into the detail technical specifications. By the time of a Rec. or G will be published some of the next 3GPP releases could have been approved and superseded by the next release cycle.
* Minsu suggested to better use Narrow bandwidth systems or Public Telephony communications instead of 3GPP in the title. Jillian agreed on that what maintaining the reference to 3GPP in the body or the document.
* Jillian asked for comments before August 28, deadline for submitting Inputs for ENAV26;
* Hideki also agreed on using more generic wording for the title. Hideki recommended to build a task group with other ENAV WG members and complete this task in ENAV26 to send to the Council. The document will broaden up to the scope for future releases of 3GPP but it is possible to keep updates of the G and R according to future developments. Jorge also support the idea to have a title more understandable for the reader and avoid 3GPP in the title.
* Jorge made a reference to the Korean paper presented in IMO to the EG because noting it did not receive enthusiastic response. There were some concerns raised when referring to 3GPP and GMDSS. Jorge expressed that when presented with IALA guidance on 3GPP, the reader should know that this technology is under review by IMO for GMDSS and IALA guidance documents should be apart from GMDSS when speaking about 3GPP. Jillian ensured that there is no reference to GMDSS in the work produced.
* Jillian informed that one slot (1h30) will be dedicated to 3GPP and IoT on 7th October. The schedule for the discussion can be published and, if required, additional work can be carried out on the documents during the ENAV26 time-frame.
* Hideki proposed Jillian to submit an information paper to NCSR8 in 2021 due to the interest in IMO to get feedback from IALA on 3GPP improvements. Jillian is happy to produce such Liaison Note.

Action Item: WG2 to prepare a Liaison Note from IALA to IMO on the improvements in 3GPP and Liaison back to 3GPP.

Action Item: following input to be received from this group by 28 August, WG2 to forward a revised Rec and G on 3GPP to IALA Secretariat as Inputs for ENAV26.

3 – WG2 technology reviews (all)

* Jillian expressed the need to establish a process in the frame of IALA when there is an emerging technology suitable for the needs of the maritime community according to the WG2.
* 3GPP technologies have their own technical standards which are robustly developed in the frame of 3GPP.
* Hideki is of the view to produce Recommendations and Guidelines but finds difficult to develop technical standardisation in WG3 for such emerging technologies. The example of dPMR was highlighted due to the valuable contribution to the maritime domain and Jillian underscored the standardisation process which is currently under development. Therefore, if IALA does not need to develop standards for technologies where other organisations or agencies are already developing these for worldwide use of such technologies.
* Recommendation to document these emerging and interesting technologies. Jillian suggested to update the MRCP document with these findings., noting the deprecation of the MRCP to a recommendation and guideline is already a task item for ENAV, which WG2 will commence at ENAV26.
* Minsu noted that the IALA position document on the future of Aids to Navigation ( <https://www.iala-aism.org/content/uploads/2020/03/IALA-Position-Document-on-the-Development-of-Marine-AtoN-Services-2019.pdf>) could also be a solution for recording outcomes from WG2.
* Minsu noted the MRCP and IALA position paper being a good place to gather emerging technologies developments.

**Action Item:** Secretariat to send to WG2 the IALA Position Paper in MSWord format.

**Action Item:** WG2 to commence the deprecation of MRCP to Recommendation and Guidelines (as per Task 3.1.4 and review of the IALA Position paper on the development of Marine AtoN services, including the 3GPP environment.

* Jillian closed the point 3 of the agenda expressing the possible way forward of WG2 outcomes. It was agreed that the ‘next steps’ for the outcomes of the WG2 technology review may take the form of one of the following:
  + Abandoned because they are of no interest or not applicable to IALA
  + Investigated and documented for a potential use at some future time and included in the MRCP
  + Recommended for implementation in IALA with specific use cases

4 – Next steps / actions (all)

List of Actions:

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