e-NAV13 Information paper

Agenda item 8.2

Task Number 2

Author(s) AG & R-121 Inter-sessional Participants

**Report of Working Group 2 Intersessional to revise**

**Recommendation R-121, held in Helsinki**

**15th – 17th January 2013.**

# Summary

An inter-sessional meeting of e-Navigation Working Group 2 was held in Helsinki, Finland, on 15th – 17th January 2013. The meeting was kindly supported by Finnish Transport Agency. The objective of the meeting was to consider the revision of Recommendation R-121 “the Performance and Monitoring of DGNSS Services in the frequency band 283.5 – 325 kHz”.

This Recommendation was written in 2001 and last updated in 2004. Since that time technology has moved on and there are different methods, employed by service providers, which are not reflected within the Recommendation. As such, there is a need for a considerable overhaul of the Recommendation to ensure it continues to be used for marine beacon service provision.

# BACKGROUND

### **2.1.1 Opening, general information**

Ms Kaisu Heikonen welcomed the participants to the Finnish Transport Agency and the WG2 members introduced themselves. During the morning of the 15th, Ms Virpi Anttila, Director of Traffic Services Department within the Finnish Transport Agency provided a formal welcome to the Working Group.

**2.1.2 Input documents**

Prior to their arrival at the inter-sessional those members attending were invited to submit proposed text for consideration in the update. The draft text received has been included in an appendix at the end of the latest draft of R-121, which has been submitted to e-NAV13 for further consideration.

3 DISCUSSION

Several key questions were raised and discussed on the aims and objectives of R-121, which are important to capture. The key points were:

* R-121 is used as the de-facto standard for the provision of marine beacon DGPS and we should consider the needs of current users when updating the Recommendation.
* The intended users of R-121 were considered to be Service providers (coastal, inland and potential future), Equipment Manufacturers, marine DGNSS users in general and other e-Navigation WG/Committees when considering the development of the maritime service portfolio.
* R-135 considers future DGNSS services and it was questioned when the future becomes today, in terms of separating R-135 and R-121, and indeed whether the two should be combined. The WG members decided that R-121 and R-135 should remain separate documents, with R-121 providing guidance and recommending how systems should be established and operated, whilst R‑135 would remain to consider potential future enhancements and service methods. This conclusion was reached after some discussion, considering the user needs and intended audience of each Recommendation. It is recognised the IALA Guideline 1060 on Recapitalisation and R-135 will need further review following the update of R-121.
* The structure of the Recommendation would be modified, with a view of simplifying the document into service provision, operations and user aspects. Considering the generation of corrections and their subsequent transmission methods in separate parts, however the focus will remain on broadcasts within the defined LF/MF frequency band.
* In line with the demarcation of future and current service options, high accuracy transmissions using RTCM broadcast standard V3 will be considered in the update to R-135 rather than R-121.
* The use of SBAS as an alternative for correction information was considered a future item as this is not currently used, however it was agreed that the use of SBAS for integrity checking should be discussed as part of the update.
* The scheduling of this update compared to other influential documents was also considered. RTCM SC104 broadcast standard V2.X is due to be revised shortly to include generic broadcast messages, along with new Galileo messages. Ideally this revision of R-121 will reflect these changes, however this will require an update to ITU-R M.823 before R-121 can be finalised.

The inter-sessional worked through the Recommendation, chapter by chapter revising the text and structure, providing a first update to approximately half of the recommendation. Further work is needed and it is anticipated that this document will be considered at e-NAV13.

# 4 Output document

Output 1: R-121 - Latest draft following Helsinki-Jan 2013.doc

# Additional information

The Working Group would like to thank Kaisu Heikonen and the Finnish Transport Agency for hosting the meeting.

A visit to an ice breaker was arranged for the afternoon of the 16th, during which the ships officer explained the role of the ice breakers and how they use the Finnish DGPS reference stations and also reference stations from neighbouring countries to establish their position. While the crew corroborate their position by using different sources, including radar and visual aids, they consider the DGPS position accurate and reliable.

The meeting was closed midday on the 17th of January.

**ANNEX A:** **Participant List**

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| **Name** | **First Name** | **Company** |
| Backstedt | Jesper | Swedish Maritime Administration |
| Day | Colin | Commissioners of Irish Lights |
| Dziewicki | Marek | Maritime Office Gdynia, Poland |
| Grant | Alan | Research and Radionavigation |
| Heikonen | Kaisu | Finnish Transport Agency, Traffic Management |
| Hoppe | Michael | Traffic Technologies Centre  GERMAN FEDERAL WATERWAYS AND SHIPPING |
| Kleppe | Bjornar | Norwegian Coastal Administration |
| Noack | Thoralf | DLR |
| Jedrejcic | Goran | Trimble Germany GmbH |