Comments RFNAV JYC280323 UK V1

**DIGITAL VOICE**

1. Should there be a cost benefit analysis be performed covering the entire maritime community, i.e. VHF coast stations, commercial shipping, recreational boating, ports, harbours and marinas etc.?

Yes but will entirely depend on the decision to keep or not analog channels for GMDSS

1. Should all VHF analogue channels move over to digital or should for instance GMDSS channels to be kept analogue like Channel 16 and Channel 70 (DSC)?

If the commissioning of a future digital maritime VHF network does not occur before 2037 (WRC 35 + 2 years) it can be considered that the existing equipment, both on board ships and in coastal stations, will be depreciated and can therefore be replaced

It remains to be decided if channel 70 for the DSC will remain in analogue or will go digital with DCS signals compatible with MRCC software or not?

It will also be necessary to take into account all the AMRD type products based on the DSC.

1. Should there be an allocation of a separate channel for digital distress, safety and calling (or should Channel 16 or Channel 70 take on this role)?

Same answer as 1 and 2

1. How is the co-existence of digital and analogue channels managed?

The simplest solution would be to be able to keep the old analog VHF network and install the new digital one during the transition period.

1. Is it appropriate to use the techniques covered in this document or do more investigation about the relative merits of TDMA vs. FDMA (e.g. in terms of frequency spectrum efficiency)?

This techniques are already working well for land radio networks and can be transpose for maritime.

1. What will be the future relationship between digital voice and DSC (e.g. could the same technology be used for DSC)?

Either we agree to take advantage of the digital switchover to modernize the DSC system, which will involve replacing the DSC software of the MRCCs (and also revisons of all concern complex ITU Recommendations), or we are content to generate DSC signals full compatible with existing software

1. Could digitisation create an opportunity for extra services on VHF channels like SMS, position information with low overhead and EMC detection?

YES

1. What are the implications of the current channel raster? (ITU-R RR Appendix **18**)?

Appendix 18 will have to be modified taking into account the frequency steps used for the different services (DigitalVoice, AIS, VDES GMDSS CHANNEL, etc.) taking also into account the availability of frequencies in each region.

1. What will the eventually implementation plan will be? Should this plan clearly sets out how digitisation would be introduced and the impact of each stage on the maritime community?

This implementation will be simple if we are content to replace exclusively ship equipment for ship to ship communications with an impact on the purchase of new equipment

On the other hand, if the coastal stations must also switch to digital, the economic impact will be higher, although minimized by the depreciation of the stations in 2305 (see 1 and 2) but will take more time.

1. Will the existence of Patents and IPR present an impediment to migration from Analogue to Digital?

It is preferable to favor solutions without license or to use codecs whose purchase price includes the cost of licenses for any manufacturer.

The above questions became apparent during the preparation of this report and are just an indication.

Because of the importance of VHF radio for the maritime community more questions are due to arise by the different organisations involved.

It would be beneficial that all questions, information, results and reports of tests/pilots are shared among all organisations.