

## **Workshop to Discuss Aeronautical Spectrum Sharing with Audio Programme Making and Special Events in the 960 to 1164 MHz band**

Date: Thursday 8<sup>th</sup> June 2017

### Attendees:

Andy Wells, Policy Lead Spectrum and Radio Licensing, CAA

Stuart Rankin, Spectrum Engineering Specialist, CAA

Vaughan John, Principal Spectrum Policy Manager, Ofcom

Andrew Burrage, Senior Consultant, Helios Technology

██████████ Spectrum Manager, NATS

██████████ Future Airspace Strategy Visual Flight Rules Implementation Group (FASVIIG)  
Programme Coordinator

██████████ Future Airspace Strategy Industry Implementation Group (FASIIG)

██████████ Defence Airspace and Air Traffic Management, MoD

### Presentations

CAA – CAA aeronautical spectrum management and our contribution to wider Government spectrum initiatives

Ofcom – Background on spectrum sharing in the 960-1164MHz band and latest developments

Helios – PMSE Baseline Safety Case

### Main discussion points:

#### *Status of Sharing?*

It was highlighted that work on the technical considerations of spectrum sharing has been concluded, which has result in the band being available to PMSE for test and development purposes. Several PMSE operators have been testing equipment. The development of the safety assurance case is part of the implementation process as to how sharing can be achieved in a way that protects the safety of aeronautical services. This is reflected in the joint statement produced by the CAA and Ofcom.

#### *Aircraft navigation systems that can 'free scan' across the band and the future introduction of 'free' routing?*

Outside of the designated operational coverage means that there is no formal protection of the frequency. Therefore strictly speaking use of DME signals outside of their designated coverage suggests a safety of life service on an unprotected frequency. Discussions with OEMs suggests this is not standard practice and testing by the PMSE industry has not detected this. Protection requirements for DME are laid down by ICAO and the SMR's reflect this requirement.

#### *PMSE operation outside of licensed conditions*

The potential for 'rogue' operators to configure equipment outside of the license was discussed. It was confirmed that this would be a matter explored within the safety assurance case and that the idea of restricting devices through technical means to prevent interference to vulnerable services (that are not location specific) such as systems in 1030 and 1090MHz was being further explored. Ofcom explained the mechanisms of operation for PMSE operators and some of the mitigations that would be explored in the safety assurance case.

#### *Potential interference from aviation into PMSE*

The innovation of PMSE manufacturers were discussed along with their willingness to explore potential solutions such as one manufacturer who is developing equipment that avoids use of the DME spot frequencies and offsets operations to mitigate interference from aviation.

*Electronic Conspicuity developments*

A discussion was raised regarding the potential use of 978MHz for electronic conspicuity systems. However, given developments were reasonably immature it would be unlikely that the safety assurance case would include any specific aspects at this stage. It was confirmed that the safety assurance case would need to be revisited in the event that the RF environment changes.

Civil Aviation Authority  
14 June 2017