



Workshop on Safety Support Case for PMSE Spectrum Sharing with Aviation Systems

Andy Wells
3 September 2018

Agenda

- Introduction and purpose of the session
- CAA approach to the safety support case
- Overview of spectrum sharing of 960-1164 MHz band with Programme Making and Special Events
- Review of the safety support case
- The practical application of frequency planning for Programme Making and Special Events
- Q&A session to inform responses to the consultation
- Summary and close

Objectives and Timeline

- Background on PMSE and spectrum requirements.
 - Seek your views and questions on Ofcom safety support case for spectrum sharing arrangements.
 - Inform formal stakeholder response to the CAA consultation letter.
-
- Consultation letter issued 30 July by Mark Swan, Group Director, Safety and Airspace Regulation.
 - Stakeholder comments requested by 21 September.
 - CAA to consider comments and determine next steps.



CAA approach to the safety support case

Andy Wells
3 September 2018

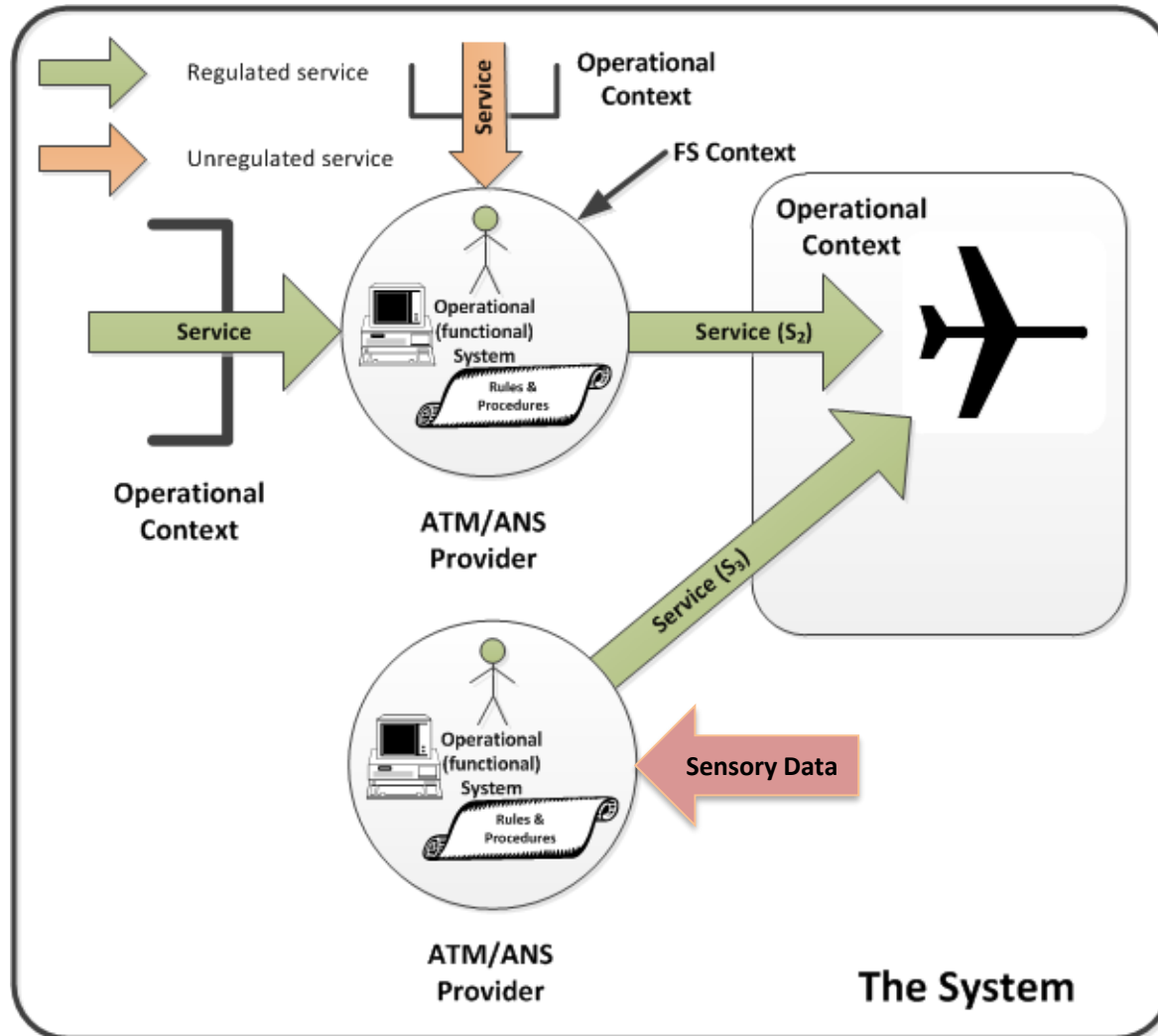
CAA Spectrum and Frequency Management

- To ensure provision of suitable spectrum to ensure safe and efficient use of the airspace.
- Ensure consistency with international obligations and standards to support safety and interoperability.
- Ensure efficient management and coordinated assignment of frequencies for aeronautical services at national and regional level.
- Promote spectrum efficiency.

Spectrum Sharing

- CAA position: Where evidence illustrates the potential of spectrum sharing with an acceptably low level of risk of interference to incumbent systems, the CAA is open to the prospect of radio spectrum sharing in a specific band.
- As the UK civil aviation regulator the CAA oversees aviation safety through performance-based regulation, based on an assessment of risk, to make sure regulation is proportionate and targeted.

ATM System Model



Service Assurance

- **Assure** – remove doubt about something – convince someone that something has happened/will happen - Tell someone something positively to dispel any doubts (OED).
- Assurance of the absence of harm
 - Safety – Security – Cultural/Sociological – Environmental
 - Usually the risk associated with some unwanted event.
- Assurance of service behaviour
 - “Can I use this service to do what I want”
 - Colloquially: “It does what it says on the can”
 - ATM IR: The service provider shall “*provide assurance, with sufficient confidence, ... that the service will behave and will continue to behave only as specified in the specified context.*”
 - Assurance that the service meets its specification i.e. the specification is a trustworthy representation of the behaviour of the service

View of Safety

- Air Traffic Service Providers:
 - see and communicate with Aircraft
 - understand the intent of traffic
 - provide separation
- They have a **view of safety** and can **intervene** if an unsafe situation develops
- The Air Traffic Service Provider:
 - is not the user of the service - the passenger is (or more directly – the aircraft is)
 - cannot ensure the safety of the passenger
 - but can assess the relative safety of the passenger
 - is therefore a passenger (user) representative that can assure the safety of the service

View of Safety

- Other ATM Service Providers:
 - cannot see and communicate with Aircraft
 - only have partial understanding of the intent of traffic and cannot directly affect the separation of aircraft
- They do not have a **view of safety** and cannot **intervene** when an unsafe situation develops
- They are responsible for the behaviour of their services (within the context they define)
- They are responsible for assuring the trustworthiness of the services they provide.
- **In General** (for all harms):
 - an organisation with a view of harm can provide an assurance case for the absence of harm
 - other organisations can only provide assurance of trustworthiness
 - the assurance may be generated by the service provider, service consumer or a third party

Service Assurance – ATM example

