



DIRECTORATE OF AIRSPACE POLICY



Aeronautical Uses of the Radio Spectrum and the Threat from Cabled Telecommunication Technologies.

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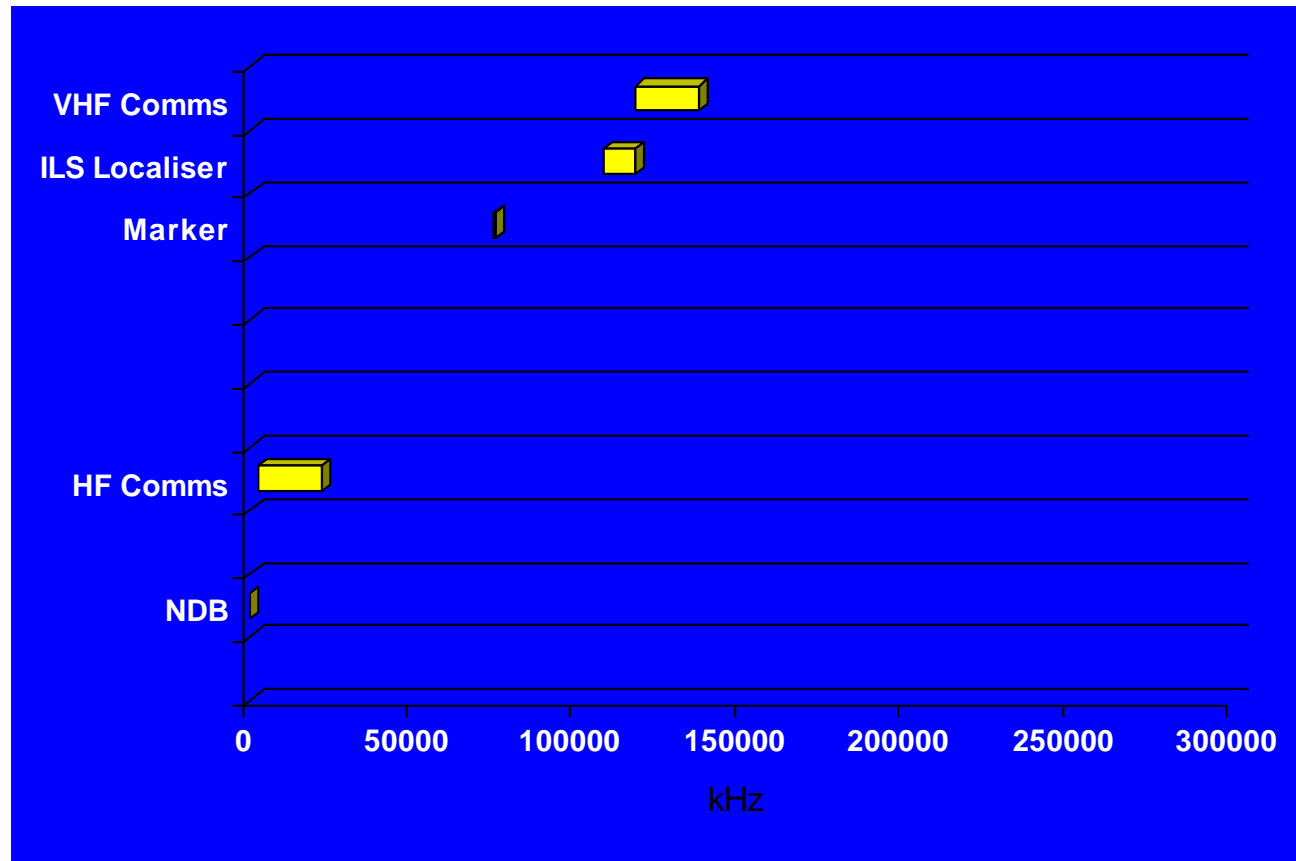
DAP Surveillance and Spectrum Management

Introduction.

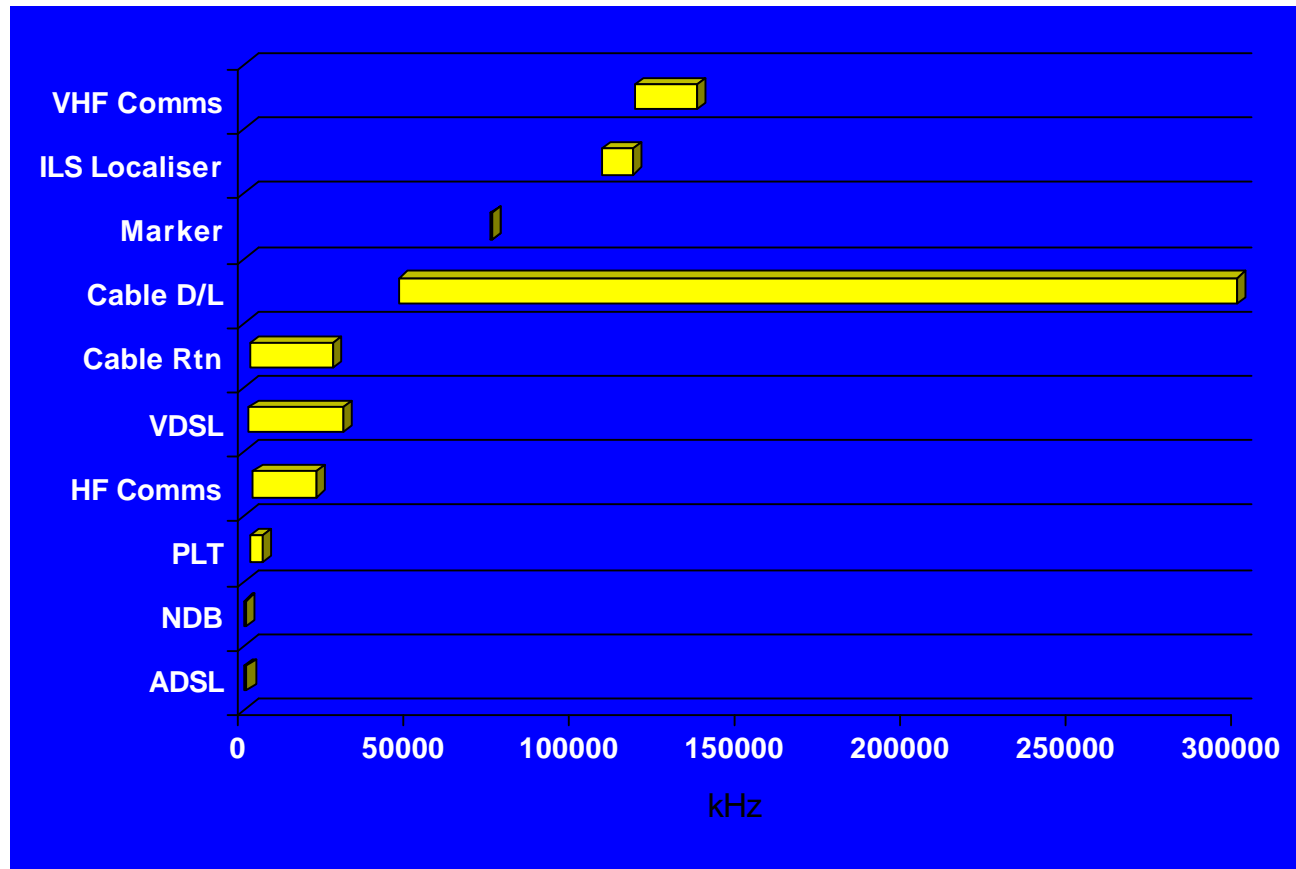


- **Aeronautical uses of spectrum up to 300MHz.**
- **Radio Regulations.**
- **CAA concerns.**
- **Protection criteria.**
- **Way forward.**
- **Conclusions.**

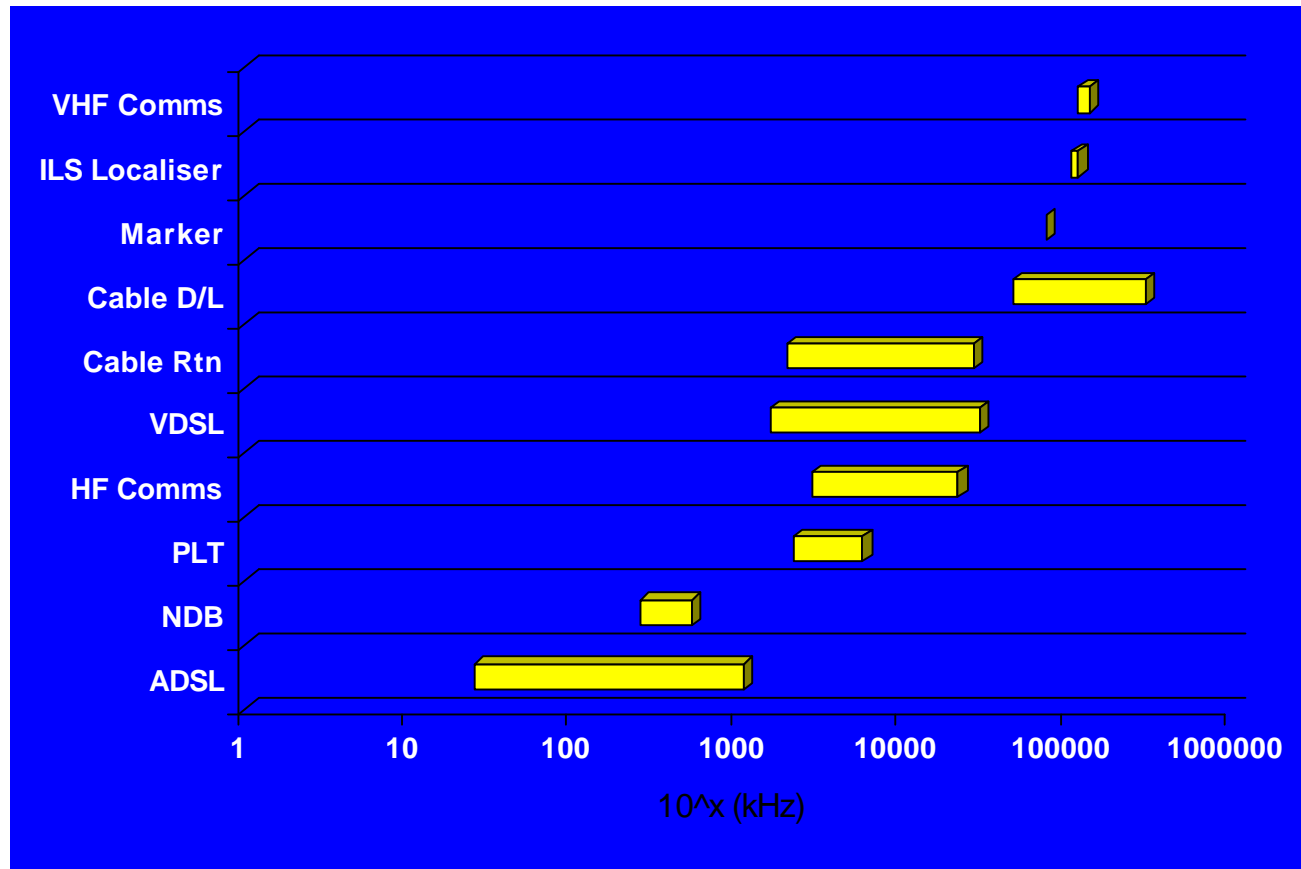
Aeronautical Use of the Spectrum up to 300MHz.



Combined Aeronautical and Cabled Telecommunications Use of the Spectrum up to 300 MHz.



Represented Logarithmically.



The ITU Radio Regulations (1).



S1.59 - Safety Service - Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property.

S4.10 - Member States recognise that the safety aspects of radionavigation and other safety services require special measures to ensure their freedom from harmful interference.

The ITU Radio Regulations (2).



S15.12 - Administrations shall take all practicable and necessary steps to ensure that the operation of electrical apparatus or installations of any kind, including power and telecommunication distribution networks, but excluding equipment used for industrial, scientific and medical applications, does not cause harmful interference to a radiocommunication service and, in particular, to a radionavigation or any other safety service operating in accordance with the provisions of these Regulations.

CAA Concerns.



- **Cumulative Effect**
 - of radiation.
 - of circumstances.
- **Lack of practical measurements (ADSL ® NDB).**
- **Technical agreement could not be reached.**
- **Political and commercial pressure.**
- **Confusion over standards.**

Protection Criteria.



- **Aeronautical frequency planning criteria is based upon same systems.**
- **ICAO Working Group F is currently working on producing general protection criteria for all aeronautical systems.**
- **Results expected shortly.**

Way Forward.



- **To address the CAA concerns:**
 - **cumulative effect studies continuing.**
 - **practical measurements of interference to ADF are planned.**
 - **need to consider measurement of interference in other aeronautical equipment.**
 - **develop or modify European standards to limit emissions to an acceptable level.**
- **Continued participation in National and International working groups.**

Conclusions.



- **Aeronautical services are under threat from cabled telecommunications services.**
- **The Radio Regulations outlaw such interference.**
- **Practical testing of aeronautical systems is required.**
- **Standards should provide adequate protection and be compliance driven.**



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