

ASRI

Aviation
Spectrum
Resources, Inc.

AFC Items for the ASRI Board of Directors

February 2014 – Charleston, SC

AFC Items for the BOD

The following items are considered to be important enough by the Aeronautical Frequency Committee (AFC) to be brought to the attention of the ASRI Board of Directors.

They are not listed by priority.

List of Items

- VDLM2 Equipage
- VDLM2 Channel Plan
- 8.33 KHz Equipment Upgrades
- AeroMACS
- ADS-B Status
- Iridium ADS-B Upgrade
- SELCAL Code Expansion
- Spectrum User Fees
- LightSquared Issues
- Aviation Spectrum Requirements Survey
- WRC-15 Agenda Items

VDLM2 Frequency Planning

ASRI has begun clearing capacity for a VDLM2 channel plan in the upper AOC frequency band. The project has 4 separate phases:

1. **Clear.** Consolidate capacity in lower AOC band
2. **Migrate voice.** Migrate affected voice users from upper to lower AOC band
3. **Migrate ACARS.** Migrate networks from upper to lower AOC band
4. **Assign.** Assign dedicated VDLM2 frequencies to ANSPs

ASRI is coordinating the work with ANSPs and the Data Comm contractor (Harris)

VDLM2 Equipage

ACARS and VDLM2 usage continues to grow, and concurrent operation of both systems is limiting AOC spectrum availability. Therefore it is important that the airlines establish a VDLM2 transition plan to upgrade their aircraft fleets.

Combined with VHF frequency congestion and FAA NextGen requirements, airlines operating VDLM2 will have greater flexibility and efficiency.

8.33 kHz Voice

Frequency congestion in high air traffic areas is limiting future assignment options for 25kHz channels. In the near future, it will become necessary to begin moving some VHF spectrum users to 8.33 kHz channels to ensure capacity are available.

ASRI is surveying the AFC membership in 2014 to determine 8.33k radio equipage rates and an expected implementation date for AOC use in the USA.

AeroMACS

The FAA have begun deploying fixed links in the AeroMACS allocation for ATS services on airports.

The AFC is gathering industry requirements for commercial AOC applications that will use the AeroMACS system. As this information will define the AFC's intent and potential regulatory actions, the AFC encourages all carriers to participate in the process.

ADS-B Status

The FAA is in the process of implementing the Next Generation (NextGen) of the Air Traffic Control system based on the use of Automatic Dependence Surveillance-Broadcast (ADS-B).

Users should begin planning on how and when they will equip their aircraft to benefit from this system.

The FAA has mandated that all aircraft should be equipped with ADS-B Out by 2020.

Iridium ADS-B Upgrade

Iridium Satellite, LLC and NAV Canada have formed a joint venture with support from Harris and ITT Exelis called AIREON to install ADS-B equipment on Iridium's next generation satellites. The system will be receive only, listening for existing ADS-B signals transmitted by an aircraft.

This service has FAA support and plans to begin service in 2017 when the satellites launch.

SELCAL Code Expansion

The limitation on available SELCAL codes is leading to regular occurrences of duplicate messages, with code reuse now averaging 1 code per 3 aircraft.

With demand increasing at 13% a year, ASRI is working with ICAO, ANSPs, avionics vendors and the FAA to raise the number of available codes to fulfill future demand. A solution has been agreed to increase the number of available tones to 32, while maintaining full compatibility with existing 12 and 16 tone systems without modification.

The AFC requests Airline AEEC representatives formally support the proposal to update the SELCAL standard at the AEEC General Session in April 2014.

Spectrum User Fees

The AFC continues to monitor the UK implementation of spectrum pricing for Aeronautical frequencies. The UK's "Administrative Incentive Pricing" (AIP) imposes fees on aeronautical VHF spectrum users based on coverage and channel bandwidth.

The UK implemented AIP on Apr 2012 for ACARS/VDLM2 and all VHF voice and information services, and is considering expansion to other aviation services.

The "Obama Jobs Bill" and PCAST report both propose spectrum pricing, but no formal action has initiated at this time.

LightSquared Issue

LightSquared has initiated legal action against the GPS Industry Council, slowing all work and potentially delaying any decision from the FCC on its revised network plan. The company is also in the bankruptcy court awaiting on a decision for Dish to buy its debt.

ASRI is awaiting for the results of both court proceedings to determine what the final outcome may be. ASRI will continue to work with similar interests to monitor the activity, reviewing any outcome for potential threats to commercial aviation operations.

Aviation Spectrum Requirements Survey

The AFC is continuing its work to identify future aviation spectrum requirements. Initial results have focused on VHF services, and all aviation users are encourage to support efforts to further develop the work in 2014.

WRC-15 Agenda Items

The AFC continues to monitor the following ITU-R agenda items for the potential effects to US aviation:

1.1 New mobile broadband allocations

1.5 Use of fixed satellite services use for UAS

1.7 AeroMACS interference to fixed satellite services

1.17 New Wireless Avionics System allocation

9.1.5 VSAT protection for African region ATM networks