AFC Radio Equipage Survey

AFC Fall 2014 Meeting

Introduction

- A 2008 SWG assigned a 100kHz sub band for 8.33kHz assignments
  - No assignments have been requested
- AFC approved VDLM2 channel plan has potential to interfere
  - Frequency roll-off from 136.650 assignment, and any future assignments below it
- AFC Meeting in Fall 2013 agreed to investigate 8.33k equipage to understand impact
  - Previous study carried out in 2008

The AFC 2014 AOC Equipage Survey

- Assess US aviation's current equipage for AOC radio capability
  - Individual survey to all North American based airlines
- Primary focus on VDLM2 and 8.33k radio equipage
  - Willing to incorporate additional questions from the AFC
  - Needs to maintain a manageable level
- Results will be anonymous
  - Identifying information will not be released outside of ASRI

Survey Questions (1-4)

1. Please confirm your aircraft fleet size?
2. How many aircraft in your fleet are capable of supporting 8.33 kHz voice?
3. What number of aircraft in your fleet are capable of supporting VHF Digital Link Mode 2 (VDLM2) data link?
   - Of those aircraft, how many are VDLM2 multi-frequency capable?
4. How many aircraft in your fleet are capable of wireless LAN (i.e. GateLink) or cell connectivity for transferring operational data at airports?
   - Do these capabilities meet all of your requirements? If not, what additional capabilities would you like to have?

Survey Questions (5-10)

5. What aircraft SATCOM capabilities do you use in your fleet for operational communications, and how many aircraft support this functionality?
6. Please provide your airline's plans for acquiring new aircraft over the next 5 years (include aircraft type, number of aircraft, time frame, 8.33 kHz voice capable, VDLM2 data link capable)?
7. Please provide your airline's known plans for aircraft avionics upgrades over the next 5 years (aircraft type, number of aircraft, time frame, 8.33 kHz voice capable, VDLM2 data link capable)?
8. What are your airline's known plans for retiring aircraft over the next 5 years (aircraft type, number of aircraft, time frame)?

Initial Results

- ASRI issued the survey in Aug to AFC members
  - Using the SurveyMonkey tool to collect data
- Four airlines have so far responded
  - Data will be key to ensuring future capacity planning
  - Meet ASRI BoD requirement for future spectrum planning

Results of Previous 2006 Survey

- Survey conducted in December 2006
- The following airlines supported the survey:

  Aeromexico, Air Tran, Air Wisconsin, American, Comair, Continental, Delta, Federal Express, Frontier, Jet Blue, Midwest, Northwest, Skywest, Southwest, Spirit, United, UPS, US Airways
- The following airline did not support the survey: Air Canada/Jazz

Aircraft Capable of Supporting 8.33 kHz Voice per Airline

AIRLINE	EQUIPPED	AIRLINE	EQUIPPED
Airline A	100%	Airline J	55%
Airline B	100%	Airline K	100%
Airline C	52%	Airline L	0%
Airline D	13%	Airline M	21%
Airline E	100%	Airline N	0%
Airline F	54%	Airline O	69%
Airline G	41%	Airline P	36%
Airline H	59%	Airline Q	39%
Airline I	7%	Airline R	100%

Aircraft Supporting VDLM2 Data Link per Airline

AIRLINE	EQUIPPED	AIRLINE	EQUIPPED
Airline A	0%	Airline J	55%
Airline B	0%	Airline K	100%
Airline C	6%	Airline L	100%
Airline D	0%	Airline M	4%
Airline E	87%	Airline N	0%
Airline F	100%	Airline O	13%
Airline G	0%	Airline P	0%
Airline H	0%	Airline Q	39%
Airline I	0%	Airline R	100%

Aircraft Avionics Upgrades

1. Plan to upgrade 61 767 and 112 757 aircraft with VDLM2 by 2011
2. Plan to upgrade A300/310 fleet with 8.33 kHz voice and VDLM2 data link in 5-6 years
3. Plan to upgrade 10 757 aircraft with 8.33 kHz voice
4. Plan to upgrade 4 757 aircraft with 8.33 kHz voice in 2007

Summary

- Survey completed in December 2006
- Total of 18 airlines participated in the survey
- One airline did not participate
- Total aircraft included in results were 5059
- 41% (2096/5059) of aircraft are capable of supporting 8.33 kHz voice operation
- 20% (1022/5059) of aircraft are capable of supporting VDLM2 data link