ASRI
Aviation
Spectrum
Resources, Inc.

AFC Radio Equipage Survey

AFC Winter 2014 Meeting

Introduction

- A 2008 SWG assigned a 100kHz sub band for 8.33kHz assignments
  - No assignments have been requested
- 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

2014 AFC Survey

- Assess US aviation's current equipage for 8.33k radio capability
  - Individual survey to all US based airlines
  - Will also request VDLM2 equipage
- Formal survey requests will be sent in March 2014
  - Using the SurveyMonkey tool
- Results will be anonymous
  - Presented at the Spring and Fall AFC's

Airline Survey Questions

- Airline fleet size
- Number of aircraft capable of supporting 8.33 kHz voice
- Number of aircraft supporting VHF Digital Link Mode 2 (VDLM2) data link
- Future plans for new aircraft, aircraft avionics upgrades, and aircraft retirements

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

New Aircraft Acquisitions

1. 737 and 777 with 8.33 kHz and VDLM2
2. 60 737NG with 8.33 kHz and VDLM2
3. 737NG with 8.33 kHz and VDLM2 in 2008
4. 737NG with 8.33 kHz in 2008
5. 90 757 starting in 2007, 15 777 starting in 2009, and convert DC10 to MD10 in next few years all with 8.33 kHz and VDLM2
6. 6 A318, 1 A319, 4 A320 with 8.33 kHz and VDLM2 over next 2 years
7. 2 MD88 with 8.33 kHz in 2007
8. 10 A330 in 2007/8 and 18 787 starting in 2008 all with 8.33 kHz and VDLM2
9. CRJ900 1 to 2 aircraft/month into 2007 with 8.33kHz
10. 35 737 per year over 4 to 5 years with 8.33 kHz and VDLM2
11. 3 aircraft per month for 6 months of 2007 with 8.33 kHz and VDLM2
12. Possible in 2009 with 8.33 kHz
13. 10 747-400 starting in 2006 and 10 A380 in 2010 all with 8.33 kHz and VDLM2
14. 10 Embraer 190 in 2007 with 8.33 kHz and VDLM2
15. 4 airlines had no plans for acquiring new aircraft

Aircraft Retirements

1. MD80s and 757s aircraft
2. 19 757 by end of 2007
3. 737s in 2008
4. All 727 by 2017
5. 4 DC10

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