Catch-up session

SRWG/2

12 May 2015

Inception of SRWG

- APANPIRG/24 noted that the CNS SG had made a decision (17/6) to establish a small working group to investigate the need for an increase in available VHF COM channels and, on the basis of the outcome, to develop recommendations for further consideration by the CNS SG
- As a result, a letter AP-CNS0009/14 dated 20 January 2014 was sent out to Australia, China, Hong Kong China, India, Japan, New Zealand, Singapore and Thailand in order to establish the Spectrum Review Working Group on 8.33 kHz channel spacing and nominate the qualified SME(s) to participate in the study.

Terms of Reference

In order to investigate the need for an increase in available VHF COM channels and, on the basis of the outcome, to develop recommendations for further consideration by the CNS SG, the APAC **SPECTRUM REVIEW WORKING GROUP:**

- develops an approach supported by new tools & criteria being introduced at ICAO global level, since they are likely to bring enhanced possibilities of VHF frequencies assignments;
- delivers a high level implementation plan for States/Administrations in the APAC region to implement the VHF assignments in a coordinated manner with ANSP, CAA and national frequency Authorities;
- proposes improvements to the existing regional VHF frequency assignment process based on the ICAO Global Spectrum Management tool, ICAO 9718 Volume II Handbook provisions and current coordination issues;
- develops an approach to transition to the new ICAO global database; and
- based on the above, develops recommendations for CNS SG about how to address the future operational needs and current limitations in VHF voice communications, aiming at avoiding introduction of 8.33 kHz spacing in the APAC Region for as long as practicable.

Stage 1: Identify VHF voice communications new needs and current limitations

- Draft a project planning for stages 1, 2 and 3;
- Gather new operational needs from Member States in terms of frequencies (and associated context: airspace or routes restructuration, new facilities etc.) in the short, mid and long terms; and
- Identify current limitations.

Stage 2: Identify Solutions

- Simulate with the global database how this could be done based on 25 KHz spacing, new ICAO frequency manager software tool and Handbook volume II provisions;
- For limitations (potential interferences detected through the tool) with neighboring States, identify solutions with neighboring States, based on the new ICAO frequency manager software tool and Handbook volume II provisions,
- If 8.33 KHz spacing is needed, study impacts on operations (airspace users and ground installations) in the considered airspace and outside;
- Consult relevant national frequency authorities for feasibility; and
- Draft a high level implementation plan;

If 8.33 KHz spacing is needed, the draft implementation plan should focus on a detailed description of airspaces within which 8.33 kHz channel spacing requires to be introduced and transition provisions needed for airlines, ANSP and CAA as necessary, both at regulatory and operational levels.

- *Lessons learnt from Europe 8.33Khz transition may be beneficial in that regard.*
- Review the project planning in view of proposed solutions; and
- Develop recommendations for CNS SG

Stage 3: Implement in a coordinated manner

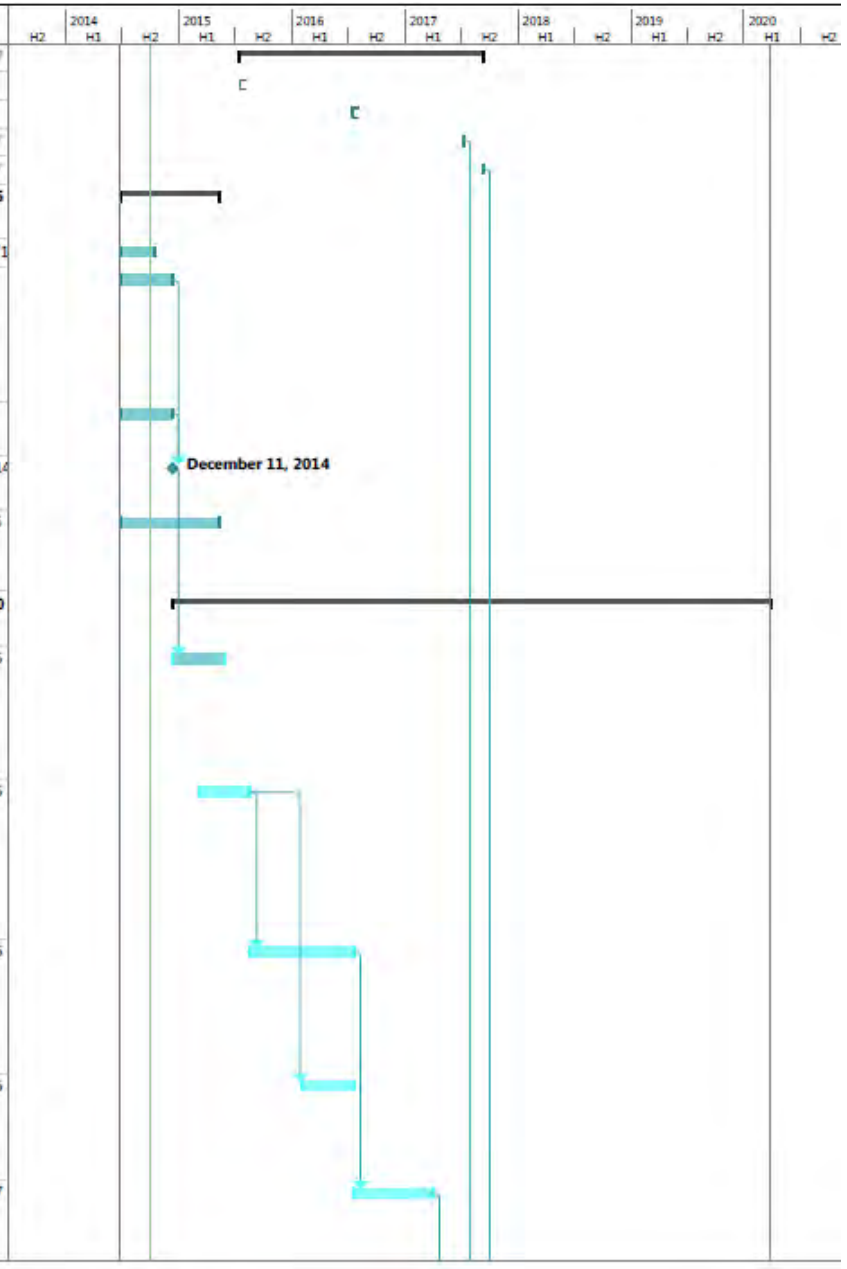
- Refine the implementation plan taking into account CNS SG/other groups considerations;

- If no 8.33 KHz spacing is needed, States implement the new assignments in a coordinated manner (ANSP, CAA, national frequency Authorities) and VHF new assignments are reflected in the global database; and

- If 8.33 KHz spacing is needed, States implement the new assignments according to the implementation plan, including transition provisions needed for airlines, ANSP and CAA as necessary.

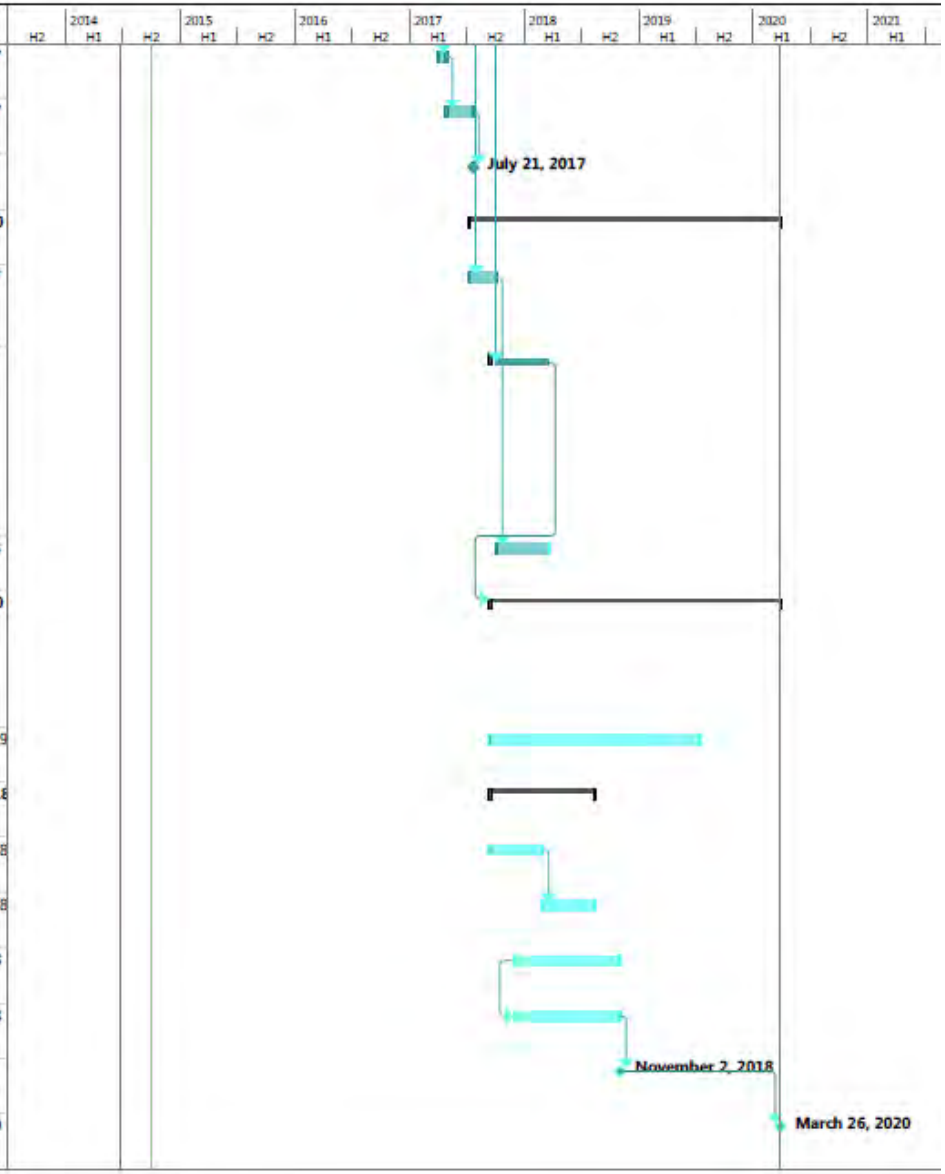
Planning

ID	Task Mode	Task Name	Duration	Start	Finish
1		Dependencies	565 days?	Wed 7/15/15	Tue 9/12/17
2		CNS 19		Wed 7/15/15	
3		CNS 20		Mon 7/11/16	
4		CNS 21	1 day?	Tue 7/11/17	Tue 7/11/17
5		APANPIRG 28	1 day?	Tue 9/12/17	Tue 9/12/17
6		**Stage 1: Identify VHF voice communications new needs and current limitations**	**229 days?**	**Thu 6/26/14**	**Tue 5/12/15**
7		a-Draft a project planning for stages 1, 2 and 3	4 mons	Thu 6/26/14	Wed 10/15/1
8		b-Gather new operational needs from Member States in terms of frequencies (and associated context: airspace or routes restructuration, new facilities etc) in the next 5 years short(2014-2019) and trends beyond, mid and long terms 2020	6 mons	Thu 6/26/14	Wed 12/10/14
9		c-Identify current limitations with continuity of the current 25kHz spacing	6 mons	Thu 6/26/14	Wed 12/10/14
10		Needs and limitations	1 day?	Thu 12/11/14	Thu 12/11/14
11		d- Study impact of ICAO Handbook Volume II provisions on current provision of VHF voice communications	229 days	Thu 6/26/14	Tue 5/12/15
12		**Stage 2: Identify Solutions**	**1380 days?**	**Fri 12/12/14**	**Thu 3/26/20**
13		a-Simulate with the global database how this this could meet the needs could be done based on 25 kHz spacing, and the new ICAO global frequency manager software tool and Handbook volume II provisions	6 mons	Fri 12/12/14	Thu 5/28/15
14		b-For limitations (potential interferences detected through the tool) with neighboring States, identify solutions using the ICAO global frequency manager software tool , based on the new ICAO frequency manager software tool and Hand	6 mons	Sun 3/8/15	Thu 8/20/15
15		c-If the need for 8.33 KHz kHz spacing is identified, study impacts on operations (including airspace users, ATC procedures and technical systems and ground installations) in the considered airspace and in the adjacent airspace to ensure continuous	12 mons	Fri 8/21/15	Thu 7/21/16
16		d-Optionally, consult with relevant national frequency authorities for about the feasibility of 25 kHz spacing continuity or 8.33 kHz spacing implementation	6 mons	Fri 2/5/16	Thu 7/21/16
17		e-Draft a high level implementation plan for continuity of 25 kHz spacing or implementation of 8.33 kHz spacing	9 mons	Fri 7/22/16	Thu 3/30/17



Planning

ID	Task Mode	Task Name	Duration	Start	Finish
18		f-Review and update the project planning stage 3 according to the proposed solutions	1 mon	Fri 3/31/17	Thu 4/27/17
19		g-Develop recommendations for CNS SG	3 mons	Fri 4/28/17	Thu 7/20/17
20		Recommendations for CNS SG	1 day?	Fri 7/21/17	Fri 7/21/17
21		**Stage 3: Implement in a coordinated manner**	**707 days?**	**Wed 7/12/17**	**Thu 3/26/20**
22		a-Finalise the implementation plan taking into account comments from CNS SG/other concerned groups into considerations	3 mons	Wed 7/12/17	Tue 10/3/17
23		**b-If no 8.33 KHz spacing is needed, States implement the new assignments in a coordinated manner (ANSP, CAA, national frequency Authorities) in line with the implementation plan and VHF new assignments are reflected in the global database**	**1 day**	**Wed 9/13/17**	**Wed 9/13/17**
24		Implement new frequencies	6 mons	Wed 10/4/17	Tue 3/20/18
25		**c-If 8.33 KHz spacing is needed, States implement the new assignments according to the implementation plan, including transition provisions needed for airlines, ANSP and CAA as necessary**	**661 days?**	**Wed 9/13/17**	**Thu 3/26/20**
26		National mandates	24 mons	Wed 9/13/17	Wed 7/17/19
27		**Safety case (regional/subregional)**	**240 days**	**Wed 9/13/17**	**Wed 8/15/18**
28		Common safety case	6 mons	Wed 9/13/17	Wed 2/28/18
29		National safety cases	6 mons	Thu 3/1/18	Wed 8/15/18
30		Upgrade of ATC procedures/technical systems	12 mons	Fri 12/1/17	Thu 11/1/18
31		Training of operators	12 mons	Fri 12/1/17	Thu 11/1/18
32		ANSP readiness	1 day?	Fri 11/2/18	Fri 11/2/18
33		Frequencies freed for reuse	1 day?	Thu 3/26/20	Thu 3/26/20



Meetings and Tools

- SRWG/1
  - 26-27 Jun. 14
- Webconferences
  - 30 Sep.14
  - 05 Nov. 14
  - 13 Jan. 15
- Portal

https://portal.icao.int/SRWG/Pages/default.aspx

- Template for operational needs
- Frequency Finder

Deliverables

- Operational needs
  - Captured for the congested areas
- Simulations with Frequency finder
  - Done for the congested areas
- Transition to the global database
  - Done for APAC in Jan. 15
- Implementation plan (needed only if move to 8.33 KHz)
- Recommendations to CNS SG: Improvements to the existing regional VHF frequency assignment process
  - Some draft recommendations in progress

Operational needs

	A	B	C	D	E	F	G	H	I
1	State/Administration	Service concerne	Number of new frequencies	Release of frequencies	Location	Time Horizon	Justification: airspace or routes creation/restructuration, new facilities,etc	Remarks	
2	Australia	TWR	5	None	New/Existing Control Towers	2014-2019	New Control Towers	Over the next 5 years we expect to need up to 5 new tower frequencies for use at towers for new SMC (Split) or ACD Functions - We use our own internal system for analysis and use of frequencies - there are no issues expected as these will be low power (10W) No coordination required with ICAO or Neighbour Agencies	
3	Australia	APP-L	5	None	Approach Services to New/Existing Towers	2014-2019	As part of our (Surveillance Approach for Regional Airports Projects) We may install some additonal VHF for use as Regional APP Service	Over the next 5 years we expect to need up to 5 new approach frequencies for use at regional towers - We use our own internal system for analysis and use of frequencies - there are no issues expected as these will be low power (10W) No coordination required with ICAO or Neighbour Agencies	
4	Australia	ACC-L	10	None	Western Australia - Locations to be determined by project and Operational Coverage Requirements	2014-2019	Review of Airspace over Western Australia may be required with respect to operations into mining areas - Operational Requirements to be defined and examined	Over the next 5 years we expect to need up to 5 new Area frequencies for use in the Northern / Southern FIR (Brisbane/Melbourne Centre) - We use our own internal system for analysis and use of frequencies - there are no issues expected - No coordination required with ICAO or Neighbour Agencies	
5	Hong Kong China	ACC-SR-I	4	0	Hong Kong (22°18'32" N 113°54'53" E)	2015-2020	For new Terminal radar control position		
6	Hong Kong China	TWR	1	0	Hong Kong (22°18'32" N 113°54'53" E)	2015-2020	For new TWR position for apron expansion		
7	Hong Kong China	ACC-SR-I	10	0	Hong Kong (22°16'33" N 114°08'41" E)	2020-2025	For PDR Operations 2020		
8	Hong Kong China	APP-SR-L	14	0	Hong Kong (22°16'33" N 114°08'41" E)	2020-2025	For PDR Operations 2020		
9	Hong Kong China	ACC-SR-U	2	0	Hong Kong (22°16'33" N 114°08'41" E)	2020-2025	For PDR Operations 2020		
10	Hong Kong China	TWR	2	0	Hong Kong (22°18'32" N 113°54'53" E)	2020-2025	For 3rd Runway		
11	Hong Kong China	SMC	1	0	Hong Kong (22°18'32" N 113°54'53" E)	2020-2025	For 3rd Runway		
	Hong Kong China	CDC	2	0	Hong Kong (22°18'32" N 113°54'53" E)	2020-2025	For 3rd Runway		

https://portal.icao.int/SRWG/Documents/2-%20Operational%20needs/New%20Requirement%20Summary%2009%20Feb.15.xls

- Thank you