



*International Civil Aviation Organization*

**ICAO SEVENTH MEETING OF SPECTRUM REVIEW WORKING GROUP (SRWG/7)**

*Bangkok, Thailand, 15-17 February 2023*

**Agenda Item 3:** Review Frequency planning requirements for the Asia/Pacific Region

3.1 VHF COM Frequency Allotment Plan for APAC

**RECONSIDERATION ON THE ALLOTMENT PLAN FOR APAC REGION**

(Presented by the Secretariat)

**SUMMARY**

This paper presents a brief overview on the findings from global database to supplement the discussion in WP/04 of SRWG/7 to invite a reconsideration on the VHF COM allotment plan for APAC for a feasible solution to accommodate the foreseeable new assignments.

**1. INTRODUCTION**

1.1 For all ICAO Regions allotment plans have been developed. These allotment plans sub-divide the frequency band 117/975 – 136 MHz, which is allocated by the ITU to the Aeronautical Mobile (R) Service, into sub bands that are to be used for certain aeronautical applications or services such as TWR, ACC, APP, VOLMET etc. These allotment plans are part of the ICAO Regional Air Navigation Plan. An overview of the allotments for the APAC Region is in the Appendix of WP/04.

1.2 Simulations of future spectrum requirements have shown that certain allotments in the current allotment plan are prone to becoming saturated while other allotments are under-utilized and can provide space for accommodating new requirements. In addition, certain frequency bands are not allotted.

1.3 This paper provides an overview of current uses and presents proposals for new allotments of the un-allotted frequency bands and revise current allotments.

**2. DISCUSSION**

Frequency bands that are not allotted

2.1 The following frequency bands in the APAC Region are not allotted to specific services, based on 25 kHz channel spacing:

2.1.1 122.000 – 123.675 MHz (bandwidth 1675 kHz)

This includes the use of the Auxiliary Frequency (123.100) MHz and the Air-to-Air frequency (123.450 MHz). For this frequency band, the COM list 3 contains 816 frequency assignments

2.1.2 136.000 – 136.950 MHz (bandwidth 950 kHz)

2.1.2.1 In this band, the COM list 3 contains 2 frequency assignment (Fiji and Australia). Note that COM list 3 includes 21 assignments for the Common Signaling Channel for VDL Mode 2 (136.975 MHz).

Frequency bands that are underutilized

2.2 Other frequency bands that showed to be underutilized in the simulation work are:

2.2.1 128.825 – 132.025 MHz (bandwidth 3200 kHz) which is allotted to AOC. Usage in this band is for

|              |                 |
|--------------|-----------------|
| A/G:         | 2 assignments   |
| ACC-IL:      | 24 assignments  |
| ACC-U:       | 76 assignments  |
| AFIS:        | 10 assignments  |
| AOC:         | 628 assignments |
| APP (I/I/U): | 94 assignments  |
| AS/SMC:      | 19 assignments  |
| ATIS:        | 102 assignments |
| CTAF:        | 2 assignments   |
| FIS-U:       | 33 assignments  |
| TWR:         | 292 assignments |
| VDL:         | 204 assignments |

Within the band 128.825 – 132.025 MHz the sub-band 129.700 MHz – 130.875 MHz is allotted through Annex 10, Volume V, to National Aeronautical Mobile Services.

Allotments may require further attention

2.3 Taking into account the results of spectrum capacity simulations, it is proposed to allot the band 122.000 – 123.675 MHz to TWR, APP (L and I) and ACC (L and I). This will provide for the coming years sufficient bandwidth for future use of frequencies for these services. The proposed revision is displayed in Figure 1

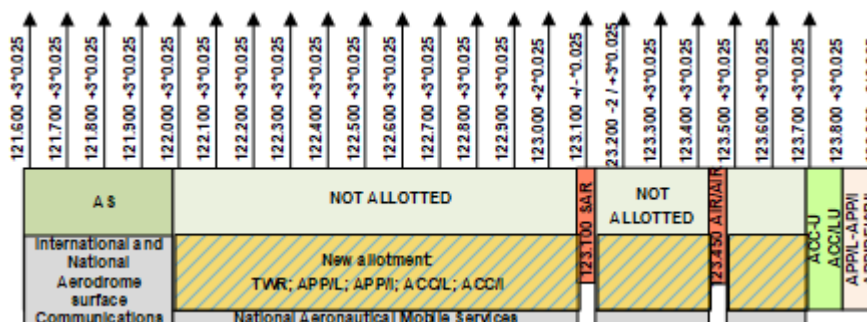


Figure 1 – Revised allotment plan for the band 122.000 – 123.675 MHz

2.4 For the frequency band 136.000 – 136.975 MHz it is proposed to allot part of this band for ACC-U, VOLMET and FIR.

2.5 It is also proposed to use part of the band 136.000 – 136.975 MHz for use by VDL facilities. It may be more frequency efficient to concentrate the use of VDL in the APAC Region in a small sub-band such as 136.500 – 136.695 MHz. In this case, the VDL Mode 2 frequency assignments that are currently

operating in the AOC band (see paragraph 3.1.1) should be reassigned a frequency in the band 136.500 – 136.975 MHz. The revised allotment is displayed in Figure 2.

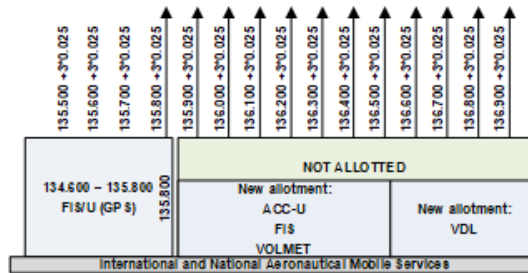


Figure 2 – Revised allotment plan for the band 136 – 137 MHz

2.6 For the frequency band 128.825 – 132.025 MHz.

2.6.1 It is proposed to reduce this band which is allotted for AOC to 129.700 – 130.875 MHz which aligns this band with the sub band that is allotted in Annex 10 Volume V for National Aeronautical Mobile Communications. This revision can take place without formally requiring re-assignment of frequencies currently used for AOC purposes outside the band 129.700 -130.875 MHz. However, since AOC frequency assignments do not require protection from harmful interference, it is more frequency efficient if these frequency assignments are re-grouped in the new AOC band. Increased use of 25kHz channels may provide sufficient capacity for future AOC frequency assignments.

2.6.2 In the light of the proposal in 2.5 to use the frequency band 136.500 – 136.975 MHz for VDL Mode 2, it is proposed to re-assign (or move) the current use of the band 128.825 – 132.025 for VDL to the band 136.500 MHz – 136.975. The VDL plan as has been developed in the EUR Region can be used as a template for this transition in APAC.

2.6.3 If the proposals in 2.6.1 and 2.6.2 can be accepted, the band 128.825- 129.700 MHz can be re-allotted to VOLMET, ATIS and ACC-L. The frequency band 130.875 – 132.025 can be re-allotted to ACC-U and FIS as displayed in Figure 3.

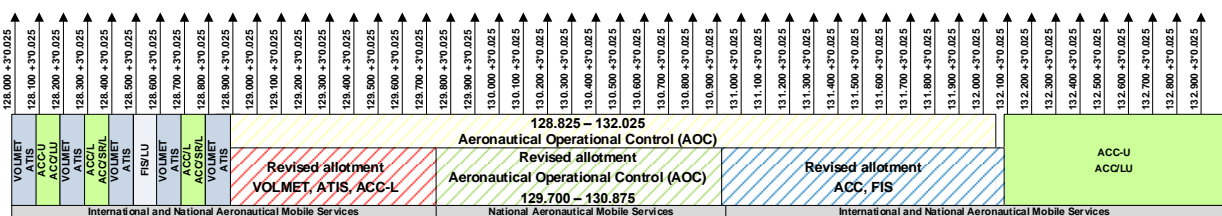


Figure 3 – Revised allotment plan for the band 128.825 – 132.025 MHz

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matter as appropriate

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