

ASRI

Aviation
Spectrum
Resources, Inc.

Selective Calling Code Pool Expansion Update

AFC Fall 2014 Meeting

The Current Limitation

- The ICAO SELCAL register is oversubscribed
 - Current 16-tone SELCAL standard is limited to 10,290 codes
 - SELCAL register holds over 32,000 assignments
- Oversubscription is resulting in up to 6 aircraft responding to the same code
 - Over 250 known duplicate call occurrences recorded in 12 months by worldwide ANSPs
- The demand for SELCAL is still growing
 - ASRI issues approximately 2,500 per year
 - 13% year-on-year growth
 - Problem will continue to increase without action

Industry Solution

- ASRI working with SELCAL avionics vendors, manufacturers, and the FAA developed a SELCAL code pool expansion solution
- The solution expands the SELCAL system to 32 tones
 - The update would create 215,760 unique codes
- ASRI immediately began working with the various standards organizations (ICAO, RTCA, and AEEC) to move the proposed solution forward

ICAO

- The ASRI staff provided the proposed solution to the ICAO Working Group Maintenance (WG-M) committee for consideration
- ICAO WG-M agreed with the ASRI proposed SELCAL code pool expansion
 - Date of implementation for ANSP ground station implementation based on survey feedback will be September 2016
- The final ICAO approval process has commenced with a Working Group of the Whole meeting scheduled for December 2014 followed by adoption by the Air Navigation Commission in early 2015
- The Aeronautical Communication Panel (ACP) Secretary issued a letter to ACP members on proposed amendments to Annex 10 on August 10, 2014 with responses due on September 8, 2014

To: Members, Aeronautical Communications Panel (ACP)
From: ACP Secretary
Subject: **Proposal for amendments to Annex 10 (SELCAL and AMHS)**
Action: Vote and provide comments, if any, by 8 September 2014

1. ICAO has now moved to a two-year cycle for the adoption of Annex amendments. In short, this means that Annex amendments will only be approved on even-numbered years. This, plus the elaborate review process¹ which can take two years before final adoption, means that in many cases we will have limited windows of opportunity to act on urgent amendments.

2. This brings me to the point of this letter. Although I am close to finalizing details for a meeting of a Working Group of the Whole (WGW) to be held in December 2014, there are a number of pending amendments which have been brought to and approved by the Maintenance Working Group (WG-M) of the Aeronautical Communications Panel (ACP) and which requires adoption by 2016. For this to occur, they will need to be submitted to the Air Navigation Commission (ANC) for preliminary review in advance of the planned (WGW). My proposed solution is to ask for your approval via this memorandum. To assist with this:

- a) copies of the proposed amendments are attached;
- b) links to the original proposals and subsequent working papers submitted to WG-M are given later in this letter; and
- c) a voting form for both amendments with a comment block is also provided.

3. Now let me please provide some details on the two amendments beginning with the one on the expansion of the SELCAL Address Pool.

SELCAL Address Pool Expansion

4. At the fourth meeting of the ACP WGW in September 2011, WP13 was presented by Aviation Spectrum Resources Inc. (ASRI) explaining the need for additional SELCAL addresses and proposing a number of possible solutions. In short, the pool of possible SELCAL address codes has become exhausted. In order to support the growing aircraft population, SELCAL code assignments are being duplicated. A direct result of this is the possibility that, aircrew will receive SELCAL notifications intended for other aircraft. The potential safety impact of this is clear.
5. Following that, WP03 was presented at the nineteenth meeting of WG-M in May 2012, which presented the optimal solution for the SELCAL address pool expansion. WG-M accepted the technical proposal as it allowed a significant expansion of the address pool, while maintaining backward compatibility. WP03 also proposed an applicability date of September 2014. WG-M felt that this date was too ambitious for a number of reasons, not the least being the lead time needed for ANSPs to upgrade their ground systems. This resulted in a request to ASRI to survey the relevant ANSPs to determine a realistic applicability date.
6. In January 2013, ASRI submitted WP15 to the twentieth meeting of WG-M, which provided the results of the survey. In short 14 ANSPs provide air-ground voice services over HF communications. Of these, 9 replied and all were able to support the expanded SELCAL pool by September 2016. Hence this date was adopted in the proposed amendment.
7. In the meantime, IBAC and IATA expressed concern that the proposed changes could be interpreted by States as calling for a mandate upon all aircraft operators, thus resulting in a costly retro-fit for many. This led to the inclusion of “Note 6” in the original proposal, which states that this amendment is only intended for aircraft forward-fit.
8. The final amendment was approved at the twenty-first meeting of WG-M based on the above.

ACTION BY ACP MEMBERS

14. The proposed amendments are given in **Attachment A** and the working papers containing the amendment proposals are given in **Attachment B**. As ACP members you are asked to consider these and provide your approval (or otherwise) by marking the voting box given in **Attachment C** and returning this to me via e-mail at vmaiolla@icao.int with copy to IIMinbox@icao.int, by **8 September 2014**.

15. Each amendment will be considered approved if a clear majority of you are in favour. Non-receipt of a reply will be considered as an abstention.

Yours sincerely,



Vaughn Maiolla

AEEC

- The AEEC Executive Committee unanimously voted to approve the SELCAL Code Pool Expansion APIM at the AEEC General Session meeting held April 14-17, 2014
- American Airlines volunteered Robert Holcomb as chairman and Paul Prisaznuk is the AEEC secretary to support the SELCAL working group (WG)
- The first meeting of the SELCAL WG was held on July 8-10, 2014 in Annapolis
 - A draft SELCAL standard (714A) was produced by AEEC staff
 - As a result of the WG meeting, an update draft was produced
- The next meeting of the SELCAL WG is scheduled for December 9, 2014 in Seattle, WA hosted by Boeing

RTCA

- The ASRI staff attended the RTCA Program Management Committee (PMC) meeting on June 17, 2014 in Washington, DC
 - The PMC committee approved the proposed ASRI Terms of Reference (TORs) and formed Special Committee (SC) 232 to develop a new Minimum Operational Performance Standard (MOPS) for the SELCAL system
- SC-232 held its first meeting September 3-5, 2014 at RTCA Headquarters in Washington DC
 - Primary goal was to review the TORs
 - Status the work in other committees
 - A draft MOPS document was produced
- The next meeting of SC-232 is scheduled for December 10-12, 2014 in Seattle, WA hosted by Boeing
 - Primary objective will be to continue to develop the MOPS
 - Meeting being held in conjunction with AEEC SELCAL WG

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Questions?