Selective Calling Code Pool Expansion Update

AFC Update

Winter 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

- The team already developed a draft ARINC Characteristic 714-7 (MARK 3 Airborne SELCAL System) to incorporate the proposed solution

- ASRI is working with ICAO and ANSPs for September 2016 implementation

ASRI Proposal

- The solution has been agreed with vendors and is backwards compatible with existing avionics
  - **No changes or costs required for existing avionics**
  - **Existing users would continue to operate on 12 or 16 tone systems**
- The proposal is a long-term solution to the duplicate SELCAL calling
  - It will slow, and eventually reverse, the duplicate calling rate for SELCAL
  - Mitigates the problem without a compulsory upgrade
  - Compatible with the normal lifecycle of existing avionics

SELCAL Code Pool Expansion

The ICAO step process to amend Annex 10 Volume 3 with the SELCAL code pool expansion is the following:

1. Aeronautical Communications Panel (ACP) WG-M agreed (Done)
2. Preliminary review by Air Navigation Commission (ANC) (Spring 2014)
3. ICAO ACP Working Group of the Whole meeting is scheduled for July 21-23, 2014 in Montreal, Canada
4. Final review by ANC (Fall 2014)
5. Adaptation by council (February 2015)
6. State letters (March 2015)
7. Applicability date (November 2015)
8. Implementation (September 2016)

SELCAL Code Pool Expansion

- ASRI with support from the avionics vendors has completed an update to ARINC Characteristics 714-6 (MARK 3 Airborne SELCAL System) and drafted an ARINC Project Implementation/Maintenance (APIM)

- ASRI staff has held meetings/teleconferences with members of the AEEC Executive Committee to obtain support for the SELCAL Code Pool Expansion APIM moving forward at the SAI Subcommittee meeting (February 4-6, 2014) and the AEEC General Session (April 14-17, 2014)

- Additional teleconferences are planned with airlines prior to the AEEC General Session

SELCAL Code Pool Expansion

- Results from the ASRI sponsored meetings/teleconferences are:
  - Supporting - AAL, SWA, UAL, UPS, USA, FDX, TAP Portugal, and Airbus
  - Non-committal – LUF and KLM/AF
  - Skeptical and non-supporting – Boeing
  - No response – DAL and BAW
- Concerns raised during the meetings and teleconferences are being addressed with the vendors and manufacturers
- ASRI wants to thank all support received from AFC airline members in obtaining their airline support for this effort

SELCAL Code Pool Expansion

- ASRI staff were successful at the SAI Subcommittee meeting in having the APIM move forward to the General Session to be considered for approval

- ASRI staff will continue to schedule teleconferences with the remaining AEEC Executive Committee members (Alaska, Austrian, British, Delta. Finnair, and the US Air Force) to gain their support for the SELCAL APIM approval prior to the AEEC General Session

- ASRI will work with the RTCA to re-institute RTCA Special Committee 83 (SC-83), to update DO-93, Minimum Performance Standards for Airborne Selective Calling Equipment once AEEC work commences.
  - The FAA is supporting ASRI with this effort.

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