

Aeronautical Telecommunication Network Panel (ATNP)
Working Group 2

Status of HF DL SARPs being developed by the
Aeronautical Mobile Communication Panel (AMCP)
Working Group E

Presented by:
Leon Sayadian, FAA

Prepared by:
Bill Blake
AMCP U.S. Member

Summary

This paper provides a status of AMCP Working Group (WG)-E efforts towards completion of validation of the HF Data Link (HF DL) Standards and Recommended Practices (SARPs), in preparation for presentation to the AMCP/5 meeting to be held April 21-30, 1998. The paper talks to the HF DL Validation Subgroup that was created to: 1) develop a SARPs to the new ICAO format, and 2) move expeditiously to validation of that SARPs. As the HF DL SARPs is considered mature and validation complete, copies of the SARPs, Manual, and Validation Cross Reference Index (VCRI) have been sent out on the ATNP mail exploder for review and comment, and VCRI were placed on the ATNP FTP CENA server and an e-mail announcement sent out to the ATNP WG2 members prior to the ATNP WG2 meeting.

Background:

AMCP WG-E was set up to develop and validate a SARPs for HF DL as another communication link for air-ground aviation data transmissions for oceanic/remote areas or where 100% VHF line of sight coverage is unavailable. This group has worked to a fast paced schedule of two years from start of work to validation completion. It should be noted that the HF DL SARPs was developed per the new ICAO format. As a result, the SARPs main body document is less than 20 pages, and the accompanying HF DL Manual, that contains further technical details is roughly 120 pages. An HF DL Implementation Manual has also been created as guidance material, especially for those countries that were not part of the WG-E effort. It must be noted that the HF DL SARPs and HF DL Manual sections on subnetwork layer were copied 90% from the AMSS SARPs. As a result, HF DL did not revalidate those paragraphs that were already validated under AMSS.

AMCP WG-E Validation Subgroup (VSG) Meeting Summary:

Due to the fact that HF DL SARPs validation was not completed at the AMCP WG-E/5 in Rio de Janeiro (January 1998), another VSG meeting was held at ICAO in Montreal, the week of February 16, 1998. This HF DL VSG meeting was attended by Iceland (Rapporteur), Canada, U.S., AMCP Secretariat and his deputy, ARINC, Boeing and Rockwell/Collins. The objective of the meeting was to complete validation of the HF DL SARPs prior to the AMCP/5 meeting that is to be held the last two weeks of April, 1998. Rockwell/Collins, Boeing and ARINC brought their technical experts to the meeting in Montreal and presented the majority of the remaining validation data for the VSG to review.

At the close of the WG-E/5 meeting Rio, January 29, 1998, roughly 65% of the SARPs was validated (complete) and a majority of the HF DL Manual was validated (by inspection only). At the February, 1998 meeting in Montreal, the VSG reviewed the unit test, analysis and simulation data from industry, and discussed (again) some open issues. Here are the results: 1) HF DL SARPs: **Validation Complete**; 2) HF DL Manual: **Validation 90% Complete**; 3) Implementation Manual (Guidance Material): **Document 95% Complete ..** (This document is not in the critical path of recommending SARPs for adoption by ICAO).

There are a few issues outstanding, but these are not tied directly to the SARPs. These issues include: 1) industry data on HF DL adjacent channel interference, which has not yet been presented (the need for this data prior to AMCP/5 was reinforced by the AMCP Secretariat); 2) One system table coordinated amongst multiple service providers; 3) Deletion of the SARPs paragraph on *Receiver Sensitivity*; 4) Change to Speed of Service table delay times (with validation to the new numbers); 5) Some items still open pending completion in other panels such as ATNP.

The next step is to bring forth to AMCP/5 the following: HFDL SARPs, HFDL Manual, HFDL SARPs VCRI, HFDL Manual VCRI, and AMCP WG-E Report.

A recommendation will be made to AMCP, for AMCP to make recommendation to ANC for adoption of HFDL SARPs and Manual (and Implementation Manual)

Action Requested of ATNP by U.S. member to the AMCP

The U.S. AMCP Member has been asked by the AMCP Secretariat and WG-E Rapporteur to request that ATNP review and provide written comments on the HFDL SARPs main body document, by April 2, 1998. Soft copies of the SARPs as well as the HFDL Manual and VCRI from the AMCP WG-E meeting in Rio de Janeiro have been placed on the ATNP FTP server operated by CENA. A new copy of the HFDL SARPs (with minor changes from the WG-E Rio meeting) will be made available at the ATNP WG-2 March meeting in Rio de Janeiro. Initial HFDL service will be Direct Link Service (non-ATN). This will evolve to Reliable Link Service which will be ATN-compatible. Complete validation of the RLS section of the HFDL manual is not yet complete.

Written comments on the HFDL SARPs/Manual should be provided to the AMCP via the ATNP secretary or alternatively via the U.S. member.