



*International Civil Aviation Organization*

**THE FIRST MEETING OF ASIA/PACIFIC ATS INTER-FACILITY  
DATA-LINK COMMUNICATION (AIDC) IMPLEMENTATION  
TASK FORCE (APA TF/1) OF APANPIRG**

Bangkok, Thailand, 16 -18 June 2015

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**Agenda Item 3: Review of outcomes of relevant meetings and AIDC Seminars in 2014**

**REVIEW OUTCOME OF AIDC SEMINAR AND AIDC ISSUES AND  
RECOMMENDATIONS**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the outcome of SIP AIDC Seminar held in October 2014 and reviews the issues identified through discussions during the Seminar.

**1. INTRODUCTION**

1.1 The Seminar on the Implementation of ATS Inter-facility Data Communication (AIDC) was held at the ICAO Asia and Pacific (APAC) Regional Office (Bangkok, Thailand, 28-31 October 2014). The objective of the Seminar was to assist the APAC States in implementing ASBU B0-FICE to Increase Interoperability, Efficiency and Capacity through Ground-Ground Integration.

1.2 The Seminar was attended by forty (40) participants from thirteen (13) Administrations (Australia, Bangladesh, Cambodia, Macao China, India, Iran (Islamic Republic of), Malaysia, Myanmar, Philippines, Singapore, Sri Lanka, Thailand and Viet Nam), and two industry suppliers (Harris and Thales).

**2. DISCUSSION**

2.1 The B0-FICE Module “Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration” as described in Global Air Navigation Plan (GANP) ASBU document was introduced.

2.2 The Seminar through discussions noted that assignment of focal point for AIDC Implementation would facilitate AIDC implementation and it was suggested to send State Letter to all APAC States requesting them to nominate a focal point details. This will be an action for AIDC Task Force to take further necessary action.

2.3 The Seminar discussed the current implementation plan and updated the implementation status provided at Appendices A and B to this Summary of Discussions. The updated implementation status which was further updated by ACSICG/2 meeting held from 20 to 22 April 2015 is provided in **Attachment to this paper for review and further updates** by this meeting.

2.4 The structure and status of the Pan regional ICD for AIDC and gap analysis against the APAC AIDC ICD Version 3 were presented and discussed during the Seminar.

2.5 The Seminar noted common message set of both AIDC and OLDI and difference between them and also received a presentation on messages used in the different flight state.

#### **Some challenging subjects and issues**

2.6 The Seminar discussed some challenging subjects and issues including:

- Message set implemented based on operational requirement and bilateral agreement;
- interoperability between ATM automated systems supporting different versions of AIDC ICDs;
- interoperability between ATM automated systems from different vendors;
- complexity of interoperability using AIDC/OLDI between different ICAO Regions mainly APAC, EUR/NAT and MID;
- possible use of AIDC message between Aerodrome (Control TWR) and ATC Centre (Air Traffic Service Unit) in the neighboring Administration and between aerodromes closer to FIR boundaries; and
- training, testing and issues forms submitted.

2.7 **Recommendations from the Seminar were as follows:**

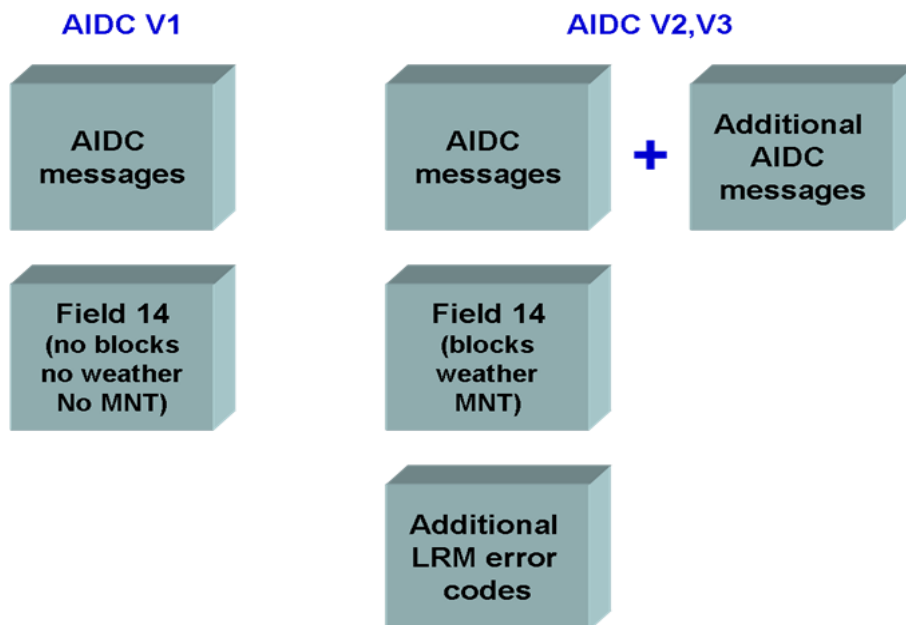
- States to share experience on AIDC implementation including sharing of training and implementation packages and visit each other;
- Define operational requirements and specify scope of operational improvements (determine what AIDC messages set is required to be supported) at initial planning stage;
- engage both technical and operational experts (CNS/ATM) in the process of AIDC implementation from initial stage;
- CNS Table 1E would become regional specific requirement for APAC region and the title name of column 4 of this table should be reviewed. Instead of AFTN /AMHS standard, transmission means may be considered;

- The entire AIDC message set may not be implemented at one go because air traffic controllers need time to get used to AIDC operation;
- Special attention should be paid to the specification of peer to peer messages including the rules for processing, content, format;
- Define the objectives for trials to avoid any problems during the implementation process;
- Develop a comprehensive and detailed testing plan including testing scripts to evaluate the process of the implementation;
- ATCOs should be trained for using AIDC in a safe and efficient manner before its implementation and before each upgrade (message set, HMI or system). The training syllabus should consist of theory and practice (CBT, simulator, OJT);
- Develop a training plan taking into consideration specific requirements for ATCO, FDO and ATSEP;
- States experienced in AIDC/OLDI be encouraged to develop/share generic training Material (concept, use cases, abnormal events) that could be used by other states to support the initial stage of their training process for ATCO, FDO and ATSEP;
- Training requirement – Generic and specific training. Training package (STP of TRAINAIR Plus and/or i-KIT on AIDC) is encouraged to be developed; and
- The upcoming APA TF (APAC TF) to maintain the AIDC issues table as initially developed by the Seminar and to follow up with the action plan to solve the issue as one of the top priorities.

### **Compatibility Issue between AIDC Versions 1, 2 and 3**

2.8 All enhancements introduced during the development of Version 2 and 3 were designed to permit continued interoperability with Version 1. For example, when a block level format was defined for Field 14, it was explicitly stated that this was an optional format to only be used with agreement between the two ATS Units. As such it is the responsibility of the vendor to ensure that these optional formats can be configured for each neighboring ATS Unit.

2.9 The following diagram depicts the significant differences between AIDC Version 1 and the subsequent AIDC versions.



The diagram shows that everything in AIDC Version 1 is included in AIDC V2 and V3. As such, an AIDC V1 ATS Unit is interoperable with an AIDC V2 or 3 ATS Unit.

The additional messages in AIDC V2 and V3 are not supported by AIDC V1. However this is controlled by simply not sending these messages

As described earlier, the optional Field 14 formats should not be included in messages sent to an AIDC V1 ATS Unit, which makes Field 14 interoperable too.

The additional LRM error codes were designed to support the new AIDC messages and the Field 14 formats. Because an AIDC V2 or V3 ATS Unit will not be receiving these messages or formats from an AIDC V1 ATS Unit, this means that they will not send these error codes to an AIDC V1 ATS Unit.

Therefore AIDC messaging is also interoperable between an AIDC V2/V3 ATS Unit and an AIDC V1 ATS Unit.

2.10 The meeting is invited to note the operational data link working group of Communication Panel (CP) will be established to continue undertaking those pending tasks of OPLINK Panel. The first meeting of CP was held in Montreal in December 2014.

2.11 It was recommended that the target date for implementation of Pan regional ICD for AIDC (Version 1.0) would be as soon as possible. Any planned new ATM automated system should be capable of supporting Pan regional ICD for AIDC. This should be further addressed by this AIDC Task Force.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to

- a) note the information contained in this paper; and
- b) take any necessary action on the recommendations resulted from the AIDC Seminar.

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