INTERNATIONAL CIVIL AVIATION ORGANIZATION

Fourth Meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG4)

(Virtual, 31 August -3 September 2021)

Agenda Item 4 : *Update on the Regional Projects implementation*

WP4.2C - Title: Implementation of Air/Ground communication aimed at ensuring Air traffic control Progress Report

(Presented by South Africa - Nokuthula Phakathi)

SUMMARY
This working paper outlines the status of the project, indicate the challenges encountered by the team, possible recommendations and the documentation developed by the team; and Action by the meeting in paragraph 4.

REFERENCE(S):
▪ Global Air Navigation Plan (GANP) ▪ ICAO Annex 10 Volumes II & III Aeronautical Telecommunication ▪ Annex 11 Air Traffic Service ▪ Doc 4444 Procedures for Air Navigation Service ▪ Doc 9694 Manuel on Air Traffic Services Data Link Applications ▪ Doc 10037 Global Operational Data Link Document (GOLD) ▪ APIRG IIM SG/1, SG/2 and SG/3 Report
This working document relates to ICAO Strategic Objectives: A – Safety and B – Air Navigation Capacity and Efficiency.
KPIS and concerned ASBU B0 Modules: All applicable to CNS and Spectrum.

1. INTRODUCTION

1.1 During the APIRG Sub-Group on Infrastructure and Information Management (IIM / SG / 1) held in Nairobi, Kenya from 27 to 30 June 2017, the IIMSG Communication Project 3 was recommended as Communication project to assist with the implementation of Air/Ground communication aimed at ensuring Air Traffic Control within AFI region through:

a)   High Frequency/Very High Frequency (HF/VHF) voice Communication;

b)   High Frequency/Very High Frequency Data link communication (HF/VHF DL); and

c)   Controller/Pilot Data Link Communication (CPDLC**).**

1.2   The implementation is in accordance with the operational requirements of ICAO Annex 10 Volumes II & III Aeronautical Telecommunication, Annex 11 Air Traffic Service and the relevant supporting guidance documents

(Doc 4444 Procedures for Air Navigation Service (PANS--ATM) Doc 9694 Manuel on Air Traffic Services Data Link Applications, Doc 10037 Global Operational Data Link Document (GOLD).

1.3 All tasks are carried out by COM/ IT experts nominated by AFI States participating in the project, led by the Project-Team Coordinator and under the supervision of the Project Facilitators (ROs/CNS, Dakar and Nairobi) through the IIM SG working methodology.

1.4 The states were invited by ICAO via a letter reference ES AN 13/0-584 dated 14 August 2017, to appoint and notify the participation of its qualified experts in any of the 14 regional IIM project teams identified.

1.5 Rationale/Justification

1.5.1   HF/VHF Voice: The requirements for HF/VHF are contained in the AFI Air Navigation Plan (ANP), FASID TABLE CNS 2A (Aeronautical Mobile Service and Aeronautical Mobile Satellite service-AMS &AMSS and Stations circuits have been implemented in accordance with this AFI Air Navigation Plan. Significant improvements are noted, notably with the implementation of aeronautical satellite telecommunications. However, the non- availability of Remote VHF encountered from time to time results from the obsolescence of some VSAT Stations.

1.5.2   HF/VHF and Data Link: The regional requirements for HF/VHF Data Link remain to be updated by the project Team.

1.5.3   CPDLC: The introduction of datalink communication in the region associated with surveillance data processing systems with possible automation of the transfer and coordination of Air Traffic between air traffic Centres (AIDC) require an available digital air/ground communication system. The implementation of CPDLC will bring more accuracy in the exchanged messages and increase the availability of message exchanges between ATCOs and pilots. The regional implementation of the CPDLC remain to be updated by the project team.

1.6   This paper provides the progress made by the IIM SG COM 3 Air/Ground Communication project. It elaborates the achievements, challenges encountered by the team, possible recommendations and the documentation developed by the team attached as indicated below :

1.6.4.1   Annexure A : IIM COM 3 Project Deliverables and Status;

1.6.4.2   Annexure B : COM 3 Questionnaire Analyis Template;

1.6.4.3   Annexure C : The states AFI Air to Ground (A/G) implementation status;

1.6.4.4   Annexure D : Draft AFI HDL/VDL Manual/Guideline;

1.6.4.5   Annexure E: Draft AFI Communication Strategy – SWOT Analysis; and

1.6.4.6   Annexure F: Draft IIM COM 3 project costing template.

2   DISCUSSIONS

2.1 The IIMSG Communication Project 3 team, has been submitting the project deliverables to the IIM SG Chairman, Vice chairman and Secretariat as a final document for submission to, and if necessary, approval by the APIRG Projects Coordination Committee (APCC).

2.2 A project progress report is submitted to the IIM SG Chairman, Vice chairman and Secretariat indicating the project status, challenges, and possible recommendations.

2.3 The IIM Sub-Group teams were allocated tasks and expected deliverables as indicated in Annexure A.

2.3.1 The team has managed to complete all project planning documentations;

2.3.2 Developed the Questionnaire analysis template, attached as Annexure B;

2.3.3 Tracked the states AFI Air to Ground (A/G) implementation status, attached as Annexure C;

2.3.4 Commenced with the development of AFI HDL/VDL Manual/Guideline, attached as Annexure D;

2.3.5 Commenced with the development of AFI Communication Strategy, attached as Annexure E; and

2.3.6 Developing the project costing template, attached as Annexure F.

2.4 The last IIMSG Communication Project 3 progress meeting was on 12 July 2021 via MS Teams. The project meeting minutes and matters arising have been compiled.

2.5 The project team members have also been communicating via a WhatsApp group if required.

2.6 IIM COM 3 MS Team folder was created for project documentation ease of access and record purposes.

3   Implications

3.1 Project Team Experts Active Participation - AFI HDL/VDL Manual/Guideline development

3.1.1   The project teams are the foundation on the implementation of the APIRG plans and ensuring that Africa is not left behind. Its success is largely dependent on the project team members active participation, commitment, and experts in the work of the project team.

3.1.2 Due to various organization or State operational matters; some of the identified experts are not available to assist with the development of AFI HDL/VDL Manual/Guideline. It is requested that additional experts are appointed to assist with the development of AFI HDL/VDL Manual/Guideline.

3.2 Project questionnaire survey

3.2.1 The key challenge faced by the project is related to the project questionnaire survey and State responses. This will allow the team to track and report the AFI Air/Ground communication, between Pilots and ATCOs, Implementation status that will ensure all Airspaces and Air Traffic Control Centers involved in the provision of air avigation service for international civil aviation have required coverage.

3.2.2 We are pleased to report that the following states have submitted completed Questionnaire: Botswana, Ghana, Kenya, Seychelles and South Africa.

3.3   To improve on Communication and Coordination, a meeting program was developed as indicated below:

ITEM	OBJECTIVE	FREQUENCY/ DATE	MEDIA	OUTPUT
Kick-off meeting	1. To initiate project 2. To discuss and allocate task 3. Project documentation	27 February 2018	Teleconference	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	27 March 2018	Skype / Whatsapp	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	24 April 2018	Skype / Whatsapp	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	26 June 2018	Skype / Whatsapp	Minutes, Matters arising and Project Status report
IIM Sub-Group Meeting	To provide project progress to IIM Chairperson, Vice-Chair and Secretariat.	Once a year – ICAO Meeting	Formal meeting	IIM Sub-Group Report with Decisions and Conclusions.
Project progress meeting	To track project progress and deliverables as per last meeting.	03 December 2020	Microsoft Teams	Minutes, Matters arising and Project Status report

Project progress meeting	To track project progress and deliverables as per last meeting.	29 March 2021	Microsoft Teams	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	24 May 2021	Microsoft Teams	Minutes, Matters arising and Project Status report
IIM PTC meeting	To provide project progress to IIM Chairperson, Vice-Chair and Secretariat.	11 June 2021	Microsoft Teams	IIM Sub-Group Report with Decisions and Conclusions.
Project progress meeting	To track project progress and deliverables as per last meeting.	12 July 2021	Microsoft Teams	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	27 September 2021	Microsoft Teams	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	03 December 2021	Microsoft Teams	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	31 January 2022	Microsoft Teams	Minutes, Matters arising and Project Status report
Close-Out	Project Close-out meeting	25 March 2022	Microsoft Teams	Project Close-out Report and Minutes.

3.4   The project deliverables dependencies are listed below with comments. The deliverables status is attached as Annexure A:

NO	DESCRIPTION (DELIVERABLE)	DEPENDENCY
1	Monthly Implementation Status report of HF &VHF stations (Voice & data Link)	Projects questionnaires sent to States / Organizations and their response.
2	Monthly Implementation/Operation status of CPDLC Circuits	Projects questionnaires sent to States / Organizations and their response.
3	Monthly Implementation/sharing and operation of Remote VHF and HF systems	Projects questionnaires sent to States / Organizations and their response.
4	Develop HF DL and VHF DL States Requirement Manual / Guidance	Team Participation and Inputs, in the development of HF DL and VFD FL states requirement manual / guidance.
5	Develop AFI Communication Strategy	Team Participation and Inputs, in the development of AFI Communication Strategy
6	Develop project costing template	Team Participation and Inputs, in the development of project costing template

3.5 Outlook for the next reporting period:

3.5.1   Questionnaire survey analysis report;

3.5.2   AFI Air to Ground Implementation status report;

3.5.3   HF DL and VDL States Requirement Manual / Guidance;

3.5.4   AFI Communication Strategy; and

3.5.5   Project costing document.

4   ACTIONS BY THE MEETING

4.1   The meeting is invited to :

a)   Take note of the progress made so far regarding the IIMSG Communication Project 3 deliverables and challenges;

b)   Encourage State participation in the AFI region projects; and

c)   Submit projects Questionnaires responses.

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