INTERNATIONAL CIVIL AVIATION ORGANIZATION

Third Meeting of APIRG Infrastructure and Information Management Sub Group (IIM/SG/3)
(Virtual Meeting, 12-14 October 2020)

Agenda Item 4: Status of implementation of the AFI IIM regional projects adopted by APIRG
 4.3 *Aeronautical Communication Navigation Surveillance and Spectrum Infrastructure and Systems*

COM Project 3: *Implementation of Air/Ground communication (HF/VHF voice data, CPDLC)*

(Presented by South Africa)

SUMMARY
This paper provides the update on the progress made in the IIM SG COM 3 Air/Ground Communication project. It elaborates the achievements, challenges encountered by the team and possible recommendations. The IIM SG COM 3 project encompass a clear project objective, planning and deliverables. **Action by the meeting is at paragraph 3**
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 and SG/2 Report
Related ICAO Strategic Objective (s): A – Safety and B – Air Navigation Capacity and Efficiency **Related ASBU KPIs & 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   Subsequently, the following project team members, as indicated below in Table 1, were identified to form part of the team that will perform the activities for the Air to Ground communication Project 3.

Table 1: IIM SG COM 3 project team members:

STATE	NAME	ROLE and RESPONSIBILITY
South Africa	Name: Nokuthula Phakathi Email: nokuthulap@atns.co.za Cell: +27 82 748 2140	Project-Team Coordinator
ASECNA	Name: Sibitang Mingo Aladjou Email:sibitangmingoala@asecna.org Cell: +221774936867	Project Team Member
Botswana	Name: Samuel Mbaakanyi Email:smbaakanyi@caab.co.bw Cell: +26772277905	Project Team Member
	Name: G Pule Email:gpule@caab.co.bw Cell: +26773850986	Project Team Member
Cameroon	Name: Email: Cell:	Team member still to be appointed
Côte d'Ivoire	Name: GNASSOU SANDRINE Email: sgnassou@anac.ci Cell: 00 225 89 84 14 70	Project Team Member
Ghana	Name: Isaiah Tefutor Email: itefutor@gcaa.com.gh Cell: +233 244 221 092	Project Team Member
IATA	Name: Seda Protus Email: sedap@iata.org Cell: +27 71 687 5948	Project Team Member
ICAO FISS	Name: Email: Cell:	
Kenya	Name: Erick Meli Email:erickmeli@kcaa.or.ke Cell: 254 (0) 722791817	Project Team Member
Mauritania	Name:	Team member still to be appointed

	Email: Cell:	
Nigeria	Name: Otitolaye Johnson Email:jotitolaye@nama.gov.ng Cell: +2348033442043	Project Team Member
Senegal	Name: Email: Cell:	Team member still to be appointed
Seychelles	Name: Pitter Elizabeth Email:pelizabeth@scaa.sc Cell:	Project Team Member
	Name: David Confait Email:dconfait@scaa.sc Cell:	Project Team Member
Togo	Name: KELEWOU Gnimdou Email: g.kelewou@anac-togo.tg Cell: +22896720604	
Uganda	Name: David Macho Email: dmacho@caa.co.ug Cell: +256 78 206 8680	

1.6   Rationale/Justification

a.   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.

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

c.   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.

1.7   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 and possible recommendations.

2. DISCUSSION

2.1   The IIMSG Communication Project 3 was initiated on 27 February 2018 via a Teleconference; the project meeting minutes and matters arising were submitted to the IIM SG Chairman, Vice chairman and Secretariat.

2.2   **Project Deliverables**

2.2.1   The initial project deliverables as indicated below in Table 2 were all completed; and submitted to the IIM SG Chairman, Vice chairman and Secretariat as a final document on 28 May 2018 for submission to, and if necessary approval is required by the APIRG Projects Coordination Committee (APCC).

Table 2: IIM SG COM 3 initial allocated tasks

INITIAL PROJECT DELIVERABLES	PLANNED DELIVERY DATE	REVISED DELIVERY DATE	OBJECTIVES
Project team coordinators and experts appointment finalization	31/11/2017	31 May 2018	
Project Organisation / Plan	31 December 2017	31 May 2018	To outline the tasks for the project organization and coordination
Project Description	31 December 2017	31 May 2018	To provide a description of the project
Project Terms of reference	31 December 2017	31 May 2018	
Project Linkage	31 October 2017	31 May 2018	Collaborative Decision Making (CDM)
Project Progress Report	After each meeting		To enable the Chair/Vice Chair and the Secretariat to monitor the progress of the project team

2.2.1 The remaining IIM Sub-Group Communication Project 3 deliverables and progress made is indicated in the attached Appendix.

2.3   Coordination and communication is key in project management to meet the project deliverables, set the goals, be realistic on time and adjust where need. The team experienced technical network connectivity challenges (via Teleconference, GoToMeeting, Skype) thus a decision to communicate via WhatsApp was taken.

2.4 To improve on Communication and Coordination, a project meeting program and plan was developed as indicated below in Table 3 and 4.

2.4.1   Project Meeting Program

The IIM Sub-Group Com 3 project meeting program was developed as per below Table 3; however, it has been revised due to unforeseen project delays:

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.	~~24 July 2018~~ 30 November 2020	Teams / Whatsapp	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	~~24 November 2018~~ February 2021	Teams / Whatsapp	Minutes, Matters arising and Project Status report
Project progress meeting	To track project progress and deliverables as per last meeting.	~~Quarterly (2019)~~ May 2021	Teams / Whatsapp	Minutes, Matters arising and Project Status report
Close-Out	Project Close-out meeting	~~2019~~ March 2022	Teams / Whatsapp	Project Close-out Report and Minutes.

2.4.2 **Project Planning**

Table a below, provides the project planning milestone, achievements and dependency:

No.	MILESTONE	START DATE	END DATE	DEPENDENCY	RESPONSIBLE STATE
1	**Project Initiation/Kick-off**	28 Feb 2018	28 Feb 2018 (100%)	Team members availability	Project Team Members
2	**Finalise Project Description**	1 March 2018	23 March 2018 (100%)	Project Team Inputs	South Africa
3	**Develop Project Terms of Reference**	1 March 2018	18 May 2018 (100%)	Project Team Inputs	Seychelles
4	**Develop Project Plan**	1 March 2018	18 May 2018 (100%)	Project Team Inputs	South Africa
5	**Finalise Link between projects**	1 March 2018	18 May 2018 (100%)	Project Team Inputs	All
6	**Project Questionnaire Finalization**	1 March 2018	16 March 2018 (100%)	Project Team Inputs	ASECNA
7	**Monthly Implementation Status report of HF &VHF stations (Voice & data Link)**	1 August 2018	~~2019~~ 2022 (1%)	- ICAO questionnaire sent to States - States participation	All AFI States
8	**Monthly Implementation/Operation status of CPDLC Circuits**	*1 August 2018*	~~2019~~ 2022 *(1%)*	- ICAO questionnaire sent to States - States participation	All AFI States
9	**Monthly Implementation/sharing and operation of Remote VHF and HF systems**	*1 August 2018*	~~2019~~ 2022 *(1%)*	- ICAO questionnaire sent to States - *States participation*	All AFI States
10	**Develop HF DL and VHF DL States Requirement Manual / Guidance**	1 July 2018	~~2019~~ 2022 *(0%)*	- Task lead to be appointed -Team Participation and Inputs to the Framework	Task lead to be appointed

2.4.3   It should be noted that only Seychelles has responded to the Questionnaire and provided Implementation status.

2.4.4   The overall IIM Sub-Group Com 3 project is behind schedule due to lack of Information and State responses.

2.5   **Challenges**

2.5.1   **Project questionnaire survey**

2.5.1.1 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.

2.5.1.2 It is requested that ICAO distribute the project questionnaire survey and State respond on or before 31 March 2021.

2.5.2   **Project Team Experts Verification**

2.5.2.1 Due to various organization or State structural changes; some of the identified experts are no longer available to assist with project deliverables.

The states experts should be verified; confirm their availability and validity of the experts to ensure effective participation of their representatives to the activities of the IIM Sub-Group on or before 31 March 2021.

2.5.3 **Effective Project Management**

2.5.3.1 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 management to track participation, commitment, identify issues, risks and mitigation plans.

2.5.3.2 There is a lack of effective project management and it should be addressed.

2.5.3.3 An AFI IIM Sub-Group Project master schedule should be developed, if not already done; and progress report disseminated to Administrations/Organizations on a Quarterly basis.

2.7   **Outlook for the next reporting period:**

2.7.1   Review the project baseline questionnaire survey and sent to AFI States by 30 November 2020;

2.7.2   Conduct project questionnaire survey until 31 March 2021;

2.7.3   Project progress meeting and report; and

2.7.4   Draft HF DL and VHF DL States Requirement Manual / Guidance Framework.

3   ACTION BY THE MEETING

3.1   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) Complete all the projects Questionnaires of the IIM Sub-group projects for dissemination to Administrations/Organizations.

3.2   **Draft Conclusion/Decision 3/xxxx**: *Effective and efficient participation/coordination of Administrations in the IIM Projects activities*

That;

a)   States verify the participation of their qualified experts by 31 March 2021;

b)   Secretariat to distribute the project questionnaire survey and State respond on or before 31 March 2021; and

c)   Develop the AFI State master schedule to track all the IIM Projects activities; and progress report disseminated to Administrations/Organizations on a Quarterly basis.

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