PROJECT: AIR/GROUND COM PROJECT

Coordinator: South Africa
DOMAIN: IIM
(Infrastructure & Information Management)

AFI REGION	PROJECT DESCRIPTION	REFERENCE IIMSG / Area of Routing # All	
Sub-domain	Title of the Project	Start	End
Aeronautical Communication (COM) (ICAO Facilitator: *WACAF/ESAF ROs/CNS*	**GROUND/GROUND COMMUNICATION :** Implementation of Air/Ground communication aimed at ensuring Air traffic control **Project-Team Coordinator**: *South Africa* **Project Team Experts (13):** *Côte d'Ivoire, Cameroon, Ghana, Seychelles, Senegal, Kenya, Mauritania, ASECNA, IATA, Nigeria, Botswana, Togo, a, Uganda*	Month/ Year	Month/ Year
Objectives	In the framework of the technologies Roadmap for Communication defined in the GANP and the AFI strategy assist States in the implementation of Aeronautical Mobile Service through : a) High Frequency/Very High Frequency (**HF**/**VHF**) voice Communication b) High Frequency/Very High Frequency Data link communication (**HF/VHF DL**) c) Controller/Pilot Data Link Communication (**CPDLC**) 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**)		
Scope	The provision of air/ground communication between Pilots and ATCOs will cover all Airspaces and Air Traffic control Centers involved in the provision of air avigation service for international civil aviation. The implementation scheme will be in accordance with the requirements of the provision of Aeronautical mobile Service (AMS) as defined by the AFI Air Navigation Plan (AFI/RAN Abuja 1997).		

Metrics	a) **HF/VHF Voice & Data Link:**
	
	 Number of Routes covered by HF/VHF communication : **X**
	    - *Average availability of HF/VHF voice : X%*
	 Number of HF/VHH DL station implemented
	    - *Average availability of HF/VHF DL : X%*
	 b) **CPDLC:**
	     ▪ Number of ATCs with CPDLC systems installed: **X**
	     ▪ *Average availability of CPDLC Links : X%*		

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Outcome	Air/Ground communication supporting enhanced aeronautical operational safety, capacity and efficiency		
Strategy	All tasks will be carried out by COM 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. Upon completion of the tasks, the results will be sent to the Project Facilitators as a final document for submission to, and if necessary approval by the APIRG Projects Coordination Committee (**APCC**). For the purpose of collaborative decision-making, meetings will be held with the areas involved.		
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 technologies. 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 centers 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.		
Related Projects	All APIRG projects specifically related to: ✓ PIA1-Improve Traffic flow through Runway Sequencing (AMAN/DMAN)- **B0-RSEQ** ✓ PIA1-Increased Runway Throughput through optimized Wake Turbulence Separation **- B0-WAKE** ✓ PIA1- Improved Airport Operations through Airport – **B0-ACDM** ✓ PIA2- Service Improvement through Digital Aeronautical Information Management- **B0-DIAM** ✓ PIA2-Meteorological information supporting enhanced operational efficiency and safety- **B0- MET** ✓ PIA3-Air Traffic Situational Awareness(ATSA)- **B0- ASEP** ✓ PIA3-Improved Operations through Enhanced En-Route Trajectories- **BO-FRTO** ✓ PIA3-Improved flow performance through planning based on Network-wide view- **B0-NOPS**. ✓ PIA3- Improved access to optimum Flight levels through Climb/Descent Procedures using ADS-B- **B0-OPF**		

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	✓ PIA4- Improved Safety and Efficiency through the initial application of Data Link En-Route- **B0-TBO**. ✓ PIA4-Improved flexibility and Efficiency in Decent provides (CDO) - **B0-CDO.** ✓ PIA4-Improved Flexibility and Efficiency Departure profiles-Continuous Climb Operations (CCO)-**B0-CCO**		

Project Deliverables	Relationship with the Regional Performance-Objectives (RPOs/PFFs) and ASBU Modules	KPI	Responsible	Status of Implementation[1]	Date of Delivery	Comments
HF/VHF/CPDLC						
Implementation of HF &VHF stations (Voice & data Link)	**AFI B0-ASEP AFI B0-FRTO AFI B0-CDO AFI B0-CCO PFF-CNS**		✓ AFI COM Project Coordinators ✓ AFI COM Project Team Leader	(green)	December 2019	
Implementation/Operation of CPDLC Circuits	**AFI B0-ASEP AFI B0-FRTO AFI B0-CDO AFI B0-CCO. PFF-CNS**		✓ AFI COM Project Coordinators ✓ AFI COM Project Team Leader	(red)	December 2019	
Teleconferences, Workshops/Seminars, meetings (French and English) on VHF/CPDLC systems operation and their implementation scheme	**AFI B0-ASEP AFI B0-FRTO AFI B0-CDO AFI B0-CCO PFF-CNS**		✓ AFI COM Project Coordinators ✓ AFI COM Project Team Leader	(grey)	TBD	
Implementation/sharing and operation of Remote VHF systems	**AFI B0-ASEP AFI B0-FRTO AFI B0-CDO AFI B0-CCO PFF-CNS**		✓ AFI COM Project Coordinators ✓ AFI COM Project Team Leader	(grey)	TBD	

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Assessment/Reporting on the operation of Air ground communication systems and operation	**AFI B0-ASEP** **AFI B0-FRTO** **AFI B0-CDO** **AFI B0-CCO** **PFF-CNS**		✓ AFI COM Project Coordinators ✓ AFI COM Project Team Leader	TBD	
Detailed guidance provided to States not complying with the AFI AMS Plan	**AFI B0-ASEP** **AFI B0-FRTO** **AFI B0-CDO** **AFI B0-CCO** **PFF-CNS**		✓ AFI COM Project Coordinators ✓ AFI COM Project Team Leader	TBD	
List of States with VHF and CPDLC , implemented	**AFI B0-ASEP** **AFI B0-FRTO** **AFI B0-CDO** **AFI B0-CCO** **PFF-CNS**		✓ AFI COM Project Coordinators ✓ AFI COM Project Team Leader	TBD	
Resources needed	✓ Adequate human resources to be appointed by States ✓ Funds to conduct meetings, Workshops, Seminars Missions and to translate reports, regional guides and manuals. Likewise, participants must be given facilities to participate in teleconferences and coordination meetings. ✓ Funds for meetings with project Team Members in order to assess the results and propose corrective actions. States could use their human resources to conduct the foreseen COIM tests and monitoring, and, if necessary, cover the financial costs, since the experience gained will result in an improvement of their own systems.				

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Grey   Task not started yet
Green   Activity being implemented as scheduled
Yellow   Activity started with some delay, but will be implemented on time
Red   Activity not implemented on time; mitigation measures are required