DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
Group A tasks – State/region preparation						
A-1	AIP – Prescription of an RCP/RSP specification	AFI APIRG Sub-group	2 AIRAC cycles prior	*Prescribe the appropriate RCP/RSP specification in the AIP (or equivalent publication). If applicable, common AIP language may be based on a bilateral, multilateral or regional air navigation agreement.* Amend AIPs and other State Documents Applicable Airspace: (Insert as applicable; eg. FSIA) ATM operation: Application of 5-min longitudinal separation minimum Applicable Sector: (Insert as applicable – Enroute or Terminal) To authorized operators (To be coordinated with ATM) Communications: FANS1/A CPDLC-RCP 240 Surveillance; FANS1/A ADS-C – RSP180	Chapter 3	PENDING - Awaiting Implementation Action

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
A-2	ANSP – PBCS policies, objectives supporting safety oversight	DASSR and AFI APIRG Sub-group	AFI APIRG PBCS project team (TBD)	*Identify means to apply RCP/RSP specifications and compliance criteria for initial approval and continued compliance, including:* *a) ATS provision requirements, and requirements for ATS unit's system and CSP/SSP service agreements, if applicable;* *b) flight plan requirements; and* *c) monitoring, alerting and reporting requirements.* Develop policies and guidance materials for Operators, States and ANSPs Establish a safety oversight program to ensure the compliance of the ANSP and Operators with the RCP/RSP specifications: Provide guidance and materials for operators in accordance with section 4.4 of Doc 9869 Create regional standardized processes for monitoring, alerting and reporting requirements	Chapter 4 Section 4.2.1 Section 4.2.2	PENDING - Awaiting Implementation Action

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
A-3	Operator and aircraft system – PBCS policies, objectives supporting safety oversight	DASSR and AFI APIRG Sub-group	2 ARAC cycles prior	*Identify means to determine aircraft operator eligibility requirements for PBCS operations, including requirements for operations, maintenance, aircraft system and CSP/SSP service agreements, if applicable:* *a) establish State airworthiness requirements;* *b) establish operational policy/procedures requirements for operational approval;* *c) prepare State inspectors to perform tasks for operational approval;* *d) develop plan to issue operational approval to national operators. Train pilots and, if applicable, dispatchers on PBCS operations; and* *e) develop and distribute operations manuals, pilot bulletins or other appropriate documents containing PBCS policy and/or procedures.* *<u>Note</u>.— State of the Operator identifies means for commercial air transport operations. State of Registry identifies means for general aviation operations. State of Design identifies means for design approval of the aircraft system.* Production of common AC for approval Conduct familiarization and training of Airworthiness Inspectors	Chapter 4 Section 4.2.1 Section 4.2.3	PENDING - Awaiting Implementation Action
A-4	*Regional Supplementary Procedures* (Doc 7030) for PBCS operations, if applicable	Manager ATS and AFI APIRG Sub-group	Feb 2018	*On behalf of a region, a State may develop a proposed amendment to the Regional Supplementary Procedures (Doc 7030), if applicable.* Regional doc 7030 amendment by ICAO office		
Group B tasks – ANSP general project development and management						

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
B-1	PBCS Implementation Plan	DANS and AFI APIRG Sub-group	Jan 2018	*Establish PBCS implementation team and prepare a plan outlining the tasks for PBCS implementation. Include interdependencies between tasks, when each task is to be completed, lead point of contact and any coordination required.* To establish AFI PBCS Implementation Project Team and allocate tasks and sub-tasks	State/region specific, Appendix A serves as a guide.	PENDING - Awaiting Implementation Action
B-2	Target dates for PBCS and relevant ATM operations	DANS and AFI APIRG Sub-group	Feb 2018	*Identify key target dates for implementing PBCS supporting specified ATM operation(s) and the tasks identified in the plan.* To ensure that ATS Systems comprises of communication services, procedures, personnel training and communication, and service provision approval by xxx date* The establishment of local and regional PBCS monitoring programs by xxx date* Notification of ATM Operations related aircraft operator requirement, including compliance with appropriate RCP and RSP specifications by xxx date* *Dates to be set at AFI APIRG/21	Section 4.3.1	

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
B-3	RCP/RSP specifications	DASSR and AFI APIRG Sub-group		*Identify and confirm applicable RCP/RSP specifications that will be used for operational implementation of communication and surveillance capabilities supporting specified ATM operation(s). Existing RCP/RSP specifications may be appropriate for a new ATM operation predicated on RCP/RSP specifications (e.g. application of performance-based separation minimum), or when implementing an emerging technology to provide a communication or surveillance capability (e.g. SATVOICE) supporting an existing ATM operation. If a new RCP or RSP specification is needed, establish a task to coordinate with ICAO on the development of the appropriate RCP/RSP specifications for update to Doc 9869.* Communication: FANS1/A CPDLC –RCP 240 Surveillance: FANS 1/A ADS-C –RSP 180	Chapter 3 Appendix B Appendix C	PENDING - Awaiting Implementation Action
B-4	PBCS awareness	DANS and AFI APIRG Sub-group	continues	*Establish means to raise awareness on PBCS implementation in a particular region or airspace through workshops and distribution of information. Establish a planning team to work with ICAO and subject matter experts to develop relevant material.* Organise and Conduct PBCS workshops on a regional level to share information with key stakeholders, especially states, ANSP, CSP and airline operators At the National level – conduct information campaign for airspace users To make use of various modern communication means to disseminate awareness information such as emails, web base applications, social media and information bulletins. For states & ANSPs to provide subject matter experts to actively participate in the AFI PBCS Implementation Project Team	This manual Doc 10037 Doc 10038	PENDING - Awaiting Implementation Action
Group C tasks – ANSP implementation activities – ATS service provision						

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
C-1	Operational concepts and procedures for PBCS operations	DANS and AFI APIRG Sub-group	Feb 2018	*Develop operational concepts for implementation of any ATM operation predicated on an RCP/RSP specification. Consider the following:* *a) applicable ATM operation(s);* *b) relevant interoperability requirements for communication and surveillance capabilities;* *c) provision for PBCS operations and appropriate RCP/RSP specifications;* *d) operating procedures for PBCS operations;* *e) operator/flight/flight crew and/or ATS unit/controller contingency procedures when system degrades below that required by RCP/RSP specifications; and* *f) procedures for resuming specified ATM operation(s) after system is restored to an acceptable level of performance.* ATM operation: Application of separation minimum to authorized operators CONOPS Use GOLD Manual to define interoperability standards for CPDLC and ADS-C and SVOM for SATVOICE Communication: FANS1/A CPDLC –RCP 240 Surveillance : FANS 1/A ADS-C –RSP 180 Develop guidance materials outlining operating procedures Develop contingency procedures Develop and publish relevant procedures	This manual Doc 10037 (GOLD Manual) Doc 10038 (Satellite Voice Manual)	PENDING - Awaiting Implementation Action

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
C-2	ATC automation changes to use flight plan RCP/RSP indicators	DANS and AFI APIRG Sub-group	Feb 2018	*Implement changes to recognize and use flight plan RCP/RSP indicators to apply ATM operation(s) predicated on the RCP/RSP specifications only to eligible operators/aircraft, and/or adapt other system parameters, if applicable (e.g. set timer threshold values), based on different performance levels.* *This task should be complete prior to operational implementation of ATM operation(s) predicated on RCP/RSP specifications.* Audit the ATC automation system to establish if it can accommodate the use of flight plan RCP/RSP indicators. If not have it upgraded by Jan. 2018	Chapter 4 Section 4.4	PENDING - Awaiting Implementation Action
C-3	ATC automation changes for PBCS monitoring	DANS and AFI APIRG Sub-group	Jan 2018	*Implement post-implementation monitoring capability in ATC automation.* *This task should be completed to obtain a sufficient sample to confirm ACP and ASP comply with RCP/RSP specifications prior to implementation of specified ATM operation(s).* Audit the ATC automation system to establish whether it can provide PBCS monitoring information. This information is ACP and ASP for CPDLC-flight crew-initiated log files for different media paths using all transactions requiring a response. If ATC automation system cannot provide PBCS Monitoring, then it needs to be upgraded by date xxx to provide such capabilities. Else ACP and ASP information needs to be extracted from ATC Automation system, convert into standard xxx format and use PBCS Monitoring tool such as GPAT and/or Airways New Zealand.	Chapter 4 Section 4.5 Appendix D Appendix E	PENDING - Awaiting Implementation Action

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
C-4	Confirm initial ANSP compliance with RCP/RSP specifications	DASSR and AFI APIRG Sub-group	Jan 2018	*Prior to operational implementation, confirm CPDLC and ADS-C comply with RCP/RSP specifications:* *a) measure actual performance against RCP/RSP specifications for compliance to support initial approval of ATS provision, including CSP/SSP service agreement, if applicable;* *b) identify any aspect of service performance that is not compliant with the RCP/RSP specifications; and* *c) take appropriate action to mitigate.* To implement. Record ACP/ASP and compare with standards using PBCS Monitoring tools. To identify after analysing ACP and ASP records. Define mitigation requirements	Chapter 4 Section 4.2.2 Section 4.3.1 Section 4.3.2 Appendix D Appendix E	PENDING - Awaiting Implementation Action
Group D tasks – Aircraft operator, Aircraft type/system (airworthiness) eligibility						
D-1	Aircraft operator readiness	DAO and AFI APIRG Sub-group	Feb 2018	*Satisfy operator eligibility requirements for PBCS operations that are established by the State of the Operator or State of Registry in Task A-3. This includes requirements for flight crew training and qualification, operations, maintenance, aircraft system and CSP/SSP service agreements.* Operators need to familiarize with Section 4.2.3, 4.3.2 & 4.3.3. Operators need to ensure that all requirements from 4.3.4 are met	Chapter 4 Section 4.2.3 Section 4.3.2 Section 4.3.3 Section 4.3.4	PENDING - Awaiting Implementation Action

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
D-2	Confirm initial operator and/or aircraft type/system compliance with RCP/RSP specifications	DAO and AFI APIRG Sub-group	Feb 2018	*Prior to operational approval, confirm CPDLC and ADS-C aircraft equipment and operator capabilities comply with RCP/RSP specifications:* *a) measure actual performance against RCP/RSP specifications for compliance to support initial approval of operator, including aircraft system approval and CSP/SSP service agreement, if applicable;* *b) identify any aspect of aircraft type/system and/or capability performance that is not compliant with the RCP/RSP specifications; and* *c) take appropriate action to mitigate.* Operator compliance with specifications outlined in Section 4.3.2 (CSP) and 4.3.3 (Aircraft System) a. Obtain actual data on performance of aircraft system b. Obtain actual data on performance of the CSP service agreement c. Compare actual performance of aircraft system with required performance of aircraft system d. Compare actual performance by current CSP service agreement to new CSP service agreement e. Take corrective action.	Chapter 4 Section 4.2.3 Section 4.3.2 Section 4.3.3 Section 4.3.4	PENDING - Awaiting Implementation Action
Group E tasks – All stakeholders – post-implementation monitoring						

DRAFT GUIDELINES FOR PBCS IMPLEMENTATION FOR AFI STATES, ANSPS AND AIRCRAFT OPERATORS

Task ID	Task Descriptor	Lead	Complete Date	Task Detail	Reference(s)	Status
E-1	PBCS monitoring – post-implementation	DANS and DAFI MRA and AFI APIRG Sub-group	May 2018	*On-going post-implementation data collection, monitoring, problem reporting and tracking, analysis and corrective action.* *When performance falls below specified levels, or problems are reported, operational judgment may be a consideration in determining appropriate actions.* ANSP to implement Section 4.5, with additional guidance materials from Appendix D & E. ANSPs to collect, record and analyse information on a national level as part of a local PBCS Monitoring Program ANSPs to report problems to the regional PBCS Monitoring Agency The AFI PBCS Monitoring Regional Agency to investigate and solve problems. The AFI PBCS Monitoring Regional Agency to share data & experience with other Regional Monitoring Agencies ANSPs to implement contingency procedures developed.	Chapter 4 Section 4.5 Appendix D Appendix E Doc 9937 Doc 10067	PENDING - Awaiting Implementation Action

DANS = Director Air Traffic Services

DAFIMRA = Director African Monitoring Regional Agency

DAO = Director Airlines Operations

DASSR = Aviation Safety Standards and Regulation

Note: Nomenclatures may differ for different States, ANSPs and Operators