CIVIL AVIATION AUTHORITY OF VIETNAM

ADVISORY CIRCULAR
AC 10-021

PROCESS AND APPLICATION: PERFORMANCE BASED COMMUNICATION AND SURVEILLANCE

SECTION 1 POLICY & GENERAL INFORMATION

1.1 PURPOSE

The purpose of this advisory circular (AC) is to provide guidance to aircraft operators regarding the—

1) International standards for Required Communications Performance (RCP);
2) International standards for Required Surveillance Performance (RSP); and.
3) Requirement to have CAAV approvalfor such operations.

Performance-based communications and surveillance (PBCS) is now an ICAO global standard for operators, with emphasis on reduced separation oceanic and remote environments.

This AC also explains the basic principles of PBCS and the way it relates to the flight planning and operations.

1.2 STATUS OF THIS AC

This revision is [1]2020 of this AC.

1.3 BACKGROUND

A. In 2007, the ICAO published Standards in Annex 6 (Part I and Part III) and Annex 11 establishing the requirement for operators to receive approval by the State of the Operator before operations in airspace where designated RCP type was prescribed.

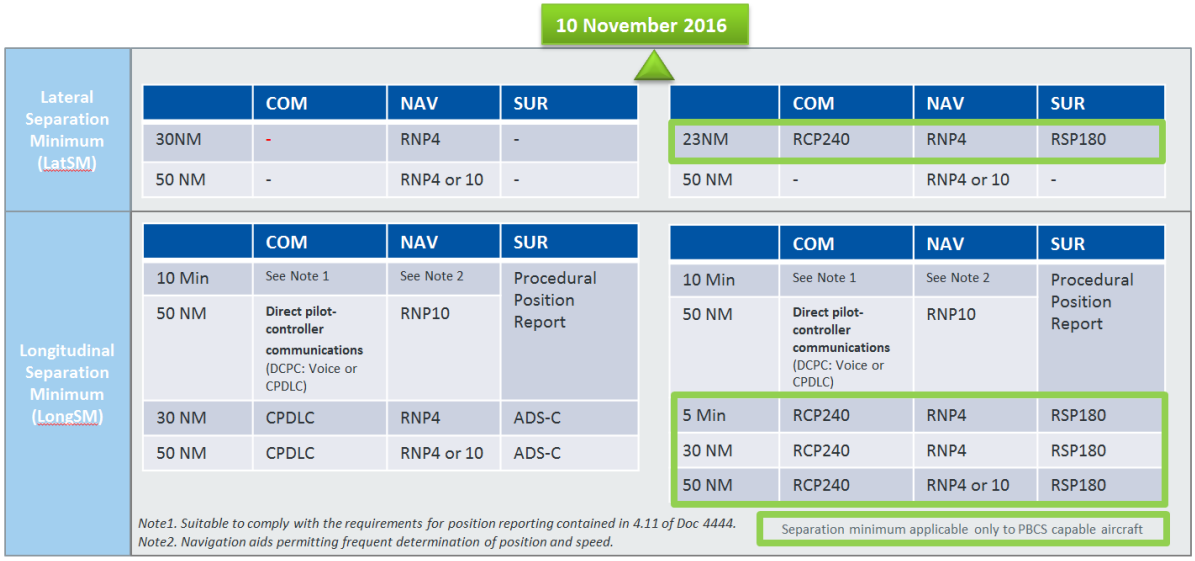
B. In 2016, the ICAO revised Standards in Annex 6 (Part I, II and Part III) and Annex 11 by extending the scope to the requirement for operators to receive approval by the State of the Operator before operations in airspace where designated RSP specification has been prescribed, to provide the operational, functional, safety and performance criteria for surveillance capability.

C. The requirement is that, for flights in defined portions of airspace or on routes where an RCP and RSP type has been established, the aircraft will have communication and surveillance equipment's which will enable it to operate in accordance with the prescribed RCP and RSP specifications. The operator must be authorized by the State of the Operator for operations in such airspace.

D. As of 10 November 2016, certain separation minima shall be applied only to those pairs of aircraft meeting required communication performance (RCP) and a required surveillance performance (RSP) specification. Amendment 7 to the ICAO PANS-ATM (Doc 4444) made

- Advisory Circulars are intended to priovide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.
- Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material,
- ACs should always be read in conjunction with the referenced regulations.

changes to the 30NM lateral and 30NM/50NM longitudinal separation standards and introduced a new time-based longitudinal separation as described in in Figure below:



E. The Asia and the Pacific (APAC) and North Atlantic (NAT) regions, which had applied 30NM lateral and 30/50 NM longitudinal separation minimum, agreed to transition to the implementation of these new requirements from 29 March 2018 in part of their airspace.

F. The previous version of this AC was taking into consideration the Performance-Based Communication and associated RCP specification only. The AC has also been renamed to consider the Performance-based communications and surveillance (PBCS) framework.

1.4 APPLICABILITY

The requirement for CAAV authorization before conducting operations in areas requiring RCP and RSP specifications for ATC purposes applies to operators of Vietnam-registered aircraft involved in general aviation, aerial work and commercial air transport.

Vietnam operators without ADS-B approval may not operate aircraft in areas requiring ADS-B for ATC separation.

1.5 RELATED REGULATIONS

- Part 6 – Required Instruments and Equipment
- Part 10 – Operations of Aircraft
- Part 12 – AOC Certification and Administration

1.6 RELATED PUBLICATIONS

These publications are source documents for this advisory circular—

1) Civil Aviation Authority of Vietnam (CAAV)
   - ♦ AC 10-009, Application & Process: Performance-Based Navigation
   - ♦ AC 10-011, Application & Process: Required Communications Performance
   - ♦ AC 10-013, Application & Process: Application for Data Link Communications
2) International Civil Aviation Organization (ICAO)

- Annex 6, Part I, International Commercial Air Transport – Aeroplanes
- Annex 6, Part II, International General Aviation - Aeroplanes
- Annex 6, Part III, International Operations – Helicopters
- Annex 11, Air Traffic Services
- Doc 4444, Air Traffic Management
- Doc 9869 – Performance-Based Communication and Surveillance (PBCS) Manual
- Doc 10037, Global Operational Data Link (GOLD) Manual
- ICAO Operational Authorization Guide Performance-based Communication and Surveillance (PBCS)

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

3) European Aviation Safety Agency (EASA)

- AMC 20-24, Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance Application via 1090 MHZ Extended Squitter.

4) United States Federal Aviation Administration (US-FAA)

- AC 20-165(), Airworthiness Approval of Automatic Dependent Surveillance - Broadcast OUT Systems
- AC 20-140(), Guidelines for Design Approval of Aircraft Data Link Communication Systems Supporting Air Traffic Services (ATS)
- AC 90-117(), Data Link Communications

5) Civil Aviation Safety Authority of Australia (CASA)

- Appendix XI of Civil Aviation Order 20.18

6) Other publication

- RTCA DO-306 / EUROCAE ED-122, Safety and Performance Standard for Air Traffic Data Link Services in Oceanic and Remote Airspace (Oceanic SPR Standard)

1.7 DEFINITIONS & ACRONYMS

1.7.1 DEFINITIONS

The following definitions are used in this advisory circular and may differ from definitions contained in other references—

1) **Aeronautical Telecommunication Network Baseline 1 (ATN B1).** ATN B1 generally means that the data link system on an aircraft, the Air Traffic Services Unit (ATSU) ground system, and communication service provision comply with the standard as adapted by Eurocontrol Specification on Data Link Services (EUROCONTROL-SPEC-0116). ATN B1 consists of the following data link applications:

   (i). Context Management (CM) for data link initiation capability (DLIC); and

   (ii). Limited Controller Pilot Data Link Communications (CPDLC) for Air Traffic Service (ATS) Communications Management (ACM), ATS clearance (ACL), and ATC Microphone Check (AMC)

2) **Automatic Dependent Surveillance Broadcast (ADS-B).** ADS-B is an advanced surveillance technology where ADS-B Out equipped aircraft share position, altitude, velocity, and other information with ATC and other appropriately equipped aircraft.

3) **Automatic Dependent Surveillance – contract (ADS-C)** is a means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying the conditions under which ADS-C reports would be initiated, and the data that would be contained in the report.

4) **Communication Service Provider (CSP).** Any public or private entity providing communication services for general air traffic. This would include services provided by a satellite service provider (SSP) through a contract or agreement.

5) **Controller-Pilot Data Link Communications (CPDLC)** is a means of communication between controller and pilot, using data link for ATC communications.

6) **Future Air Navigation System (FANS 1/A).** FANS 1/A generally means that the data link system on an aircraft, the ATSU ground system, and communication service provision comply with the standard. In certain cases, specific reference is made to a particular type of FANS 1/A aircraft as follows:

   (i). FANS 1/A+ means that the aircraft completely complies with Revision A of the standard, which includes message latency monitor; and

   (ii). FANS 1/A ADS-C means that the aircraft complies with ATC Facilities Notification (AFN) and ADS-C applications, but does not include the CPDLC application.

7) **Required Communication Performance (RCP)** is a means by which a specification defines performance requirements associated to a communication transaction.

Note: See International Civil Aviation Organization (ICAO) Doc 9869 and Appendix B of Global Operational Data Link Document (GOLD) document for RCP specifications.

Note: The term RCP, defined by ICAO as "a statement of performance requirements for operational communication in support of specific ATM functions", is used to align the concept of PBC with the concept of PBN. The term RCP is now used in the context of a specification that is applicable to the prescription of airspace requirements, qualification of ATS provision, aircraft capability, and operational use, including post-implementation monitoring (e.g RCP 240 refers to the criteria for various components of the operational system to ensure an acceptable intervention capability for the controller is maintained).

8) **Required Surveillance Performance (RSP)** is a means by which a specification defines performance requirements associated to the delivery of surveillance data.

Note: Note 1: See ICAO Doc 9869 and Appendix C of the GOLD document for RSP specifications.

Note: The term RSP is used in the context of a specification that is applicable to the prescription of airspace requirements, qualification of ATS provision, aircraft capability, and operational use, including post-implementation monitoring (e.g. RSP 180 refers to the criteria for various components of the operational system to ensure an acceptable surveillance capability for the controller is maintained).

1.7.2 ACRONYMS & ABBREVIATIONS

The following acronyms and abbreviations are used in this advisory circular—

1) **ADS-B** = Automatic Dependent Surveillance Broadcast
2) **ADS-C** = Automatic Dependent Surveillance Contract
3) **ANSP** = Air Navigation Service Provider
4) **AFM** = Aircraft Flight Manual
5) **ATC** = Air Traffic Contro
6) **ATM** = Air Traffic Managementl
7) **ATS** = Air Traffic Services
8) **CPDLC** = Controller Pilot Data Link Comunnications
9) **CSP** = Communication Service Provider
10) **ICAO** = International Civil Aviation Organization
11) **MEL** = Minimum Equipment List

12) **PANS** = Procedures for Air Navigation Services (ICAO-PANS)

13) **RCP** = Required Communication Performance

14) **RSP** = Required Surveillance Performance

SECTION 2 PBCS OVERVIEW

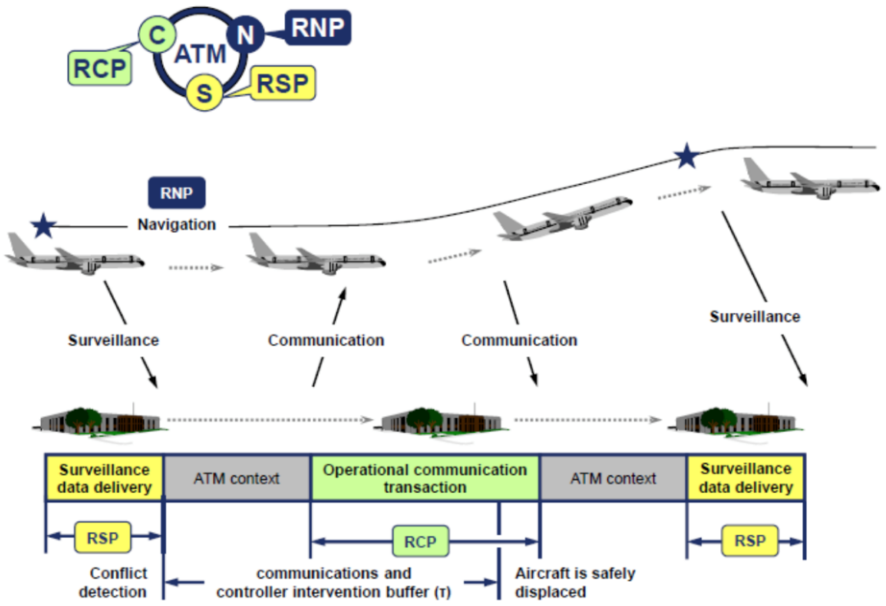
A. The PBCS concept provides objective operational criteria to evaluate different and emerging communication and surveillance technologies, intended for evolving air traffic management (ATM) operations. Once these criteria have been established and accepted, implementation of a specific ATM operation including its technical and human performance may be evaluated against these operational criteria to assess their viability.

B. The PBCS concept is aligned with that of performance-based navigation (PBN). While the PBN concept applies required navigation performance (RNP) and area navigation (RNAV) specifications to the navigation element, the PBCS concept applies required communication performance (RCP) and required surveillance performance (RSP) specifications to communication and surveillance elements, respectively. However, there are some differences between the PBCS and PBN concepts:

   ⇨ the PBCS concept applies RCP and RSP specifications, which allocate criteria to ATS provision, including communication services, aircraft capability, and the aircraft operator; whereas the PBN concept applies RNP/RNAV specifications, which allocate criteria only to the aircraft capability and the aircraft operator; and

   ⇨ the PBCS concept includes post-implementation monitoring programs, on a local and regional basis, with global exchange of information, whereas the PBN concept includes real time monitoring and alerting functionality in the aircraft capability.

C. The PBCS provides air traffic services providers with some level of assurance that the aircraft and flight crew meet the communication and surveillance requirements needed for the application of the performance-based separation standards. PBCS also provides a framework in which all stakeholders (regulators, air traffic service providers, operators, communication service providers (CSP), manufacturers) continue to collaborate in optimizing the use of available airspace while identifying and mitigating safety risks.Communication-Confirmation-Action



D. An operator must obtain a PBCS operational approval from CAAV to operate using the separation minima mentioned in the following table:

Dimension of Separation	Separation Minima	RSP requirement	RCP Requirement	Associated Navigation Requirement	
Lateral	23 NM	180	240	RNP 2 RNP 4	or
Performance-Based Longitudinal	5 minutes	180	240	RNP 2 RNP 4 RNP 10	or or
Performance-Based Longitudinal	30 NM	180	240	RNP 2 RNP 4	or
Performance-Based Longitudinal	50 NM	180	240	RNP 4 RNP 10	or
·Also applicable to existing and future applications of 30NM and/or 50NM lateral separation minima					

Source ICAO Circulars 341 and 343

SECTION 3 PREREQISITES

3.1 AIRWORTHINESS REQUIREMENTS - GENERAL

A. The aircraft manufacturer or equipment supplier shall demonstrate that aircraft system meets the required communication performance (RCP) and the required surveillance performance (RSP) specifications allocated to the aircraft system as contained in the PBCS Manual (Doc 9869). The current RCP and RSP specifications are shown below but other specifications may be added, pending the introduction of new ATM operations or use of new communication or surveillance technologies:

RCP/RSP Specification	RCP/RSP Transaction Time (seconds)	RCP/RSP Continuity (probability)	RCP/RSP Availability (probability)	RCP/RSP Integrity (acceptable rate/flight hour)
RCP 240	240	0.999	0.999 0.9999 (efficiency) (see Note 2)	10^{-5}
RCP 400	400	0.999	0.999	10^{-5}
RSP 180	180	0.999	00.999 0.9999 (efficiency) (see Note 3)	Figure of Merit (FOM)= navigation specification (see Note 3) Time at position accuracy = +/-1s Data integrity (malfunction)= 10^{-5}
RSP 400	400	0.999	0.999	Figure of Merit (FOM)= navigation specification (see Note 3) Time at position accuracy = +/-1s Data integrity (malfunction)= 10^{-5}

Note: Rationale for the criteria provided in this specification can be found in Annex 11 — Air Traffic Services, Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM (Doc 4444)), , the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689), and RTCA DO-306/EUROCAE ED-122.

Note: RTCA DO-306/EUROCAE ED-122 specifies an availability value based on a safety assessment of the operational effects pertaining to the loss of the service. The availability value herein is more stringent, based on an additional need to maintain orderly and efficient operations.

Note: The navigation figure of merit (FOM) is specified based on the navigation criteria associated with this specification. For example, if RNP 4 is prescribed, then for ADS-C surveillance service, the FOM level would need to be 4 or higher. In all cases, when the navigation capability no longer meets the criteria specified for the operation, the flight crew is responsible for reporting the non-compliance to ATC in accordance with ICAO procedures.

B. 2.2 The operator must demonstrate that the aircraft system can meet the applicable RCP and RSP specifications prescribed for the intended operations. The aircraft system is to meet the continuity, availability and integrity requirements as follows:

- ⇨ Continuity: The aircraft system, when operating with a representative ATS provision (i.e. simulation or real ground system), can meet the operational RCP/RSP time and continuity criteria.
- ⇨ Availability: The aircraft system meets the RCP/RSP availability criteria. RCP/RSP availability is typically shown by evaluation of equipment failure and the number of similar components installed on the aircraft.
- ⇨ Integrity: The aircraft meets the RCP/RSP integrity criteria and associated safety requirements. RCP/RSP integrity is typically shown by analysis, design, system architecture, and evaluations of human-machine interaction.

C. The operator shall provide the following documents as a demonstration of compliance with the RCP and RSP specifications:

- ⇨ Type Certificate (TC);
- ⇨ Supplemental Type Certificate (STC);
- ⇨ Aircraft Flight Manual (AFM), AFM supplement; or

- ⇨ A Statement of Compliance (SoC) from the TC holder, STC holder or the entity that owns the design approval for their data link installation.

Note: For a FANS 1/A CPDLC and ADS-C aircraft system, RTCA DO-306/EUROCAE ED- 122, Safety and Performance Standard for Air Traffic Data Link Services in Oceanic and Remote Airspace, is equivalent to RCP 240, RCP 400, RSP 180 and RSP 400 specifications. For an Aeronautical Telecommunications Network (ATN) Baseline 1 (B1) or FANS 1/A CPDLC aircraft system, RTCA DO-290/ED-120, Safety and Performance Requirements Standard for Air Traffic Data Link Services in Continental Airspace, provides performance criteria for the European Region.

Note: Note 2:FAA AC20-140A or later satisfies the requirement for RCP240, RCP400, RSP 180 and RSP 400.

D. The aircraft manufacturer or equipment supplier should identify any specific items related to PBCS capability in the master minimum equipment list (MMEL). The operator must ensure that any items related to PBCS capability are specified in the Minimum Equipment List (MEL).

E. The operator must ensure that the aircraft system is properly maintained, including configuring user-modifiable software, such as those used to manage communication media and routing policies, to meet the appropriate RCP/RSP specifications.

3.2 AIRWORTHINESS REQUIREMENTS – ADS-B

A. Additionally, to the requirements specified in chapter 3.1 of this AC, and as part of his application for the operational approval, the operator shall include information of the various equipment on each aircraft type;

B. ADS-B equipment should be of an approved type complying as a minimum to one of the following specifications:

- ⇨ European Aviation Safety Agency (EASA) - Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090 MHz Extended Squitter (AMC 20- 24);
- ⇨ European Aviation Safety Agency (EASA) - Certification Specifications and Acceptable Means of Compliance for Airborne Communications, Navigation and Surveillance Subpart D — Surveillance (SUR) (CS- ACNS.D.ADS-B);
- ⇨ Federal Aviation Administration (FAA) – Advisory Circular No: 20-165 (or later versions) Airworthiness Approval of Automatic Dependent Surveillance – Broadcast (ADS-B) Out Systems; or
- ⇨ Civil Aviation Safety Authority of Australia (CASA)
- ⇨ Civil Aviation Order 20.18 Appendix XI.

C. The aircraft configuration must comply with its Type Certificate as reflected in the AFM, AFM supplement or other appropriate airworthiness documentation acceptable by the CAAV;

D. Maintenance program must contain the necessary maintenance procedures to ensure continued airworthiness, in accordance with applicable ADS-B system;

E. The MEL must reflect the functional requirements of the ADS-B system. The MEL must be revised to indicate the possibility to dispatch aircraft with the ADS-B system unserviceable or partially unserviceable;

F. The operator must ensure that the configuration and equipment list detailing the pertinent hardware and software components for the specific ADS-B OUT / ADS-B IN operations are

G. appropriately documented and managed;

H. The operator must ensure that engineering / maintenance personnel (flight dispatchers and maintenance engineers) are trained and familiar with the ADS-B operations.

3.3 OPERATIONS REQUIREMENTS

A. For the PBCS application to be considered, an operator must establish and document the following:

- ⇨ Normal and abnormal procedures, including contingency procedures;
- ⇨ Pre-flight planning requirements including MELs, eligible flight plan filing;
- ⇨ Actions to be taken in the data link operation, to include specific RCP/RSP required cases;
- ⇨ Actions to be taken for the loss of data link capability while in and prior to entering the airspace requiring specific RCP/RSP specifications;
- ⇨ Flight crew qualification and proficiency requirements;
- ⇨ Appropriate maintenance program to ensure all task and associated requirements for PBCS operations;
- ⇨ Training program for relevant personnel consistent with the intended operations;
- ⇨ A performance monitoring process;
- ⇨ A process to address substandard separation minima performance;
- ⇨ A problem reporting process to the local/regional PBCS monitoring agency;
- ⇨ Data link communication problem reporting procedures to the local/regional PBCS monitoring agency to ensure effective identification, tracking, and follow- up of data link-related events and permits record-keeping of various problems and solutions.
- ⇨ A contract/service agreement with Communication Service Provider (CSP) that includes:
- ⇨ Failure notifications (to operator and ANSPs);
- ⇨ Recording data link messages;
- ⇨ CSP integrity;
- ⇨ Compliance with CSP allocations for RCP/RSP Adequate subnetwork coverage for the route flown;
- ⇨ Any other specific regional requirements, when applicable

3.3.1 TRAINING REQUIREMENTS

A. The operator should ensure that flight crew and other personnel (flight dispatchers and maintenance engineers) are proficient with the PBCS operations and ADS-B. The areas of subject that should be addressed during the training are provided in Appendix 1 to this AC.

A separate training program is not required if data link communication and surveillance is integrated in the current training program. However, the operator should ensure that the existing training program incorporates the topics defined in Appendix B for flight crew and other personnel that have direct impact on overall data link performance required for the provisions of air traffic services.

SECTION 4 APPLICATION EVALUATION AND APPROVAL

4.1 APPLICATION AND ASSESSMENT

A. The operator must submit the following to CAAV along with an application letter, for PBCS operational approval:

- ⇨ The completed Application Forms CAAV 586A, 586B and 586C;

- ⇨ Evidence of compliance with requirements as specified in Section 3 of this AC;
- ⇨ Evidence of flight and dispatch crew training to include pilot knowledge of data link performance based communication and surveillance concepts and system procedures;
- ⇨ Equipment maintenance program;
- ⇨ Evidence of Training of the relevant personnel including maintenance and operational personnel (including flight crew);
- ⇨ Operating policy and procedures;
- ⇨ Copy of the contracted CSPs
- ⇨ MELs;
- ⇨ Enrollment/participation in local or regional PBCS monitoring programs, if any.

B. CAAV assessment for the PBCS operational approval will consider the following aspects:

- ⇨ Aircraft eligibility and airworthiness compliance (any limitations, assumptions or specific procedures considered in the framework of the airworthiness approval must be addressed);
- ⇨ Documentation and maintenance of operating procedures for the specific data link system(s) including use of message sets;
- ⇨ Means of ensuring compliance of contracted services, such as those with communication services providers (CSPs) with respect to PBCS operations;
- ⇨ Documentation and maintenance of procedures for participation in PBCS monitoring programs including problem reporting process;
- ⇨ Documentation and maintenance of policies and procedures to control configuration of aircraft system including software and communication subnetwork for managing media and routing;
- ⇨ Flight crew initial training/competency requirements and continuing qualification requirements;
- ⇨ Training requirements for other personnel (e.g. flight dispatchers and engineers).

The operator is to note that when operating in FAA airspace, the FAA's oceanic automation system, Advanced Technologies & Oceanic Procedures (ATOP), will determine eligibility for use of performance-based separation minima based on detection of BOTH flight plan codes.

C. CAAV inspector(s) may want to observe and evaluate your ability to perform data link operations. The following topics may be covered in this phase, at the discretion of the inspector:

- ⇨ Description of data link procedures (logon, transfer of control from Current Data Authority CDA to Next Data Link Authority (NDA), logoff, and when it is necessary to go to voice)
- ⇨ Description of procedures for data link monitoring.
- ⇨ Identif ication and explanation of any data link operational limitations included in the data link section(s) of the AFM or AFM supplement.
- ⇨ Demonstration of compliance with the data link manufacturer's Instructions for Continued Airworthiness (ICA).

4.1.1 APPROVAL

A. Upon successful assessment of the PBCS application, CAAV may grant PBCS operational approval to the operator. The PBCS operational approval will be stated in the Operations Specifications.

B. After the operator has been granted PBCS operational approval, the operator with PBCS operational approval is to indicate its approval status for RCP/RSP capabilities in the ICAO flight plan as follows (example:

   ⇨ Item 10a - CPDLC descriptors (J1-J7); RCP capability “P1” or “P2”; and

   ⇨ Item 10b - ADS-C descriptors (D1 or G1); and (c) Item 18 - “SUR/RSP180” or “SUR/RSP400” to show RSP capability.

C. The operator, when planning to operate in airspace where RCP/RSP specifications are prescribed for certain services such as reduced separation, is to ensure that the planned use of communication and surveillance capabilities for the flight are in accordance with regulations, policies and procedures in control areas for the flight as published in the AIP or other State publications.

SECTION 5 APENDICES

5.1 APPENDIX 1 - TRAINING ON DATA LINK, PBCS OPERATIONS AND ADS-B SYLLABUS

A. Flight Crew

- Data link communications system theory (relevant to operational use)
- AFM and AFM Supplement limitations
- Normal pilot response to data link communication messages
- Message elements in the message set used in each environment
- Required Communication Performance (RCP)/Required Surveillance Performance (RSP) specifications and their performance requirements
- Implementation of performance-based reduced separation with associated RCP/RSP specifications or other possible performance requirements associated with their routes
- Other ATM operations involving
- data link communication services
- Both normal and non-normal (contingency) procedures
- Data link communication failure/problem and reporting
- General understanding of ADS-B-NRA operating procedures;
- Specific ADS-B associated phraseology;
- General understanding of the ADS-B technique and technology;
- Characteristics and limitations of the flight deck human-machine interface, including an overview of ADS-B environment and system descriptions;
- Need to use the ICAO defined format for entry of the Aircraft Identification or Aircraft Registration marking as applicable to the flight;
- Handling of data source errors (e.g. discrepancies between navigation data sources)
- Incident reporting procedures
- Crew Resources Management and associated human factors issues.

Note: If flight crew has already been trained on data link operations, additional training only on PBCS is required, addressing a basic concept and requirements that have direct impact on overall data link performance required for provisions of air traffic services (e.g. reduced separation).

B. Dispatchers/Flight Operations Officers

- Proper use of data link and PBCS flight plan designators;
- air traffic service provider’s separation criteria and procedures relevant to RCP/RSP specifications;
- MEL remarks or exceptions based on data link communications;
- Procedures for transitioning to voice communication and other contingency procedures related to the operation in the event of abnormal behavior of the data link communication;
- Coordination with the ATS unit related to or following a special data link communication exceptional event (e.g. log-on or connection failures); and

- Contingency procedures to transition to a different separation standard when data link communication fails
- General understanding of the ADS-B technique and technology;

C. Engineering and maintenance personnel

- Data link communication equipment including its installation, maintenance and modification
- MEL relief and Procedures for return to service authorizations
- Correction of reported non-performance of data link system
- ADS-B equipment including its installation, maintenance and modification

End of Advisory Circular