



Ministry of Land Infrastructure and Transport
CIVIL AVIATION BUREAU OF JAPAN



Session 4 Modifying ATC automation for RSP/RCP indicators

Systems Development, Evaluation
and Contingency management Center
(SDECC)

Operational Data Link Seminar
May, 2016



ATC automation changes for PBCS concept

PBCS manual Appendix A provides checklist for PBCS Implementation Plan, and “Group C tasks” defines ANSP implementation activities – ATS service provision.

Tasks in Group C are as follows:

- C-1 Operational concepts and procedures for PBCS operations;
- **C-2 ATC automation changes to use flight plan RCP/RSP indicators;**
- C-3 ATC automation changes for PBCS monitoring; and
- C-4 Confirm initial ANSP compliance with RCP/RSP specifications.



Task Detail of C2

Detail of Task C-2 is defined as below:

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.



Step 0

Capability to receive flight plan with RCP/RSP indicators

- The indicators for RCP, which are “P1” through “P9”, in flight plan field 10a had already been incorporated into ICAO 2012 flight plan format.
- In the current version of Doc 4444, all of P codes are defined as “reserved for RCP”.
- After 10 November 2016, the date of applicability of amendment for Doc 4444, “P1”, “P2” and/or “P3” will be filed as the indicator of RCP specification.
- JCAB had checked that all of own ATC automations have capability to file and process flight plans or AIDC messages with RCP/RSP indicators.



Step 1

Compliance with safety requirements

- RCP related safety requirements are defined in Doc 9869, Appendix B.
- Currently, JCAB's ATC automations have capability to comply with all requirements other than SR-14 (ANSP).
- SR-14 (ANSP) is defined as below:

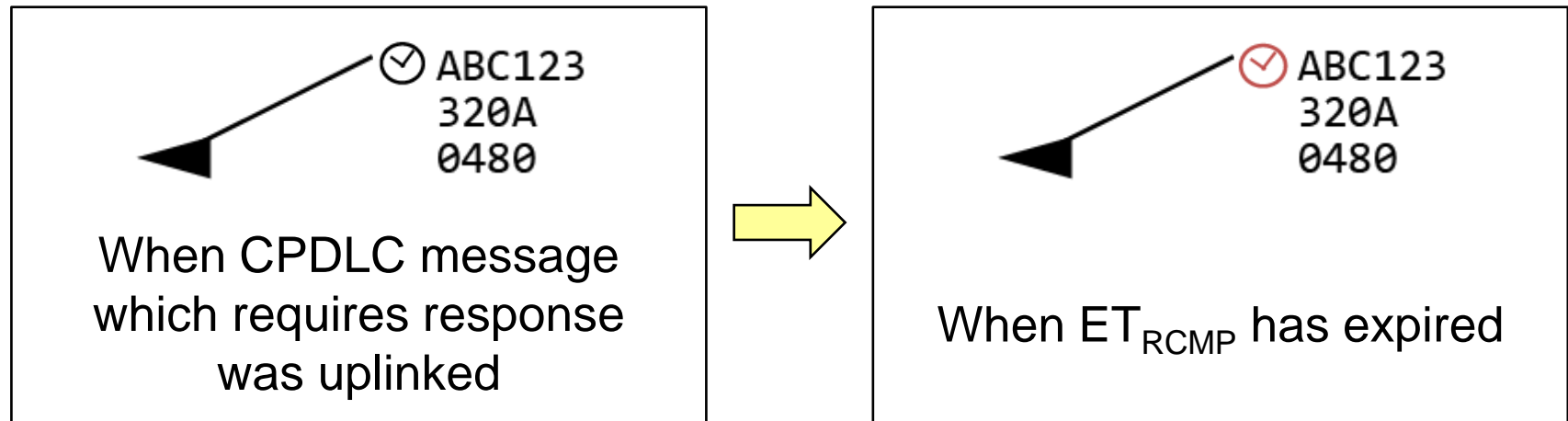
RCP related safety requirements		
Specification: RCP 240/D		Application: CPDLC
		Component: ANSP
Ref	Related RCP parameter	Safety requirement
SR-14 (ANSP)	A, C, I	The ATS unit system shall indicate to the controller when a required response for a message sent by the ATS unit is not received within the required time (ET_{RCMP}).



Step1

Display of an alert to the expiration of ET_{RCMP}

- JCAB is planning to upgrade oceanic ATC automation to display an alert which notifies controllers of expiration of ET_{RCMP} .



- The value of ET_{RCMP} timer will be set to 210 seconds, and this timer value is modifiable by system parameter.



Step 2

Apply ATM operations to eligible aircraft

- JCAB is planning to upgrade oceanic ATC automation to apply following ATM operations predicated on RCP/RSP specifications:
 - 23NM reduced lateral separation minima of RNP4 or RNP2 aircraft on parallel or non-intersecting tracks or ATS routes;
 - 50NM reduced longitudinal separation minima between RNP2, RNP4 or RNP10 aircraft;
 - 30NM reduced longitudinal separation minima between RNP2 or RNP4 aircraft; and
 - 5 minutes reduced longitudinal separation minima between RNP2, RNP4 or RNP10 aircraft.

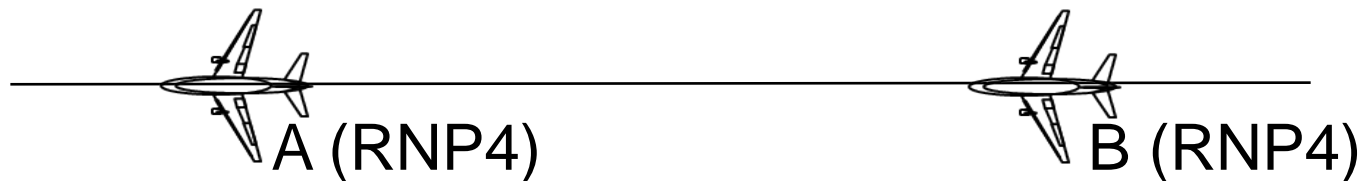


Step 2

Apply ATM operations to eligible aircraft

Example:

Conflict probe between RNP4 aircraft using RCP/RSP indicators in flight plans.



“P2” in FPL field 10a		“RSP180” in FPL field 18 following “SUR/”		Separation minima used in Conflict Probe
Aircraft A	Aircraft B	Aircraft A	Aircraft B	
✓	✓	✓	✓	30NM
✓	✓	✓		15 minutes
✓		✓	✓	15 minutes
✓		✓		15 minutes



Q & A

