

Performance Based Communication & Surveillance

Air Traffic Service Provision

Presented to: NAT PBCS Workshop

By: United States

Date: 20-22 February 2013



Federal Aviation
Administration



Provision of Performance Based Separation

- **In accordance with ICAO Doc 4444**
 - Internationally agreed data-link-based separation minima values available for application in oceanic and remote airspace are
 - 50NM longitudinal
 - 30NM longitudinal
 - 30NM lateral
- **Ocean21 automation supports use of these standards that require advanced CNS capabilities**
 - ADS
 - CPDLC
 - RNP



Operational Capability

- **ADS-C and CPDLC connections required for separation standard**

- CNS requirements for 50nm longitudinal separation

Separation Minimum	Navigation Requirement	Communications Requirement	Surveillance Requirements
50NM longitudinal	RNP 4 and RNP 10	DCPC or CPDLC	Position report at least every 27 minutes (at least every 32 minutes if both aircraft are approved for RNP-4 operations)

- CNS requirements for 30nm lateral separation

Separation Minimum	Navigation Requirement	Communications Requirement	Surveillance Requirements
30NM lateral	RNP 4	CPDLC meeting the regional goal of RCP240	ADS-C lateral deviation event contract with 5NM lateral threshold for triggering ADS report of lateral deviation event meeting surveillance type 180 regional goal

- CNS requirements for 30nm longitudinal separation

Separation Minimum	Navigation Requirement	Communications Requirement	Surveillance Requirements
30NM longitudinal	RNP 4	CPDLC meeting the regional goal of RCP240	ADS-C position report at least every 14 minutes meeting surveillance type 180 regional goal



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- **Ocean21 manages individual aircraft profiles**
- **Reads flight plan information to determine which separation standards may be applied based on aircraft equipage**
 - continue to accommodate operators that are not eligible for data-link-based separation
- **Protects random routes of individual aircraft and is able to issue conflict warnings up to 2 hours ahead of the event**
- **Adapted with the separation standards applied by adjacent ATC facilities**
 - Warns controller when a conflict will occur based on the adjacent ATC facility's requirements



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- **CPDLC maintained at RCP 240**
 - Communication system measured against RCP allocation
- **ADS-C maintained at RSP 180**
 - Ocean21 automation continuously monitors for receipt of expected ADS-C reports
 - Periodic
 - Waypoint change event
 - If expected report not received in timely manner, Ocean21 will increase required separation standard and warn controller that insufficient separation exists
 - ADS-C report overdue by 3 minutes controller must take action to obtain report
 - ADS-C report overdue by 6 minutes controller must take action to apply another form of separation



Questions

