Reduced Oceanic Separation:

Implementation and Interoperability

Presented by: ISPACG

Who is ISPACG?

- **I**nformal **S**outh **P**acific **A**ir Traffic Services **C**oordinating **G**roup
- ISPACG was established by multilateral agreement between Australia, Fiji, Tahiti, New Zealand, Papua New Guinea, Chile, and the United States. It is presently co-chaired by Ahmad Usmani (FAA) and Jeremy Elich (Airservices Australia).
- Formed to facilitate the optimum provision of air traffic services (ATS) in the South Pacific region, through the development and near-term implementation of improvements to ATS operational procedures; and to implement technology developments available to ATS providers within the South Pacific region.
- 40th meeting held in Brisbane, Australia, in May of 2026

Historical Meeting Actions to Address Reducing Separation Standards

- ISPACG/20 Established the Data Link Working Group under ISPACG FIT in 2006 to address the imminent and future issues associated with the provision of air traffic services predicated on data link.
- The Data Link Working Group established the *Pacific Operations Manual*, a regional guidance document for the uniform application of Data Link procedures in the South Pacific. This document was later renamed the *FANS-1A Operating Manual* after including the Bay of Bengal airspace.
- The *Guidance Material for ATS Data Link Services in North Atlantic Airspace* document was developed concurrently in the North Atlantic region.
- The *Global Operational Data Link Document*, or GOLD, in use since 2010, replaced these two documents as the global standard.

Evolution of Regional Capability Coordination

Summary of the Twenty First Meeting of the
Informal South Pacific Air Traffic Services Co-ordinating Group
(ISPACG/21)

Appendix B
Capacity Enhancement Table

CAPACITY ENHANCEMENT	ACTION WITH	ESTIMATED COMPLETION DATE	DATE COMPLETED	NOTES
Implement 30NM Longitudinal Separation				
Australia	Airservices		20 Jan 05	Brisbane eastern oceanic airspace
Fiji	AFL		Jan-05	
New Zealand	Airways		20 Jan 05	
PNG	CAA of PNG	Dec 10		
Solomon Islands	Airservices		20 Jan 05	
Tahiti	SEAC Tahiti	TBD		
United States	FAA		13 Mar 07	All Oakland Sectors
Implement UPRs				
Australia	Airservices			Partial implementation YSSY/YBBN/YMML-KLAX/KSFO. UPRs between PHNL-YSSY, New Zealand/New Caledonia-Japan are pending.
Fiji	AFL			Has UPR capability for Datalink aircraft.
New Zealand	Airways			Has UPR capability
PNG	CAA of PNG	Oct 07		
Solomon Islands	Airservices			Partial implementation YSSY/YBBN/YMML-KLAX/KSFO
Tahiti	SEAC Tahiti			Partial implementation YSSY/NZAA-KLAX
United States	FAA			Partial implementation North America to South Pacific.
Implement UPR DARP				
Australia	Airservices	TBD		
Fiji	AFL	TBD		
New Zealand	Airways		Jun 06	DARPing available within the NZZO FIR.
PNG	CAA of PNG	Dec 09		
Solomon Islands	Airservices	TBD		

Page 3 of 6

Original Capacity Enhancement Table

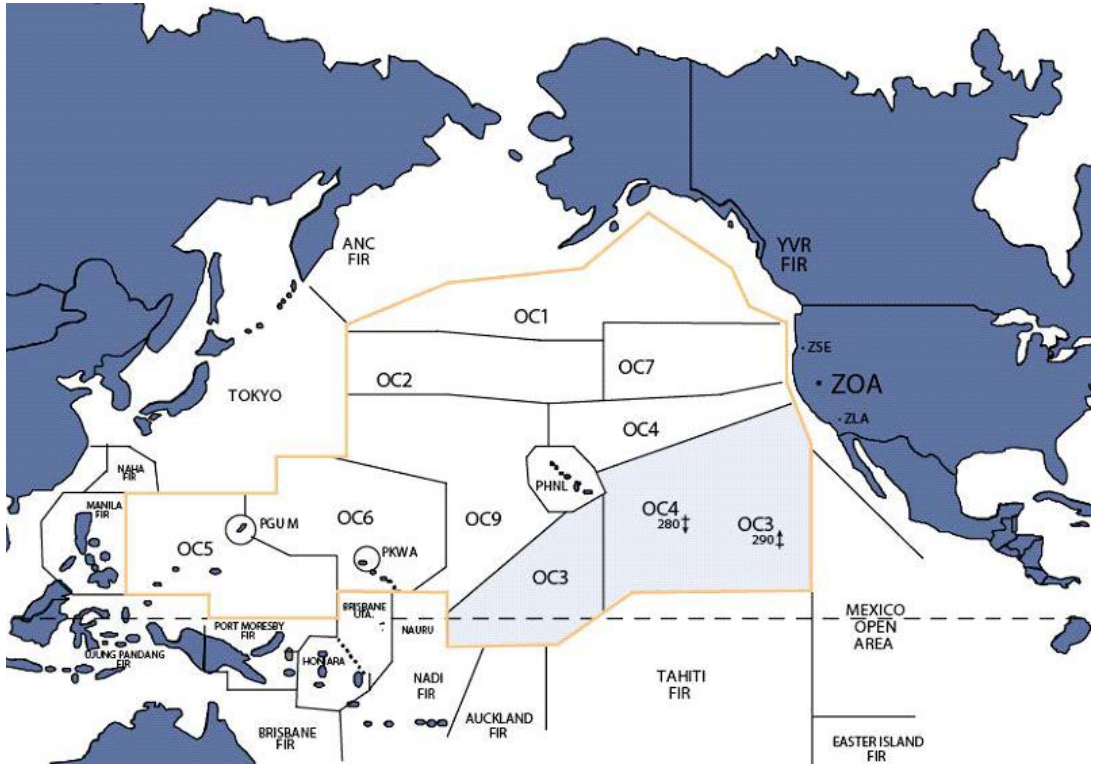
Pacific FIR Seamless Airspace Chart
pdated at ISPACG/38 Meeting - 06/04/2024

ANSP	RNP 4				RNP2							DARP		AIDC										Network Optimization			SWIM			CRV		REMARKS
	30 NM LAT	23 NM LAT	20 NM Long.	30 NM LONG	12 NM Lateral Climb-through	23 NM Lateral Climb-through			ADS-C CDP	ADS-B ITP	Lateral Offset Clearances	UPR	Accept	Initiate	CPLEST	CDN	Weather Deviation	Offset	Block Level	Mach Speed	FANPON	ADS forwarding	TRU Msg	Enhanced CDN	Enhanced ABI	CDM	Enroute CPM	COP/ Tailored Arrival	AIXM	FIXM	MYXM	DATA	VOICE	
AirNav Indonesia	O	O		O								O			X	O	O	O	X	O												
Fiji Airports	X	O	O	X							X	X	X	X	X	X	X	X	X	X									O	O	O	X	X	
AirServices Australia	X	X		X							X	X	X	O	X	X	X	X	X							X		O						
	X	X		X							X	X	X	O	X				X							X		O	O	O	O	X	X	
Airways NZ	X	X	O	X		O			X	O	O	X	X	X	X	X	X	O	X	X						O	O	O	O	O	O	X	X	
CAAP	O			O											X	O																	
CAAS		O		O		O									X	O										X		X					
DGAC												X	O	O	O	O	O	O	O	O													
FAA	X	X	O	X					X	X	X	X	X	X	X	X	X	X	X	X						X						X	X	
	X	X	O	X					X	X	X	X	X	X	X	X	X	X	X	X						X						X	X	
JCAB	X	X	X	O	X				X	O	X	X	X	X	X	X	X	X	X	X	X	X												
															X	X										X		X						
Niusky Pacific	O			O							X				O	O	X		X	X									O	O	O	X	X	
SEAC-PF	X			X								X	X	O	X		X		X	X						X						O		ADS-B SAT FOR SAR
FAA				X					X	X	X	X			X	X																	
												X																						
	X			X									X		X	X			X	X			X										
				X									X		X	X			X															
	X	X		X							X	X	X													X	X	X						
												O																						
												O																						
NavCanada	X			X								X	X	O																				
SENEAM																																		
DGAC Ecuador															X	X																		

Version 1 Seamless Airspace Chart

US Implementation of Distanced-Based Reduced Separation in Oceanic Airspace

- The FAA implemented 30/30 on an operational trial basis in one portion of the Oakland (KZAK) FIR on 22 December 2005.
- Participating operators were Air New Zealand, Qantas, and United
- Average number of participating flights per day was 23
- A Scrutiny Group was convened to evaluate:
  - Performance of aircraft with State approval to participate
  - Operation of the ATOP automation system, introduced at ZOA 17 October 2005.

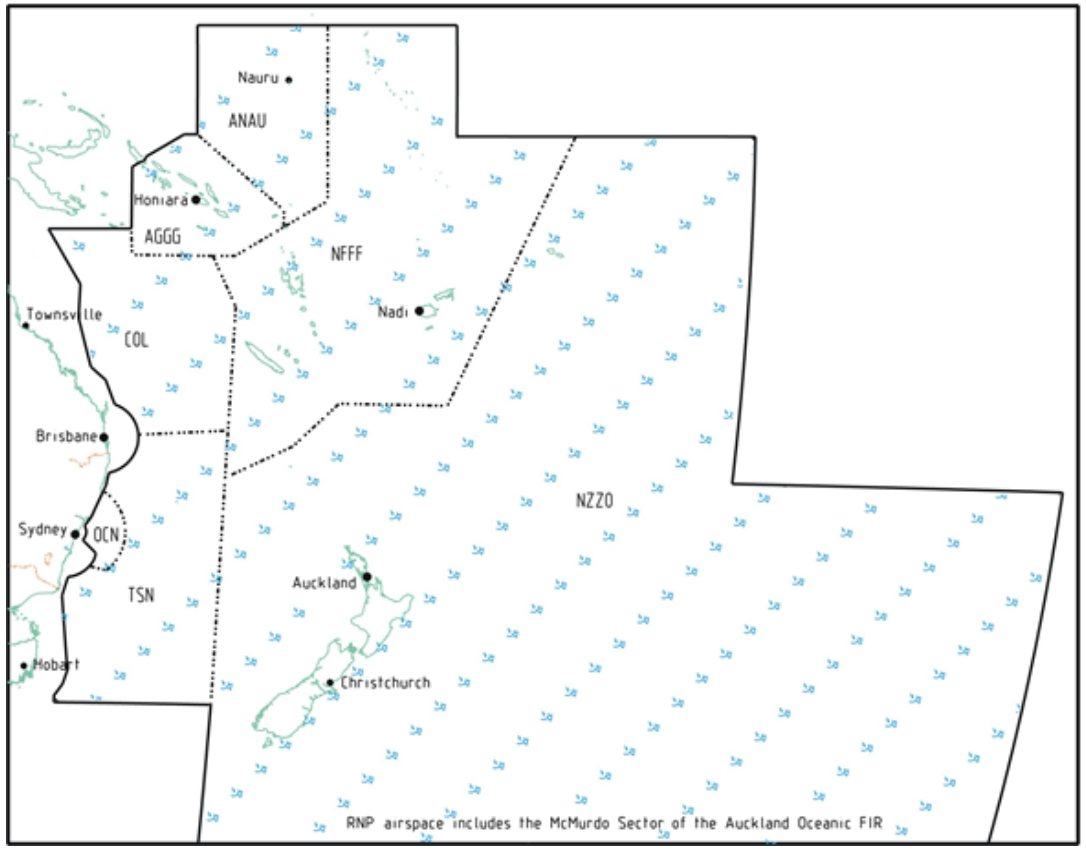


ISPACG 30/30 implementation

- ISPACG established a dedicated implementation working group made up of Australia, New Zealand and Fiji to progress 30/30 adoption across participating FIRS. This group completed necessary safety work together for the implementation on 30/30

- This enabled shared problem solving, aligned implementation and harmonised procedures reducing risk and ensuring consistent application across FIR boundaries.

- Through ISPACG this group worked closely with FAA coordinating with their own implementation of 30/30 ensuring regional consistency.



What 30/30 Changed

- Reduced separation to 30 NM Lateral/30 NM longitudinal in Oceanic airspace
- Applicable only to aircraft with approved RNP 4 and equipped and operational ADS-C and CPDLC
- Separation assurance driven by Surveillance performance and reliability, not procedural position reports.

Safety Assessment – What was Tested

- Key failure scenarios considered included:
  - Late, missed, or degraded ADS-C position reports
  - CPDC Latency or non-response
  - Incorrect aircraft equipage or flight plan declarations
  - Satellite communication degradation

- Safety assessments, Hazard Identification and Post implementation review was conducted as a group through ISAPCG reducing the burden on each individual FIR

- Safety reports , data and analysis was shared across participating FIR's

3.0	Safety Assessment			
3.1	Complete plan to collect data necessary to establish safety Assessment	19 Apr 04		15 Sep 04
3.2	Analysis of data to verify collision risk model and target level of safety		10 Nov 04	8 Dec 2004
3.3	Update 30/30 risk model assumptions/parameters		10 Nov 04	20 Oct 04
3.4	Collect weather and turbulence data in Oceanic FIRs in preparation for analysis			19 Apr 04
3.5	Management of gross navigational error reporting	19 Apr 04		15 Sep 04
3.6	Confirm that automation ground systems meet safety objective	19 Apr 04	10 Nov 04	6 Dec 2004
3.7	High Level Regulatory Safety Oversight	19 Apr 04	10 Nov 04	8 Dec 2004
3.8	Collect safety analysis data			15 Sep 04
3.9	Complete safety analysis		11 Nov 04	

Lesson 1: ADS-C Performance requires active monitoring

- Delays reduce separation margins faster than procedural environments
- Controllers must monitor contract status, not assume validity
- Late or missed ADS-C event requires immediate reassessment
- Training must ensure Air Traffic Controllers know the requirements of the standard and how to apply them. But also must cover how they respond when those requirements are no longer met
- System tools can assist in maintain controller awareness of loss of ADS-C e.g. Alerts presented to the controller when an expected ADS-C report is not received.

Lesson 2: Flight Plan integrity is a Safety Barrier

- Incorrect or incomplete Indicators of navigation and communication equipment create risk.
- Aircraft can be incorrectly treated as eligible for 30nm separation
- Key Controls
  - Pre-tactical validation of equipage
  - Tactical cross-check of that equipment is functional prior to transfer of control or commencing application of the standard

Lesson 3: Cross-FIR consistency matters

- Safe application of reduced separation depends on consistent interpretation and coordinated action across FIR boundaries, not just local compliance.
- ADS-C performance thresholds and monitoring expectations may differ
- Triggers for implementing alternate separation can be applied inconsistently across different FIR”S
- Seamless transfer of ADS-C and CPDLC connections is necessary to apply the standard across FIR boundaries.
- Standardised coordination and transfer practices between FIRs need to be established.

Value of ISPACG in delivering 30/30

- Regional cooperation enabled;
  - Joint hazard identification and risk mitigation
  - Alignment on ADS-C and data-link performance expectations
  - Sharing of ADS-C and datalink performance data and safety occurrence reports

- Coordinated and cooperative implementation allowed consistent implementation across the region, reducing ambiguity and complexity at FIR boundaries and providing more seamless requirements and operations to airlines.

Ongoing Support of ISPACG

- Supports regional monitoring of data link performance though shared visibility of ADS-C and CPDLC reliability trends.
- Enables Early identification of degradation and emerging risks.
- Has provided a forum to address emerging operational challenges including
  - Satellite outages and coverage issues
  - Fleet equipage variability
  - Increasing complexity of airspace.