



**THE FORTY-FOURTH MEETING OF THE
INFORMAL PACIFIC ATC CO-ORDINATING GROUP
(IPACG/44)**
(Honolulu, Hawaii, 22 & 23 August 2018)

Presented by: Federal Aviation Administration

Updates from Operational Data Link Working Group (OPDLWG)



**Federal Aviation
Administration**

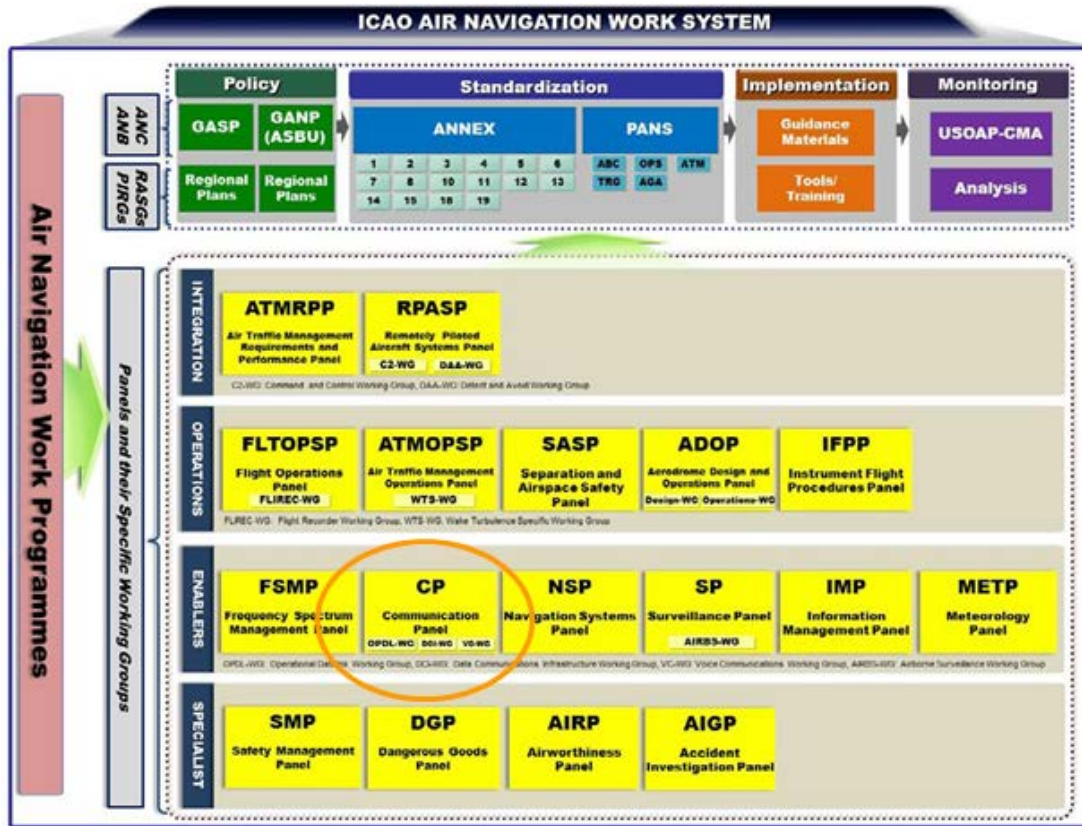


Overview

- Quick background on OPDLWG
- Updates from the Global Operational Data Link (GOLD) Project Team
 - Maintains ICAO Doc 10037, GOLD Manual
- Updates from Performance-based Communication and Surveillance (PBCS) Project Team
 - Maintains ICAO Doc 9869, PBCS Manual
- Global documentation for ATS Inter-facility Data Communication (AIDC)
- Long Range Voice Communication Implementation Strategy
- ICAO Inter-panel Coordination



CP - OPDLWG



Communication Panel (CP)

- undertakes specific studies and develops technical and operational ICAO provisions for ATM voice and data communications systems, supporting procedures and their applications
- The OPDLWG is a subgroup of the CP

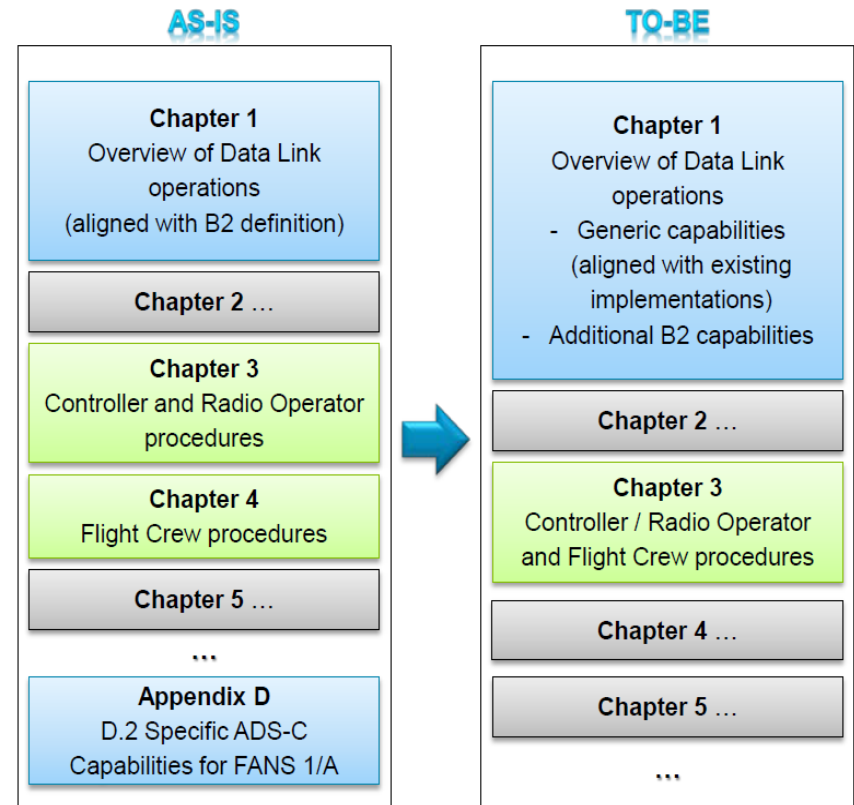
The Operational Data Link Specific Working Group (formerly known as OPLINKP)

- Aims to advance the use and performance of datalink and satellite voice technologies, addressing all operational aspects of ATS that use these technologies for communications, whether between aircraft and the ground or multiple ground facilities
- **Participants include:** Brazil, Canada, China, Iceland, India, Japan, New Zealand, Russian Federation, Singapore, United Kingdom, United States, IATA, ICCAIA, IFATCA, IFALPA, EUROCONTROL, ICAO
- **US Member:** Mark Patterson, AFS-470, mark.patterson@faa.gov
- **Last meeting:** Reykjavik, Iceland, 7-11 May 2018
- **Next meeting:** Montreal, Canada, 22-26 Oct 2018



GOLD Project Team Update

- **Project Team Lead:**
Jérôme Condis, Airbus
- **ICAO Doc 10037, 1st Edition, GOLD Manual, published in June 2017**
- **2nd Edition is planned to be published by the end of 2019**
- **Substantial reorganization planned for pilot and ATC guidance for related procedures**



Purpose of the GOLD Manual

- Provides guidance and information concerning data link operations and is intended to **facilitate the uniform application** of:
 1. Standards and Recommended Practices (SARPs) contained in:
 - Annex 2 - Rules of the Air,
 - Annex 10 - Aeronautical Telecommunications,
 - Annex 11 - Air Traffic Services,
 2. provisions in the Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM) (Doc 4444) and,
 3. Regional Supplementary Procedures (Doc 7030)
- Intended to **improve safety** and **maximize operational benefits** by promoting seamless and interoperable data link operations throughout the world

GOLD Edition 2 – highlights

- **Incorporate new message elements and associated procedures to support the CLIMB VIA SID and DESCEND VIA STAR procedures approved by ATMOPS**
 - The new message elements and associated procedures would be included in time to support the presentation and discussion in the ATMOPSP meeting scheduled in September 2018
- **Removal of FANS 1/A ADS-C “Only” Aircraft implementation**
 - The number of aircraft in operation was not considered significant enough to provide global guidance so group agreed to remove
- **Inclusion of guidance on DCL**
 - A global interest on the guidance on DCL was reaffirmed and a need for harmonized implementation was reiterated by the airspace users



Restricting logons from Non-SATCOM aircraft

- If logon is rejected and crew does not understand the reason, then they could attempt to re-logon, possibly multiple times
- Accepting the log on without setting up CPDLC connections could also be confusing to the crew who may not recognize that the communication was not established
 - Also potentially causes connection issues for adjacent ATSU's
- Concluded that **clarification on the “valid flight plan” should be provided in the GOLD** stating that it is acceptable to reject a logon when a flight plan indicates that the aircraft does not have the equipment appropriate to the route of flight



CANSO Data Link Task Force

- CANSO established a Data Link Task Force to address the lack of guidance for ANSPs that wish to plan and implement data link services
 - The target delivery date by the task force is earlier than the GOLD edition 2
- In order to drive one central source for data link guidance and avoid duplication of efforts, Nav Canada member made a proposal that the improvement on the guidance for ANSP implementation be made by CANSO first then submitted to the OPDLWG for inclusion in the GOLD Manual
- OPDLWG highlighted that special care be given in order to ensure two documents are kept consistent and supplementary to each other

PBCS Project Team Updates

- **Project Team Lead:** Theresa Brewer, FAA
- ICAO Doc 9869, 2nd Edition, PBCS Manual officially published in June 2017
- 3rd Edition planned for 2019
- 11 items currently on work program
 - **6 in progress for changes for 3rd edition**



Purpose of the PBCS Manual

- Provides guidance and information concerning PBCS operations and is intended to facilitate the uniform application of:
 1. the SARPs contained in
 - Annex 6
 - Annex 11
 - Annex 15
 - PANS-ATM (Doc 4444)
 - PANS-ABC (Doc 8400)
 2. Regional Supplementary Procedures (Doc 7030)
- Intended to **improve safety** and **maximize operational benefits** by promoting the PBCS concept and its general application to **diverse and emerging technologies for communication and surveillance supporting ATM operations**



Work program items for Edition 3

1. Additional guidance for operational approval process
2. Clarification and improvement of guidance related to CSP/SSP allocations, notifications, compliance (includes Charter)
3. Additional guidance for Appendix D regarding data compilation and filtering, data interpretation for compliance assessment, and use of problem reports and associated investigations
4. Alignment of PBCS manual & DO-350A/ED228A in terms of safety requirements and availability
5. Development of RCP/RSP specifications to support B2 and domestic data link operations
6. Updates to clarify role of regional monitoring agencies (RMAs) - ensure alignment with Doc 10063 and Doc 9937



ATS Inter-facility Data Communication (AIDC)

- All necessary guidance for AIDC implementation available, e.g. regional ICDs and European On-Line Data Interchange (OLDI), but not in the form of global guidance (ICAO manual)
- Work on flight and flow information for a collaborative environment (FF-ICE), is expected to encompass ATS inter-facility data communications (AIDC), and being actively pursued
 - May necessitate the guidance on migration/transition from AIDC to FF-ICE
- Plan is update the existing ICAO document 9694 with the newly merged NAT ICD/PAN ICD, now PAN ICD version 1, and the current use of the European OLDI – difficulty is allocating expert resources



Long Range Voice Communication Implementation Strategy

- New OPDLWG job card created for approval by the ANC
- Identified need for new allocations - fundamental differences between data communication and SATVOICE that need to be considered in defining a new RCP specification for SATVOICE
- Once some progress is made within the OPDLWG, the relevant expert groups will be consulted to seek feedback or requested to take on the work relevant to the expertise of the group
 - e.g. SASP for end-to-end performance target, and DCIWG for defining allocation values



Inter-panel coordination

- **SASP – comments provided on PfA for SB ADS-B**
- **Remotely Piloted Aircraft Systems Panel (RPASP)**
 - development of a required link performance (RLP) concept for C2 Link
 - proposed amendment to Annex 10 concerning C2 Link
- **Aviation System Block Upgrades (ASBU) Panel Project Team (PPT)**
 - recent updates made to the ASBU framework, which better represented and aligned with the work program of the OPDLWG
 - Secretary encouraged active participation in the PPT by the project team leads under OPDLWG job cards

	BBB	B0	B1	B2	B3	
VHF/HF Voice SATVOICE Emergency		B0/1 CPDLC (FANS 1/A & ATN B1) for domestic and procedural airspace	B1/1 CPDLC (FANS 1/A+) PBCS approved for domestic and procedural airspace	B2/1 CPDLC (B2) PBCS approved for domestic and procedural airspace	B3/1 Extended CPDLC (B2 incl. Adv-IM and DRNP) for domestic airspace <i>TBC as FAA only</i>	CPDLC
		B0/2 ADS-C (FANS 1/A) for procedural airspace	B1/2 ADS-C (FANS 1/A+) PBCS approved for procedural airspace	B2/2 ADS-C (B2) PBCS approved for domestic and procedural airspace	B3/2 Extended ADS-C (B2 incl. Adv-IM and DRNP) for domestic airspace <i>TBC as FAA only</i>	ADS-C
			B1/3 SATVOICE (incl. routine communications) for procedural airspace	B2/3 SATVOICE PBCS approved (incl. routine communications) for procedural airspace	B3/3 SATVOICE PBCS approved (incl. routine communications) for domestic airspace	Voice