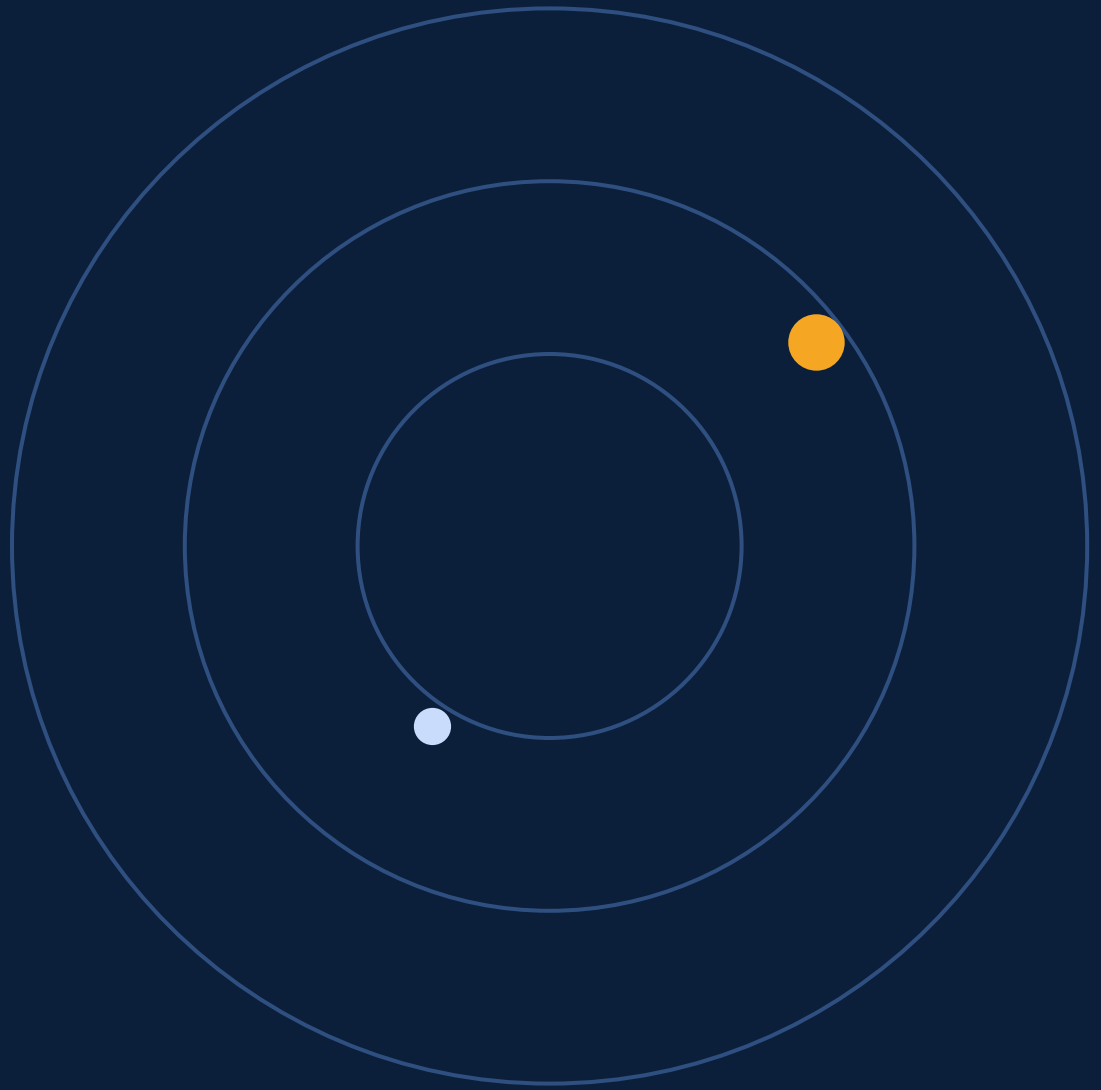
ICAO | NAM/CAR REGIONS

ICAO Documentation Supporting ADS-C and CPDLC Implementation

SARPs, PANS, manuals and guidance for oceanic and remote airspace



CAR Regional ADS-C/CPDLC Project

OVERVIEW

A layered ICAO framework supports data link

5 SARPs

- Annex 10, Volume II
- Annex 10, Volume III
- Annex 11
- Annex 6, Part I
- Annex 19

2 PANS and regional procedures

- Doc 4444 (PANS-ATM)
- Doc 7030 (Regional Supplementary Procedures)

9 Manuals and guidance

- Doc 10037 (GOLD)
- Doc 9869 (PBCS)
- Doc 9694 (ATS Data Link)
- Doc 9880 (ATN)
- Doc 9859 (SMM)
- Doc 9750 (GANP)
- Docs 10063, 10120, 10038

ICAO provides SARPs, PANS, technical manuals and implementation guidance supporting ADS-C and CPDLC, particularly in oceanic and remote airspace.

SARPs and PANS: the regulatory backbone

SARP

Annex 10, Vol. II

Aeronautical Telecommunications: Communication Procedures including those with PANS Status

Communication procedures applicable to aeronautical data link services.

SARP

Annex 10, Vol. III

Communication Systems

Technical provisions for aeronautical communication systems supporting data link applications.

SARP

Annex 11

Air Traffic Services

Regulatory framework for the provision of ATS, including communication and surveillance requirements.

PANS

Doc 4444

Procedures for Air Navigation Services: Air Traffic Management (PANS-ATM)

Operational procedures for CPDLC and ADS-C, including message use, coordination and application in ATC operations.

Manuals: performance, procedures and strategy

Doc 9869

Performance-based Communication and Surveillance (PBCS) Manual

Performance specifications, RCP/RSP requirements, monitoring and implementation.

Doc 10037

Global Operational Data Link (GOLD) Manual

Principal operational guidance: procedures, message sets, interoperability and operational considerations.

Doc 9694

Manual of Air Traffic Services Data Link Applications

Technical and operational guidance on ATS data link applications.

Doc 9880

Detailed Technical Specifications for the ATN using ISO/OSI Standards and Protocols

Technical specifications relevant to ATN-based data link implementation.

Doc 9859

Safety Management Manual (SMM)

Safety assessments, hazard identification and risk mitigation before operational implementation.

Doc 9750

Global Air Navigation Plan (GANP)

Strategic framework and ASBU alignment for modernizing communication and surveillance.

ADDITIONAL DOCUMENTATION

Further documents for implementation

ICAO Document	Implementation Application
Annex 6, Part I	Aircraft equipment, operational authorization and PBCS-related requirements.
Annex 19	Safety management and operational risk assessment.
Doc 7030	Regional Supplementary Procedures, where applicable to the airspace concerned.
Doc 10063	Monitoring the application of performance-based horizontal separation minima.
Doc 10120	Implementation of performance-based longitudinal separation minima.
Doc 10038	Satellite Voice Operations Manual, relevant to complementary communication arrangements.

GANP ASBU FRAMEWORK

Four documents enable ADS-C and CPDLC

IMPLEMENTATION ENABLERS

Annex 10	Communication procedures and systems
Doc 4444	PANS-ATM operational procedures
Doc 10037	GOLD Manual
Doc 9869	PBCS Manual

ASBU ELEMENTS (DOC 9750)

COMS-B0/1

CPDLC

Controller-Pilot Data Link Communications

COMS-B0/2

ADS-C

Automatic Dependent Surveillance-Contract

Source: ICAO GANP Portal (icao.int)

RECOMMENDED PRIORITIES

Five documents to prioritize for the CAR project

1	**Doc 10037 - GOLD Manual**	Operational procedures, controller and flight crew training, CPDLC message sets, ADS-C contracts and interoperability.
2	**Doc 9869 - PBCS Manual**	RCP/RSP specifications, performance monitoring, safety and operational performance assessment.
3	**Doc 4444 - PANS-ATM**	Operational procedures and applicable separation standards.
4	**Annex 10, Volumes II and III**	Communications provisions and supporting technical infrastructure.
5	**Doc 9750 - GANP**	Alignment with ASBU elements COMS-B0/1 (CPDLC) and COMS-B0/2 (ADS-C), and subsequent implementation evolution.

REGIONAL DELIVERABLES

From references to CONOPS and Implementation Plan

PRIMARY OPERATIONAL GUIDANCE

Doc 10037

GOLD Manual

Procedures, training, message sets, contracts

Doc 9869

PBCS Manual

RCP/RSP, performance monitoring and assessment

SUPPORTING SARPS AND PANS

Applicable SARPs and PANS

- Annex 10, Volumes II and III
- Annex 11
- Doc 4444 (PANS-ATM)
- Doc 9750 (GANP)

CAR REGIONAL DELIVERABLES

- **CONOPS**
- **Assessment Report**
- **Implementation Plan**

Docs 10037 and 9869 are the primary operational references, supported by the applicable SARPs and PANS.

OFFICIAL REFERENCES

Official ICAO references

Doc 10037

GOLD Manual

Doc 9869

PBCS Manual

Doc 9694

ATS Data Link Applications

GANP

ASBU Communication Elements

Start with Docs 10037 and 9869 as the primary operational guidance for the CAR Regional ADS-C/CPDLC Project.