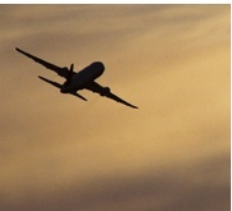# GOLD – Chapter 5
Flight Crew Procedures

(ICAO Seminar/workshop on the implementation of Ground Ground and Ground Air data link in the SAM Region)

Lima, Peru 10 -12 September 2012

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GOLD – Global Operational Data-link Manual

- GOLD is a significant step towards <u>global standard procedures</u>:

  - GOLD - "is intended to maximize operational benefits in data link operations by promoting seamless and interoperable data link operations throughout the world."

  - GOLD is formatted such that it has specific sections for the different operational users:
   - Chapter 5 provides guidance on Flight Crew Procedures
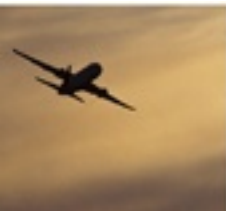
GOLD – towards "seamless and interoperable" global procedures

- The procedures and guidance material for data link operations captured in the GOLD have been developed over years of operational experience.

- Many aircraft operate globally. We need to strive for seamless and interoperable procedures to:
    - Maximise Safety.
    - Keep training costs down.

- There will not be time to cover all of the procedures detailed in GOLD in this briefing.

GOLD Chapter 5

- **This chapter provides guidance on procedures and recommended practices for the flight crew in airspace where data link services are available.**

- **This information is intended to assist in the development of:**
  - **Airline procedures and associated documentation; and**
 - **Appropriate flight crew training programs.**
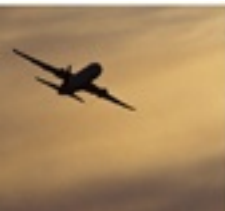
GOLD Chapter 5.1 and 5.2

- 5.1 Overview
  - 5.1.1 Operational Differences between voice and CPDLC
  - 5.1.2 Operational authorisation for CPDLC
  - 5.1.3 When to use voice and when to use CPDLC
  - 5.1.4 Loss of SATCOM data communications

- 5.2 Logon
  - 5.2.1 General
  - 5.2.2 When to initiate log-on request
  - 5.2.3 Automatic transfer between FIR
  - 5.2.4 Transfer of voice with CPDLC
  - 5.2.5 Exiting CPDLC and ADS-C service areas

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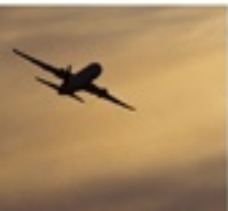
Operational Differences Voice-CPDLC

- **Development, testing, and operational experience have highlighted fundamental differences between CPDLC and voice communications. These differences need to be considered when developing or approving flight crew procedures involving the use of CPDLC.**

- **The operator should develop flight crew procedures to ensure that each flight crew member (e.g. pilot flying and pilot monitoring - communicating) independently reviews each CPDLC uplink prior to responding and/or executing a clearance that it may contain and each CPDLC downlink message prior to transmission.**
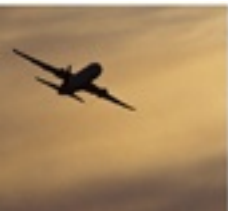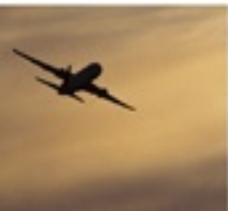
GOLD Chapter 5.3 and 5.4

- <u>5.3 CPDLC ATS Uplinks</u>
  - 5.3.1 General
  - 5.3.2 Flight Crew Response Times
  - 5.3.3 Conditional Clearances
  - 5.3.4 "Expect" uplinks
  - 5.3.5 Uplinks with FMS loadable data
- <u>5.4 CPDLC ATS Downlinks</u>
  - 5.4.1 General
  - 5.4.2 Free text
  - 5.4.3 Unsupported messages
  - 5.4.4 CPDLC reports

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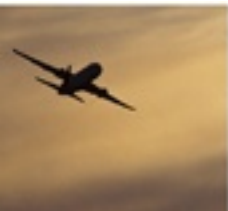
GOLD Chapter 5.5 and 5.6

- <u>5.5 ADS-C Contract</u>
  - 5.5.1 General

- <u>5.6 Position Reporting</u>
  - 5.6.1 General
  - 5.6.2 Position reporting in a non-ADS-C environment
  - 5.6.3 Position reporting in an ADS-C environment
  - 5.6.4 Position reporting using FMC-WPR

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GOLD Chapter 5.7 and 5.8

- **5.7 Weather Deviations and Offsets**
  - 5.7.1 General
  - 5.7.2 Weather deviations and offsets
  - 5.7.3 Deviations either side of route
  - 5.7.4 Reporting back on route
- **5.8 Emergency and Non-routine procedures**
  - 5.8.1 Emergency – General
  - 5.8.2 CPDLC and ADS-C Emergency
  - 5.8.3 Voice Communications
  - 5.8.4 Data link system failures
  - 5.8.5 Using CPDLC to relay

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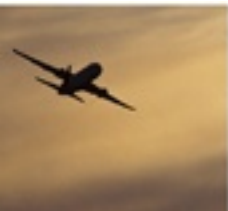
Thank you

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