Twenty-Third Meeting of the
Informal South Pacific ATS Coordinating Group (ISPACG/23)

FANS Interoperability Team Meeting (FIT/16)
Santiago, Chile, 24-25 March 2009

Agenda Item 6: Progress Toward The GOLD Standard

GLOBAL OPERATIONAL DATA LINK DOCUMENT (GOLD) UPDATE AND ACTION

(Presented by Federal Aviation Administration)

SUMMARY

This paper provides a status of the Global Operational Data Link document (GOLD). The Group is invited to support the GOLD points of contact (POCs) for the South Pacific sub-region in compiling comments on the GOLD, v0.4, by no later than 1 May 2009.

1. INTRODUCTION

1.1   At ISPACG/22 and FIT/15, it was concluded that "the data link working group undertake a comprehensive review of the FANS Operations Manual (FOM) with the aim of revising the format and language used as required to achieve global endorsement of the FOM." This work is progressing by an Ad Hoc Working Group, which has been coordinating directly with the data link working group, to develop a global operational data link document (GOLD).

1.2   The Asia-Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) and others recognize a need to globally harmonize data link operations related to planning and implementation, operational procedures, initial qualification, post-implementation monitoring and corrective action, and to the greatest extent possible, resolve regional and/or State differences impacting seamless operations.

1.3   With the expansion of data link operations in continental (domestic) airspace, it is noted that this work is seen as the first step to harmonizing oceanic and continental (domestic) data link operations worldwide.

1.4   The GOLD will be intended primarily for airspace planners, controllers, pilots and dispatchers, training organizations for pilots and controllers, central monitoring and reporting agencies, and automation specialists at centers.

2. DISCUSSION

Establishing the GOLD Ad Hoc Working Group

2.1 Through various regional forums, the North Atlantic (NAT), Asia-Pacific, and some States in other regions have agreed to develop the GOLD to "link" the guidance material and procedures for data link operations that can be used in all regions of the world. ICAO Montreal secretariat supports the work and the following list summarizes current endorsement for the GOLD:

a) NAT SPG/44 in June 2008, (Refer NAT SPG Conclusion 44/9);

b) NAT Implementation Management Group (NAT IMG/32) in May 2008;

c) NAT Future Air Navigation System (FANS) Implementation Group (NAT FIG/17) in April 2008;

d) Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/19) in September 2008;

e) Informal South Pacific Air Traffic Services Coordinating Group and FANS Interoperability Team (ISPACG/22 – FIT/15) in March 2008; and

f) Informal Pacific Air Traffic Control Coordinating Group and FIT (IPACG/29 – FIT/16) in October 2008.

2.2 The United States (FAA) has accepted the responsibility to coordinate the group's activities across regions via the GOLD Coordinator.

2.3 Points-of-contact (POCs) have been identified to serve on an Ad Hoc Working Group. The following provides an update on the POCs that have been identified:

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Work program and terms of reference

2.4   The GOLD Ad Hoc Working Group will prepare a global operational data link document that:

   a)   Takes account of ICAO provisions;

   b)   Bases work on:

      1)   Guidance Material for ATS Data Link Services in North Atlantic Airspace (NAT GM);

      2)   FANS Operations Manual (FOM); and

      3)   RTCA DO-306/EUROCAE ED-122, Oceanic Safety and Performance Standard (Oceanic SPR Standard);

   c)   Harmonizes procedures globally;

   d)   Provides performance specifications and guidance material for:

      1)   Communication – Required Communication Performance (RCP) type(s) for Controller-Pilot Data Link Communications (CPDLC); and

      2)   Surveillance – Automatic Dependent Surveillance-Contract (ADS–C) and FMC WPR;

   e)   Includes guidelines and requirements for:

1)   Qualification/eligibility of aircraft data link equipage, aircraft operator, procedures and air traffic service provision; and

2)   Post-implementation monitoring;

f)   Identifies regional differences only as absolutely necessary; and

g)   Enables planning and implementation regional groups to globally adopt the GOLD.

2.5   A current draft of the GOLD v0.4 was distributed among GOLD Ad Hoc Working Group participants on 6 February 2009. Given resources are available, it would be reasonable to expect a more mature draft for a broad review as early as July 2009.

Status of the GOLD

2.6   The ad hoc working group is continuing its assessments of existing material, developing and agreeing on material for the GOLD. The material is being taken from each of the regional documents. New material is being developed on performance-based specifications, data collection, monitoring, analysis and results, which is based on material, such as DO-306/ED-122 and the material provided at ISPACG/22 FIT/15 in Working Paper 07 (WP/07). The plan is to mature the GOLD and include additional information based on lessons learned.

2.7   The document is structured so that it can be expanded to eventually include data link operations in core Europe and in other regions/States as implementations take place.

2.8   The Ad Hoc Working Group has produced a GOLD version 0.4, totaling 241 pages, for internal use, which contains nearly all the relevant information provided in the NAT GM, the FOM, and DO_306/ED_122. The current high-level outline of the GOLD is as follows (parenthesis includes the number of pages for that section):

FOREWORD (3)

1.   Definitions (15)

2.   Overview of data link operations (TBD)

3.   Administrative provisions for data link (14)
Service provision (7)
Operator eligibility (5)
Flight planning (2)

4.   Operating procedures (62)
CPDLC & ADS-C connection management (17)
CPDLC (22)
ADS-C (14)
FMC WPR (1)
Emergency and non-routine procedures (7)
Voice phraseology related to data link operations (1)

Appendices (120)
- A. CPDLC message elements & use of free text (67)
- B. RCP specifications (20)
- C. Surveillance performance specifications (19)
- D. Post-implementation monitoring (9)
- E. Regional or State-specific information (9)
- F. Operator/aircraft-specific information (5)

2.9   The GOLD coordinator maintains a number of documents that provide traceability between the GOLD and the source documents, e.g., FOM and NAT GM, and track open comments. Some material in the NAT GM still needs to be reviewed for inclusion. There are a total of 55 open comments, categorized as follows: 20 – Additional information, 8 – Clarification, confusing, 7 – Editorial, 11 – Review for completeness and correctness, 9 – Serious – potential conflict with seamless operations.

2.10   The Ad Hoc Working Group is proceeding to complete the sections of the document requiring additional information and ensuring complete coverage of the FOM and the NAT GM. In addition, further work is needed to simplify text, ensure consistency in style, clean it up, and streamline the document.

2.11   While this version of the GOLD is intended for internal use, the POCs intend to coordinate within their respective regions and/or organizations with guidance to obtain the appropriate level of comments on the GOLD, given the current state of its maturity, so we can identify the significant issues early in the process.

2.12   Much of the work continues to be accomplished via email, net meetings, teleconference, etc., as needed.

2.13   The GOLD Ad Hoc Working Group is working to the following schedule:

a)   17-18 November 2008 – GOLD Ad Hoc WG #1 (London) - Done

b)   January 2009 – complete initial draft of GOLD – V0.4 Done

c)   2-6 March 2009 – NAT FIG Update (Savannah, GA) – Now

d)   23-27 March 2009 – ISPACG Update (Santiago, Chile)

e)   20-24 April 2009 – FIT BOB Update (Bangkok)

f)   27 April – 8 May 2009 – OPLINKP Update (Montreal, Canada)

g)   18-22 May 2009 – IPACG Update (Seattle, WA)

h)   (Tentative) 25-29 May 2009 or 1-5 June 2009 - GOLD Ad Hoc WG #2 (Los Angeles)

i)   July 2009 – coordination draft GOLD for broad review

2.14   After the group has completed the GOLD, the group will consider how it will affect regional and other (e.g., ICAO and RTCA/EUROCAE) documentation. The POCs will provide recommendations to the appropriate groups and/or organizations for further action via normal channels.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a)   Note the information in this paper.

b)   Support the GOLD POCs for the South Pacific sub-region in compiling comments on the GOLD, v0.4, by no later than 1 May 2009.