

**Twenty Sixth Meeting of the  
Informal South Pacific ATS Co-ordinating Group (ISPACG/26)**

**Nadi, Fiji, 1-2 March 2012**

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**Agenda Item 4: AI 21-5 Sharing of Operational Data**

**GLOBAL OPERATIONAL DATA LINK DOCUMENT (GOLD)  
AMENDMENT PROGRAM**

**Presented by the Federal Aviation Administration**

**SUMMARY**

This paper provides an update on the ICAO GOLD Working Group's work program to amend the GOLD and invites ISPACG to participate in this effort. It also provides detailed information on how to subscribe to the GOLD web site and ensure notification of updates.

**1. INTRODUCTION**

- 1.1 This paper provides an update on the Global Operational Data Link Document (GOLD) amendment program and invites the ISPACG to participate to complete a GOLD, 2<sup>nd</sup> Edition, by first quarter 2013.

**2. DISCUSSION**

*GOLD Status*

- 2.1. In June 2010, the North Atlantic (NAT) and Asia Pacific (APAC) Regions, and South Atlantic sub-Region adopted the First Edition of the GOLD. The GOLD now supersedes both the Guidance Material for ATS Data Link Services in North Atlantic Airspace (NAT Data Link GM) and Future Air Navigation System 1A (FANS 1/A) Operations Manual (FOM), which was used through the APAC, Africa-Indian Ocean (AFI), and South American (SAM) Regions.
- 2.2. The GOLD includes guidance material for data link service provision, operator preparation and aircraft equipage, controller and flight crew procedures, and includes performance-based specifications for communications and surveillance and post-implementation monitoring and corrective actions. A summary of the GOLD contents together with intended uses can be found at **Attachment A**.

### *GOLD change process*

2.3. The GOLD FOREWORD provides a description of the change process:

#### **8. Changes to the document**

This document is maintained as a regional document in coordination with all ICAO planning and implementation regional groups (PIRGs) providing data link services within their region. Each participating PIRG establishes a mechanism for submitting and administering change proposals.

Change proposals (CPs) can be submitted by any stakeholder participating in data link operations. The stakeholder should submit a Change Proposal to their ICAO regional office (see Appendix E). The ICAO regional office will coordinate the change proposal within its own region, other regions, and ICAO HQ, to determine the acceptability of the change proposal. Once the ICAO regional office has completed coordination and the participating PIRGs accept the change proposal, the change is concluded by each of the PIRGs.

- 2.4. The GOLD has set a precedent for the development of global guidance material. While it is maintained as a regional document by each of the participating regions, any region must first globally coordinate any amendments and obtain agreement with participating regions before the amendments can be incorporated into the next edition of the GOLD.
- 2.5. This approach is advantageous in that the users of the document also participate in its development in a timely manner. They have established good working relationships with their peers in other regions. ICAO has supported this new way of operating. However, until ICAO has established a global configuration management process for the GOLD, the participating regions have requested that the GOLD Working Group remain active and facilitate the global coordination of amendments to the GOLD. Follow-on work for the GOLD Working Group includes:
- a) Soliciting proposals for amendments to the GOLD among participating regions, new regions and airspace users;
  - b) Coordinating proposed amendments across the regions;
  - c) Providing interpretation and further clarification to GOLD guidelines, as necessary;
  - d) Facilitating planning and implementation of data link operations, post-implementation monitoring, and corrective actions; and
  - e) Developing a proposal for ICAO on establishing a global configuration management process for the GOLD.

- 2.6. In January 2011, the GOLD Working Group solicited input to establish a work program for follow-on work to amend the GOLD. The group received a number of items regarding its application and interpretation, the need for additional material, considerations for adoption in other regions, and other changes needed to support the planning and implementation initiatives in the NAT Region, e.g., data link mandate, reduced lateral and longitudinal separations, and the performance-based framework for communications and surveillance. These items are tracked in a master change proposal matrix.
- 2.7. The GOLD Working Group will process change proposals into a working draft using processes and forums similar to change processes used prior to the First Edition. The GOLD coordinator will:
- a) Use a master change proposal matrix, similar to the comment matrix previously, to track changes to the GOLD and relevant material;
  - b) Use the GOLD, First Edition, as the baseline to incorporate into a GOLD changes that are tracked by the resolution status column of change proposal matrix; and
  - c) Distribute versions of the GOLD working draft and the change proposal matrix for further coordination and comment via email. Teleconferences/Web Ex sessions and meetings will be arranged, as needed.

*GOLD web site*

- 2.8. ICAO is sponsoring a web site to support the work of the GOLD Working Group on the ICAO Secure Portal web site. Various other ICAO global groups are also hosted on this web site.
- 2.9. A person wishing to participate in the GOLD amendment program is invited to register as a member of the GOLD group on this web site as soon as is convenient, and start using the service. This web site will be used to post the latest draft versions of GOLD and the change proposal matrix, and to notify members of updates. Persons already registered on the ICAO Secure Portal web site may request a membership to the group GOLD through an existing Profile link. Anyone who does not have an account with the ICAO Secure Portal web site should follow the instructions below to subscribe and gain access to the web site:
- a) Access the ICAO Portal at the following link: <http://portal.icao.int>;
  - b) Click the REQUEST AN ACCOUNT option;
  - c) Click the OK button on the pop-up message to indicate this is your first Portal account. In the pop-up window, enter the group name (all caps and no spaces) GOLD in the SUBSCRIBE TO field;
  - d) Click the OK button;

- e) Enter the necessary information in the New User Account form; and
- f) Click the SUBMIT REQUEST button.

2.10. When the above steps are completed, ICAO will provide confirmation that the requestor has been granted or denied access (if granted, the email will include a username and password). For further information or assistance, subscribers may contact "Catherine DALY" <cdaly@paris.icao.int>.

*Amending the GOLD for European (EUR) Region adoption*

2.11. Since November 2010, the GOLD Working Group has been coordinating with the European Air Navigation Planning Group (EANPG) to determine the steps necessary to adopt the GOLD in the European (EUR) Region. The intent is to support global harmonization of the European data link implementation beginning February 2013, in accordance with the Implementing Rule for Data Link Services. This European data link implementation is referred to as LINK 2000+.

2.12. The amendments needed to GOLD will be challenging because the EUR Region will be implementing LINK 2000+ in certain domestic airspace, whereas the NAT, APAC and other regions now provide data link services mostly in oceanic and remote airspace. Furthermore, LINK 2000+ is based on the aeronautical telecommunication network (ATN), whereas other implementations around the world are based on FANS 1/A.

2.13. The GOLD Working Group held the GOLD/4 meeting in Paris, from 10-14 October 2011, mainly to address the amendments needed for adoption by the EUR Region that would be acceptable for other participating regions.

2.14. GOLD/4 was attended by 27 participants from the ICAO, Canada, France, Germany, Iceland, Italy, Romania, Singapore, Spain, United Kingdom (U.K.), New Zealand, United States (U.S.), International Federation of Air Traffic Controllers' Associations (IFATCA), EUROCONTROL, Thales, Airbus, Air Europa, and Delta.

2.15. GOLD/4 produced a change package that will be used to construct the GOLD, v1.1. The change package represented a significant amount of work to gain confidence that GOLD could be amended for global use, including the EUR Region. The participants concluded that GOLD was invaluable toward harmonizing data link implementations around the world and participants from Europe agreed to continue supporting the merge of LINK2000+ guidance material into the GOLD.

*Next steps*

2.16. GOLD/4 agreed on a detailed work program to amend the GOLD and produce the GOLD, 2nd Edition in early 2013, to support new data link implementations throughout the world. The ICAO NAT, APAC, EUR, SAM and AFI Regions are now participating in the GOLD work.

2.17. The group agreed to proceed with desk reviews, virtual meetings, and face-to-face meetings to complete Edition 2.0 of the GOLD to support adoption by regional planning and implementation groups in 2013. **Table 1** provides a schedule of GOLD events needed to meet this target date. The next face-to-face meeting, GOLD/5, is scheduled in Montreal, Canada, 4-8 June 2012.

**Table 1. Schedule of GOLD events**

Event	GOLD/4	Web 4.1	GOLD/5	Web 5.1	GOLD/6
Actions/ comments due	10 Jul 2011	9 Feb 2012	21 May 2012	10 Oct 2012	9 Jan 2013
Pre Meeting GOLD update	30-Aug-2011 (Matrix only)	15 Feb 2012 (V1.2.1)	28 May 2012 (v1.3.1)	17 Oct 2012 (v1.4.1)	16 Jan 2013 (v1.5.1)
Meeting	10-14 Oct 2011	22 Feb 2012 (2 hr) 1300UTC	11-15 Jun 2012 (5 days) (Miami)	24 Oct 2012 (2 hr)	28 Jan – 1 Feb 2013 (5 days) (San Diego)
Post Meeting GOLD update	21 Oct 2011 (v1.1)	29 Feb 2012 (V1.2.2)	22 Jun 2012 V(1.3.2)	31 Oct 2012 (v1.4.2)	27-Feb 2013 (v1.5.2)
Desk Review (approx)	(3 months)	(3 months)	(4- months)	(2+ months)	13 Mar 2013 (Edition 2)

### 3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information in this paper;
- b) encourage participants to subscribe to the GOLD web site, as necessary (Refer to **paragraph 2.9**);
- c) endorse ISPACG participation in the GOLD amendment program, which is targeted for completion in first quarter 2013;
- d) identify and prepare proposals for specific GOLD amendments that are of interest to the ISPACG and submit to [tom.kraft@faa.gov](mailto:tom.kraft@faa.gov) for consideration by the GOLD Working Group, e.g., use of controller pilot data link communication (CPDLC) for exchange of weather information (Refer to **paragraph 2.17**); and
- e) Provide comment and opinion on other proposals for GOLD amendment (Refer to **paragraph 2.17**).

### GOLD Content Summary

Material Type	Reference	Description	Intended uses, remarks
<b>Introductory material</b>	Foreword	Purpose, scope, etc.	For all users of the document. Descriptive.
	Chapter 1	Definitions	For all users of the document. Descriptive.
	Chapter 2	Overview of data link operations	For ATSPs and operators to develop training material for personnel, as appropriate, on the fundamentals of data link operations. Descriptive.
<b>Guidelines</b>	Chapter 3	Administrative provisions related to data link operations	For ATSPs and airspace planners to plan for and implement data link services, including ATC automation, and interfacility agreements. For ATSPs and operators to negotiate contractual arrangements with CSPs. For operators to plan for and use the data link system.
	Chapter 4	Controller and radio operator procedures	For ATSPs and CSPs to develop procedures and training material for controllers and other personnel at ATSU's and radio facilities.
	Chapter 5	Flight crew procedures	For operators to develop procedures and training material for the flight crew and dispatchers.
	Chapter 6	Advanced data link operations	For ATSPs and operators to develop procedures and training material for personnel, as appropriate, related to advanced data link operations, such as dynamic airborne reroute procedures (DARP) and tailored arrival (TA).
	Chapter 7	State aircraft data link operations	For ATSPs and State (military) operators to develop procedures and training material for personnel, as appropriate, related to conducting military operations, such as military assumes responsibility for the separation of aircraft (MARSA) and air-to-air refueling (AAR).



Material Type	Reference	Description	Intended uses, remarks
<b>Appendices (Supporting and Additional Guidelines)</b>	Appendix A	CPDLC message elements and standardized free text messages	For all users. Based on Doc 4444, and includes FANS 1/A and ATN B1 messages.
	Appendix B	RCP specifications	For technical operations specialists, applies to CPDLC, particularly in reduced separation environments.
	Appendix C	Surveillance performance specifications	For technical operations specialists, applies to ADS-C and FMC WPR, particularly in reduced separation environments.
	Appendix D	Post-implementation monitoring and corrective action	For post-implementation monitoring of the performance of the data link system, analysis, investigations, and corrective action at the State/ATSP, regional, and global levels.
	Appendix E	Regional/State-specific information	Includes differences in data link operations at the State/ATSP and regional levels.
	Appendix F	Operator/aircraft specific information	Includes differences in aircraft data link system capability and performance.

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