

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE**



**REPORT OF THE REVIEW OF THE GUIDANCE MATERIAL ON CNS/ATM
OPERATIONS IN THE ASIA AND PACIFIC REGION
TASK FORCE**

Honolulu, Hawaii, United States

2 – 4 October 2003

The views expressed in this Report should be taken as those of the
Task Force and not the Organization

Published by the ICAO Asia and Pacific Office, Bangkok

History of the Meeting

Introduction i
Attendance..... i
Officers and Secretariat..... i
Opening of the Meeting i
Documentation and Working Language i

Report of the Review of the CNS/ATM Operations Guidance Material Task Force Meeting

Agenda Item 1: Adoption of Agenda 1
Agenda Item 2: Operational Considerations 1
Agenda Item 3: Other Business 3

Appendices

Appendix A: List of Participants..... A-1
Appendix B: Analyses of the ICAO Review of the Guidance Material..... B-1
Appendix C: Action Items..... C-1

1.1 Introduction

1.1.1 The Review of the *Guidance Material on CNS/ATN Operating Procedures in the Asia Pacific Region* (referred to in this report as the Guidance Material) Task Force (Review/CNS/ATM-GM/TF) was held at the Ilikai Wakiki Hotel in Honolulu, Hawaii, United States from 2 to 4 October 2003.

1.2 Attendance

1.2.1 The meeting was attended by 5 participants from Japan, New Zealand, the United States, IATA and IFALPA. A complete list of participants is at **Appendix A**.

1.3 Officers and Secretariat

1.3.1 Mr. David Moores, Regional Officer ATM, ICAO Asia and Pacific Office, Bangkok, Thailand served as the Moderator and Secretary for the meeting.

1.4 Opening of the Meeting

1.4.1 Mr. David Moores, on behalf of Mr. Lalit B. Shah, Regional Director, Asia and Pacific Office, welcomed the participants and opened the meeting. He expressed appreciation to the Federal Aviation Administration (FAA) of the United States for hosting the meeting. He reminded the meeting that undertaking this review and revision of the ICAO *Guidance Material on CNS/ATM Operations in the Asia and Pacific Region* was a significant step in the development of common FANS-1/A operating procedures that could have worldwide applicability. The guidance provided by ICAO Headquarters in its review of the Guidance Material was intended to harmonize the regional material with ICAO SARPs and PANS, thereby fulfilling the request of the Air Navigation Commission to standardize operating procedures in the region, and with other regions to the extent possible. It was hoped that once the revised guidance material was approved by ICAO, this would lead to other regions adopting the document.

1.5 Documentation and Working Language

1.5.1 The working language of the meeting as well as all documentation was in English.

Agenda Item 1: Adoption of Agenda

1.1 The meeting reviewed the provisional agenda presented by the Moderator and adopted it as the agenda for the meeting.

Agenda Item 2: Review and revision of the Guidance Material

2.1 The meeting recalled that APANPIRG/13 (September 2002) had considered the results of a review carried out by ICAO Headquarters as requested by the Air Navigation Commission to align the *Guidance Material on CNS/ATM Operations in the Asia/Pacific Region* with the SARPs and PANS to the extent possible, and in particular with the procedures contained in Amendment 1 to the *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444).

2.1.1 APANPIRG/13 endorsed the need for a review of the Guidance Material to be carried out by the ICAO Asia and Pacific Office, in particular to address the differences between operating ADS and CPDLC using the FANS-1/A system, and the operational and technical requirements for ATS data link applications, i.e. ADS and CPDLC, provided for in ICAO SARPs and PANS. However, due to resource constraints and other priorities of the Asia and Pacific Office it was not possible to carry out the review sooner.

2.1.2 APANPIRG/14 (August 2003) on reviewing progress to revise the Guidance Material, agreed that this should be carried out by a Task Force with appropriate expertise and to be given priority. To undertake this work, the United States at APANPIRG/14 offered to host the review meeting in Honolulu, Hawaii to immediately proceed the IPACG/20 meeting, 6-10 October 2003 to take advantage of experts on FANS-1/A and ADS and CPDLC operations who would be attending that meeting. At the same time, the States responsible for the Pacific Operations Manual (POM) would be represented at the review meeting, and this would facilitate harmonizing the POM with the Guidance Material.

2.1.3 The meeting noted that APANPIRG/14 recognized a need for a global approach to be taken for operating procedures for data link applications using FANS-1/A, and suggested that the Asia/Pacific Guidance Material could provide a basis for other regions to implement and operate ADS and CPDLC services.

2.1.4 The APANPIRG/14 meeting agreed to the following Conclusion:

Conclusion 14/2 – Revision of the *Guidance Material on CNS/ATM Operations in the Asia/Pacific Region*

That, as a matter of priority, and in line with the review by ICAO at the request of the Air Navigation Commission, a Task Force be established to revise the *Guidance Material on CNS/ATM Operations in the Asia/Pacific Region*, in coordination with States responsible for the Pacific Operations Manual (POM) with the intent of harmonizing both documents.

Review of the Guidance Material

2.2 The Task Force noted that in the development of the ICAO Guidance Material, the operating procedures contained in Part III were based on the South Pacific Operations Manual (SPOM). Further, the Guidance Material, Version 1 had been revised in 2000 but Version 2.0 had not been published due to problems in harmonizing the material with ICAO SARPs and PANS. This had led to ICAO Headquarters undertaking a thorough review of the document and requesting that the Guidance Material be revised in line with that review. Further, since the SPOM had been merged with the North Pacific Operations Manual to become the POM, this document had been substantially revised in both content and layout, and Part III of Version 2.0 of the Guidance Material was substantially out of date. The meeting agreed that the POM, Version 2 dated 31 August 2003 would be adapted for inclusion as Part III to the Guidance Material. It was noted that the POM had incorporated hyperlinking and sophisticated user friendly document management techniques not used in ICAO documents, and these would need to be converted and adapted to the ICAO style and layout.

2.2.1 The Guidance Material was made up of three parts, Part I and II were of a general nature and there were no major problems identified by the ICAO Review. Part III, which provided examples of detailed operating procedures for ADS and CPDLC was the main focus of the ICAO Review. The meeting carried out a detailed review of the document based on the ICAO Review, and aligned it with the ICAO review material to the extent possible.

2.2.2 A detailed analysis of the ICAO Review was carried out and action to be taken has been identified and provided in **Appendix B**. In this regard, a number of the issues raised in the Review have been already incorporated in the POM, others will be included in a Request for Change (RFC) to amend the POM, and some issues were not agreed with, and reasons for this position are provided.

Use of the POM

2.3 The meeting agreed that the changes proposed to Part III of the Guidance Material meant that the POM would not be in line with the ICAO Guidance Material. Also, it was noted that the Air Navigation Commission had expressed the wish to see common regional operating procedures provided by States, and their documents should be harmonized with ICAO provisions and guidance material. Accordingly, the meeting recommended that IPACG and ISPACG should review the POM based on the ICAO review material with the intent to harmonize the POM with the ICAO Guidance Material.

2.3.1 The meeting was of the view that States would continue to use the POM as their operating procedures document as the ICAO Asia/Pacific guidance document was guidance material. Therefore, there was a need to ensure in the future that both documents were kept in line. To achieve this, it would be necessary for States responsible for the POM to provide ICAO with any revisions made to the POM. This in turn could lead to a Request for Change to the Asia/Pacific Guidance Material, which would need to be endorsed by ICAO to ensure compatibility with ICAO provisions to the extent possible. There was a possibility that differences between the two documents could arise from time to time, and there would be a need for close coordination between IPACG and ISPACG and the ICAO Asia and Pacific Office. The meeting emphasized that this situation underlined the need for ICAO to provide global operating procedures for ADS and CPDLC using FANS-1/A.

2.3.2 The meeting noted with regret that the Asia and Pacific Office could not attend the IPACG/20-FIT/7 meetings from 6 to 10 October 2003 due to constraints and other meeting commitments. The meeting urged ICAO to continue to attend these meetings which were focused on implementation of the ICAO Asia/Pacific Regional Plan for the New CNS/ATM, as well as

developing operational initiatives to improve the efficiency and safety of international airspace in the Pacific Region. In this regard, the task Force recognized that ICAO had an important role to play.

Agenda Item 3: Other business

3.1 Future requirements to support FANS-1/A operations

3.1.1 The meeting expressed its satisfaction with the outcome of this effort to align the Guidance Material with ICAO SARPs and PANS for ADS and CPDLC operations. The ICAO Headquarters' review of the Guidance Material, as requested by the Air Navigation Commission was seen by the Task Force as a significant cooperative effort between ICAO, the States/ATS providers and users of the FANS-1/A system in the Asia and Pacific Region. The meeting was confident that the review of the Guidance Material carried out at this meeting, and when the revision to the Guidance Material was completed, would go a long way to meeting the objective set by the Commission to harmonize the FANS-1/A operating procedures in the region. The Task Force was also of the view that the revised guidance material could provide an acceptable set of procedures substantially in line with ICAO SARPs and PANS to achieve common procedures worldwide for the provision of ADS and CPDLC services using FANS-1/A.

3.1.2 In consideration of future developments in the use of FANS-1/A in a global ATM system, the meeting recognized that the commercial airline industry that was the major component of the airspace users of FANS-1/A, would continue to operate this system for the foreseeable future. The Task Force recognized that in the oceanic and remote airspace environment where procedural ATC was being provided, there was no replacement system under development by the manufacturing industry to meet airline requirements. The long haul fleet of the latest generation of aircraft were exclusively equipped with FANS-1/A. This represents approximately 2000 airframes. As the benefits of using FANS-1/A are realized, e.g. by increasing airspace capacity through the reduction of en-route separation minima, improving operational efficiency by significantly enhancing situational awareness for ATC, more efficient use of airspace such as dynamic airborne reroute planning, and enhancing safety by providing a rapid means of detecting aircraft non-conformance with ATC clearances, this should lead to more non-FANS-1/A operators equipping their aircraft with this system. Also, the United States military had implemented an equipage programme for FANS-1/A for its long haul fleet of some 1700 aircraft. This represents a substantial financial investment by civil and military operators. In the global economy of today and the immediate future, it was imperative that the airspace users and ATS providers obtain maximum benefit from their investment. As this was the only aircraft data link system available, it was expected to be the primary system in use for some considerable time. Also, the meeting noted that due to the prevailing economic climate, it was felt that investment by airlines in new technology was highly unlikely, and the FANS-1/A system would remain in use for the current and future generation of aircraft.

3.1.3 The meeting also recognized that development of ADS-B applications such as airborne separation assurance system (ASAS) would have the potential for tactical reduction of separation in oceanic and remote airspace. Further, with the airspace capacity benefits afforded by RVSM and the precision navigation capability of FANS-1/A equipped aircraft, the meeting was of the view that there was no aviation industry urgency to develop a next generation replacement of FANS-1/A, which would continue to meet the operational requirements of the current and immediate future generation of commercial air transport aircraft. Therefore, the meeting considered it was imperative that ICAO developed PANS and guidance material to support the operation of FANS-1/A globally.

3.1.4 The evolution of the technical performance and of the air and ground components of the data link systems that make up the FANS-1/A operating environment has made substantial improvements since the introduction of ADS and CPDLC services in the South Pacific FIRs in the mid 1990's. The development of the safety management systems that underpin ADS and CPDLC operations was an essential element to the success of present day operations. The data link performance characteristics of aircraft and ground systems had been and continued to be comprehensively investigated and remedial action taken where problems were uncovered. This effort attests to the success of the Central Reporting Agency (CRA) operated by the IPACG and ISPACG for the Pacific Region. The cooperative effort of the States, ATS providers and the airspace users in the region had resulted in substantial research and development of FANS-1/A, leading to improvements in the performance of the data link systems such that the present level of operation was of a significant higher order. In the view of the Task Force, the FANS-1/A operation as experienced in the Pacific Region has reached an overall mature level.

3.1.5 In light of the foregoing, the Task Force urges ICAO to build on the outcome of this review of the Asia/Pacific Guidance Material, and to use it as a basis for developing and providing an ICAO global document of FANS-1/A operating procedures. The meeting recognized that to date, the development of ICAO SARPs, PANS and guidance material for ADS and CPDLC has been primarily focused on the next generation of aircraft systems based on the aeronautical telecommunications network (ATN). The practical reality of the present and future data link operating environment, as described above, will continue to be based on FANS-1/A. In keeping with ICAO's primary role to develop SARPs and PANS to support States implementing standardized air navigation systems and procedures to serve international civil aviation, the provision of standardized worldwide operating procedures and technical requirements for FANS-1/A was urgently required. The introduction of FANS-1/A operations continues to expand with the North Atlantic Region well advanced in the provision of such services, and the Asia Region embarking on an implementation programme for ADS/CPDLC, first in the Bay of Bengal Area planned for February 2004 followed shortly thereafter in the South China Sea and West Pacific areas. It was expected that other oceanic areas would also be implementing FANS-1/A in the near term. Therefore, it would be timely for ICAO to establish a technical work programme to amend the PANS-ATM in particular to provide operating procedures specifically to support FANS-1/A operations.

3.2 Action Plan

3.2.1 The Meeting agreed to the Action Plan as shown in **Appendix C**.

3.3 Future Work

3.3.1 The meeting agreed that to complete the review of the Guidance Material, the Task Force would continue its work by correspondence. Also, coordination would be established with IPACG and ISPACG to harmonize the Guidance Material and the POM, and to develop additional material to be included as appropriate. On completion of draft Version 3.0 of the Guidance Material, this would be submitted to the ATM/AIS/SAR/SG (June 2004) for final review prior to presenting the document to APANPIRG/15 for approval.

3.3.2 The meeting agreed that a further meeting was not required but progress to complete the revision of the Guidance Material would be kept under review, and a meeting convened if this was considered necessary to complete the work.

4. **Closing of the meeting**

4.1 The members of the Task Force expressed their appreciation for the initiative taken by the ICAO Asia Pacific Office to progress the development of Guidance Material which urgently required updating in view of the continued implementation of ADS and CPDLC operations in the region. Also, the review of the Guidance Material undertaken by ICAO Headquarters was acknowledged as being most helpful in progressing the work of the Task Force.

4.1.2 In closing the meeting, Mr. Moores thanked the participants and their administrations for their cooperation and support to complete this important task. The outcome of the meeting demonstrated the value of a small core group of dedicated experts to undertake this kind of work. On behalf of the meeting, he thanked the Federal Aviation Administration of the United States for making the arrangements and providing an excellent venue for the meeting.

Review/CNS/ATM/OPS-GM/TF
Appendix A to the Report of the Meeting

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**ANALYSIS BY THE GUIDANCE MATERIAL TASK FORCE ON THE ICAO REVIEW
OF THE “GUIDANCE MATERIAL ON CNS/ATM OPERATIONS
IN THE ASIA/PACIFIC REGION**

1. Background:

1.1 The ICAO Headquarters Guidance Material review (referred to as the Review) was carried out on a document created at least a year before the Review took place. That document, the South Pacific Operations Manual (SPOM), has in the intervening years been amended and expanded to its current form as the Pacific Operations Manual (POM). Even the POM itself is changing as the Indian Ocean Operations Manual (IOOM) is being incorporated. The POM has been adopted by the FANS Implementation Team of the Bay of Bengal (FIT-BOB), and is expected to also be adopted by the Southeast Asia ATS Coordination Group (SEACG) -FIT for implementation of ADS and CPDLC in the Southeast Asia and West Pacific areas.

1.2 The widespread acceptance of the POM by the user communities adds some urgency to the desire to harmonize the ICAO Asia/Pacific GM and the POM. The Task Force appreciated being asked to participate in this process of encouraging universal policy within the ICAO community to support a unified implementation to the extent possible, while recognizing some inevitable flexibility of States.

1.3 It is a fundamental principle that safety of operation is paramount and consistency of air traffic control practices across international cultural and language boundaries is integral to that safety.

2. Structure:

2.1 This analysis is hooked to the paragraph numbers in the Review document and all paragraph references are presumed to be to that document unless specified as follows: any paragraph reference to the original Guidance Material will be shown as “{GM}”; any to the POM will show “{POM}”; any to the SPOM will show “{SPOM}”; and any references to Annex 10 will show “{Annex}”. In each case, the description of “the issue involved” is the Task Force’s best effort at interpreting the comments of the Review.

2.2 One more caveat: the terms Guidance Material and POM are used interchangeably in this report as Part III of the Guidance Material is Version 2.0 of the POM as adapted by the Task Force, with POM being used more commonly.

3. Task Force analysis on the ICAO Review (paragraph numbering in this section follows the Review document format)

7.1 The focus here seems to be on the format (contents) of the FANS-1/A Problem Report Form {POM 3.10} and its variance from a similarly purposed form used in Europe, the “Paris” form. We concur that problem reporting should be comprehensive, and that “the form should be standardized.” A task needs to be assigned to harmonize these two forms and write a Request For Change (RFC) for the POM as soon as practical.

7.2 The Review itself says that this issue is really for review “at a later date”, and we concur. In the opinion of the Task Force, this relationship of standards to performance to safety acceptability may have proven itself empirically. Since this portion of the Review was written, years of data has been accumulated concerning actual CPDLC and ADS performance, and the POM has

morphed through several iterations. RTCA SG-189 is nearing its 4+-year development of standards. There is ample reliable data available to look into this matter and ICAO should consider initiating a review to address their concerns on this matter.

7.2.1 Within the subject of collection of data, the more important concern here seems to be the impact of, and reaction to, lost CPDLC or ADS messages. The statistical impact is contained within the data so far collected by the Central Reporting Agency (CRA) of IPACG/ISPACG. The practical impact, i.e. the risk or need for “positive assurance” is largely mitigated through accepted ATC practices applied regardless of communication method or separation standard: system-inherent triggers to take action if compliance has not been assured well ahead of any potential loss of separation. We do not see a need for POM change on this issue.

7.2.2 This section of the Review implies that in the absence of a specific form-related item, critical data may not be reported or evaluated. Through the CRA, the FANS Interoperability Teams (FITs) of IPACG/ISAPCG gather, analyse, and act upon a wide range of data that is not specifically mentioned on the reporting form. Performance by communication medium, individual air frame performance, airline performance, ATSU equipment reliability, are only a few of the items collected monthly and analysed for trends. The Task Force would not support any effort that promoted a “not-on-form = not-required-to-report” mindset.

8.1 The concern we see here is that a CPDLC connection with an ATSU which is *not* responsible for the aircraft in question, contains the risk of an inappropriate control action occurring. The Task Force concurs that risk exists. For such an event to happen, a controller must issue a CPDLC clearance to an aircraft not under his jurisdiction, and a pilot would have to acknowledge and activate a clearance from a facility that he knew was not his current contact point. We do not agree that the POM “belittled” that risk; and that “Care must be taken...” sentence (4.4.2 {POM}) is merely a reminder of what is perhaps *the* most fundamental air traffic control principle. A CPDLC message cannot occur with an inactive CPDLC connection (*cf.* 4.4.4 {POM}) and if a controller is in doubt as to whether or not his CPDLC connection is the active one, there is an easy way to determine that (*cf.* 4.4.4.1 {POM}).

It is useful to remember that a CPDLC connection’s purpose is “to allow the exchange of CPDLC messages between an aircraft and an ATSU” (ref. 4.4.1 {POM}). It is a communication link to the ground, as are VHF, UHF and SATVOICE. When such a communication link exists and the flight is transiting into an FIR without that capability, appropriate contact/monitor instructions must of course be issued (and they are covered elsewhere in the POM), but it would be irresponsible to *cut off* an existing communication link rather than allow it to remain available for use if necessary. When flights are in CPDLC areas they do not turn off their HF.

The Review references 8.2.8 {Annex}, which contains several subsections *generally* related to this particular concern, but we do not see specific relevance, nor contradiction with the POM.

The Review references 8.2.9.6.2 {Annex}, which is quite specific on this issue *requiring* termination of the CPDLC connection when transiting to a voice environment. In the view of the Task Force, operational experience and our view of the safety/risks issues involved, as reflected in the POM procedures, do not agree with this requirement.

8.1. a): The concern here is that the use of voice or CPDLC for control must be “made explicitly clear to the flight crew.” The Task Force considers that this is well covered in 4.7.1.2 {POM}, especially the last paragraph. For related information see also 4.6.3.1 {POM}.

8.1. b): This concern, partner to “a)” above, wants “explicit” clarity for the pilot as to when he should resume CPDLC operational use after having retained an unused connection while on voice. The Task Force considers that 4.6.3.1 {POM} and 4.7.1.2 {POM} deal well with this issue too.

8.1.1: This appears to be an extension of 8.1, and we have already responded to that issue.

8.1.2: The Task Force does not recommend a change to the {Annex }on this issue.

8.2: This concern, dealt with above also, seems to be that there is little or no justification for retaining a CPDLC connection with an ATSU not responsible for the flight in question. The Review focuses on “entering airspace that has radar and VHF coverage” but that is not the point. The most common reason is that a flight is transiting an FIR that does not have CPDLC capability (temporarily or not), or the airspace being transited is so small as to create more risk in rapid-fire CPDLC changes than simply using HF in the FIR for the short-term.

The Task Force is of the view that it *is* “...appropriate to offer guidance that effectively supports CPDLC connections remaining active, while at the same time noting the need for the controller to ensure that CPDLC clearances or instructions are not issued.” Again, CPDLC is a communication link; the pilot does not turn off HF or SATVOICE because a controller “might issue a clearance” inappropriately.

9.1: The Task Force is unsure of the specific issue being raised here. Part III of the GM is based on the POM and provides examples of operating procedures that are not “guidance material” and as such, the statement that “CPDLC will be the primary means of communication...” in 5.1.1 {POM} is directive and clear. Additionally, the Review asks that Part III of the GM “incorporate the intent” of 8.2.9.1.1 {Annex}, and the Task Force believes that it does with “pre-formatted message elements [rather than free text] that are required to be used whenever possible” in 5.3.2 {POM}.

With respect to the Review asking the same incorporation of intent for 8.2.9.1.2 {Annex}, the Task Force agrees that although the stakeholders in the POM-associated FIRs already know and live by the maxim of responding in the medium in which the request was received, an RFC to the POM shall be generated to make that more explicit.

Again, the Review asks the same intent incorporation for 8.2.9.1.3 {Annex}, and the POM does so *nearly verbatim* in 5.7.3 {POM}.

The Review asks the same for 8.2.12.1 {Annex}, and this is exactly done in 7.1.3 {POM}, although the POM uses the phrase “most appropriate means” rather than “most efficient means.” Efficient (fastest or most convenient) is not always the most appropriate; the environment of the situation needs to be a factor, so the Task Force supports retention of “appropriate.”

9.2: This request of the Review has already been incorporated into 5.1.2.2 {POM}.

9.3: The Task Force agrees with the concern here that pilots know why a message is rejected when the ATSU’s system supports less than all messages, and between the time the Review was conducted and now, this has been taken care of in 5.2.2 {POM}. The Task Force does not concur with a reply of “SERVICE UNAVAILABLE” in these circumstances; UL#169 “MESSAGE NOT SUPPORTED BY THIS FACILITY” is used instead.

9.4: The Review seems to take issue with three co-located but unrelated concerns here. First, as to the second sentence, the Task Force does not concur at all with its removal. The POM stakeholders read it quite clearly and unambiguously to mean that any ATSU’s inability to support

one or more specific CPDLC messages neither invalidates their own service implementation, nor impacts (alters implementation of) their overall system.

Second, there seems to be a suggestion that the pre-formatted free text messages to be used should be listed “in aeronautical publications.” The POM *is* the only “aeronautical publication” if you will, for which the Task Force’s organizations have joint publishing authority, and they are listed in 5.10 {POM}.

Third, a concern was expressed that the example used in the POM is not in the message set of the PANS-ATM. That is true; Part III of the GM relates to the POM, which is a FANS-1/A operations manual, not ATN.

9.5.1: It is understood that the concern here rests on an unintentional mis-definition of the POM. While it may be true that confusion might occur when the POM is “read in conjunction with other ICAO documents”, it should be remembered that Part III of the GM refers to the POM, which is an operations manual actively used by pilots and air traffic controllers. Operationally, they would not be expected to read “other ICAO documents”, which are more policy oriented and not readily available in operations, and would be used by management.

9.5.2: Even if “a large amount” of the POM is “sufficiently covered” by the {Annex}, that does not mitigate for the fact that the {Annex} is *not* an operations manual and is *not* accessible to nor used by the pilot/controller constituency. It is important to keep in mind that Part III of the GM is intended to provide guidance on operating procedures, which is why the POM is used as the source document for this part.

With respect to the second point raised by the Review, that free text should be avoided whenever possible, the Task Force concurs and considers this is sufficiently covered in 5.3.1 {POM}.

9.5.3: The concern here seems to be that the POM is (a) not in compliance with 8.2.9.5.2 {Annex} and (b) that any such free text listings as the POM has should instead be proposed as an amendment to Doc 7030 or the PANS-ATM. The Task Force does not agree with (a). The POM in its relevant sections is merely “a list of pre-formatted free text messages [that] shall be established by the appropriate ATS authority.” The “authority” in this case is the group of POM stakeholders whom have subscribed to and put in use the POM. The Task Force agrees with (b) and has accepted an action item to bring such amendments to ICAO.

9.6.1: This concern is understood to be that the POM is unnecessarily restrictive about related (conditional or dependent) clearance items being together in one uplink. That a policy maker, ICAO, establishes more flexible limits than an implementing authority, the POM stakeholders, is common and normal in corporate and government life. The Task Force considers that the POM restriction is appropriate, and does not violate the limits of the umbrella policy.

9.6.2: This seems to the Task Force to be a self-contradictory paragraph in the Review. Breaking it down into three parts:

- (a) 5.4.5.1 and 5.4.5.2 {POM} should be combined because they are redundant.

The Task Force concurs and an RFC to that effect is being prepared.

- (b) Cross reference from the POM back to 8.2.9.3.3.2 {Annex} and 8.2.9.3.3.3 {Annex} should be included in the POM.

While the Task Force and the Review agree that the POM in fact provides almost verbatim the appropriate Annex directives, it is not editorially practical to back reference each provision in an operations manual to the enabling/agreeing policy document.

- (c) 8.2.9.3.3.5 {Annex} specifies that when part of a multi-part clearance cannot be issued *“for the parts that cannot be accommodated, the current clearance shall be restated or an alternative clearance shall be given.”*

The Task Force does not concur. In the operational judgment of pilot and controller alike, restating an existing clearance in a response to a request for a change to that clearance, is very confusing. The POM specifically directs that an UNABLE response shall be uplinked and the restatement of the original clearance is specifically proscribed, and the Task Force supports this position for safety reasons.

9.6.3: This part of the Review is based on a definition difference with which the Task Force does not concur. It does not matter if the second message is sent because of a time delay, since the original message, or because of a time delay, the STANDBY response is received to the initial message. A query to ensure connectivity is appropriate in either case. The issue of CPDLC failure is dealt with elsewhere in the POM and does not need to be emphasized here.

9.6.4: The Review raises valid questions, which the Task Force will refer to the manufacturers for an answer with respect to their implementation of FANS-1/A. An RFC to the POM for clarification might then be appropriate.

9.6.5: This entire section of the Review is over taken by events. The Pacific, like the Atlantic, has switched to REPORT LEVEL from REPORT REACHING. However, there are two subsections worth a comment:

9.6.5.1. c): The POM note referred to – “now Note 2 instead of Note 1” – is a statement of fact, not a statement of options. The Task Force does not concur with its removal.

9.6.5.1. d): The Task Force concurs and this has been done in the current version of the POM.

9.6.6: The Task Force concurs and this has been done in the current version of the POM.

9.6.7: The Task Force agrees with the Review that there are some inconsistencies, however there is no way to resolve them through the POM. Uplink 134 as shown is not available to FANS-1/A implementations; nor does the FANS-1/A implementation support the voice phraseology, or use of CONFIRM as in the Annex.

9.6.8: The Task force concurs and has generated an RFC to remove this from the POM.

9.7.1: The intent of the Review seems to be that we cannot be more restrictive than the PAN-ATM policy. As mentioned in an earlier item, the Task Force does not concur with that philosophy. The stakeholders have agreed that these multi-part messages are to be avoided as much as possible and the Task Force does not feel the need to offer any further rationale as the Review requests, because the users of this operations manual understand it already. The Task Force also points out that 8.2.9.2.1 {Annex} supports the POM in this area.

9.7.2: 5.5.2.1 {POM} and 8.2.9.3.3.4 are nearly identical. Perhaps the POM was changed after the Review, or the Review failed to recognize that the POM editorial convention makes it specifically clear that all the responses are in one message.

9.7.3: The Task Force concurs with the Review and has generated an RFC to change 5.5.2.2 {POM}.

9.7.4: In a separate response to the Review above, the Task Force has made clear that it does not concur with 8.2.9.3.3.5 {Annex} for safety reasons.

9.8.1: The Task Force concurs with the Review. This process is in place to ensure confirmation of current data authority (CDA) and an RFC will be generated to make this clear in 5.8.4 {POM}.

9.8.2: The Task Force believes the immediately preceding Section of the POM (5.8.5) does make clear why DL#43 cannot be used. The “next” waypoint may well be one which is of no interest to ATC.

9.9 and 9.10: These two parts of the review deal with the FANS-1/A message sets as they exist. In general, the Task Force wishes to note that these message sets were developed by the users themselves in a long deliberative process involving considerable compromise of individual States’ procedures. The message intents were taken from the PANS-ATM and matched with the appropriate FANS-1/A message. The message intents were also discussed at length, and written in such a way as to express the users’ common understanding. Then ultimately, as the Review itself noted, “...the FANS-1/A message element texts, i.e. that which is displayed, cannot be modified because they have been hard-coded into the avionics.” Even so, the Task Force acknowledges that a wholesale revisiting of these message sets in light of the points made by the Review may be in order at a later date.

10.1: The Task Force concurs that a comprehensive re-evaluation of the ADS materials in the POM vis-à-vis the PANS-ATM is appropriate, and the POM stakeholders will initiate that action. The Task Force believes this effort is too sizable to be included here and shall be handled in a separate work group, in close cooperation with ICAO. It should be noted that the PANS-ATM ADS provisions are already based on the FANS-1/A actual performance parameters.

10.1.1: The concern expressed here by the Review appears to rest on a misunderstanding of fundamental ATC procedures. Any single ADS report, just like any single Mode-C radar return or any single voice pilot report, merely confirms the flight’s level status *at that moment in time*. The issue the Review cites is one in which the maintenance of that level as the end result of a climb or descent, is critical to avoid – in the words of the review – a “level bust.” When required, ATC validates the endstate of a climb or descent through issuance of a CPDLC instruction using UL#129 REPORT LEVEL, which arms the FMC in such a way that the report will only be downlinked if the flight does in fact stop the climb or descent at the requested level. In no situation would ATC use a single ADS report as the sole determiner that a “level bust” had not occurred.

10.1.2: The Task force acknowledges that at the time the Review was written, there may have been reason for safety concerns based on lack of accumulated data. In the years since the review was written, extensive experience and data collection and analysis support the safety of using ADS as specified.

10.1.3: The Task Force makes note of the Reviews comments as requested.

10.2: The Task Force does not concur with adding ADS emergency comments to this Section, believing that subject is dealt with sufficiently elsewhere in the POM.

10.3: The Task force notes and concurs with the Review’s emphasis on the “...serious manner...” with which ADS emergency activation must be dealt. See 7.1.2 {POM} for example.

10.4: The varying of demand rates to accommodate ATC situations and facilitate safe airspace control is intrinsically obvious to the ATC practitioner.

10.5: The Task Force concurs with the Review and an RFC will be generated to change the POM.

10.5.1: The Task Force is unclear as to the Review's concern here. The paragraph in question, 6.11.1.1 {POM} is not directive in nature. The term "should" is permissive, and this Section is in accordance with Annex 15.

10.5.2: The Review asks why 6.11.1.3 {POM} "changes existing ICAO procedures." This POM wording does not change ICAO PANS-ATM, and for an explanation of why it is in the POM at all refer to 6.11.2 {POM}.

11.1: The Task Force notes the comments of the Review, and believes that in the context of an operations manual, it is appropriate to include these provisions.

11.1.1 and 11.1.2: The Task force concurs with the Review and an RFC is to be generated to require a response in all cases, and add clarity to the two referenced sections of the POM.

11.1.4: The Task Force concurs with the Review's statement that these procedures should be in "international provisions." When that is done, an RFC could then be developed to drop them from the POM. With respect to the Review's last comment here, the {Annex} limits the response to CPDLC but that is not enough when ADS has also failed. The Task Force believes the Review may be using the term "CPDLC" here when contextually "data link communications" would be more appropriate.

Review/CNS/ATM/OPS-GM/TF
Appendix C to the Report of the Meeting

ACTION ITEMS – GUIDANCE MATERIAL TASK FORCE

	ACTION ITEM	STATUS	ACTION BY	TARGET DATE	REMARKS
1-1	Prepare Draft Guidance Material, Ver 3.0	Ongoing	Members of Task Force.	1 May 2004	Incorporate new material in Part I, 1.3.3.3. POM to be adapted to ICAO layout
1-2	Coordinate with ICAO HQ to develop an amendment proposal to PANS-ATM for FANS-1/A	Pending	ICAO APAC Office	1 Nov 2003	FANS-1/A operations has worldwide application and PANS-ATM provisions to include FANS-1/A
1-3	Coordinate with IPACG/ISPACG on proposed amendment to Part III of the GM	Pending.	U.S./New Zealand/Japan	IPACG/20 (6 Oct 2004)	The POM V 2.0 included as Part III to the GM. IPACG/ISPACG to consider amendment of POM.
1-4	Coordinate development of the GM with other ICAO regional offices	Pending	ICAO APAC Office	1 Jan 2004	Harmonization of FANS-1/A operating procedures
1-5	Establish coordination with ICAO APAC on amendments to the POM	Ongoing	U.S./ICAO APAC Office	As soon as practicable	Keep ICAO GM Part III revisions in line with the POM
1.6	Review ICAO process to amend the GM	Pending	ICAO APAC Office	1 Feb 2004	GM amendment subject to APANPIRG approval. Annual amendment cycle, ICAO to consider more expeditious process.
1.7	Review GM Chapter 4, paragraph 6 on ADS separation	Pending	Task Force Members/ICAO APAC Office	1 Jun 2004	Coordinate with IPACG/ISPACG To be reviewed by ATM/AIS/SAR/SG.
1.8	Coordinate with Task Force draft revised GM V 3	Pending	ICAO APAC Office/Task Force members	1 May 04	Final review prior to submitting for approval

Review/CNS/ATM/OPS-GM/TF
Appendix C to the Report of the Meeting

	ACTION ITEM	STATUS	ACTION BY	TARGET DATE	REMARKS
1.9	Submit Draft GM V. 3.0 to ICAO for approval	Pending	ICAO APAC Office	APANPIRG/15	APANPIRG to approve
1.10	Publish GM V. 3.0	Pending	ICAO APAC Office	Subject to approval	GM to be posted on the ICAO APAC website

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