



International Civil Aviation Organization

**THE EIGHTH MEETING OF AERONAUTICAL
TELECOMMUNICATION NETWORK (ATN)
IMPLEMENTATION CO-ORDINATION GROUP
OF APANPIRG (ATNICG/8)**

Jakarta, Indonesia, 18 - 21 March 2013



Ministry Of Transportation
Republic of Indonesia

Agenda Item 9: Review and update Subject/Tasks List and Action Items List etc.

REVIEW OF PERFORMANCE FRAMEWORK FORM FOR ATN

(Presented by the Secretariat)

SUMMARY

This paper presents the Performance Framework Form for the Implementation of ATN in Asia and Pacific Region updated in the last ATNICG meeting for review. The Form was prepared in line with the guidance provided by ICAO headquarters. The form provides information on various tasks to be completed for the implementation and also provides information on the implementation schedule and status. The meeting is invited to review the form and update it wherever required. The meeting is also invited to note the new ANRF to be used after APANPIRG/24 meeting scheduled for end of June 2013.

1. INTRODUCTION

1.1 Aviation environment, including ICAO, industry and the States have been steadily moving towards a performance based approach to planning. In this approach, planning is expected to be directed towards one or more of the eleven ATM Community Expectations included in the Global ATM Operational Concept (Doc 9854). These expectations are also referred to as Key Performance Areas (KPA's).

1.2 The forms updated from time to time will be used for the assessment of progress in meeting the plan objectives and will also reflect the changing requirements. The attached form was noted by APANPIRG/23 meeting and recorded as Attachment 2 to the report of APANPIRG/23 on agenda item 3.0.

2. DISCUSSION

2.1 Performance Framework Form for the implementation of Aeronautical Telecommunication Network (ATN) for Asia Pacific Region was developed to cater to the regional Objective 8 and was reviewed by ATNICG in its last meeting. It is now proposed to review the PFF once again in light of the developments that have taken place subsequently.

2.2 The meeting is invited to review the information provided in the Performance Framework Form placed at **Attachment 1** to this paper.

2.3 The meeting is also invited to note that as recommendations made by the AN Conf/12 on migrating to the ASBU Framework, the Performance Framework Form will be modified to the Air navigation Report Form (ANRF) effective from 2nd half of 2013. The sample ANRF on ATN/AMHS/AIDC is provided in the *Attachment 2* for information. States are expected to fill the ANRF as appropriate and provide to ICAO Regional Office.

3. ACTION BY THE MEETING

3.1 The meeting is invited to review the PFF provided at Attachment 1 and noted the sample ANRF provided in **Attachment 2** to this paper.

APANPIRG/23
ATTACHMENT 2 to Report on Agenda Item 3.0

ASIA/PACIFIC REGION

PERFORMANCE FRAMEWORK FORM
 (REGIONAL)

(Amended in March 2012)

REGIONAL PERFORMANCE OBJECTIVE: - <u>APAC Objective 8</u>				
IMPLEMENTATION OF AERONUTICAL TELECOMMUNICATION NETWORK (ATN) FOR GROUND – GROUND COMMUNICATION NETWORK				
Benefits				
Safety	<ul style="list-style-type: none"> Will provide reliable means of communication for Air Navigation Services, with the provision of automatic switching capability, in the event of failure of current media 			
Efficiency	<ul style="list-style-type: none"> Routers will have the capability of choosing between different media based on defined criteria. Multiplicity of protocols used for different communication requirements will be avoided; Provision for lower case characters and graphic message included; 			
Strategy				
Implementation strategy, short term (2009-2013)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
SDM <i>(ATM Service Delivery Management)</i>	Ensure implementation of Ground to Ground Aeronautical Telecommunication Network (ATN) in the Asia and Pacific Regions			
	<ul style="list-style-type: none"> <u>Review the ATN Implementation Strategy</u>, revise it when necessary taking into account the current developments. 	2013	ATNICG.	Strategy needs to be revised to take into account the emerging communication services like SWIM.
	<ul style="list-style-type: none"> <u>Review the Status of implementation of dual stack ATN at the Backbone Boundary Intermediate System hubs.</u> 	2011	ATNICG	Completed
	<ul style="list-style-type: none"> <u>States hosting Backbone Boundary Intermediate Stations</u> to organize Testing of their system on bilateral basis 	2013	States hosting Backbone Boundary Intermediate Systems	On-going Planner has been developed to provide up to date implementation and testing status in the region.

APANPIRG/23
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	<ul style="list-style-type: none"> • <u>Implementation of AMHS Off Line Directory Service.</u> Availability of off-line support by Eurocontrol AMC considered essential for the efficient management of AMHS Addresses. ICAO HQ has directed the States to register the operating personnel with AMC. • <u>Update information by the States/Administrations in AMC</u> 	<p style="text-align: center;">2010</p> <p style="text-align: center;">Ongoing</p>	<p style="text-align: center;">ICAO Asia/Pacific Office, AEROTHAI.</p> <p style="text-align: center;">States</p>	<p>Completed. Off line support by EUROCONTROL AMC established</p> <p>Ongoing. 20 Administrations have registered as on the date of ATNICG/7</p>
	<ul style="list-style-type: none"> • <u>Completion of Networking with the BIS States</u> 	<p style="text-align: center;">2013</p>	<p style="text-align: center;">Asia and Pacific Regions States</p>	<p>Some States started implementation and conducted operational trials</p>
	<ul style="list-style-type: none"> • <u>Review if implementation objectives have been met.</u> 	<p style="text-align: center;">2009 - 2013</p>	<p style="text-align: center;">ATNICG</p>	<p>ATNICG to periodically review the status and direction in which the implementation is progressing and to ensure that the implementation efforts are leading towards the defined objectives</p>
<p>GPIs</p>	<p>GPI/17: Data link applications, GPI/22: Communication infrastructure</p>			
<p>References</p>	<ul style="list-style-type: none"> • <i>Annex 10, Aeronautical Telecommunications, Volume III (Part I – Digital Data Communication Systems)</i> • <i>Manual on Detailed Technical Specifications for the Aeronautical Telecommunications Network (ATN) using ISO/OSI (Doc 9880)</i> • <i>ICAO Aeronautical Telecommunication Network (ATN) Manual for ATN using IPS Standards and Protocols (Doc 9896)</i> • <i>Manual on Required Communication Performance (Doc 9869)</i> • <i>Manual of Technical Provisions for the Aeronautical Telecommunication Network (Doc 9705)</i> • <i>Regional Implementation guidance materials adopted by APANPIRG</i> 			

AIR NAVIGATION REPORT FORM (ANRF)

(This template demonstrates how ANRF to be used.

The data inserted here refers to ASBU B0-25 and B0-35 as an example only)

Regional and National planning for ASBU Modules

REGIONAL/NATIONAL PERFORMANCE OBJECTIVE – B0-25: Increased Interoperability, Efficiency And Capacity Through Ground-Ground Integration (AIDC) and B0-35 - Improved Flow Performance through Planning Based On A Network-Wide View

Performance Improvement Area 2 & 3**Ground/ground Network based Information Integration****ASBU B0-25: Impact on Main Key Performance Areas (KPA)**

	Access & Equity	Capacity	Efficiency	Environment	Safety
Applicable	N	Y	Y	Y	Y

ASBU B0-25: Implementation Progress

Elements	Implementation Status (Ground and Air)
1. AIDC	
2. ATN/AMHS	

ASBU B0-25: Implementation Roadblocks/Issues

Elements	Implementation Area			
	Ground system Implementation	Avionics Implementation	Procedures Availability	Operational Approvals
1. AIDC				
2. ATN/AMHS				

ASBU B0-25: Performance Monitoring and Measurement (Implementation)	
Elements	Performance Indicators/Supporting Metrics
1. AIDC	Indicator: Percentage of ATS Units/ATM automation system has AIDC function; Percentage of AIDC circuits requirements are implemented; Supporting metric: ATC handling over incidents have been reduced.
2. ATN/AMHS	Indicator: Percentage of required Hubs/stations implemented; Supporting metric: Number of delayed messages reduced and XML based traffic is being able supported.

ASBU B0-25: Performance Monitoring and Measurement (Benefits)	
Key Performance Areas	Performance Metrics
Access & Equity	Not applicable
Capacity	Not applicable
Efficiency	Time required for message delivery reduced
Environment	n/a
Safety	Operational message are exchanged in an secured manner

AIR NAVIGATION REPORT FORM HOW TO USE - EXPLANATORY NOTES

1. **Air Navigation Report Form (ANRF):** This form provides a standardized approach to implementation monitoring and performance measurement of Aviation System Block Upgrades (ASBU) Modules. The Planning and Implementation Regional Groups (PIRGs) and States could use this report format for their planning, implementation and monitoring framework for ASBU Modules. Also, other reporting formats that provide more details may be used but should contain as a minimum the elements described below. The Reporting and monitoring results will be analysed by ICAO and aviation partners and then utilized in developing the Annual Global Air Navigation Report. The Global Air Navigation Report conclusions will serve as the basis for future policy adjustments aiding safety practicality, affordability and global harmonization, amongst other concerns.
2. **Regional/National Performance objective:** In the ASBU methodology, the performance objective will be the title of the ASBU module itself. Furthermore, indicate alongside corresponding Performance Improvement area (PIA). Consequently, for ASBU Block 0, a total of 18 ANRFs will need to be developed that reflects respective 18 Modules.
3. **Impact on Main Key Performance Areas:** Key to the achievement of a globally interoperable ATM system is a clear statement of the expectations/benefits to the ATM community. The expectations/benefits are referred to eleven Key Performance Areas (KPA) and are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. The KPAs applicable to respective ASBU module are to be identified by marking Y (Yes) or N (No).
4. **Implementation Progress:** This section indicates status of progress in the implementation of different elements of the ASBU Module for both air and ground segments.
5. **Elements related to ASBU module:** Under this section list elements that are needed to implement the respective ASBU Module. Furthermore, should there be elements that are not reflected in the ASBU Module (example: In ASBU B0-80/Airport CDM, Aerodrome certification and data link applications D-VOLMET, D-ATIS, D-FIS are not included; Similarly in ASBU B0-30/AIM, note that WGS-84 and eTOD are not included) but at the same time if they are closely linked to the module, ANRF should specify those elements. As a part of guidance to PIRGs/States, the FASID (Volume II) of every Regional ANP will have the complete list of all 18 Modules of ASBU Block 0 along with corresponding elements, equipage required on the ground and in the air as well as metrics specific to both implementation and benefits.
6. **Implementation Status (Ground/Air):** Planned implementation date (month/year) and the current status/responsibility for each element are to be reported in this section. Please provide as much details as possible and should cover both avionics and ground systems. If necessary, use additional pages.

7. **Implementation Roadblocks/Issues:** Any problems/issues that are foreseen for the implementation of elements of the Module are to be reported in this section. The purpose of the section is to identify in advance any issues that will delay the implementation and if so, corrective action is to be initiated by the concerned person/entity. The four areas, under which implementation issues, if any, for the ASBU Module to be identified, are as follows:

- Ground System Implementation:
- Avionics Implementation:
- Procedures Availability:
- Operational Approvals:

Should be there no issues to be resolved for the implementation of ASBU Module, indicate as “NIL”.

8. **Performance Monitoring and Measurement:** Performance monitoring and measurement is done through the collection of data for the supporting metrics. In other words, metrics are quantitative measure of system performance – how well the system is functioning. The metrics fulfil three functions. They form a basis for assessing and monitoring the provision of ATM services, they define what ATM services user value and they can provide common criteria for cost benefit analysis for air navigation systems development. The Metrics are of two types:

- A. Implementation Indicators/supporting metrics: This indicator supported by the data collected for the metric reflects the status of implementation of elements of the Module. For example- Percentage of international aerodromes with CDO implemented. This indicator requires data for the metric “ number of international aerodromes with CDO”.
- B. Benefit Metrics: This Metric allows to asses benefits accrued as a result of implementation of the module. The benefits or expectations, also known as Key Performance Areas (KPA), are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. It is not necessary that every module contributes to all of the five KPAs. Consequently, a limited number of metrics per type of KPA, serving to measure the module(s)’ implementation benefits, without trying to apportion these benefits between module, have been identified at the end of this table. This approach would facilitate States in collecting data for the chosen metrics.

On the basis of examples of Performance Indicators/supporting Metrics detailed in this document, PIRGs/States to reflect under this section the appropriate metrics that represents the monitoring of respective ASBU Module both in terms of implementation as well as benefits to five KPAs.

The impact on KPAs could be extended to more than five KPAs mentioned above if maturity of the system allows and the process is available within the State to collect the data.

— END —