Organisation de l'aviation civile internationale
Bureau de l'Afrique orientale et australe

Douzième Réunion du Sous-Groupe Gestion de la circulation Aérienne /Gestion de l'Information Aéronautique/Recherches et Sauvetage (ATM/AIM/SAR SG/12) (Dakar, Sénégal, 25 - 29 Juillet 2011)

Point 9 de l'ordre du jour: Objectifs de Performance d'APIRG.

(Présenté par le Secrétariat)

Résumé
La présente note est une mise à jour sur la mise en œuvre de l'approche basée sur les performances adoptée par l'OCAI pour la planification des services de navigation aérienne. En particulier, il est proposé de revoir les objectifs de performances pour la région AFI dans les domaines ATM, AIM et SAR tels qu'établis par la réunion SP AFI RAN dans les fiches du cadre de performances (PFFs) pertinents et renvoyés à APIRG Les suites à donner par la réunion sont au **paragraphe 3**.
Références: Rapport SP AFI RAN. Rapport ATS/AIS/SAR SG/11 Rapport APIRG/17 Ce document de travail est en relation avec les objectifs stratégiques **A**

1 INTRODUCTION

1.1 Il est à rappeler que l'objectif de planification de l'OACI est de réaliser un système mondial homogène de Gestion du Trafic Aérien (ATM), par la mise en œuvre de systèmes et procédures de navigation aérienne, d'une manière progressive, économique et coopérative.

1.2 A cet égard, l'OACI a adopté une approche basée sur les performances pour la planification de la navigation aérienne au niveau régional et national, en conformité avec le *Plan Mondial de Navigation Aérienne* (Document 9750).

1.3 L'on se rappellera que la réunion SP AFI RAN 2008 à Durban, en Afrique du Sud, a approuvée l'introduction d'une approche basée sur les performances, pour la planification des services de la navigation aérienne dans la région AFI. Par suite, une série de fiches de cadre de performances (PFF), relatives aux domaines de la navigation aérienne, a été examinée pendant la réunion et a été renvoyée à l'APIRG, pour servir de mécanisme pour l'identification des objectifs de performances et l'établissement d'un calendrier, pour la planification régionale et le processus de mise en œuvre.

2 DISCUSSION

2.1 Les fiches de cadre de performance qui s'appliquent aux domaines ATS, AIS et SAR, adoptés par la réunion SP AFI RAN et renvoyées à l'APIRG, sont listées ci-après :

1. Mise en oeuvre des dispositions du nouveau plan de vol de l'OACI
2. Optimisation de la structure des routes ATS dans l'espace aérien en-route
3. Optimisation de la structure des routes ATS dans l'espace aérien terminal
4. Optimisation des approches RNP avec guidage vertical
5. Recherches et sauvetage
6. Mise en œuvre du WGS-84 et de l'E-TOD

2.2 La réunion d'APIRG/17 a examiné les fiches du cadre de Performance (PFF) établissant des objectifs de performance pour la région AFI, qui ont été définis lors de la réunion de RAN SP AFI/08 en 2008 et mise à jour par le sous-groupe ATS/AIS/SAR. Il est noté que le temps qui reste avant les dates-cibles fixées par la Réunion spéciale SP AFI RAN pour réaliser certaines tâches telles que celles relatives à la mise en œuvre du nouveau plan de vol de l'OACI est largement écoulé ; cependant les dates cibles ont du être maintenues pour que la région continue à viser une mise en œuvre harmonisée. En conséquence la réunion a formulé la Conclusion 17/41 pour mettre à jour et à adopter ces PFF.

2.3 Depuis lors, l'Equipe de travail sur la Transition au nouveau Plan de vol OACI (FPLT TF) a tenu deux réunions (Johannesburg, Afrique du sud, du 13 au 14 septembre 2010 et Nairobi, Kenya, du 16 au 18 février 2011) et en a saisi l'occasion pour examiner et mettre à jour la PFF sur la mise en œuvre des dispositions du nouveau Plan de vol OACI . La réunion FPLT TF/2 a reconnu qu'il y'avait besoin de directives pour l'élaboration des objectifs nationaux de performance dans la mise en œuvre des dispositions du nouveau Plan de vol OACI au 15 novembre 2012, pour permettre aux et ANSPs accélérer leur processus de planification. À cet égard, la réunion a examiné une PFF générique qui émanait de l'atelier sur les dispositions du nouveau Plan de vol OACI tenu à Nairobi, du 14 du16 février 2011, l'a amendé et adopté comme modèle de directive aux États (voir l'appendice G au présent document).

2.4 De même, les trois PFF sur les routes ATS (En route, Terminale et approche) ont été examinées et mises à jour par les réunions PBN/GNSS TF/1 et TF/2 successivement (Nairobi, Kenya, 12-14 octobre 2010 et Dakar, Sénégal, 13-15 juin 2011 respectivement). La réunion PBN/GNSS TF/2 a cependant demandé aux États de transmettre plus d'informations, notamment sur le statut de la mise en œuvre des tâches énumérées, pour permettre au Secrétariat de mettre à jour la PFF de façon continue.

2.5, Il est prévu que la première réunion de l'Equipe de travail AFI sur l'intégration des Services SAR (ASSI TF) qui aura lieu à Dakar, du 19 du 20 septembre 2011, sera l'occasion d'examiner la PFF sur les Recherche et le Sauvetage. De même la première réunion de l'Equipe de travail AFI sur la mise en œuvre de l'AIM (Dakar, Sénégal, 20-22 juillet 2011) examinera la PFF sur le WGS-84 et l'E-TOD.

2.9 Les PFFs, suite aux dernières mis à jour figurent aux **Appendices A à F** à cette note.

3. ACTIONS PAR LA REUNION

3.1 La réunion sont invitée à:

a) prendre note des informations contenues dans la présente note de travail;

b) convenir d'examiner les fiches de cadre de performance en pièces jointes pour correction et mise à jour si nécessaire ;

c) développer d'autres PFF, afin d'atteindre tout autre nouveau objectif de performance identifié pour la région AFI, selon les besoins.

Appendix A
ATM PERFORMANCE OBJECTIVES

NATIONAL PERFORMANCE OBJECTIVE - IMPLEMENTATION OF THE NEW ICAO FPL PROVISIONS BY 15 NOVEMBER 2012

Benefits

Environment	• reductions in fuel consumption
Efficiency	• ability of air navigation service providers t make maximum use of aircraft capabilities • ability of aircraft to conduct flights more closely to their preferred trajectories • facilitate utilization of advanced technologies thereby increasing efficiency • optimized demand and capacity balancing through the efficient exchange of information
Safety	• enhance safety by use of modern capabilities onboard aircraft

Strategy

Short term (2010-2012)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AUO SDM	• plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service;	2009-June 2011	States	Ongoing
	• ensure that the capabilities of local systems are fully adaptable to the changes envisaged in the new FPL form;	2010	States	Ongoing
	• ensure the ability of FDPS's to parse information correctly to guarantee that misinterpretation of data does not occur;	2010	States	Ongoing
	• analyze each individual data item within the various fields of the new flight plan form, comparing the current values and the new values to verify any issue regarding the provision of service by the flight planning facility itself or downstream units;	2010	States	Ongoing
	• ensure that there are no individual State peculiarities or deviations from the flight plan provisions;	2011	States	Ongoing

	• ensure that the accepting ATS Reporting Office accepts and disseminates all aircraft capabilities and flight intent to all the downstream ACCs as prescribed by the PANS-ATM provisions.	2012	States	Ongoing
	• in order to reduce the change of double indications it is important that any State having published a specific requirement(s) which are now addressed by the amendment should withdraw those	2010-2012	States	Ongoing
	• requirements in sufficient time to ensure that aircraft operators and flight plan service providers, after 15 November 2012, use only the new flight plan indications;			
	• inform on the implementation status to the ICAO regional offices on an ongoing basis;	2010-2012	States	Ongoing
	• keep the Flight Plan Implementation Tracking System (FITS) up to date based on the information provided by the States.	2010-2012	ICAO Regional Office	Ongoing
linkage to GPIs	GPI/5 RNAV and RNP (Performance-based navigation) GPI-12 Functional integration of ground systems with airborne system GPI/18 Aeronautical Information			

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APPENDIX B

AFI REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES FOR PBN

AFI REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES OPTIMIZATION OF THE ATS ROUTE STRUCTURE IN EN-ROUTE AIRSPACE				
Benefits				
Environment **Efficiency** **Safety**	• reduction in gas emissions • ability of aircraft to conduct flight more closely to preferred trajectories • increase in airspace capacity • facilitate utilization of advanced technologies (e.g., FMS-based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency			
Strategy ***Short term (2010)*** ***Medium term (2011-2015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AOM	***En-route airspace***	2008		
	• develop regional implementation plan	2008-2009	AFI PBN TF	Completed
	• develop regional action plan	2009-2010	AFI PBN TF	Completed
	• establish collaborative decision making (CDM) process	2010	States	Continous
	• develop airspace concept based on AFI PBN regional implementation plan, in order to design and implement a trunk route network, connecting major city pairs in the upper airspace and for transit to/from aerodromes, on the basis of PBN, e.g. RNAV 10 and RNAV 5, and taking into account interregional harmonization	2009-2012	AFI PBN TF/States	In progress
	• harmonize national and regional PBN implementation plans	2010-2016	AFI PBN TF/States	On-going
	• develop performance measurement plan	2010-2012	States	In progress
	• formulate safety plan	2010-2012	States	To be developed
	• publish national regulations for aircraft and operators approval using PBN manual as guidance material	2010-2011	States	To be developed

	• identify training needs and develop corresponding guidelines	2010-2011	States	In progress
	• identify training programmes and develop corresponding guidelines	2010-2011	AFI PBN TF/States	in progress
	• formulate system performance monitoring plan	2010-2011	AFI PBN TF/States	To be developed
	• implementation of en-route ATS routes	2010-2012	AFI PBN TF/States	In progress
	• monitor implementation progress in accordance with AFI PBN implementation plan and State implementation plan	2010 and beyond	AFI PBN TF/States	On-going

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APPENDIX C

AFI REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES OPTIMIZATION OF THE ATS ROUTE STRUCTURE IN TERMINAL AIRSPACE				
Benefits				
Environment **Efficiency** **Safety**	• reduction in gas emissions • ability of aircraft to conduct flight more closely to preferred trajectories • increase in airspace capacity • improved availability of procedures • facilitate utilization of advanced technologies (e.g., FMS based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency			
Strategy ***Short term (2010)*** ***Medium term (2011-2015)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AOM	***Terminal airspace***	2008		
	• develop regional implementation plan	2009	AFI PBN TF	Completed
	• develop regional action plan	2009-2010	AFI PBN TF	Completed
	• develop State PBN implementation plan	2009 (see note1)	States	In progress (X States have completed)
	• establish collaborative decision making (CDM) process	2010	States	In progress
	• develop airspace concept based on AFI PBN roadmap, in order to design and implement an optimized standard instrument departures (SIDs), standard instrument arrivals (STARs), holding and associated instrument flight procedures, on the basis of PBN and, in particular RNAV 1 and Basic-RNP 1	2009-2012	PBN TF/States	In progress
	• develop performance measurement plan	2010-2012	States	In progress
	• formulate safety plan	2010-2012	States	To be developed
	• publish national regulations for aircraft and operators approval using PBN manual as guidance material	2010-2011	States	To be developed
	• identify training needs and develop corresponding guidelines	2010-2011	States	In progress
	• identify training programmes and develop corresponding guidelines	2010-2011	AFI PBN TF	To be developed
	• formulate system performance monitoring plan	2010-2012	AFI PBN TF/States	In progress
	• develop a regional strategy and work programme implementation of SIDs and STARs	2009-2012	AFI PBN TF/States	In progress

	• monitor implementation progress in accordance with AFI PBN implementation roadmap and State implementation plan	2010 and beyond	AFI PBN TF/States	On going
Linkage to GPIs	GPI/5: performance-based navigation; GPI/7: dynamic and flexible ATS route management; GPI/8: collaborative airspace design and management; GPI/10: terminal area design and management; GPI/11: RNP and RNAV SIDs and STARs; GPI/12: FMS-based arrival procedures.			

APPENDIX D

OPTIMIZATION OF VERTICALLY GUIDED RNP APPROACHES				
Benefits				
Environment Efficiency Safety	• reduction in gas emissions • increased accessibility to aerodromes, including continuity of access • increased runway capacity • reduced pilot workload • availability of reliable lateral and vertical navigation capability			
Strategy				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AOM	***Terminal airspace***	2008		
	• develop regional implementation plan	2008 – 2009	AFI PBN TF	Completed
	• develop regional action plan	2009-2010	AFI PBN TF	Completed
	• develop State PBN implementation plan	2009 (*)	States	In progress
	• establish collaborative decision making (CDM) process	2010	States	In progress
	• develop airspace concept based on AFI PBN implementation plan, in order to design and implement RNP APCH with Baro-VNAV or LNAV only (see note 1) in accordance with relevant Assembly resolutions , and RNP AR APCH where beneficial	2009 – 2012	AFI PBN TF/States	In progress
	• develop performance measurement plan	2010-2012	States	In progress
	• formulate safety plan	2010-2012	States	To be developed
	• publish national regulations for aircraft and operators approval using PBN manual as guidance material	2010-2011	States	To be developed
	• identify training needs and develop corresponding guidelines	2010-2011	States	In progress
	• identify training programmes and develop corresponding guidelines	2010-2011	AFI PBN TF/States	To be developed
	• implementation of APV procedures	2010 - 2016	AFI PBN TF/States	In progress
	• Formulate system performance monitoring plan	2010-2012	AFI PBN TF/States	in progress
linkage to GPIs	GPI/8: collaborative airspace design and management; GPI/10: terminal area design and management; GPI/11: RNP and RNAV SIDs and STARs; GPI/12: FMS-based arrival procedures			

(*)States that have not already done so, should complete their national PBN implementation plans as soon as possible.Note 1: where altimeter setting does not exist or aircraft are not suitably equipped for APV

APPENDIX E

AFI REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES FOR SEARCH AND RESCUE (SAR)

ESTABLISHMENT OF SUB-REGIONAL SAR ARRANGEMENTS				
Benefits				
Efficiency and Safety	• cost-efficient use of accommodation and RCC equipment on a shared basis • service provision more uniform across a geographic area defined by risk • proficient services provided near and within States with limited resources. • harmonization of aviation / maritime procedures • inter-operability of life-saving equipment • development of a pool of experienced SAR mission coordinators skilled across both aviation and maritime domains thus reducing coordination and fragmentation			
Strategy				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
N/A	• conduct Southern African regional SAR workshop	2010	ICAO	2-3 June Workshop in Niger.
	• establish collaborative decision making process	2011 – 2012	ICAO/States	Not started
	• develop needs assessment and gap analysis	2011 – 2012	APIRG	Not started
	• develop Southern African regional action plan	2011 – 2012	APIRG	Not started
	• conduct regional SAR Administrators training and SAR Mission Coordinators training	2011 – 2012	ICAO	Not started
	• determine regional organisation, functions and responsibilities, accommodation and equipment needs.	2011 – 2012	APIRG	Not started
	• produce draft legislation, regulations, operational procedures, letters of agreement SAR plans and safety management policies for regional SAR provision using IAMSAR manual as guidance.	2010 – 2012	APIRG	Implementation on a continuous basis

	• determine future training needs and develop training plans	2010 – 2011	APIRG	Implementation on a continuous basis
	• develop ➢ alerting procedures ➢ resource databases ➢ interface procedures with aerodrome emergency procedures and generic disaster response providers ➢ RCC check lists ➢ staffing, proficiency and certification plans ➢ preventive SAR programmes ➢ quality programmes ➢ education and awareness programmes ➢ in-flight emergency response procedures	2011 – 2012	States	Not started
	• conduct training as required	2010 – Permanent	States	Implementation on a continuous basis
	• conduct SAR exercises required	2012 - Permanent	States	Not started
	• monitor implementation process	As appropriate	ICAO/States	Not started
linkage to GPIs	N/A			

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APPENDIX F

PERFORMANCE FRAMEWORK FORMS FOR WGS-84 AND E-TOD IMPLEMENTATION
AIM PERFORMANCE OBJECTIVES

NATIONAL PERFORMANCE OBJECTIVE IMPLEMENTATION OF WGS-84 AND ELECTRONIC TERRAIN AND OBSTACLE DATA	
Benefits	
Environment	none
Efficiency	required by Performance Based Navigation
	support approach and departure procedure design and implementation improve aircraft operating limitations analysis support aeronautical chart production and on-board databases
Safety	improve situational awareness support determination of emergency contingency procedures support technologies such as ground proximity and minimum safe altitude warning systems
KPI Status of implementation of WGS-84 in the AFI Region Status of implementation of eTOD in the AFI Region (for areas 1 & 4)	
Proposed Metrics: Number of States having implemented WGS-84 Number of States having implemented a number of PBN components (based on WGS-84) Number of States having organized eTOD awareness campaigns and training programs Number of States having implemented eTOD for Areas 1 & 4	

Strategy
Short term (2010)
Medium term (2011 - 2015)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
ATM CM	Electronic terrain and obstacle data (eTOD) Share experience and resources in the implementation of eTOD through the establishment of an eTOD working group.	2008-2011	APIRG States	Valid
	Report requirements and monitor implementation status of eTOD using a new AIS Table of the AFI FASID (Ref. Appendix B). Develop e-TOD implementation plan as per the implementation template endorsed by the AFI e-TOD WG/1 Meeting.	2009-ongoing	APIRG States	valid
	Develop a high level policy for the management of a national eTOD Programme.	2008- 2011	States	valid
	Provide terrain and obstacle data for Area 1;	2008-2010	States	valid
	Provide terrain and obstacle data for Area 4;	2008-2010	States	valid
	Provide terrain and obstacle data for Area 2;	2015	States	valid

	Provide terrain and obstacle data for Area 3;	2015	States	valid
ATM AUO	WGS-84 Report requirements and monitor implementation status of WGS-84 using the AIS-5 Table of the AFI FASID.	Ongoing	APIRG States	Valid
Link to GPIs	GPI-9: Situational awareness;GPI-11: RNP and RNAV SIDs and STARs; GPI-18: Aeronautical Information;GPI-20: WGS-84;GPI-21: Navigation Systems			