

Chapter 5

AIR TRAFFIC MANAGEMENT

INTRODUCTION

5.1 The material contained in this chapter complements that contained in Chapter 4 of Part I and in the ATM sections of the FASIDs of the regional ANPs. This chapter is kept under review by the PIRGs and should be periodically updated to reflect the information contained in the ATM sections of the regional FASIDs.

ATM OBJECTIVES

5.2 Each regional planning group will develop its own work structure for accomplishing the work associated with the step-by-step approach identified in Chapter 3 of Part I. In some cases, an already established working group or CNS/ATM Subgroup may be in a suitable position to accomplish the work; in other cases, specific task forces or subgroups will need to be established.

5.3 To complete the tables in this chapter, the following steps from the global planning methodology outlined in Chapter 3 of Part I will need to be considered:

Step 4. Perform an operational analysis of the current infrastructure for the areas identified in terms of:

- a) ATM limitations and shortcomings;
- b) separation standards; and
- c) CNS availability.

Step 5. Determine the ATM objectives for the areas identified in Step 2 using as the basis the guidance material contained in the operational concept document (operational analysis) (Appendices A and B to Chapter 4 of Part I refer).

**GLOBAL AIR TRAFFIC MANAGEMENT
SYSTEM IMPLEMENTATION OBJECTIVES BY REGION**

		GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION																		
			1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Development of SARPs	R T S P	Global ATM																		
		Functional integration of flight OPS/ATM																		
		ATM requirements for CNS																		
		Separation between aircraft																		
		AIDC																		
		ATFM procedures and systems																		
Aircraft equipage/ flight operations		RNP certification/approval																		
		Functional integration of airborne systems with ground systems																		
Implementation and operational use																				
REGIONAL ATM OPERATIONAL CONCEPT																				
Global	Determination of major traffic flows																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM																			
	EUR																			
	MID																			
	NAM ¹																			
	NAT																			
Global	Identification of ATM objectives based on these traffic flows																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM																			
	EUR																			
	MID																			
	NAM ¹																			
	NAT																			
Global	Development of regional strategic airspace CNS infrastructure plan based on ATM requirements																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM																			
	EUR																			
	MID																			
	NAM ¹																			
	NAT																			

1. To be developed

	GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION																		
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
AIRSPACE MANAGEMENT																			
Global	Optimized sectorization																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM																		
	EUR																		
	MID																		
	NAM																		
	NAT¹																		
Global	Fixed RNAV ATS routes																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM																		
	EUR																		
	MID																		
	NAM																		
	NAT																		
Global	Contingency RNAV routes																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM¹																		
	EUR																		
	MID																		
	NAM¹																		
	NAT¹																		
Global	Random RNAV routes																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM																		
	EUR																		
	MID¹																		
	NAM¹																		
	NAT¹																		

1. To be developed

	GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION																			
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010		
Global	Airspace desegregation/flexible use of airspace ²																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM ¹																			
	EUR																			
	MID																			
	NAM																			
	NAT ¹																			
Global	Application of RNP																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM																			
	EUR																			
	MID																			
	NAM																			
	NAT																			
Global	Application of RCP ²																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR ¹																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			
Global	Application of RSP ²																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR ¹																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			

1. To be developed.

2. Emerging concept or technology — consensus still to be reached.

	GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION																		
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
AIR TRAFFIC SERVICES																			
Global	Trajectory conformance monitoring																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM ¹																		
	EUR																		
	MID																		
	NAM ¹																		
	NAT																		
Global	Minimum safe altitude warning																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM																		
	EUR																		
	MID																		
	NAM																		
	NAT ¹																		
Global	Conflict prediction																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM ¹																		
	EUR																		
	MID																		
	NAM																		
	NAT																		
Global	Conflict alert																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM ¹																		
	EUR																		
	MID																		
	NAM																		
	NAT																		
Global	Conflict resolution advice ²																		
Regions	AFI																		
	ASIA/PAC																		
	CAR/SAM ¹																		
	EUR ¹																		
	MID																		
	NAM ¹																		
	NAT																		

1. To be developed.
2. Emerging concept or technology — consensus still to be reached.

GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Global	Functional integration of ground systems with airborne systems																	
Regions	AFI ¹																	
	ASIA/PAC ¹																	
	CAR/SAM ¹																	
	EUR ¹																	
	MID ¹																	
	NAM ¹																	
	NAT ¹																	
Global	Dynamic accommodation of user-preferred flight profiles ²																	
Regions	AFI																	
	ASIA/PAC																	
	CAR/SAM ¹																	
	EUR																	
	MID ¹																	
	NAM																	
	NAT ¹																	
Global	Reduced vertical separation																	
Regions	AFI																	
	ASIA/PAC																	
	CAR/SAM																	
	EUR																	
	MID																	
	NAM																	
	NAT																	
Global	Reduced longitudinal separation																	
Regions	AFI																	
	ASIA/PAC																	
	CAR/SAM																	
	EUR																	
	MID																	
	NAM																	
	NAT ¹																	
Global	Reduced lateral separation																	
Regions	AFI																	
	ASIA/PAC																	
	CAR/SAM																	
	EUR																	
	MID																	
	NAM																	
	NAT ¹																	

1. To be developed.

2. Emerging concept or technology — consensus still to be reached.

	GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION																			
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010		
Global	Independent IFR approaches to closely spaced runways																			
Regions	AFI ¹																			
	ASIA/PAC																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			
Global	RNAV SIDs and STARs																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM																			
	EUR																			
	MID																			
	NAM ¹																			
	NAT ¹																			
Global	Curved and segmented approaches																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR ¹																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			
Global	Arrival metering, sequencing and spacing ²																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			
Global	A-SMGCS ²																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			

1. To be developed.

2. Emerging concept or technology — consensus still to be reached.

		GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION																		
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010		
Global	ATS inter-facility data (AIDC) communications																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM																			
	EUR																			
	MID																			
	NAM																			
	NAT																			
Global	Application of data link																			
Regions	AFI																			
	ASIA/PAC																			
	CAR/SAM																			
	EUR																			
	MID																			
	NAM																			
	NAT																			
AIR TRAFFIC FLOW MANAGEMENT																				
Global	Centralized ATFM																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			
Global	Inter-regional cooperative ATFM																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR ¹																			
	MID ¹																			
	NAM ¹																			
	NAT ¹																			
Global	Establishment of ATFM databases																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM																			
	NAT																			

1. To be developed

		GLOBAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY REGION																		
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010		
Global	Application of strategic ATFM planning																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM																			
	NAT ¹																			
Global	Application of pre-tactical ATFM planning																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM																			
	NAT ¹																			
Global	Application of tactical ATFM planning																			
Regions	AFI ¹																			
	ASIA/PAC ¹																			
	CAR/SAM ¹																			
	EUR																			
	MID ¹																			
	NAM																			
	NAT ¹																			

1. To be developed.

REGIONAL AIR TRAFFIC MANAGEMENT SYSTEM IMPLEMENTATION BY STATE

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