

MAIN FIELD		ELEMENTS	SARPs/PANS		GUIDANCE MATERIAL	
			TARGET COMPLETION DATE ¹	STATUS	TARGET COMPLETION DATE ²	STATUS
A T M	A T M	Global air traffic management requirements	2005	Annexes 2 and 11 SARPs and PANS-ATM procedures under development.		Operational concept of global ATM being defined as part of updated global plan.
		Interoperability and functional integration of flight operations, ATS, ATFM and tactical ASM	2005	Annexes 2 and 11 SARPs and PANS-ATM procedures under development.		
		Required total system performance (RTSP)	2005	Draft policy statement under development.		
		ATM requirements for communications, navigation and surveillance	2002	Annexes 2, 6 and 11 SARPs and PANS-ATM procedures under development.		
	A S M	Airspace infrastructure planning	—	—	Completed	<i>Manual on Airspace Planning Methodology for the Determination of Separation Minima</i> (Doc 9689) published.
		RNP and RNAV for en-route operations	Completed	Annex 11 SARPs and PANS-ATM procedures adopted by Council in 1998.	Completed	Update of the <i>Manual on Required Navigation Performance (RNP)</i> (Doc 9613) completed. Second edition published.

DEVELOPM

Appendix :
RELATED TO

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APPI

1) final action by the Air Navigation Commission

2) approval by the Secretary General

MAIN FIELD		ELEMENTS	SARPs/PANS		GUIDANCE MATERIAL	
			TARGET COMPLETION DATE ¹	STATUS	TARGET COMPLETION DATE ²	STATUS
A T M	A T S	Separation between aircraft	2002	PANS-ATM procedures approved by Council in 1998; further amendment to Annexes 2, 6, 11 and PANS-ATM under development.	2001	Amendment to <i>Air Traffic Services Planning Manual</i> (Doc 9426) to be developed. Amendment to the <i>Manual on Implementation of a 300 m (1 000 ft) Vertical Separation Minimum between FL 290 and FL 410</i> (Doc 9574) completed. Additional guidance is under development for the Manual on APM (Doc 9689).
		ATS (uplink of MET data)	2001	Annex 3 SARPs and PANS-ATM procedures concerning D-ATIS and D-VOLMET being developed with the assistance of the METLINKSG.	—	—
		ATS (uplink of SIGMET information in graphical format)	2004	Initial Annex 3 SARPs specifying the code to be used for graphical SIGMETs being developed with the assistance of the METLINKSG.	—	—
		WAFS planning and implementation (final phase)	2004	Annex 3 SARPs for global WAFS SIGWX forecasts in binary format (BUFR code) for direct transmission to airline and ATM computers being developed with the assistance of WAFSSG.		

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MAIN FIELD		ELEMENTS	SARPs/PANS		GUIDANCE MATERIAL	
			TARGET COMPLETION DATE ¹	STATUS	TARGET COMPLETION DATE ²	STATUS
		ATS applications for air-ground data links	2003	Annex 11 SARPs and PANS-ATM procedures are being developed.	Completed	The <i>Manual of Air Traffic Services Data Link Applications</i> (Doc 9694) published and dispatched in second quarter 1999. Additional guidance is under development.
		Data interchange between automated ATS systems	2002	Annex 11 SARPs and PANS-ATM procedures under development.		
		ILS/MLS/GNSS ³ operations	2002	PANS procedures under review.		
	A T F M	ATFM systems and procedures	2005	Annexes 2 and 11 SARPs and PANS-ATM procedures to be developed.	2001	ATFM part of the ATM operational concept under development.
CNS/ATM		Human Factors	2001	HF-related SARPs were developed and incorporated in Annexes 10 and 11. Further, HF-related requirements for inclusion in the PANS-OPS were developed during 2000, with an applicability date of 1 November 2001.	2001	A chapter on Human Factors issues was developed and included in the <i>Manual of Air Traffic Services Data Link Applications</i> (Doc 9694). A manual on Human Factors Guidelines for Air Traffic Management Systems (Doc 9758) was completed and published in 2000.

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APPENDIX 3I

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3) OCP is developing PANS-OPS criteria for SBAS/GBAS

MAIN FIELD	ELEMENTS	SARPs/PANS		GUIDANCE MATERIAL	
		TARGET COMPLETION DATE ¹	STATUS	TARGET COMPLETION DATE ²	STATUS
	Human Resource Planning and Training			2001	The human resource planning guidance material is under development. A potential approach and format for regional training planning was developed.
COM	VHF digital link (Modes 3 and 4)	Completed	Mode 4 validation commenced in 1997. Mode 3 validation started in 1998. Validation of material in manuals ongoing.	Ongoing	SARPs adopted in 2001. Manuals on VDL technical details and implementation aspects will be published in 2001.

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COM (cont'd)	AMS	Completed	Included in Amendment 75 to Annex 10.	Completed	Included in Amendment 75 to Annex 10.
	Next generation satellite system	Completed	SARPs development completed by AMCP/7	Ongoing	Guidance material on specific systems to be developed as required.
NAV	RNP (en-route)	Completed	Adopted/approved by Council in 1994 (Annexes 2, 4, 6, 11, 15 and PANS-ATM).	Completed	Guidance material for RNP1 operations under development.
		—	—	Completed	<i>The Manual on Airspace Planning Methodology for the Determination of Separation Minima</i> (Doc 9689) published in 1998.
	RNP (terminal area, approach, landing, departure)	Completed	Recommended by AWOP/16 and adopted by the Council in 1999.	Completed	Developed by AWOP, in parallel with SARPs.
	WGS-84	Completed	Adopted by Council in 1994, 1995, 1997 and 1998. Annexes 4, 11, 14 (both volumes) and 15 updated, provisions applicable from 1 January 1998.	Completed	<i>WGS-84 Manual</i> , (Doc 9674) and Amendment 1 issued. Amendment 2 concerning taxiway and apron points has been written and submitted for translation and publication. ICAO WGS-84 website is under development.

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APPENDIX 31

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MAIN FIELD	ELEMENTS	SARPs/PANS		GUIDANCE MATERIAL	
		TARGET COMPLETION DATE ¹	STATUS	TARGET COMPLETION DATE ²	STATUS
	Aeronautical data bases	2003	SARPs for the standard conceptual information model required for the provision and exchange of electronic aeronautical data initiated at the AIS/MAP/98 Divisional Meeting, are being developed by the Secretariat with the assistance of ADMSG.	2004	To be developed by the Secretariat with the assistance of AISMAPSG and ADMSG.
NAV (cont'd)		2001	Initial SARPs for electronic aeronautical charts for cockpit display were included in Amendment 52 to Annex 4.		
		2004	SARPs for the electronic terrain data are under development in consultation with RTCA/EUROCAE.		
	GNSS performance criteria to support operational requirements	2001	Draft material was developed at the GNSSP/3 (12 to 23 April 1999).	2001	Developed by GNSSP in parallel with SARPs.
	SARPs for the use of existing satellite navigation systems with augmentation sub-systems	2001	First package of SARPs was recommended by GNSSP/3 and adopted by Council in March 2001 for applicability on 1 November 2001.	2001	Developed by GNSSP in parallel with SARPs.

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	SARPs for the longer-term GNSS	2004	Guidance on the long-term GNSS was developed by GNSSP/3 and the work on SARPs for new elements of GNSS (GPS second civil frequency, Galileo, GLONASS-M) is under way.	2004	Developed by GNSSP in parallel with SARPs.
SUR	Surveillance system specifications for emerging surveillance systems and architectures	2004	Surveillance enhancements (ANC Task No. CNS-9601) being developed by SCRSP.	Ongoing	
	SSR procedures	Completed	Update of Annex 11 and PANS-ATM.	Completed	
	ADS procedures	2001	Annex 11 SARPs and PANS-ATM procedures being developed by the OPLINKP and SASP.	Completed	<i>Manual of ATS Data Link Applications</i> (Doc 9694) published and dispatched in second quarter 1999.
	ADS-B and equivalent	On-going	Being developed by OPLINKP	Ongoing	Amendment to the <i>Manual of ATS Data Link Applications</i> (Doc 9694) to be developed.

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APPENDIX 31

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	ADS: inclusion of turbulence reporting	2001	Annex 3 SARPs and PANS-ATM turbulence reporting procedures based on the eddy dissipation rate being developed with the assistance of METLINKSG.		

LEGEND

ATM — Air traffic management
 ADS — Automatic dependent surveillance
 ADS-B — ADS broadcast
 AIS — Aeronautical information services
 ASM — Airspace management
 ATFM — Air traffic flow management
 ATN — Aeronautical telecommunication network
 ATS — Air traffic services
 CNS — Communications, navigation, and surveillance

COM — Communications
 GNSS — Global navigation satellite system
 NAV — Navigation
 RNAV — Area navigation
 RNP — Required navigation performance
 SSR — Secondary surveillance radar
 SUR — Surveillance
 WAFS — World area forecast system
 WGS — World geodetic system

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