



**INFORMATION PAPER**

**FOURTEENTH MEETING OF THE CAR/SAM REGIONAL PLANNING AND  
IMPLEMENTATION GROUP (GREPECAS/14)  
(San Jose, Costa Rica, 16 to 20 April 2007)**

**Agenda Item 2: Analysis of global, inter- and intra-regional activities**

**WORK PROGRAMME OF ICAO PANELS**

(Presented by the Secretariat)

**SUMMARY**

This paper reports on the outcome of the review by the Air Navigation Commission of ICAO, in March 2007, concerning rationalization of the work programmes of ICAO Panels in order to make them more efficient and effective.

Action by GREPECAS/14 is in paragraph 2.

**1. INTRODUCTION**

1.1 There are currently eleven active panels: Aerodromes Panel (AP), Aeronautical Communications Panel (ACP), Aeronautical Surveillance Panel (ASP), Air Traffic Management Requirements and Performance Panel (ATMRPP), Airworthiness Panel (AIRP), Dangerous Goods Panel (DGP), Flight Recorder Panel (FLIRECP), Navigation Systems Panel (NSP), Obstacle Clearance Panel (OCP), Operations Panel (OPSP), and Separation and Airspace Safety Panel (SASP).

1.2 The Air Navigation Commission, in March 2007, reviewed and accepted the proposed new work programmes of the ANC Panels as contained in the appendix, as the basis of the future work of the respective Panels pending the full validation of the ANIP framework.

**2. ACTION BY GREPECAS/14**

2.1 The meeting is invited to note the information contained in this paper.



**APPENDIX**

Title	Panel	Task Description	Expected Output	Output Date
<b>Standardization of Aeronautical Communication Systems</b>	<b>ACP</b>	<p>Develop material relevant to the standardization of communication systems in support of current and future aviation safety and security requirements. This task includes:</p> <p>a. Development of a report on future technical concepts and architectures for aeronautical safety-of-life communications , including an assessment of potential technologies, and ensuring continuing availability of required ATM communications capacity;</p> <p>b. Development of SARPs, guidance material and detailed technical specifications for the ATN, based on using the Internet Protocol Suite (IPS, TCP/IP)</p>	<p>Report on future technical concepts and architectures for aeronautical safety-of-life communications SARPs for the ATN, based on using the Internet Protocol Suite (IPS, TCP/IP)</p> <p>Manual of detailed technical specifications for the ATN, based on using the Internet Protocol Suite (IPS, TCP/IP)</p> <p>Guidance material the ATN, based on using the Internet Protocol Suite (IPS, TCP/IP)</p>	<p>2007-06-29</p> <p>2007-06-29</p> <p>2008-06-27</p> <p>2008-06-27</p>
<b>International Telecommunication Union (ITU)</b>	<b>ACP</b>	<p>Develop technical and regulatory material to support the ICAO position for review by Regional Telecommunication Organizations and by the ITU.</p> <p>This task includes the development of working papers and reports for submission to Regional Telecommunication Organizations and ITU</p>	<p>ITU working papers and reports for WRC-07</p> <p>ITU working papers and reports proposals for WRC-11</p>	<p>2007-07-31</p> <p>2009-06-30</p>
<b>Maintain the Relevancy of ICAO Provisions for Aeronautical Communications</b>	<b>ACP</b>	<p>Assess requirements for enhancing and maintaining the relevancy of existing ICAO provisions (SARPs, detailed technical specifications and guidance material) for communication systems in the light of experience gained during implementation</p> <p>This task includes:</p> <p>Development of a manual of detailed technical specifications for AMS(R)S</p>	<p>Manual of AMS(R)S detailed technical specifications</p>	<p>2007-06-29</p>

Title	Panel	Task Description	Expected Output	Output Date
<b>Protection of Aeronautical Electromagnetic Spectrum for CNS Systems</b>	<b>ACP</b>	Develop draft ICAO policies and material relevant to the protection and availability of aeronautical electromagnetic spectrum for communication, navigation and surveillance applications required for the safety and efficiency of international civil aviation. This task includes: a. Updating the ICAO position for WRC-07 b. Developing draft ICAO position for WRC-11 c. Updating the ICAO RF policy Handbook (Doc. 9718)	Final ICAO position for WRC-07 Draft ICAO position for WRC-11 Updated ICAO RF policy Handbook (Doc. 9718)	2007-09-28 2008-06-27 2010-06-30
<b>Modernize the Airworthiness Manual (Doc 9760)</b>	<b>AIRP</b>	Update the Airworthiness Manual (Doc 9760) to include new guidance material to support the provisions of Annex 6 and Annex 8, including: a) update the administrative processes and procedures contained in the Manual; and b) develop provisions to define and apply failure probability descriptors.	Update to the Airworthiness Manual	2007-12-31
<b>Certification of Aircraft Software Systems</b>	<b>AIRP</b>	Develop certification procedures for aircraft software systems. Technological advances in aircraft software systems necessitate that standardized certification procedures be applied to ensure commonality of design, performance, and interoperability.	Amendments to Annex 8 to include new Standards and Recommended Practices concerning the certification of aircraft software systems.	2008-12-31
<b>Use of light emitting diode (LED) technology in visual aids</b>	<b>AP</b>	Develop specifications and guidance material on the use of LEDs as visual aids at aerodromes.	Amendments to Annex 14, Volumes I and II, and updated guidance materials in the Aerodrome Design Manual, Part 4 - Visual Aids	2009-12-15
<b>Update of Annex 14, Volume II</b>	<b>AP</b>	Update Annex 14, Volume II specifications on heliport design and operations, taking into account modern helicopter operations, and develop design criteria for precision and non-precision approach heliports.	Amendments to Annex 14, Volume II and updated guidance in the Heliport Manual.	2009-12-15 2009-12-15

Title	Panel	Task Description	Expected Output	Output Date
<b>Rescue and Fire Fighting Services at Aerodromes</b>	<b>AP</b>	a) Develop updated requirements for principal extinguishing agents in Annex 14, Volume I; b) Adequacy of current aerodrome categories for RFF specified in Annex 14, Volume I; c) Develop updated specifications for the provisions of RFF service at heliports; d) Develop new provisions on response times in areas beyond movement areas; e) Develop specifications to determine minimum RFF staffing levels at aerodromes and training requirements.	Amendments to Annex 14, Volumes I and II for RFF service at aerodromes and heliports respectively. Revised and updated guidance materials for Annex 14, Volumes I and II	2009-09-15 2009-09-15 2009-09-15
<b>Licensing/certification of aerodromes</b>	<b>AP</b>	a) To update the existing provisions in Annex 14, Volume I, on certification of aerodromes. b) To develop further guidance in the Manual on Certification of Aerodromes (Doc 9774).	Amendments to Annex 14, Volume I; Updating the Manual on Certification of Aerodromes.	2009-09-15 2009-09-15
<b>Obstacle marking and lighting</b>	<b>AP</b>	a) Update Annex 14, Volume I, Chapter 6 specifications on visual aids for denoting obstacles outside obstacle limitation surfaces; and b) Develop specifications on visual aids for denoting wind turbines.	Amendments to Annex 14, Volume I.	2009-12-15
<b>Aerodrome Design specifications – Code F</b>	<b>AP</b>	Updated Annex 14, Volume I, Code F specifications, including a consideration of the methodology and underlying basis.	Amendments to Annex 14, Volume I.	2009-12-15
<b>Visual aids for A-SMGCS and for prevention of runway incursions</b>	<b>AP</b>	a) Develop specifications for visual aids to meet the requirements of A-SMGCS; b) Develop and update specifications on visual aids for preventing runway incursions including stop bars, runway guard lights, and runway location alerting systems.	Amendment to Annex 14, Volume I.	2009-12-15

Title	Panel	Task Description	Expected Output	Output Date
<b>Reliability of aerodrome electrical and lighting systems</b>	<b>AP</b>	Updating the Aerodrome Design Manual, Part 5 – Electrical systems.	Updated guidance materil in the Aerodrome Design Manual, Part 5 - Electrical systems.	2009-12-15
<b>Currency of surveillance-related ICAO provisions</b>	<b>ASP</b>	Develop amendments to existing ICAO provisions on aeronautical surveillance and airborne collision avoidance systems in light of operational experience.	Amendments to Annex 10 and Doc 8071, Doc 9684, Doc 9688, Doc 9863 and Doc 9871.	2008-06-30
<b>Aeronautical surveillance applications</b>	<b>ASP</b>	Develop an initial set of ICAO SARPs, procedures and guidance material necessary for supporting the introduction of airborne surveillance applications in the operational environment in a safe and harmonized manner.	Amendments to Annex 10 and PANS-OPS and a manual containing guidance material	2008-06-30
<b>Multilateration systems</b>	<b>ASP</b>	Develop SARPs and guidance material for Multilateration systems and their use in air traffic surveillance.	Amendments to Annex 10 and guidance material	2008-06-30
<b>1030/1090 MHz RF pollution study</b>	<b>ASP</b>	Report on the radio frequency (RF) pollution problem associated with the use of 1030 and 1090 MHz frequencies.	A report outlining the results of the study and containing a recommendation for way forward by ICAO.	2008-06-30
<b>Required surveillance performance (RSP)</b>	<b>ASP</b>	Develop the concept of required surveillance performance.	SARPs (in Annex 10) and guidance material	2008-06-30
<b>Air Navigation System Performance</b>	<b>ATMRPP</b>	Formulate guidance on performance for the future global ANS system; continue the definition of related performance metrics and elementary characteristics in the context of the overall behaviour of the ANS system; and facilitate global harmonization of such work, including definitions, standards for reporting requirements, information disclosure and guidance for monitoring.	Manual on the Performance of the Air Navigation System	2007-12-31

Title	Panel	Task Description	Expected Output	Output Date
<b>Service Delivery Management</b>	<b>ATMRPP</b>	Based on the Global ATM Operational Concept, develop guidance on ATM service delivery management, and the distribution of responsibilities for the various air navigation services and their seamless performance, including the designation of predetermined separators for separation provision.	Guidance on Service Delivery Management Proposal for ICAO flight plan mechanism in line with the Global ATM Operational Concept	2009-12-31 2009-12-31
<b>Technical Instructions for the Safe Transport of Dangerous Goods by Air</b>	<b>DGP</b>	Develop amendments to the Technical Instructions for the Safe Transport of Dangerous Goods by Air and its related documents so as to ensure that the document remains up-to-date.	New editions of the Technical Instructions, its Supplement, and the Emergency Response Guidance for Aircraft Incidents involving Dangerous Goods (Doc 9481),	2009-12-31
<b>Transport of Dangerous Goods on Cargo Aircraft</b>	<b>DGP</b>	Amended provisions to the Technical Instructions related to the transport of dangerous goods on cargo-only aircraft, including accessibility requirements, quantity limitations, and emergency response procedures related to Class C cargo compartments.	Amended Technical Instructions related to transport of dangerous goods on cargo-only aircraft.	2008-11-30
<b>Flight Recorders</b>	<b>FLIRECP</b>	SARPS on carriage requirements for: a) Cockpit Voice Recorders, Airborne Image Recorders, Data-Link Recorders and combination recorder systems. b) Independent power supplies for flight recorders. c) Extending the recording durations of Cockpit Voice Recorders. d) Increasing the number of parameters to be recorded and sampling rates for Flight Data Recorders.	Amendments to Annex 6 — Operation of Aircraft, Parts I, II and III, on carriage requirements for flight recorders.	2008-05-14
<b>GNSS evolution</b>	<b>NSP</b>	Develop amendment to SARPs and guidance material for GNSS in Annex 10 for: a) ground based augmentation system (GBAS) capable of supporting Category II/III operations; b) dual frequency SBAS; c) GPS evolution; d) GLONASS evolution; and e) Galileo,	Amendments to Annex 10 for: GBAS - GPS L1 feasibility study GBAS (Vol.I) Dual frequency SBAS (Vol.I) GPS evolution (Vol.I) GLONASS evolution (Vol.I) Galileo (Vol.I)	2007-12-31 2009-12-31 2009-12-31 2009-12-31 2009-12-31 2009-12-31

Title	Panel	Task Description	Expected Output	Output Date
<b>Resolution of issues with existing navaids</b>	<b>NSP</b>	Develop material addressing the following technical and operational issues with existing navaids: a) assessment of DME infrastructure in support of PBN; b) mitigation of DME interference to GNSS services in the 960 - 1215 MHz band; c) updates and corrections to existing SARPs for ground- and satellite-based radio navigation aids	Guidance material on DME infrastructure assessment Amendments to Annex 10 and guidance material on mitigation of DME interference to GNSS Amendments to Annex 10 and guidance material for ground- and satellite-based navaids	2007-12-31 2007-12-31 2007-12-31
<b>Testing of radio navigation aids</b>	<b>NSP</b>	Develop updates to Doc 8071 (testing of radio navigation aids) on: a) conventional navaids; and b) new GNSS signals and constellations.	Updated Doc 8071 Vol.I (conventional navaids) Updated Doc 8071 Vol.II (new GNSS signals and constellations)	2007-12-31 2009-12-31
<b>Operational implementation strategies for the navigation infrastructure</b>	<b>NSP</b>	Develop guidance material to support operational implementation strategies for the navigation infrastructure in the framework of the ICAO Global Plan.	Updates to Doc 9849 (GNSS Manual) Additional guidance material in Annex 10 Vol.I	2007-12-31 2007-12-31
<b>Performance Based Navigation-Flight Procedures</b>	<b>OCP</b>	Develop ICAO provisions in the field of instrument flight procedures to support Performance Based Navigation.	Amendments to PANS OPS criteria: -new RNP APP criteria -align criteria with PBN concept Procedure design manual for RNP AR (authorization required) approach operations. Amendments to Procedure Design Construction Manual	2008-11-01 2007-10-01 2009-05-01
<b>Collision Risk Model</b>	<b>OCP</b>	a) Upgrade the existing CRM to meet the needs of modern aviation; and b) Expand the scope of CRM applicability to PBN procedures.	Update of the ICAO collision risk model Feasibility study regarding expanding the scope of the ICAO Collision Risk Model Expanded ICAO Collision Risk Model to include PBN operations	2007-11-01 2008-09-01 2011-09-01

Title	Panel	Task Description	Expected Output	Output Date
<b>Helicopter Operations</b>	<b>OCP</b>	Develop criteria to support GNSS and vertically guided SBAS helicopter and heliport specific operations.	Amendments to PANS OPS criteria: -PinS visual segment and helicopter specific terminal and en route criteria using SBAS -Heliport basic GNSS and SBAS departure criteria -SBAS Localizer Performance (LP) PinS criteria, SBAS LPV PinS and Heliport Criteria -PBN criteria for helicopter operations, September 2008.	2008-09-01
<b>Quality Assurance</b>	<b>OCP</b>	Develop Flight Procedure Quality Assurance Manual.	Flight Procedure Quality Assurance Manual	2007-11-01
<b>Charting and Avionics Displays</b>	<b>OCP</b>	Develop new charting and aeronautical data requirements to support PBN, SBAS and GBAS operations. Harmonize charting and aeronautical data requirements with industry requirements for data bases and avionics.	Amendments to Annex 4 and PANS OPS relating to charting Amendments to Annex 15 relating to aeronautical data requirements	2008-09-01 2008-09-01
<b>Vertical Navigation (VNAV)</b>	<b>OCP</b>	Develop PANS OPS criteria to promote the use of vertically guided approaches.	Amendments to PANS OPS criteria: -Common flight procedures for approaches using a vertical descent path (NPA CDFA, APV, PA) -APV criteria for the obstacle rich environment (offset APV, steep angle APV) -SBAS Category I approach -GBAS Category II/III approach	2008-09-01 2008-09-01 2009-09-01 2009-09-01
<b>Noise Abatement Flight Procedures</b>	<b>OCP</b>	Develop and consolidate provisions for the procedure designer to use in addressing aircraft and environmental problems.	Amendments to PANS OPS: -Standardized noise abatement provisions for the Arrival/Approach phase (CDA) -Consolidation of Noise abatement provisions	2008-09-01 2007-11-01

Title	Panel	Task Description	Expected Output	Output Date
<b>Re-classification of Instrument Approach Procedures</b>	<b>OPSP</b>	Re-classify instrument approach procedures based on a 2D/3D concept. Amend definitions in Annex 6 Parts I, II and III to more precisely define instrument approach operations based on lateral and vertical guidance. Amend definitions in Annex 2 to relate 2D/3D approach and landing operations to non-precision, semi-precision, and precision approach procedures. Adoption of these amendments will clarify the type of guidance (lateral or lateral/vertical) upon which each approach operation is based and will serve to reduce the number of terms being applied to non-precision approaches with vertical guidance, thus reducing the potential for misunderstanding among the user communities.	1) Amendments to Annex 6 Parts I, II and III to add the terms 2D and 3D to the definitions for approach and landing operations, and to define the new terms 2D/3D approach and landing operations. 2) Amendments to Annex 2 to add 2D and 3D approach and landing operations to the definitions of approach procedures, and to change the definition of "approach procedure with vertical guidance (APV)" to "semi-precision approach procedure (SPA)"	2008-12-31
<b>Modernize the Manual of All Weather Operations</b>	<b>OPSP</b>	Modernize the Manual of All Weather Operations (Doc 9365) to incorporate new technologies and procedures developed since the manual was first published in 1991.	Update of the Manual of All-Weather Operations	2009-12-31
<b>Fatigue Risk Management</b>	<b>OPSP</b>	Develop provisions and guidance materials to enable States to promulgate fatigue risk management regulations and/or procedures.	Amendments to Annex 6 Parts I and III and supporting guidance material related to fatigue risk management programme.	2007-06-30
<b>Synthetic Vision Systems</b>	<b>OPSP</b>	Develop Standards and Recommended Practices and guidance materials for the operational procedures governing the use of synthetic vision system to complement the recently developed proposals for new ICAO provisions related to HUD/HGS and EVS.	Amendments to Annex 6, Parts I, II and III to provide Standards and Recommended Practices governing the operation and use of synthetic vision systems.	2009-12-31
<b>Airborne Separation criteria and standards</b>	<b>SASP</b>	Develop criteria, performance standards and separation minima if necessary in relation to airborne separation assurance.	Report on the feasibility of Airborne performance standards	2009-06-31

Title	Panel	Task Description	Expected Output	Output Date
<b>Long Term RVSM Monitoring Requirements</b>	<b>SASP</b>	In coordination with Regional Monitoring Authorities, produce updated version of the RMA manual with specific recommendations related to long term monitoring of height-keeping performance.	Amended RMA Manual	2008-11-21
<b>GPI-21 Application of New Technologies to Existing Separation Standards</b>	<b>SASP</b>	Develop Standards and Recommended Practices, guidance material, as well as implementation guidelines to allow the application and use of new and emerging technologies with existing separation minima.	Requirements/conditions for the use of new equipment and technologies with existing separation standards	2010-11-26
<b>Performance Based Navigation Applications</b>	<b>SASP</b>	Develop lateral and longitudinal separation standards for emerging Performance-Based Navigation applications.	Amendment to PANS/ATM related to new separation criteria for Performance Based Navigation applications	2011-06-11

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