INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF

THE FORTY-FIFTH MEETING OF

THE EUROPEAN AIR NAVIGATION PLANNING GROUP

(Paris, 1 to 3 December 2003)

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i   **Introduction**

Place and Duration

i.1   The Forty-Fifth Meeting of the European Air Navigation Planning Group (EANPG/45) was held in the European and North Atlantic Office of ICAO from 1 to 3 December 2003.

Attendance

i.2   The Meeting was attended by Members and representatives of forty States and by observers from seven international organizations. A list of participants is given at **Appendix A**.

Officers and Secretariat

i.3   Mr Karsten Theil, Chairman of the EANPG, presided over the meeting throughout its duration. Mr Christian Eigl, ICAO Regional Director, Europe and North Atlantic, was Secretary of the meeting and was assisted by the following staff from the Organization:

Mr Robert Kruger	Mr Herman Pretorius
Mr George Firican	Mr Thierry Tostain
Mr Björn Hellroth	Mr Jacques Vanier
Mr Victor Kourenkov	Mrs Nikki Goldschmid
Mr Stanislav Neznamov	

Working languages

i.5   The discussions were conducted in English, French and Russian. Documentation was issued in English.

Conclusions and Decisions

i.6   The EANPG records its action in the form of Conclusions and Decisions with the following significance:

Conclusions deal with matters which, in accordance with the Group's terms of reference, merit directly the attention of States or on which further action will be initiated by ICAO in accordance with established procedures.

Decisions deal with matters of concern only to the EANPG and its contributory bodies.

ii   Agenda

ii.1   The Group agreed to the following agenda for organizing the work of the Meeting and the structure of the report:

Item 1:   Review of significant developments

Item 2:   Previous EANPG follow-up

Item 3:   Implementation programmes

Item 4:   Air Navigation Issues

Item 5:   Performance Monitoring and Safety Issues

Item 6:   Administrative and Organisational Issues

Item 7:   Any Other Business

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1.   Review of Significant Developments

Outcome of the Eleventh Air Navigation Conference and possible follow-up action

1.1   The meeting recalled Recommendation 4/1 of the Eleventh Air Navigation Conference (AN Conf/11) and noted that at least 23 of the 61 recommendations were addressed to Planning and Implementation Regional Groups (PIRGs) and States. The Group expressed the view that the relevant recommendations would require implementation in a uniform manner in all the regions and agreed that ICAO use the regional machinery to ensure harmonization as soon as the report of the conference has been approved.

CONCLUSION 45/1 –   HARMONIZATION OF THE WORK PROGRAMMES OF THE PIRGs

> **That:**
>
> a)   **ICAO, including the Regional Directors as the Secretaries of the Planning And Implementation Regional Groups (PIRGs), through its regional machinery, ensure that the relevant recommendations of the Eleventh Air Navigation Conference are implemented in a uniform manner in all the ICAO regions; and**
>
> b)   **the work programmes of the PIRGs, in co-ordination with the Chairpersons of the Groups, be harmonized and synchronized accordingly.**

1.2   The Group was informed that the Air Navigation Commission (ANC) should complete its review of all non-Standards and Recommended Practices (SARPs) related material contained in the ANConf/11 Report by 19 February 2004 and that the Council should take action by the end of March 2004. As regards the SARPs related material, which concerns only Annex 10, the report to the Council for the adoption of the amendment should be available by 20 November 2004. The implementation date has not yet been determined.

ICAO Universal Safety Oversight Audit Programme

1.3   With regard to the continuation of the ICAO Universal Safety Oversight Audit Programme, the Meeting noted that the Council has decided to postpone action on the expansion of the Programme planned to begin in 2004 to 2005 but is subject to the 35th Assembly agreeing to the adoption of a transition to a systems approach. The Group noted that the current programme of Annexes 1, 6 and 8 audit follow-ups will continue through 2004, by the end of which they will all have been completed.

Revised Terms of Reference of the EANPG

1.4   The Group was informed that the revised Terms of Reference proposed by EANPG/44 had been agreed to by the ICAO Council. The new Terms of Reference were to be included in the revised EANPG Handbook.

Other significant developments

1.5   The Group was informed that Reduced Vertical Separation Minimum (RVSM) had been successfully implemented in the Middle East (MID) and parts of the Asia Regions on 27 November 2003. A great deal of the work that had been carried out to support the implementation of RVSM in the EUR Region was used in the MID Region. In this connection, it was noted that a EUR/MID RVSM interface meeting had been held in Paris from 4 to 5 November 2003. The Group also noted that the AFI Planning and Implementation Regional Group (APIRG) had recently agreed to plan for the implementation of RVSM in the Africa - Indian Ocean (AFI) Region in January 2005.

2.   Previous EANPG follow-up

Status report – Decisions and Conclusions

2.1   The Group was provided with information on the status of the Decisions and Conclusions of EANPG/44. Some minor clarifications were made and the updated list was to be distributed as Supplement 2 to the EANPG Handbook.

Status report – EANPG Work Programme

2.2   The EANPG/44 Work Programme was reviewed and the Group was updated on progress since EANPG/44. Many of the items identified in the work programme were subject to working papers that would be considered later in the course of the meeting. Other items were either completed, or subject to revisions that would be indicated in the EANPG/45 Work Programme. On the problem of duplication of navigation aids identification codes, it was determined that the issue was adequately covered by Annex 11 material, so no further action was required.

3.   Implementation Programmes

8.33 kHz Expansion

3.1   The initial 8.33 kHz channel spacing implementation in Europe provided 74 conversions from 25 kHz channel spacing. The 8.33 kHz Horizontal Expansion programme that extended 8.33 kHz operations to an additional 19 States on 31 October 2002 had by December 2003 achieved 40 of its planned 70 conversions to 8.33 kHz channel spacing. The additional channels provided by these conversions had made a valuable contribution in reducing the shortage of VHF communication channels, but the demand still exceeded the supply. The European Region has planned for the phased introduction of further expansion of 8.33 kHz airspace to eventually include all designated controlled airspace by 2009 in the area of 8.33 kHz operations.

3.2   In order for the phased expansion of 8.33 kHz operations to meet the Regions VHF communications requirements, it was vital that the maximum possible conversions to 8.33 kHz are made. The number of conversions is the only valid success indicator to measure the effectiveness of the 8.33 kHz implementation programme.

3.3   The total expenditure on 8.33 kHz implementation so far is in excess of 500 million Euro. The number of conversions achieved is 109, which means that each conversion has come at an overall average cost of about 4.5 million Euro. In this context, it is vital that the relatively minor additional expenses involved in installing new 8.33 kHz capable ground equipment, or the expansion of UHF ground facilities, be given the appropriate high priority by the authorities involved. Airspace reorganization also has the potential to enable more 8.33 kHz conversions. Adequate UHF coverage was identified as being particularly important in the transition to 8.33 kHz operations.

Offset carrier operations on 8.33 kHz channels

3.4   There is a large number of potential 8.33 kHz conversions blocked by offset carrier (Climax) operations. The offset carrier technique was restricted to 25 kHz channels. Preliminary tests indicated that a limited Climax technique may be possible on 8.33 kHz channels. Despite the potential to substantially increase the benefits of the 8.33 kHz programme, no resources had been made available to conduct the necessary studies into determining the feasibility of idea. The Group concluded that the potential benefits of being able to use climax operations on 8.33 kHz warranted studies to establish the feasibility of the technique.

CONCLUSION 45/2 -   OFFSET CARRIER OPERATIONS ON 8.33 KHZ CHANNELS

> **That, States and organizations in a position to do so, provide resources for studies into the feasibility of offset carrier operations on 8.33 kHz channels.**

Use of 8.33 kHz for OPC

3.5   The utilization of the OPC band was considered in the context of the overall saturation of the VHF band in Europe. It was considered that the potential to get more valuable conversions to 8.33 kHz for operational control (OPC) assignments had not been fully explored. The potential for 8.33 kHz conversions in the operation control (OPC) band to contribute to an increase in capacity in the VHF communications band needed to have a higher profile in order to promote more progress in this important activity.

CONCLUSION 45/3 -   USE OF 8.33 KHZ FOR OPC

> **That, States and operators in the 8.33 kHz area of operations take a proactive role in the implementation of 8.33 kHz channels in the OPC band.**

Implications of the Expansion of 8,33 kHz Airspace on the Interface with Adjacent Regions

3.6   The phased expansion of the 8.33 kHz channel spacing airspace might render difficult the handling of flights in areas adjacent to regions where a 25 kHz channel spacing is still implemented. Procedures currently applied for re-directing unequipped aircraft to levels below an expanded 8.33 kHz airspace could prove inadequate in the future.

3.7   Aircraft entering the airspace of the EUR Region above flight level 245 (and above flight level 195, starting in 2006) should be fitted with a 8.33 kHz VHF equipment. Non-equipped aircraft entering the EUR Region were currently handled on an individual basis, according to the Letters of Agreements concluded between the adjacent air traffic control units concerned. The gradual expansion of 8.33 kHz channel spacing airspace will probably make it a requirement for flights to start descending below the bottom flight level, before entering the airspace of the first control centre in the EUR Region.

3.8   The Group agreed there was a need to study the issue, with a view to incorporate into ICAO documents, as required, procedures dealing with the descent of unequipped aircraft below the 8.33 kHz channel spacing airspace, when entering the EUR Region.

CONCLUSION 45/4 –   REGIONAL INTERFACE ISSUES FOR 8.33 kHz EXPANSION

> **That, in the context of further 8.33 kHz expansion, the ICAO Regional Director coordinate with Eurocontrol and the Offices of the adjacent Regions the preparation of the proposals for amendment to the Regional Supplementary Procedures (Doc 7030) which might be necessary.**

Implementation of the Single European Sky

3.9   The Group was provided with an update on the European Commission (EC) activities related to a Single European Sky initiative. The Group was informed that, as regards the legislative process, the initiative was currently in a conciliation phase in order to agree on common wording and that this phase should be completed by 10 December 2003. A few issues remained such as how to integrate the military requirements and the establishment of functional blocks of airspace. The Group was also informed that a single sky committee would be established and that a Memorandum of Co-operation would be signed with Eurocontrol in order to provide a framework to give mandates to carry out different tasks. The Group also noted that a series of workshops were being planned to address the various elements of the initiative.

3.10   The Group noted with appreciation the information and agreed that it was important to maintain a close liaison between ICAO and the EC. Particular mention was made of States' responsibilities stemming from Article 28 of the Chicago Convention. It was also agreed that the EANPG and COG, through the ICAO EUR/NAT Office should closely collaborate with the EC in progressing the initiative.

CONCLUSION 45/5 -   SINGLE EUROPEAN SKY INITIATIVE

> **That the EANPG Programme Coordinating Group (COG), through the ICAO Regional Director, closely co-ordinate with the European Commission (EC) and other stakeholders in order to progress the Single European Sky initiative.**

Progress report on the Eurocontrol LINK 2000+ programme

3.11   Eurocontrol presented the EANPG with a report on the progress achieved with regard to the LINK 2000+ Programme and its proposed deployment strategy, including considerations to the development of a mandate for data link equipage and data link service provision. The objective of the LINK 2000+ Programme was to plan and co-ordinate the implementation of operational air-ground data link services for ATC, up to the end of the decade in the core area of Europe (Belgium, the Netherlands, Luxembourg, Germany, Austria, Switzerland, Italy, France, Spain and Portugal), based on the Aeronautical Telecommunication Network (ATN) and VHF Digital Link Mode 2 (VDL Mode 2). The Programme focused on the implementation of Controller Pilot Data Link Communication (CPDLC) and on the provision of a migration path to ATN/VDL Mode 2 for several services already existing over the Aircraft Communications Addressing and Reporting System (ACARS).

3.12   Eurocontrol secured the commitment of the Air Navigation Service Providers of Austria, Belgium, Luxembourg, France, Germany, Italy, the Netherlands, Portugal and Spain to provide data link services in the upper airspace by 2007. The Eurocontrol Maastricht Upper Area Control Centre would provide the services from 2003 onwards, followed by other centres in 2006 and 2007. This stepped implementation of data link equipped centres would allow crews to get accustomed gradually to data link operations.

3.13   An important issue was the aircraft equipage. In 2002, the Link 2000+ Programme Steering Group endorsed a three stepped approach for airborne air/ground data link equipage a) support to pioneer airlines; b) offer an incentive scheme to encourage airlines to equip with ATN/CPDLC capable avionics; c) mandate for data link equipage and data link service provision.

3.14   The possibility of mandatory carriage for data link was under investigation as it was generally accepted that the full benefits of data link would only become available when a large majority of flights would be equipped. The objective would be to have 75% of the flights and all centres, in the LINK 2000+ area of applicability, data link equipped. A clear mandate policy for data link equipage would allow avionics and ATC system manufacturers to plan their production and delivery of equipment, and airspace users to equip aircraft, taking into regard the published mandate time. The introduction of a mandate would be organised in such a way to minimise the financial pressure on airlines; the mandate should apply firstly to new aircraft and later for aircraft that would require retrofit. It was noted that the Link 2000+ programme did not include the requirement for ADS.

3.15   The necessity for amendments to the European Air Navigation Plan (EUR ANP – Doc 7754) and the ICAO Regional Supplementary Procedures (ICAO SUPPs – Doc 7030) would need to be assessed, in case of a mandatory carriage of data link equipage. The necessary steps for developing the amendments would be taken in due time and in co-ordination with EANPG. A draft mandate had been prepared within Eurocontrol. When mature enough this draft would be subject to a formal consultation, in accordance with the Eurocontrol Notice of Proposed Rule Making (ENPRM) process. Parallel discussions would take place with ICAO to address notably the modification of the above mentioned documents. A formal decision was expected

by the end of 2004. The possibility to develop related Implementing Rules for the Single European Sky would be discussed with the European Commission.

3.16   The EANPG noted the status of the LINK 2000+ Programme and asked that the EANPG COG and the Group be informed regularly on the progress achieved.

4.   Air Navigation Planning Issues

Harmonization of training in the Eastern part of the ICAO European Region

4.1   The Group noted that harmonization of air traffic services (ATS) technologies automatically forced States to harmonize their basic training requirements and review their approaches towards human resources planning, recruitment, selection and training policy.

4.2   Eurocontrol advised that with the introduction of the Eurocontrol Safety and Regulatory Requirements (ESARRs) and specially ESARR 5 (ESARR for ATM services' personnel), a uniform minimum standard of training for the licensing/certification of air traffic controllers in Eurocontrol Member States had become mandatory. The Group noted that Eurocontrol had recommended that ECAC Member States not members of Eurocontrol apply the provisions of ESARR 5.

4.3   The Group agreed that the minimum training standard and guidelines, identified in Eurocontrol's "Guidelines for Common Core Content and Training Objectives for Air Traffic Controllers" (CCC) could be extended to all States in the Eastern part of the ICAO European Region, subject to the States concerned acceptance.

4.4   It was recommended that States develop training syllabi based on CCC guidelines adapted to their specific context (national legislation, route structure etc).

CONCLUSION 45/6 -   HARMONIZATION OF TRAINING IN THE EASTERN PART OF THE ICAO EUR REGION

> **That:**
>
> a)   **States from the Eastern part of the ICAO EUR Region be encouraged to develop their national training standards, based on the training standards and guidelines developed by Eurocontrol in the context of the European air traffic management programme (EATMP) for the European Civil Aviation Conference (ECAC) States;**
>
> b)   **the ICAO Regional Director, in co-operation and co-ordination with Eurocontrol, the Interstate Aviation Committee and International Federation of Air Traffic Controllers' Associations, organize a special Workshop, in order to familiarize the States concerned with the training standards and guidelines, developed by Eurocontrol.**

Flight planning improvement

4.5   The study conducted by the GATE/ATM project team proved that in the Eastern Part of the ICAO EUR Region there were no major problems with the means for individual flight plan delivery and processing, and that they met current operational requirements of the airspace users and air navigation service providers. However, complex and inflexible procedures and limited use of modern technical means for the delivery and acceptance of Repetitive Flight Plans (RPLs) in some States in the Eastern Part of the ICAO EUR Region restricted the use of available airspace and reduced flexibility in airlines operations.

4.6   While taking into consideration all necessary security and safety aspects, as well as experience gained by CFMU/Eurocontrol, it was recommended to consider using the Internet, facsimile and other modern electronic means of communication for submitting RPLs. To offload system operators and to avoid typing errors, electronic transmission of RPL data should be arranged in a way suitable for automated data processing. In order to enable airlines to plan their operations in a flexible way, States were encouraged to make possible early filing of individual flight plans without a requirement for RPLs in the future.

4.7   Recently, significant events (wars, strikes, major system failures, etc.) revealed that not all States had contingency procedures to allow flexible and dynamic re-routing of the aircraft when required. In case of abnormal situations, it was impossible to know in detail the extent to which air traffic services could be disrupted, the area affected or the timing of contingency situations. Therefore, special flight planning procedures for abnormal situations should be in place for immediate approval of new routings to avoid affected areas. To facilitate urgent re-routing when abnormal situations occurred in flight, the procedures for submitting and receiving air-filed flight plan (AFIL) should be adopted by appropriate ATS authorities, where it was not done already.

CONCLUSION 45/7 –   FLIGHT PLANNING IMPROVEMENTS

That States in the Eastern Part of the ICAO European Region:

a)   consider all possibilities of utilizing modern technical means of communication and streamline the existing procedures for submitting flight plan listings, with the objective of using individual flight plans in the future; and

b)   ensure that flight planning procedures allow flexible re-routing of aircraft in abnormal situations.

4.8   In a related development, the Group noted with appreciation that the Air Navigation Commission had established a Flight Plan Study Group (FPLSG) in order to assist the ICAO Secretariat in updating flight plan requirements. It was also noted that current operating practices and flight plan format had been in use for many years and were developed on the basis of a manual, paper based, teletype communication system. The increased use of automation in the acquisition, processing and distribution of flight plans and associated data necessitated updating the existing flight plan form.

Air Traffic Flow Management exemptions policy

4.9   The Group recalled that in May 2002, the ATFM exemption procedures were revised in order to reduce to the extent possible the overall number of exemptions to ATFM measures. An additional objective was to reduce the number of flights that were apparently claiming ATFM Exempt Status without being entitled to preferential treatment.

4.10   The Group was informed that the new measures implemented by the CFMU had only partially resulted in the desired effect.   However, the introduction of a single status indicator (STS/ATFMEXEMPTAPPROVED) for a multiple number of exempt reasons makes the follow-up and verification of the claimed status even more difficult for some State authorities and thus hampered their possible remedial actions against abuse of the exempt status.

4.11   The issues in question took into account three aspects of the problem area of ATFM exemption. They are the reduction of existing STS indicators as far as practicable, the reduction of the absolute number of exempt flights due to more strict requirements and the improved transparency of exemption reasons to enable States to verify the adherence to established exempt procedures. The main proposals concerning the current procedures were as follows:

a) removal of **STS/EMER** from the exempt procedures;

b) clarification of medical exempt status;

c) exempt procedures for flights conducted due to national interest; and

d) maintaining the existing **STS/HEAD**, **STS/SAR** and **STS/STATE**.

4.12 It was pointed out that, in the context of harmonising ATFM procedures throughout the entire EUR Region, changes to Eurocontrol CFMU documentation should take due account of the ATFM procedures applied in the Eastern Part of the European Region including ATFM exempt procedures. With this in mind, the Group agreed that the EANPG COG should review the ATFM exemption policy and develop new ATFM exempt procedures in close co-ordination with the Russian Federation, Eurocontrol and other interested parties and develop appropriate amendments to EUR Regional provisions.

DECISION 45/8 – UPDATE THE EUROPEAN REGION ATFM EXEMPTION POLICY

That the EANPG Programme Coordinating Group (COG):

a) **in close co-operation with stakeholders, review the Air Traffic Flow Management (ATFM) exemption policy and develop new ATFM exemption procedures; and**

b) **initiate, on behalf of the EANPG, amendments to the EUR Regional documentation and make arrangements for processing the changes.**

Development of the ATS route network in the South-East Europe

4.13 The EANPG was informed on the significant improvement of the ATS route network in the South East European area that had been reached in the framework of the ICAO Olympics Preparation Meetings (OLIMP). Extensive consultations, addressing operational aspects related to a new ATS route network proposal developed by the airspace users were conducted by ICAO and IATA during the last twelve months involving the active participation of Greece and Turkey. The close co-operation between ICAO and IATA was a key factor ensuring the successful conclusion of the consultation process at the end of August 2003. The agreed new ATS route package set for implementation on 25 December 2003 would respond to the international requirements of the civil aviation community and to the specific national needs in the area.

Transition from ORCAM to the future systems

4.14 Eurocontrol presented the EANPG with a working paper reflecting the concerns of the Originating Region Code Assignment Method (ORCAM) Users Group on their perceived future shortage of the SSR codes. Despite the innovations and the continued improvements of the management and usage of the SSR codes that offered a temporary relief to the European "core" area, the ORCAM Core Group (Paris, 29-30 September 2003) recognized that unless radical solutions would be implemented a code shortage situation would occur in the very near future (next couple of years). It was highlighted that one State already faced several shortage of codes and another exhausted 94% of the available codes during the summer season of 2003.

4.15 The Mode S Programme implementation was postponed to 2007 and therefore no positive impact on the SSR codes was expected earlier than 2008-2010. States have chosen among different Mode S identification solutions (conspicuity codes versus discrete codes) and therefore the pressure on the use of the SSR codes will not be alleviated, at least during the transition phase, at the extent expected.

4.16   New programmes, like the Advanced Surface Movement Guidance and Control Systems (A-SMGCS) would also negatively impact as they would require longer time usage of the SSR codes (from 30 to 60 minutes). This would translate into a reduction of the number of usage cycles of the codes and therefore accelerating the code shortage problem. The ORCAM Users Group recognized that if no action was taken, no guarantee could be given that traffic would be accommodated with appropriate SSR codes beyond 2005.

4.17   Taking into account the above and based on a request of the ORCAM Users Group, a Focus Group, gathering expertise from different fields of activity, including (but not limited to) ORCAM Users Group, Eurocontrol and experts from the civil-military interface was recently set-up to investigate and assess the feasibility of operational and/or technical solutions meant to alleviate the foreseen shortage in SSR codes availability. In this respect a letter from Eurocontrol would be sent shortly in order to invite States to nominate experts in the Focus Group. It was envisaged that its work would start early 2004 and be finalised during 2004. The EANPG welcomed the establishment of the Focus Group and asked that an interim report on its findings to be presented to the EANPG COG at its session in June 2004 and a full report to the EANPG/46 (December 2004). The Group also recognized the need that States take all necessary measures in order to improve and rationalise the use of the SSR codes, particularly those allocated for local applications (civil or military).

CONCLUSION 45/9 –   IMPROVED USAGE OF SSR CODES

> **That, in order to prevent an early shortage in the Secondary Surveillance Radar (SSR) codes availability, all States be requested to make all efforts to improve and rationalise the use of the codes and particularly of those allocated for local applications (civil or/and military).**

ATS message handling service network management

4.18   In planning for the implementation of the EUR ATS Message Handling Service (ATSMHS) the need for common facilities for the support of EUR ATSMHS was identified. One of the most important of these common facilities required for the deployment and operation of ATSMHS is the "centralised off-line management function", which would be responsible for network inventory, maintenance and publication of addressing information, management of routing tables and provision of general support.

4.19   During the migration from AFTN/CIDIN to ATSMHS, a very close co-ordination of EUR AFS network management activities must be maintained, in order to ensure effective management of the network as a whole and to make the transition seamless to the users.

4.20   Currently the management of the operational AFTN/CIDIN was performed through the CIDIN Management Service (CMC), which was provided by Eurocontrol. Following a very successful launching in 2001, this service is supported by Eurocontrol and subscribed to by 39 States as Cooperative CIDIN (COM) Centres (CCCs).

4.21   Given the close relation and the co-existence of the AFTN/CIDIN and the ATSMHS during the migration phase and the similarity in the respective management functions, the need for centralised management would be most efficiently met, if the ATSMHS management function were also undertaken by Eurocontrol and co-located with the CMC.

4.22   It was agreed that Eurocontrol be invited to consider expanding the CMC functions to provide an ATSMHS centralised off-line management service. This service should be available from the start of the deployment of ATSMHS in Europe and should function in the same administrative framework as the CIDIN management service.

CONCLUSION 45/10 –   ATSMHS NETWORK MANAGEMENT

> **That Eurocontrol be invited to consider extending the Common ICAO Data Interchange Network (CIDIN) Management Service (CMC) to provide ATS Message Handling Service (ATSMHS) off-line network management.**

Rules for the use of the EU addressing indicator

4.23   The EU addressing indicator had been reserved in ICAO Doc 7910 for use by multinational systems in the European Region. The purpose is to allow multinational systems, such as the EAD, to retain the same addressing indicator, irrespective of which State or States the service is operated from. This was to enable the physical location of the service to be independent of the address used. This would allow the physical location of service provision to be changed without the necessity to change the addressing indicator. The ICAO EUR/NAT Regional Director was the authority recognized for making any changes to the EU entry in Doc 7910.

4.24   It was recognized that use of the EU indicator needed to be carefully managed to ensure that primary purpose of the addressing indicator, which was to enable the AFTN addressing system, was not compromised. The following basic rules were identified to ensure the benefits of having a EU indicator were maximized with a minimum and acceptable level of problems.

  i)   only State groupings within the Region that are providing multinational services can be considered as being eligible to use EU;

  ii)   there must be clear operational and/or institutional needs for an allocation;

  iii) there must be an acceptable level of implications, which must be assessed by the EANPG COG;

  iv)   assignments are to be formulated in accordance with the requirements of Doc 7910. The 3rd and 4th letters of a EU allocation will identify the function of the system. The 5th to 8th letters will be assigned in accordance with the requirements of Doc 8585, in close co-ordination with the EANPG COG.

Only when the above requirements were met was the ICAO Regional Director of the EUR/NAT Office to consider a request for an EU allocation in ICAO Doc 7910.

CONCLUSION 45/11 –   USE OF THE EU ADDRESSING INDICATOR

> **That:**
>
> a)   **State groupings that wish to have an EU address indicator allocation in ICAO Doc 7910 for European multinational services, do so through the ICAO Regional Director, who will coordinate with the EANPG Programme Coordinating Group (COG) to conduct any necessary technical reviews; and**
>
> b)   **the ICAO Regional Director prepare a proposal to include the requirements for EU addressing indicator allocations in the Air Navigation Plan (ANP).**

Migration to BUFR coded Meteorological messages (METAR/SPECI and TAF)

4.25   The World Meteorological Organization (WMO) had decided to migrate to Binary Universal Form for the Representation of meteorological data (BUFR) for Coded Meteorological Messages. This matter had been considered by the MET Div Meeting (2002), which recommended the development of a migration plan for the use of table-driven code forms for the dissemination of METAR/SPECI and TAF (Recommendation 2/5).

4.26   In accordance with working arrangements between the International Civil Aviation Organization and the World Meteorological Organization (Doc 7475), WMO is responsible for the aeronautical meteorological codes. This means that the WMO decision to migrate from all alphanumeric codes to table-driven code forms (TDCF) for information communication purposes would also require the migration to TDCF for aeronautical meteorological codes. The timetable for the aviation related codes (METAR/SPECI and TAF), would commence in 2007 with BUFR TDCF being in use in parallel with the existing alphanumeric codes, and would require the exclusive use of BUFR codes by 2015.

4.27   TDCF are self-descriptive, flexible and expandable, making amendments for messages coded in BUFR easier. This provides significant institutional benefits, but these benefits would not be possible until after the migration is complete. During the migration the presentation to the end-users would not change.

Migration to BUFR – aviation communications infrastructure implications

4.28   The current global ICAO ground infrastructure, the Aeronautical Fixed Telecommunication Network (AFTN), is a character based system and so cannot be used for the digital BUFR TDCF. Although the Satellite distribution system for information relating to air navigation (SADIS) has the technical capability to broadcast in BUFR code for the types of alphanumeric OPMET messages involved, there are no plans for SADIS to be used for the migration. The full implementation of BUFR would have a very significant impact on the aviation community, because it would require a completely new communications infrastructure at all levels - international, regional, state and user.

4.29   The planned Aeronautical Telecommunication Network (ATN) ATS Message Handling Service (ATSMHS) had the potential to meet BUFR requirements, but not without some of the features that come with its extended services, which had not yet been finalized. The Common ICAO Data Interchange Network (CIDIN) had the capability to include an additional application definition to accommodate BUFR, but its implementation was confined mainly to Europe and so is not the required global solution. Internet and the new SADIS second-generation two-way system had been identified as possible alternate communications solutions for BUFR messages, but there was still a lot of work to be done before these possibilities are formally available.

4.30   The combination of the use of BUFR codes and their transition by the ATSMHS in parallel with the same information on AFTN would add significantly to the total AFS traffic. This and other cost implications would need careful analysis to ensure that the most cost effective global implementation strategy is developed.

4.31   The Group agreed that there were many issues, including those identified above, that required very well coordinated inter-regional planning. It was considered that more specific technical details and guidance for the transition to BUFR codes were required from the ICAO HQ to enable more uniform regional and inter-regional implementation planning.

CONCLUSION 45/12 – MIGRATION TO BUFR CODED OPMET MESSAGES

That, ICAO give guidance to achieve a uniform global approach to the implementation of Binary Universal Form for the Representation of meteorological data (BUFR) coded Operational Meteorological Information (OPMET) messages, including early advise of the likely timeframe for the development of the provisions necessary for ATS Message Handling Service (ATSMHS) extended services to accommodate BUFR coded messages.

Regional preparation for BUFR code migration

4.32   Because of the considerable work to be done to enable the migration by the aviation community to the use of BUFR codes, an early start was of considerable importance and so it is proposed that the COG be tasked with identifying the issues and developing the possible scenarios and related guidance material. Issues to be addressed include MET operational implications and the communications infrastructure requirements. These efforts would need to be undertaken in close co-ordination with ICAO HQ and could provide the basis for a global approach to the transition planning.

DECISION 45/13 – PLANNING FOR MIGRATION TO BUFR CODED OPMET MESSAGES

That, the EANPG Programme Coordinating Group (COG), in consultation with ICAO, examine the implementation of the migration to Binary Universal Form for the Representation of meteorological data (BUFR) coded Operational Meteorological Information (OPMET) messages. This should include:

a)   **an assessment of the benefits to the aviation community of a full transition to BUFR;**

b)   **an assessment of the possibility of using different approaches/scenarios to transition, including the costs and benefits implications;**

c)   **an assessment of whether the proposed transition timeframes are realistic;**

d)   **an assessment of whether civil aviation should undertake the World Meteorological Organization (WMO) transition to table-driven code forms (TDCF) within the aviation environment; and**

e)   **when feasible, draft material for use by ICAO in drawing up migration guidelines for the PIRGs and the modification of Standards and Recommended Practices (SARPs) and other institutional instruments, including the production and maintenance of a presentation standard.**

Inclusion of GAMET messages in the EUR OPMET Databases

4.33   The Group was informed that the METG had agreed that GAMET[*] area forecasts (and AIRMET* information) for low level flights should be made available via the EUR OPMET databases. When trying to implement this, it had however been found that GAMET messages were currently not suitable for inclusion in the databases, because the message was not strictly specified as it was the case with other OPMET messages.

4.34   As the GAMET was closely linked with AIRMET, it was considered important that both types of messages should be made available via the EUR OPMET databases. The GAMET format should therefore be defined by a template in Annex 3 (similar to the templates for other OPMET messages) and an exclusive header be reserved for GAMET.

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[*] see Annex 3, 1.1 refers

CONCLUSION 45/14 -   IMPROVED SPECIFICATION OF GAMET MESSAGES

> **That ICAO consider:**

> a)   **inviting the World Meteorological Organization (WMO) to introduce an exclusive header for GAMET, and**

> b)   **including a template for GAMET in Annex 3 to facilitate the availability in Operational Meteorological Information (OPMET) databases.**

Runway designator in OPMET messages

4.35   The Group was informed that the state of the runway in METAR/SPECI was given per runway in an eight-digit code, where two digits were available for the runway designation. This two-digit runway designation (DRDR) limited the possibilities to have a clear distinction when there were more than two parallel runways at the aerodrome. In case of three or more parallel runways there was no coding practice available for the state of the runway.

4.36   It was also recognized that the current coding was in conflict with Annex 14 provisions for the runway designator, which included provisions for up to six parallel runways and that all OPMET messages be aligned with Annex 14.

CONCLUSION 45/15 -   RUNWAY DESIGNATOR IN OPMET MESSAGES

> **That ICAO consider a review of the runway designator in all Operational Meteorological Information (OPMET) messages in order to align them with the provisions in Annex 14.**

Refresher training of aeronautical meteorological personnel

4.37   The Group noted that the METG had reviewed a training programme for refresher training of aeronautical meteorological personnel, submitted by Russian Federation. The training programme had been recommended to be used in the States in the Eastern Part of the EUR Region. The syllabus was however considered to be of interest for a wider application.

CONCLUSION 45/16 -   REFRESHER TRAINING FOR AERONAUTICAL METEOROLOGICAL PERSONNEL

> **That ICAO consider forwarding to the World Meteorological Organization (WMO) the refresher training syllabus for aeronautical meteorological personnel as developed for the States in the Eastern Part of the EUR Region,**

Implementation of SIGMET requirements in the EUR Region

4.38   The Group noted that the MET Divisional Meeting (Montreal 9-27 September 2002) had recommended all PIRGs to review the implementation of the SIGMET requirements, in particular concerning SIGMETs for volcanic ash.

4.39   Responding to this, the METG had drafted regional survey and test procedures concerning the issuance and reception of SIGMETs. These procedures should be coordinated with the other Regions concerned with the aim to establish procedures covering the Eastern Part of Russian Federation in the areas of responsibility of the Volcanic Ash Advisory Centres in Anchorage and Tokyo. The METG had also developed a new EUR SIGMET guide, based on the same type of document for the ASIA/PAC Regions, which was

approved by the EANPG to be published as EUR guidance material and be made available on the ICAO web-site.

CONCLUSION 45/17 -   **IMPLEMENTATION OF SIGMET REQUIREMENTS IN THE EUR REGION**

        That the ICAO Regional Director:

    a)   **publish the EUR information concerning en-route weather phenomena which may affect the safety of aircraft operations (SIGMET) Guide;**

    b)   **request the EUR States to review their procedures to ensure that SIGMET messages are issued as required; and**

    c)   **coordinate special surveys and tests of the EUR SIGMET procedures.**

Distribution of ASHTAMs and NOTAMs for volcanic ash on SADIS

4.40   The Group recalled its Conclusion 41/13 b) that was calling for the SADISOPSG to ensure that ASHTAMs/NOTAMs for volcanic ash are disseminated on the AFS — The SADISOPSG/5 Meeting had addressed this issue (Conclusion 5/9 refers). The necessary procedures had been tested and they are, in principle, feasible to implement; however, no requirements had been stated so far by any PIRGs served by SADIS to include aeronautical information service (AIS) data (e.g. NOTAMs/ASHTAMs) on the SADIS broadcast. Therefore, the issue of the inclusion of these messages on the SADIS broadcast would remain dormant until such time as one of the PIRGs concerned states a requirement for such AIS information to be carried on the SADIS.

4.41   The Group reiterated its Conclusion 41/13 b) that these messages should be disseminated on SADIS, independent of the dissemination of other types of AIS information. It was, however, a global issue which should be considered by International Airways Volcano Watch Operations Group (IAVWOPSG).

CONCLUSION 45/18 -   **DISSEMINATION OF ASHTAMS AND NOTAMS FOR VOLCANIC ASH ON SADIS**

        That the International Airways Volcano Watch Operations Group (IAVWOPSG) be invited to consider the global operational requirements to disseminate ASHTAMs and NOTAMs for volcanic ash on the Satellite distribution system for information relating to air navigation (SADIS).

SADIS second generation broadcast

4.42   The group was informed that SADISOPSG/7 Meeting had endorsed the proposal by the SADIS Provider State that a complementary second SADIS carrier called "SADIS second-generation broadcast (SADIS 2G)" would be up-linked. With regard to the implementation, the Group agreed on its benefits, i.e. an improvement in satellite performance, a future reduction in required bandwidth and cost and a wider market for the supply of cheaper receiving equipment. It was however realized that the SADIS 2G implementation would mean that all the VSAT stations would have to be changed over a number of years. Furthermore, there would be cost implications at the system level, mainly related to the establishment of an operational infrastructure. The Group shared the view of the SADISOPSG/7 and agreed on the following Conclusion:

CONCLUSION 45/19 - IMPLEMENTATION OF THE SADIS SECOND-GENERATION SYSTEM

That, subject to the successful completion of ongoing trials, the Satellite distribution system for information relating to air navigation (SADIS) second-generation broadcast (SADIS 2G) be endorsed for implementation.

Discontinuation of the first generation SADIS two-way VSAT programme

4.43   With regard to the future of the first generation SADIS two-way programme, the Group was informed by the SADISOPSG that the existing two-way programme was unable to meet the requirements of increasing the quantity of OPMET data available for SADIS uplink, or improving its timeliness of availability in a cost-effective manner. It was felt that the main reason for this failure was the long lead-time between the project conception and its operational implementation; during this period technologies had evolved, and more cost-effective solutions had become available. The Group shared the view of the SADISOPSG that the first-generation two-way programme should be discontinued.

CONCLUSION 45/20 - DISCONTINUATION OF THE FIRST-GENERATION SADIS TWO-WAY VSAT PROGRAMME

That, the EANPG endorse the discontinuation of the current first-generation Satellite distribution system for information relating to air navigation (SADIS) two-way very small aperture terminal (VSAT) programme as of 1 January 2004.

Definition of the Meteorological Authority

4.44   The Group was informed that during the MET Cost Recovery Workshop in Moscow 4-7 November 2003, organized by ICAO in co-ordination with WMO (EANPG Conclusion 43/27 refers), it had been found that the definition of "Meteorological authority" in Annex 3 was not uniformly interpreted among the participants from States in the Eastern and Central Parts of the EUR Region. Primarily it had been found that the word "authority" in many States relates to the functions of a regulatory body, while the Annex 3 definition reads "The authority providing or arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State".

4.45   Based on these observations, the issue was raised by the Secretariat to the Group to consider the need for a review of the current definition of "Meteorological authority" in Annex 3. It was however agreed that the issue should be referred to the COG for further consideration.

Low Visibility Operations Workshop

4.46   The *European Guidance Material on Aerodrome Operations under Limited Visibility Conditions* (EUR Doc 013) was approved by the EANPG via the correspondence procedure and published on the EUR/NAT regional web pages in March 2003. In order to raise awareness of this new guidance material among airlines, airport operators, air navigation service providers and safety regulators, the Group agreed that a workshop be held for the benefit of concerned parties.

CONCLUSION 45/21 – WORKSHOP ON AERODROME OPERATIONS UNDER LOW VISIBILITY CONDITIONS

That the ICAO Regional Director, in co-operation with appropriate international organizations in the Region, organize a workshop on aerodrome operations under low visibility conditions for concerned parties among airlines, airport operators, air navigation service providers and safety regulators.

Requirements for information to aircraft

4.47   The EANPG considered that while information on the status changes of ground systems should normally be passed to pilots as rapidly as possible, it was also recognized that in the final stages of a Category II or III approach, flight crews would wish to receive only such information as is truly essential for the successful completion of the approach. However, the ICAO Standard (Annex 11, 4.2.1) and PANS (PANS-ATM 7.4.2) governing the provision of information to aircraft seem not to convey this notion with the desired detail or clarity. It is therefore proposed that a review of the above ICAO provisions be undertaken at global level, to include the concept that information regarding ground systems provided by ATC to pilots during the final stages of a Category II or III approach should be limited to only that necessary for the situation.

CONCLUSION 45/22 – PROVISIONS RELATING TO INFORMATION PROVIDED TO AIRCRAFT

> **That, in view of the safety considerations, ICAO review the provisions of Annex 11, paragraph 4.2.1 and *Procedures for Air Navigation Services - Air Traffic Management* (PANS-ATM) (Doc 4444) paragraph 7.4.2 relating to the provision of information to aircraft during the final stages of Category II and Category III approaches.**

Phraseology for Low Visibility Procedures

4.48   The use of standard phraseologies relating to operations under low visibility procedures was seen as having the potential to make a substantial contribution to flight safety. Some work had been conducted in the Region on the subject, but it was considered to be a global issue that should be addressed by global provisions in the PANS-ATM, Chapter 12.

CONCLUSION 45/23 – PHRASEOLOGIES RELATING TO LOW VISIBILITY PROCEDURES

> **That ICAO consider the inclusion of phraseologies relating to low visibility procedures in the *Procedures for Air Navigation Services - Air Traffic Management* (PANS-ATM) (Doc 4444).**

Review of the ICAO AIP template

4.49   The Group was presented a review report of the AIP template, as contained in Annex 15 and the AIS Manual (Doc 8126, fifth edition dated 1995). The review had been performed by a group of AIS experts from the ECAC States, organised by Eurocontrol.

4.50   It had been found, that the State interpretation of the ICAO SARPs and guidance varied and that the inclusion of information/data resulted in divergence, which was considered to be of special concern for automated data processing. The result of the review had been consolidated in the "ICAO AIP Template Review Report", containing a series of observations and specific proposals to be considered for amendments to ICAO SARPs and Guidance Material.

4.51   During the discussion it was recognized that the emphasis on the AIP as a primary operational tool for flight crew use was no longer considered appropriate when flight deck 'documentation', especially in graphic and electronic form, is being provided by other means (commercial flight guides, FMS databases, State-produced VFR guides, etc.). There would be a need to redefine the role of the AIP as a document that is primarily intended to present a State's formal declaration of regulations, procedures, services and facilities that constitutes a reliable source from which the above mentioned 'documentation' may be produced by third party suppliers.

4.52   It was recognized that the presented material would be a valuable contribution for enhancement of the existing SARPs and guidance material and therefore should be forwarded to ICAO for further consideration.

CONCLUSION 45/24 –   REVIEW OF THE ICAO AIP TEMPLATE

> **That, in order to enhance the ICAO provisions concerning the AIP and to improve consistency in the application of the existing SARPs, the Eurocontrol AIP Template review report be forwarded to ICAO for further study and consideration, particularly taking into account the need for improved end to end integrity of all forms of aeronautical data provided as operational information to flight crews.**

4.53   When discussing the AIP template review report and in particular the example for an electronic AIP section ENR 3.2, the representative of IBAC requested that in the "Dist(ance)" column also the values for nautical miles should be given as this is the unit used in most aircraft and by most pilots. It would also be analogous with the use of units of measurement in ICAO Annexes and Documents that show nautical miles and feet in addition to the standards SI units. Referring to the comment made by IBAC, the representative of IFALPA informed that some of the States currently using metric altitudes were considering a change to flight levels based on feet when introducing RVSM.

4.54   Recognizing the standards contained in ICAO Annex 5 (Units of Measurement), IFALPA expressed the following view:

> The most important objective is to achieve a rational common global standard of units of measurement. As the use of different altimetry units seriously affects flight safety, only one unit should be used for altimetry world-wide. The foot is by far the most commonly used unit for reporting vertical position and vertical intervals and lends itself to a simple rational system of cruising levels. Therefore, the world-wide use of the foot should be implemented as the basic unit of measurement for vertical distances and feet per minute for the vertical speed. In addition, the requirements of global navigation create a need for the retention of the nautical mile. This creates an additional requirement for the retention of the knot for the measurement of horizontal speed.

CNS/ATM Transition Plan

4.55   The EANPG was informed that the "ICAO European Region Transition Plan to CNS/ATM" was under revision in order to reflect the latest updates and the outcome of the ICAO Eleventh Air Navigation Conference (Montreal, 22 September - 3 October 2003). This new version of the "ICAO European Region Transition Plan to CNS/ATM" (Version 2.0) would be made available for download from the ICAO Web Site: (http://www.icao.int/eurnat/edocs/cnsatm.pdf).

Amendments to the European ANP and SUPPS

4.56   Since the publication of the first edition of the *European Air Navigation Plan* (EUR ANP), Volumes I and II in 2001, one hundred and sixteen proposals for amendment to the EUR ANP, the majority of which were amendments concerning ATS routes and about 20 proposals for amendment to the *Regional Supplementary Procedures (SUPPS)* (Doc 7030) were processed by the ICAO Secretariat.

4.57   Thirty-seven proposals for amendment approved up until 28 May 2002 were consolidated and incorporated into Amendment No. 1 of the EUR ANP and thirty-nine proposals approved up until 6 October 2003 were incorporated into Amendment No. 2, which was published in November 2003.

4.58   Despite the amount of work already done there was still details in the ANP that were not correct. The meetings held by the Consultative Group of Senior Officials (CGSO) identified a number of areas where States needed to officially submit relevant material in order for the amendment process to be initiated according to established procedures. In view of this, and any other corrections that need to be undertaken to improve the accuracy and usefulness of the ANP, the Group agreed that States be requested to take the following action.

CONCLUSION 45/25 –   UPDATE OF THE EUR ANP

> **That, States, as a matter of urgency, review the details in the Air Navigation Plan - European Region (EUR ANP) (Doc 7754) concerning their State and officially submit proposals for amendment if any corrective action is required.**

5.   Performance Monitoring and Safety Issues

Regional Safety Management Planning

5.1   The Group was presented with the latest updates regarding Eurocontrol's ATM regulatory and safety management activities. A particular note was made of the role and work of the Eurocontrol Safety Regulation Commission and that Eurocontrol was developing and promoting a harmonised approach for the safety regulation and management of air navigation services. One main element of this approach was the mandatory introduction of the safety management by the ANS providers.

5.2   In their paper, the ICAO Secretariat underlined that the amendment 40 to Annex 11, adopted on 12 March 2001, required that States implement systematic and appropriate ATS safety management programmes to ensure that safety was maintained in the provision of ATS within airspaces and at aerodromes. Amendment 40 also stipulated that, as of 27 November 2003, the acceptable level of safety and safety objectives applicable to the provision of ATS within airspaces and at aerodromes should be established by the State or States concerned. When applicable, safety levels and safety objectives should be established on the basis of regional air navigation agreements. Recently, the 11th Air Navigation Conference (AN Conf/11 - Montreal, 22 September to 3 October 2003), dedicated agenda item 2 specifically to safety and security in Air Traffic Management (ATM). It also made available for use by all concerned the draft *Manual on Safety Management for Air Traffic Services* (available at that stage in draft format and in English only).

5.3   One area of uncertainty was the level of implementation of safety management systems in the ICAO EUR Region. It was known that several States had implemented very robust safety management systems but an overall view would be required in order to determine what action the ICAO EUR/NAT could take to assist States. As a first step, it was intended to carry out a survey of all EUR provider States to determine the level of implementation of safety management systems; a second step being planned was to hold a workshop in the Eastern Part of the EUR Region in September 2004, subject to approval of funds by the ICAO Council.

5.4   On the basis of the outcome of the survey, an action plan would be developed and submitted in draft format to the EANPG Programme Coordinating Group (COG). This action plan would then form the basis of further work on developing a regional safety management programme. One issue that would need to be clarified was what safety objectives and targets would be subject to a regional agreement. In carrying out this work, due account should be taken of the work on the Eurocontrol Safety Regulatory Requirements (ESARRs) in order to ensure regional safety management consistency and to avoid duplication of work.

5.5   IFATCA provided information on their approach to safety management implementation issues. They invited the Group to consider their views when developing ICAO guidance material on the systematic safety management programme for ATM in order to adequately cover the legal aspect.

5.6   EANPG agreed that the COG should take the leading role in co-ordinating the development of a regional safety management programme and provide EANPG/46 with a progress report.

DECISION 45/26 –   SAFETY MANAGEMENT IN THE EUROPEAN REGION

> **That the EANPG Programme Coordinating Group (COG):**
>
> a)   **develop a draft regional safety management plan; and**
>
> b)   **provide EANPG/46 with a progress report.**

5.7   Tunisia presented the Group with a paper describing the activities and the approach adopted by Tunisia to introduce the safety management for the air navigation services and aerodromes certification, covering mainly the regulation framework. Taking into account the experience of Eurocontrol in developing and establishing a Safety Management System in the ATM field, Tunisia had asked for the support of Eurocontrol to evaluate, and to establish the best practices that have already been successfully implemented by some European ANSPs. The Group agreed that States should facilitate the process by sharing the information and their experience on the means of compliance and implementation of a systematic and appropriate safety management programme applicable to the ATS systems and aerodrome operations.

CONCLUSION 45/27 –   SHARING OF INFORMATION ON SAFETY MANAGEMENT IN THE EUROPEAN REGION

> **That:**
>
> a)   **States and International Organizations share information and material on means of compliance and implementation of systematic and appropriate ATM and aerodrome operations safety management programmes; and**
>
> b)   **States in the ICAO EUR Region evaluate the applicability of the Eurocontrol Safety Regulatory Requirements (ESARR).**

Results of the RVSM safety monitoring report

5.8   The Group was presented with the second RVSM safety and risk assessment analysis and was informed that the computed vertical collision risk due to technical height-keeping performance met the ICAO Target Level of Safety (TLS). Furthermore, the quality of the height monitoring data was satisfactory as more than 90% of the flights were made by operators that met their monitoring targets. Most operator monitoring/classification combinations had showed compliance with technical height keeping requirements. There were however a few instances that had given rise for concern. The Regional Monitoring Agency (RMA), in co-ordination with the ICAO EUR/NAT Office when required, continued to ensure that corrective actions were applied as problems were identified. With this in mind, the Group noted with satisfaction that the vertical collision risk due solely to technical height-keeping performance had been estimated to be 1.12×10^{-10} fatal accidents per flight hour, compared with the agreed TLS of 2.5×10^{-9} fatal accidents per flight hour.

5.9   As regards risk due to operational errors, the Group was informed that many States had rarely reported large altitude deviation events in their airspace since May 2002; therefore, when carrying out the risk analysis, it had been assumed that the Post Implementation Safety Case (POSC) atypical errors and error rates remained constant and therefore the historical POSC set of Altitude Deviation Reports (ADR) was used to complete the estimate of the overall vertical risk. It is important to remark that the number of reports collected in the POSC was initially considered sufficiently representative. However, the lack of enough new quantitative

operational error data to update the operational risk value makes it difficult to draw a firm conclusion on the continued validity of this statement.

5.10   In addition to ADRs, atypical Altitude Assignment Deviations (AAD) for level flight can be recorded by the height monitoring system. These AAD values (greater than 350 ft) are considered together with any ADRs that indicated that aircraft levelled off at a wrong flight level. The value of the probability of vertical overlap due to atypical errors combined with the appropriate values of horizontal overlap frequency gives the collision risk estimate based only on atypical data. This was estimated to be 3.82×10^{-10} for climbing/descending deviations and 1.04×10^{-10} for level flight deviations.

5.11   On the basis of the data presented, the Group noted that the total vertical risk, which is the sum of the aforementioned risks due to atypical performance (4.86×10^{-10}) and the risk due to technical vertical height-keeping performance (1.12×10^{-10}) was estimated to be 5.98×10^{-10}. This is approximately one order of magnitude better than the TLS, however, some doubts remain regarding the level of risk due to operational errors. In this connection, it was stressed yet again that operational risk was not a direct result of the separation minima being applied but was a result of the decision to monitor operational risk.

5.12   On the basis of the foregoing, the Group noted that, if the number of atypical errors based on ADRs was considered constant as well as the reporting rates, then the ADRs used in this assessment can be considered valid. However, a firm conclusion on that could not be drawn and a high degree of statistical confidence could not be built into the results due to the lack of new quantitative data (paragraph x.x above refers).

5.13   The Group noted that the effect of future traffic growth had been assessed with the conclusion that the TLS regarding technical height keeping performance would continue to be met until 2015. However, further work was necessary to validate and refine the assumptions.

5.14   Based on available information, it was considered that the continuous operation of RVSM had not adversely affected nor would it adversely affect the overall risk of en-route mid-air collision. However, considering the under-reporting of ADRs, insufficient arguments could be built so as to give satisfactory statistical evidence, within the overall European RVSM airspace, that risk levels were being contained. Also, it appeared that RVSM did not seem to have any marked effect, from the operational point of view, on traffic below FL 290.

5.15   Based on the foregoing and in the light of the limited amount of new quantitative operational error data, the Group noted that the operation of RVSM in EUR airspace could be considered tolerably safe. Nevertheless, the Group agreed that the uncertainty regarding the lack of ADR data needed to be addressed in order to increase the confidence level of the safety analysis, which must take into account operational errors. It was therefore agreed that additional efforts needed to be made by all concerned so that the best measure of risk due to all causes can be determined so as to provide the best measure of system safety.

CONCLUSION 45/28 – REQUIREMENT TO PROVIDE ALL ALTITUDE DEVIATION REPORTS RELATING TO RVSM AIRSPACE

> **That, in order to ensure that the risk assessment due to operational errors in the EUR Reduced Vertical Separation Minimum (RVSM) airspace is based on a high level of confidence:**
>
> a)   **all States having implemented RVSM provide the Regional Monitoring Agency (RMA) with all reports of altitude deviations due to operational errors; and**
>
> b)   **the RMA provide States with guidance to report altitude deviations.**

5.16   The Group noted that, at the end of 2004, the RMA plans to issue a new RVSM safety monitoring report. This 2004 report will contain two full years of RVSM monitoring data, thus allowing the clarification of safety arguments. The confidence level associated with the safety monitoring report will depend to a large extent on the amount of new ADR data made available by States.

5.17   The Group noted that the technical height-keeping analysis and follow-up process would be continued by the RMA in order to ensure that all aircraft meet the Minimum Aircraft System Performance Specification (MASPS) and to verify the efficacy of the MASPS for those operator monitoring/classification combinations that have no data. For those instances where requirements have not been met, the RMA will obtain additional data to ensure the correctness of the results and inform the State of registry accordingly.

Establishment and funding of the European Regional Monitoring Agency

5.18   The Group recalled that, at its 44th Meeting, it had decided that a plan for funding the European RVSM RMA and the associated monitoring infrastructure should be developed (EANPG Decision 44/15 refers). In follow up to the EANPG Decision, COG/26 established a small task force, which had been charged with developing a proposal that would be presented to EANPG/45 for their approval.

5.19   It was pointed out that, when examining various financing mechanisms, the following basic guidelines were used to evaluate them:

      a)   the mechanism should be as simple as possible;

      b)   it should be transparent to airspace users and service providers;

      c)   it should require the minimum amount of international negotiations to be able to put it in place;

      d)   the mechanism itself must not introduce additional costs to the provision of the RVSM RMA function;

      e)   the principles developed in establishing the financing mechanism should be adaptable to areas of the EUR Region where RVSM has not yet been implemented; and

      f)   the mechanism should be able to respond to changes that may be required to the monitoring needs.

5.20   The COG task force recommended that the Eurocontrol Route Charges System was the best system and the COG therefore endorsed that proposal because it met all of the conditions listed above. The system already exists and therefore would not require any international co-ordination. A billing and management system as well as financial regulations are already in place, thereby avoiding any additional costs of setting up and operating the system. Also, the airspace users are familiar with the system and the necessary transparency is provided.

5.21   It was also recognized that costs associated with RVSM monitoring are en-route costs that should be recovered by Eurocontrol Member States within the frame of their common route charges system. Therefore, the costs for the provision of RVSM height monitoring should be recovered from airspace users through the single Eurocontrol charge established for each flight performed in the airspace under the responsibility of the Eurocontrol States, Eurocontrol Central Route Charges Office (CRCO) area.

5.22   It was noted that not all of the existing EUR RVSM area is covered by the Route Charges System. However, an initial review of operations indicated that the flights operated outside of the Eurocontrol Route Charges System but within the EUR RVSM area amounted to approximately 2% of traffic and, when considering the flights within these FIRs/UIRs, few, if any, are expected to be carried out by aircraft never entering the EUR RVSM airspace. It was therefore not considered cost effective to establish and manage a

separate cost recovery mechanism for these FIRs/UIRs and that this will have zero impact on the overall cost recovery.

5.23   It was therefore agreed that Eurocontrol should continue to act as the EUR RVSM RMA and that the financing mechanism should be based on the Eurocontrol common policy for route charges adopted by Eurocontrol Member States and the current rules associated with the Eurocontrol Route Charges System. It was noted that Eurocontrol route charges are in accordance with ICAO policies for air navigation charges.

CONCLUSION 45/29 –   EUROPEAN RVSM RMA

> **That Eurocontrol continue to act as the European Regional Monitoring Agency (RMA) for the existing Reduced Vertical Separation Minimum (RVSM) airspace area in the European Region according to the technical guidelines of ICAO for as long as the height keeping monitoring requirements prevail.**
>
> *Note: The proposed financing arrangements would be based on the Eurocontrol route charges mechanism, with a pragmatic balance between simplicity and fairness in cost allocation, taking due account of the avoidance of double charging in locations adjacent to other RVSM areas.*

5.24   In association with the annual safety report for review by the EANPG, the Group noted that information would also be provided concerning the operation of the monitoring system.

5.25   The Group expressed its appreciation to Eurocontrol for the efforts that were put into developing the initial safety reports and for acting as the EUR RVSM RMA.

Development of a long term RVSM monitoring policy

5.26   The Group was informed that an RMA Handbook had been developed by the RMAs and that the Handbook had been endorsed at the May 2003 meeting of the ICAO Separation and Airspace Safety Panel (SASP). The EUR/NAT Office of ICAO has provided the draft document to the RMAs. The Group was informed that the Handbook provided the framework for the inter-operability of the various RMAs that have been established in order to sustain and provide for the implementation of RVSM. The Handbook also provided clear guidance regarding the exchange of data between RMAs in order to assist each other in carrying out the necessary risk assessments, especially as regards technical risk. It is generally felt that the studies required to determine the stability of ASE need not be carried out in all Regions but that an examination of the data collected in the EUR and NAT Regions, and soon the NAM Region, may provide the necessary data for a large percentage of the aircraft population. This may not obviate the need for monitoring in specific areas because of the abundance of aircraft that never enter areas where monitoring is carried out.

5.27   It has been recognized that in the Eastern Part of the EUR Region, once RVSM go-ahead has been agreed, a monitoring programme will need to be put in place, especially as the aircraft population is different from the Western part of the Region. In order to incorporate this requirement, and those of adjacent Regions such as the MID Region that have no monitoring infrastructure, it has been recognized that a more global approach to monitoring is required. It was therefore agreed that the only current way in which the global needs for monitoring can be cost effectively addressed was by data sharing. This is because the only source of data capable of providing sufficient information to support the Pz(1000) calculations, an essential variable required to determine the risk in the system, or the analysis of performance trends is the existing ground based monitoring infrastructure established for the NAT and EUR Regions. With this in mind, it was agreed that ICAO should develop provisions for data sharing and guidelines for monitoring requirements.

CONCLUSION 45/30 –   GLOBAL RVSM MONITORING REQUIREMENTS

> **That ICAO urgently develop global provisions that would:**
>
> a) **ensure that data on technical height-keeping performance is shared among all Reduced Vertical Separation Minimum (RVSM) Regional Monitoring Agencies (RMA), in order to provide the necessary data to determine the Pz(1000) parameter of the Collision Risk Model (CRM), and to analyse performance trends, both being essential in assuring that the technical risk due to RVSM remains below the Target Level of Safety (TLS);**
>
> b) **provide clear guidelines for monitoring requirements and data exchange between RMAs; and**
>
> c) **propose a fair and equitable global method of cost recovery of the required RMA infrastructure.**

ATC operational problems in RVSM transition airspace

5.28   The Group was informed that some States carrying out transition tasks in the Eastern Part of the EUR Region were experiencing ATC operational problems, primarily because of the use of a non-Standards and Recommended Practices (SARPs) compliant table of cruising levels. In addition, the procedures applied by these States needed harmonization as they affected a wide geographical area. The Group therefore requested the ICAO Regional Director to convene a co-ordination meeting of States to resolve this issue as soon as possible. Eurocontrol indicated that it was prepared to provide assistance in this connection. It was agreed that the COG should be informed of progress made on this issue.

CONCLUSION 45/31 –   RESOLUTION   OF   OPERATIONAL   PROBLEMS   IN   RVSM TRANSITION AIRSPACE

> **That the ICAO Regional Director:**
>
> a) **convene, as soon as possible, a meeting of States and international organizations concerned to address the ATC operational problems in the reduced vertical separation minimum (RVSM) transition areas with particular emphasis on the issue of the use by a number of States of flight cruising levels not compliant with the Standards and Recommended Practices (SARPs); and**
>
> b) **inform the EANPG Programme Coordinating Group (COG) on progress achieved.**

Spectrum Requirements for Aviation

5.29   Radio spectrum of sufficient quality and quantity is essential for safe and efficient aviation industry. It is also a very scarce resource, which demanded careful management. In response to the EANPG task on the matter, a table was prepared that attempted to provide an overall picture to indicate, in the European context, the present and future utilization of the frequency bands that have aviation allocations. This table was intended to assist in the spectrum management process, by providing an executive summary of the degree of utilization in the whole aviation spectrum, in those areas that have the most intense utilization.

5.30   The information in the table is subject to ongoing update as a joint effort between the EANPG - FMG and the Aeronautical Spectrum and Frequency Consultancy Group (ASFCG). However the supporting data needed to complete the table was outside the remit and control of these groups. Assistance is therefore being sought from the total aviation community to consider the future requirements for facilities and services in

sufficient detail for the all important radio spectrum requirements to be forecast. Without a credible forecast of its requirements, aviation faces the prospect of not having sufficient spectrum to satisfy its future needs.

5.31   The Group also noted Recommendation 5/1 of the AN Conf/11 titled "Preparation for WRC-2007" which urged States and International Organizations to continue efforts on this matter. As an element of this requirement, the Group agreed the following:

CONCLUSION 45/32 –   AVIATION RADIO SPECTRUM REQUIREMENTS

> **That, States and International Organizations consolidate their planning efforts to more clearly identify radio spectrum requirements in the overall air navigation planning effort, in order to ensure that future spectrum requirements can be met.**

RVSM Implementation in South Caucasus Area

5.32   Armenia, Azerbaijan, Georgia (South Caucasus States) and Ukraine informed the Group of operational difficulties being associated with non-compliance with Annex 2 - Rules of the Air in the Rostov FIR. This situation was expected to be aggravated in the future as the South Caucasus States planned to implement RVSM in November 2004.

5.33   In order to assist the South Caucasus States in solving interface problems, the Group requested the ICAO Regional Director to convene a meeting of the States concerned, by adopting the following conclusion:

CONCLUSION 45/33 -   CO-ORDINATION   MEETING   -   INTERFACE   ISSUES   OVER   THE BLACK SEA

> **That the ICAO Regional Director convene a co-ordination meeting of States concerned in order to solve outstanding interface issues over the Black Sea.**

6.   Administrative and Organisations Issues

EANPG supporting structure

6.1   The Group finalized a review of the ICAO working bodies dedicated to the Eastern Part of the ICAO European Region in order to improve the efficiency and effectiveness of the ICAO working structure in the Region. It was noted that the best organizational solution would be to bring the regional activities of the ICAO meetings and working groups under the umbrella of a single planning body, the EANPG.

6.2   In this respect, it was agreed to establish two new EANPG subgroups to replace the TARTAR, FLOE and GATE. The first of these groups would work on air route issues for the Eastern Part of the Region. It was considered important to keep the best principles and practices of the TARTAR in the new subgroup, which included the Co-ordination Procedures and ATS Route Catalogue. The subgroup would work on tasks allocated by the EANPG and this would include the ability for States to make amendment proposals, without the need to obtain EANPG approval.

6.3   The second group would work on ATM issues for the Eastern Part of the Region. It was agreed that, for the time being, the GATE Project Team on Training (GATE/TNG) and the GATE Project Team on AIS (GATE/AIS) would continue working and would report directly to the COG upon accomplishing their tasks.

6.4   The necessity of convening an ICAO co-ordination meeting similar to the FLOE may be considered when there were specific operational problems to justify such action. The composition of such a meeting should be limited to States concerned. In addition, new working groups or task forces may be set up by the EANPG, as required, in order to cope with specific issues in the Region.

6.5   The Group agreed to include the tasks for the new working groups in the EANPG Work Programme, which would be managed by the COG in the usual way.

DECISION 45/34 -   NEW EANPG TASKS

> **That, the agreed tasks, which have been included in the EANPG Task List, be managed by the EANPG Programme Coordinating Group (COG) in the usual way.**

6.6   Finally, the Group requested the ICAO Regional Director to notify in writing, with the words of appreciation, the States participating in the TARTAR, FLOE and GATE of successful termination of the activities of the working bodies and the establishment of the new working structure in the Region.

EANPG working arrangements related to the IAVWOPSG, SADISOPSG, SCRAG and WAFSOPSG

6.7   The Group noted the establishment of the World Area Forecast System Operations Group (WAFSOPSG) and the International Airways Volcano Watch Operations Group (IAVWOPSG), which had been established in response to Recommendations of the Meteorology (MET) Divisional Meeting (2002) and, in particular, the respective roles of the EANPG in relation to these two Groups.

6.8   It was also noted that the EANPG working arrangements related to the WAFSOPSG and the IAVWOPSG were similar to the working arrangements related to the earlier established SADIS Operations Group (SADISOPSG) and the SADIS Cost Recovery and Administrative Group (SCRAG).

6.9   It was consequently agreed that the EANPG working arrangements related to the IAVWOPSG, SADISOPSG, SCRAG and WAFSOPSG should be included in the EANPG Handbook.

DECISION 45/35 -   EANPG WORKING ARRANGEMENTS WITH IAVWOPSG, SADISOPSG, SCRAG AND WAFSOPSG

> **That, the Secretary of the EANPG include in the EANPG Handbook the working arrangements with the International Airways Volcano Watch Operations Group (IAVWOPSG), SADIS Operations Group (SADISOPSG), SADIS Cost Recovery Administrative Group (SCRAG) and World Area Forecast System Operations Group (WAFSOPSG).**

EANPG handbook update

6.10   A revised EANPG Handbook, that took account of all the recent changes, was to be issued by the Secretariat in co-ordination with the COG.

Meeting dates for EANPG and COG in 2004

6.11   It was agreed that the EANPG/46 Meeting would be held from 29 November to 1 December 2004 and the COG/29 Meeting would be held from 1 to 3 June 2004 followed by the COG /30 Meeting from 26 to 28 October 2004.

7.   Any Other business

ICAO provisions related to contingency planning in the EUR Region

7.1   The Group recalled that, as a consequence of the adoption of Amendment 42 to Annex 11, which was applicable on 27 November 2003, the "Guidelines for Contingency Measures for Application in the Event of Air Traffic Services and Related Services", which had been approved by Council on 27 June 1984 and which had been developed pursuant to Assembly ResolutionA23-12, had been superseded.

7.2   In addition to the new ICAO Annex 11 provisions, the Group noted that Eurocontrol had prepared a document titled "Guidelines for Application of ATS Contingency Planning", which can be downloaded from the following web site: www.eurocontrol.int/eatmp/library/documents/.

7.3   The Group recognized that effects of the failure and/or disruption of ATS on international civil aviation are so significant and far reaching that, normally corrective action cannot be taken in isolation. ICAO therefore encourages and fully supports inter- and intra-regional co-operation to develop contingency plans. It was recalled that contingency plans should address any causes that might disrupt the normal provision of air navigation services (ANS). For example, in several areas of the world, contingency plans are in place to cater for volcanic eruptions which can seriously disrupt civil aviation and can be potentially dangerous to aircraft in flight.

7.4   As indicated in the Annex 11 Guidelines, contingency plans are intended to provide alternative facilities and services to those provided for in the ICAO Regional ANP and are therefore of a temporary nature. These arrangements do not constitute an amendment to the approved Regional Plans. ICAO will, to the extent possible, provide assistance in seeking agreement to the deviations from the ANP and, if necessary, will seek the approval of the President of the Council. It is however recognized that in some instances, it is necessary to implement contingency plans before they can be co-ordinated internationally. This is especially true for natural disasters.

7.5   Since time is of the essence in contingency planning and because, in many instances, activities that can lead to disruptions in air navigation services are predictable, contingency plans should be prepared well in advance and, when appropriate, included in letters of agreement between air traffic services (ATS) units. It is recognized, however, that there are situations for which no advance warning can be given or expected, and therefore in such circumstances contingency plans need to be developed with due haste. As previously indicated, ICAO will facilitate the necessary co-ordination recognizing that, in some instances States must take immediate action without undue bureaucratic overhead.

7.6   The airspace user community such as IATA must be closely involved in the related conceptual and co-ordination work of predictable contingency plans. It is also most important that civil-military co-operation and co-ordination be recognized as an important factor required for the success of any contingency plan. Therefore, close ties should be established and maintained between the respective authorities at the national level as well as with suitable international organizations.

7.7   In conclusion, the Group agreed that all States should prepare in advance contingency plans for predictable events as well as for events wherein an element of risk to civil aviation has been identified. Where appropriate, contingency plans should be included in letters of agreement between ATS units concerned. Contingency plans should be promulgated with sufficient advance notice to permit airspace users (both civil and military) and air navigation service providers to make all necessary adjustments. Finally, ICAO will provide assistance when appropriate to facilitate the co-ordination by all concerned and the President of the Council is prepared to approve temporary deviations to the regional air navigation plan if needed.

CONCLUSION 45/36 – CONTINGENCY PLANNING IN THE EUR REGION

> **That States, in observance of the applicable provisions contained in Annex 11 to the Convention on International Civil Aviation (Chicago, 1944):**
>
> a) **prepare in advance air navigation service contingency plans for predictable events as well as for events wherein an element of risk to civil aviation has been identified;**
>
> b) **involve the relevant civil and military authorities and/or international organizations in the development, co-ordination and harmonization of contingency plans;**
>
> c) **call on ICAO to provide assistance to facilitate the contingency plan development, co-ordination and harmonization by all concerned and to achieve the approval by the President of the ICAO Council for temporary deviations to the approved ICAO Regional Air Navigation Plan, as may be required;**
>
> d) **include relevant elements of such contingency plans in letters of agreement between air traffic services (ATS) units concerned; and**
>
> e) **promulgate contingency plans with sufficient advance notice to permit airspace users and air navigation service providers to make all necessary adjustments.**

Development of harmonised ICAO provisions related to the use of Uninhabited Aerial Vehicles (UAV)

7.8   The Group was presented with an update regarding activities related to UAV developments taking place within the EUR Region and in particular, the requirement to develop ICAO provisions for such aircraft. The Group felt that there was a need to accommodate UAVs in a civil ATM environment and that urgent action was required in order to provide guidance to States. In this connection, it was stressed that in view of Article 3 of the Chicago Convention, ICAO could not provide an appropriate legal framework to accommodate military requirements in the areas of personnel licensing, certification, airworthiness, communications or ATM procedures. However, in respect of co-ordination between military authorities and air traffic services, as well as the co-ordination of activities potentially hazardous to civil aircraft, it might be possible to reinforce already existing provisions contained in Annex 11, Chapter 2.

7.9   The Group was also informed that ICAO would in the near future be circulating a questionnaire concerning civil aviation requirements regarding UAVs. The Air Navigation Commission (ANC) would review the results of the survey during its 166th Session scheduled for June 2004. The Group was also informed that the report of the joint Eurocontrol and Joint Aviation Authorities (JAA) UAV Task Force should be available in March 2004.

7.10   The Group also recalled EANPG Decision 44/48, which had asked the COG to follow up on UAV developments. Considering that work was ongoing at ICAO and within the joint Eurocontrol/JAA Task Force, the Group considered that it would be premature to propose a work package that would specifically address the civil use of UAVs in the EUR Region. It was agreed that Decision 44/48 should remain extant and that developments should continue to be monitored closely as the subject matter matured.

Implementation of B-RNAV in Tunis FIR

7.11   The Group was informed that Tunisia planned to implement B-RNAV in Tunis FIR effective 24 January 2004. The decision to implement B-RNAV was based on the increasing traffic flow between Tunisia and the European Region and the need for harmonization of the Air Navigation systems with the European adjacent States therefore ensuring a seamless transition from the EUR Region to the AFI Region.

The Group was also informed that all the necessary action required to amend ICAO documentation had been initiated.

Membership of the EANPG

7.12   A formal application was received from Ireland to become a Member of the EANPG. Considering Ireland's long history of significant involvement in the ICAO planning process and that they were currently a significant air navigation services provider within the European Region the Group agreed to the following:

DECISION 45/37 –   MEMBERSHIP OF IRELAND IN THE EANPG

> **That, the ICAO Regional Director take appropriate action to formalize the request of Ireland to become a member of the EANPG.**

Workshops on Safety issues

7.13   The Group was advised that a "European Edition" of the Annual International Aircraft Cabin Safety Symposium as well as an "Aircraft Accident Prevention and Investigation course" will take place in Prague, Czech Republic, from 23 to 25 March 2004 and 19 to 30 April 2004 respectively. All information can be obtained from the following web-site www.scsi-inc.com

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APPENDIX A – LIST OF PARTICIPANTS

(Paragraph i.2 refers)

CHAIRMAN

Mr Karsten THEIL

BALTIC STATES *(Estonia, Latvia, Lithuania)

LITHUANIA
Mr Algimantas RAŠĆIUS
Mr Kazimieras JAKAS

BELARUS *

Mr Aleksandr AKULENKO
Mr Ivan SHYMANETS
Mrs Tatiana PANACHEVNAYA

BENELUX *(Belgium, Netherlands, Luxembourg)

BELGIUM
Mr Roland MOINEAU

BOSNIA AND HERZEGOVINA

Mr Marinko SIMUNOVIC
Ms Ivana BUSIC

BULGARIA

Mr Plamen Ivanov TASEV

CAUCASIAN STATES *
(Armenia, Azerbaijan, Georgia)

AZERBAIJAN

Mr Bala MIRZAYEV

GEORGIA

Mr Zurab BELKANIA
Mr Vladimir GOGASHVILI

CENTRAL ASIAN STATES *(Kazahkstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan)

KYRGYZSTAN

Mr Timur MURATOV
Mr Karim BUTABAYEV
Mr Alik ASKAROV

UZBEKISTAN

Mr Abdusatar ERNAZAROV

CYPRUS

Mr Savras THEOPHANOUS

CZECH REPUBLIC *

Mr Ladislav MIKA *(Vice-Chairman)*

FRANCE *

Mr Raymond ROSSO
Mr Denis LEMARCHAND
Mme Marie-José ANDRIAMONJE
Mr Jean-Christophe BENEDICK
Mr Denis LAMBERGEON#
Mr Alain GRANDCLAUDE#

GERMANY *

Mr Martin RADUSCH
Mr Bernd RANDECKER
Mr Erland LORENZEN

HUNGARY

Mr Peter MOYS
Mr Istvan MUDRA

IRELAND

Mr John O'GORMAN

ITALY *

Mr Pierluigi D'ALOIA

NORDIC STATES *
(Denmark, Finland, Norway, Sweden)

Ms Ann-Katrin ECKERBERT

POLAND

Mr Witold KAMOCKI

PORTUGAL *

Mr Carlos MONTEIRO

RUSSIAN FEDERATION *

Mr Leonid SCHERBAKOV
Mr Vladlen KOROVKIN
Mr Vasily TOPCHIEV
Mr Grigory LEVCHUK
Mrs Elena STEPANOVA
Mr Boris KISELEV
Mr Anri VERESHCHAGIN
Mr Natalia KOROLEVA
Mr Anatoly RASPUTIKOV

SLOVAK REPUBLIC

   Mr Miloslav DANIHELIK
   Mr Marian MIHALUS

SLOVENIA

   Mr Bostjan PRISTAVEC

SPAIN *

   Mr Juan de Mata MORALES LOPEZ
   Mr Angel MARTINEZ CASTRO

SWITZERLAND *
   Mr Bernard SCHWENDIMANN

THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

   Mr Toni PRGOMET

TUNISIA

   Mr Mohamed Ali BEN ALAYA
   Mr Ridha DRIDI
   Mr Mohamed REJEB

UKRAINE *

   Mr Viktor N. NASTASIENKO
   Mr Oleksiy PESTERNIKOV

UNITED KINGDOM *

   Mr Roger BUDGEN

UNITED STATES

   Mr Gerald RICHARD
   Ms Nancy GRAHAM

International Organisations/ Organisations internationales

EUROCONTROL

   Mr Eamon F. CERASI
   Mr Istvan BOZSA
   Mr Roland RAWLINGS#
   Mr Lex HENDRIKS#
   Mr Alex WANDELS#
   Ms Martine BLAIZE#
   Mr Jacques BEAUFAYS#

EUROPEAN COMMISSION

   Mr Cesare BERNABEI
   Mr Ben Van- HOUTTE#

IAC

   Mr Oleg K. ERMOLOV
   Mr Alexander V. FILATOV

IATA

   Mr Cees GRESNIGT

IBAC

   Mr Patrick EXPERTON

IFALPA

   Mr Chrys HADJICHRYSANTHOU
   Mr Heinz FRUHWIRTH

IFATCA

   Mr Nicolas Y. LYRAKIDES

   * Member/Membre
   # Part time / à temps partiel

– END –