EANPG/47

INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF

THE FORTY-SEVENTH MEETING OF

THE EUROPEAN AIR NAVIGATION PLANNING GROUP

(Paris, 29 November to 1 December 2005)

PREPARED BY THE EUROPEAN AND NORTH ATLANTIC OFFICE OF ICAO DECEMBER 2005

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0. INTRODUCTION

Place and Duration

0.1 The Forty-Seventh Meeting of the European Air Navigation Planning Group (EANPG/47) was held in the European and North Atlantic Office of ICAO from 29 November to 1 December 2005.

Attendance

0.2 The Meeting was attended by 73 Members and representatives of 35 States and by observers from 8 international organisations. A list of participants is given at **Appendix A**.

Officers and Secretariat

0.3 Mr Dirk Nitschke, the Chairman of the EANPG, presided over the meeting throughout its duration. Mr Karsten Theil, ICAO Regional Director, Europe and North Atlantic, was Secretary of the meeting and was assisted by Mr Robert Kruger, Deputy Director, Mr Herman Pretorius from Headquarters, Mr Michel Beland, Mr George Firican, Mr Victor Kourenkov, Mr Jacques Vanier, Mr Guillermo Vega, Mr. Andrei Ivanov, Mrs Nikki Goldschmid and Mrs Patricia Cuff from the European and North Atlantic Office.

Conclusions and Decisions

0.4 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.

Agenda

0.5 The Group agreed to the following agenda for organising the work of the Meeting and the structure of the report:

- Agenda Item 1: Review of significant international aviation developments
- Agenda Item 2: Previous EANPG follow up
- Agenda Item 3: Aviation safety issues
- Agenda Item 4: SARPs with future applicability dates - implementation issues
- Agenda Item 5: Planning and implementation issues
- Agenda Item 6: Monitoring
- Agenda Item 7: Deficiencies
- Agenda Item 8: Any other business

1. REVIEW OF SIGNIFICANT DEVELOPMENTS

Strategic Objectives of ICAO

1.1 The Group was informed about the Vision and Mission Statement and the Strategic Objectives of ICAO 2005-2010 as adopted by the Council and the current work on the development and implementation of a Business Plan for the Organization. To reach a higher level of functional integration between Headquarters and the Regional Offices, the Action Plan sheets of the Business Plan reflect the participation of the Regional Offices in assignments. In this context, the Group noted the decision that all documentation produced by the EUR/NAT Office would indicate the strategic objective(s) that would be supported by the activity.

1.2 The Group welcomed information about efforts within the EUR/NAT Office to increase its effectiveness and concentrate its activities on the priorities of the Organization, specifically the functionally integrated work with the rest of the Organization on the rectification on safety-related deficiencies. In this respect, the Group expressed its surprise and disappointment that a vacant post as Regional Officer, Air Navigation Services Implementation had not yet been filled, and the Group invited ICAO to ensure that all resources allotted to the EUR/NAT Office were utilised to provide maximum assistance to States in their efforts to implement ICAO Standards and Recommended Practices (SARPs) and achieve the Strategic Objectives of the Organization.

EANPG Conclusion 47/1 – Use of budgeted resources

That ICAO ensure the filling of vacant posts in the European and North Atlantic Office, Paris (EUR/NAT), and utilise all resources allotted to the Office for the achievement of the Strategic Objectives of the Organization.

DGCA Conference on Aviation Safety

1.3 The Group was informed about the decision by the Council to convene, in support of Strategic Objective A – *Safety*, a Conference of Directors General of Civil Aviation on a Global Strategy for Aviation Safety in ICAO Headquarters, Montreal, on 20-22 March 2006. The Group noted that the Conference would address the status of aviation safety today; ways of improving aviation safety; and safety framework for the 21st century.

Seminar on Language Proficiency

1.4 The Group was informed that, with the assistance of Azerbaijan and in support of Strategic Objective A - *Safety*, it had been possible to arrange for an additional workshop on language proficiency to take place in Baku, Azerbaijan on 7-9 December 2005. The Group expressed its appreciation for the decision to provide further assistance to States in the implementation of the new language proficiency requirements that will become applicable in 2008, and States were invited to take maximum benefit from this opportunity.

Expansion of the Air Navigation Commission

1.5 The Group was informed about the expansion of the Air Navigation Commission from 15 to 19 Members and that Council had appointed experts from Cuba, the Republic of Korea, Singapore and Tanzania to take the additional seats.

1.6 The Group was also informed that Mr A.G. Sayce, the expert nominated by the United Kingdom, had been elected President of the Air Navigation Commission. The Group congratulated Mr Sayce

on his election and ensured him of its full cooperation and contribution to the achievements of the Commission.

Structural changes in the Russian Federation

1.7 The Group was informed that the Federal Air Navigation Authority (FANA) had been established in the Russian Federation on 5 September 2005. FANA was a specially authorised federal body of executive power, subordinate to the Government of the Russian Federation, and would carry out the following functions:

- state regulation, control and oversight in the field of utilisation of the Russian Federation's airspace;
- provision of state services in relation to air navigation servicing of users of the Russian Federation's airspace;
- establishment of a unified aerospace search & rescue system;
- certification of types and aids to navigation, air traffic control facilities as well as production means thereof;
- establishment of air navigation charge rates and collection procedures, disposal of revenues from the above charges; and
- issuance of over-flight permissions for foreign aircraft operation through the Russian Federation's airspace and crossing the state boundary of the Russian Federation.

1.8 The Group welcomed the information provided and ensured FANA of its full cooperation and support in its activities.

The Global Congress on Aeronautical Information Service

1.9 The Group was informed about the decision to convene a Global Aeronautical Information Service (AIS) Congress in Madrid, Spain, on 27-29 June 2006 in support of Strategic Objective D – *Efficiency*. The Congress would consider the essential role of AIS in the evolving world of air traffic management (ATM); identify the key drivers for change; explore what must be done to ensure that aeronautical information of the right scope and quality is made available; at a strategic level, review emerging technologies that will facilitate change in a practical and affordable manner; and outline a roadmap for the evolution of aeronautical information to assist ICAO in the difficult task of leading global change.

Single European Sky

1.10 The Representative of the European Commission (EC) informed the Group about the status of the implementation of the Single European Sky. It was noted that the timescale for change was demanding and would entail close cooperation with ICAO and with States neighbouring the European Union member States, specifically with regard to the possible expansion of the Single European Sky initiative to other parts of the Region as recommended by the ICAO 11th Air Navigation Conference, thus supporting Strategic Objectives A – *Safety*, and D – *Efficiency*.

1.11 The Representative of the European Commission also informed that the definition phase of Single European Sky ATM Research (SESAR) has just started. SESAR, formerly known as SESAME, is the technological and industrial component of the SES initiative. The Group welcomed the information provided

and recalled a number of its previous conclusions on coordination of and cooperation on the Single European Sky initiative. The Group reassured EC of its continued and strengthened support.

The role, task and responsibilities of the Regional ANS Development Association (RADA)

1.12 The Group was informed about the activities of the Regional ANS Development Association (RADA), the association of the air navigation service providers from Armenia, Azerbaijan, Georgia, Republic of Moldova and Ukraine. It was considered that RADA would be in a position to play a key role in a number of areas such as safety management systems implementation, rectification of safety-related deficiencies and the possible implementation of the concept of the Single European Sky outside the area of the European Union Member States, thus supporting Strategic Objectives A – *Safety*, and D – *Efficiency*.

The consequences for civil aviation of the increase in fuel prices

1.13 The representative of IATA informed the Group about the consequences for civil aviation of the increase in fuel prices and described a "Save One Minute Campaign". The campaign, if completely successful, could lead to an annual reduction of emissions by 5.5 million tons and net annual savings for the airlines of $300-500 millions. The Group welcomed the information provided and felt that it should be taken into consideration in connection with future work, specifically route planning and development. Thus, Strategic Objectives C – *Environmental Protection*, and D – *Efficiency*, would be supported.

2 PREVIOUS EANPG FOLLOW-UP

Air Navigation Commission and Council Actions on the Report of EANPG/46 Meeting

2.1 The Group reviewed the actions taken by the Air Navigation Commission and the Council on the Report of the Forty-Sixth Meeting of the European Air Navigation Planning Group (EANPG) which was held in Paris from 30 November to 2 December 2004.

2.2 Concluding its review, the Group thanked the Council and Commission for their valuable guidance on various activities of EANPG, which would be taken into account in the work programme of the Group.

Status report on the implementation of previous Conclusions and Decisions of the EANPG

2.3 The Group was briefed on the status of the previous EANPG Conclusions and Decisions. Many of these were covered by the Council report referred to in the paragraph above, or by action to be taken in the current meeting. Following EANPG/47, the table for reporting the status of EANPG Conclusions was to be updated and made available to the EANPG Members.

Status report of the work of the Data Link Harmonisation Steering Group

2.4 The Group was advised that a Data Link Harmonisation Symposium and two Data Link Steering Group (DLSG) meetings had been held since the last EANPG meeting. The aim of the symposium was to demystify the issues surrounding the different data link implementation activities. The DLSG/1 meeting (held in April 2005) reviewed the outcome of the symposium and developed a work programme. The DLSG/2 meeting (held in September 2005) developed a series of very specific actions to address the steps necessary to accommodate the facilities planned for continental data link in the oceanic environment. The completion of these actions would be a major step forward in completing the work programme of the DLSG.

3. AVIATION SAFETY ISSUES

Safety Oversight Audit Programme

3.1 The Group was informed about the ICAO comprehensive systems approach to the conduct of safety oversight audits in support of Strategic Objective A – *Safety*. The Group noted that the ICAO regional office would play a major role conducting follow-up missions to ascertain the status of implementation of States' corrective action plans, in addition to maintaining close contact with audited States as part of their regular mission. Technical staff from the regional office were trained as safety oversight auditors to assist in the conduct of audits and to conduct follow-up missions.

3.2 The Regional Office could also provide, upon request, limited assistance to States in preparation for an audit by organising a workshop to complement the information provided at the National Audit Coordinators seminar/workshops. These complementary workshops would assist States in identifying means by which they could prepare for an audit. Workshop participants would use their completed compliance checklist and the eight critical elements of a safety oversight system described in the Safety Oversight Manual, Part A: - *The Establishment and Management of a State's Safety Oversight System* (Doc 9734) to identify actions States could undertake in preparation for an audit.

3.3 The representatives of the Czech Republic, Germany, the United Kingdom and IATA expressed their support of the proposed workshop and indicated their preparedness to contribute to its work with experiences from their work on safety oversight and audits. The Group noted that a workshop should be prepared on the basis of these experiences, compared with specific needs for assistance as indicated by States.

EANPG Conclusion 47/2 – ICAO USOAP audit preparation workshop

That:

a) States be invited to indicate their interest to participate in a workshop dedicated to the preparation for an audit on the basis of the critical elements of a safety oversight system, including their specific needs for assistance; and

b) based on the interest of States, the ICAO Regional Director organise a workshop as soon as possible to assist in preparing for an audit.

Rationalisation of safety auditing activities

3.4 The Group was presented with information outlining the burden imposed upon States by the numerous independent safety audit activities. The Group agreed that increased cooperation between the auditing agencies to perform joint audits could reduce time and resources devoted by both the auditors and the audited while achieving the same results.

3.5 The Group noted that besides the ICAO Universal Safety Oversight Audit (USOAP) programme, other international aviation organisations and the European Commission (EC) have shown an increasing interest in safety and security related issues and had established their own audit programmes. The proliferation of audit activities increased the burden imposed on States having to repeatedly answer similar questions presented under different formats.

3.6 The Group recalled that the 35th Assembly, in its Resolution A35/7, requested the Secretary General to continue to foster coordination and cooperation between USOAP and audit programmes of other organisations related to aviation safety, and specifically with IATA and Eurocontrol.

3.7 The Group also noted that the Memorandum of Cooperation (MOC), signed between ICAO and Eurocontrol, regarding their respective safety oversight programmes, now successfully implemented, represents a good way forward to coordinate international oversight activities.

3.8 The Group agreed that the various auditing entities should cooperate to harmonise their activities to avoid duplication and repetition and consider combining some of their activities, when possible, in order to reduce the burden on States and enhance the effectiveness of audit activities, thus supporting Strategic Objective D – *Efficiency*.

3.9 The Group welcomed information on the Memorandum of Cooperation between ICAO and the European Aviation Safety Agency (EASA) concerning EASA's participation in USOAP.

EANPG Conclusion 47/3 – Rationalisation of audit activities

That the ICAO Regional Director:

a) invite European auditing entities to agree on a methodology to harmonise their auditing activities, in order to avoid duplications and repetitions whenever feasible;

b) invite European auditing entities to further harmonise their auditing activities with those of ICAO (in relation to either safety or security as appropriate); and

c) together with European auditing entities, develop audit rationalisation proposals to be presented to the DGCA Conference on Aviation Safety scheduled for March 2006.

Unified strategy to resolve identified safety-related deficiencies

3.10 The Group was provided with an overview of the unified strategy to assist States in resolving identified safety-related deficiencies, which was adopted by the 35th Session of the ICAO Assembly (Resolution A35-7 refers). The unified strategy was based on the principles of increased transparency, cooperation and assistance, and to foster, where appropriate, partnership among States, users, air navigation service providers, and other stakeholders to analyse causes, develop and implement solutions in a more business-like approach. ICAO, as a partner, could assist in the development of sustainable solutions to resolve safety deficiencies resulting from insufficient safety oversight in individual States or groups of States. This approach, however, can only be successful where commitment from Governments is achieved and maintained.

3.11 The Regional Office could support States in their efforts to obtain assistance from various sources which may come in various forms. States would be invited to identify and discuss their needs with the Regional Office with a view to identify root causes of persistent problems in implementing effective safety oversight and to develop sustainable solutions. Likewise, States and organisations capable of providing assistance would be invited to inform the Regional Office on the type and nature of assistance that could eventually be made available to other States.

3.12 All information obtained in this process, whether it related to needs or assistance needs to be kept confidential. Although the Regional Office intends to facilitate bridging the needs with the available assistance, agreement from the State having expressed needs will be sought before any information is transmitted to a possible source of assistance. The Regional Office must also exercise extreme caution to ensure that the proposed mechanism matches the identified needs to the appropriate available assistance in order to foster safety and is not used as a vehicle to serve commercial interests. In support of Strategic Objective A – *Safety*, the Group agreed to the following:

EANPG Conclusion 47/4 - Unified Strategy

That:

a) States be invited to inform the Regional Office of their needs of assistance to resolve safety related deficiencies;

b) States and organisations capable of providing assistance be invited to inform the Regional Office on the type and nature of assistance that could eventually be made available to States; and

c) the ICAO Regional Director establish a mechanism to match identified needs with the appropriate available assistance in the interest of safety.

3.13 The Group appreciated information from the European Commission that the European Aviation Safety Agency (EASA) would be a valuable partner and could make substantial contributions to the work under the unified strategy to rectify safety-related deficiencies.

Role, task and responsibilities of the European Aviation Safety Agency (EASA)

3.14 The Group was informed that the European Aviation Safety Agency (EASA) had been established in 2002 with the aim of providing a high and uniform level of aviation safety across the European Union member States, and that Iceland and Norway had joined as members. For the time being, the main area of responsibility of EASA was airworthiness, and a legislative proposal for extension of the responsibilities to cover also air operations, flight crew licensing and safety of foreign aircraft had recently been presented. At the same time, the intention of further extension of the responsibilities to cover air traffic management, air navigation services and airports had been announced.

3.15 The Group welcomed the information provided and noted an invitation to European stakeholders to provide comments on the developments to the European Commission and to EASA as appropriate.

En-route wake turbulence

3.16 The Group considered details of an incident that occurred between an Airbus A340-500 and a Boeing B757 in which an aircraft experienced a violent and uncontrollable roll accompanied by a loss of altitude presumably resulting from wake vortex turbulence encounter in which both passengers and cabin crewmembers were abruptly tossed around the cabin, some of them being injured.

3.17 The Group recognized that in-trail climbs are a normal action used by air traffic controllers in the management and organisation of air traffic and that, at the time of the incident, the separation between the aircraft was in excess of the standard used by air traffic control. The Group also noted the violent nature of the wake turbulence encounter at cruise altitude and recalled the anecdotal information related to wake turbulence that had been presented in the context of the implementation of RVSM.

3.18 The Group was informed that since 2003, an ad hoc group of experts under the auspices of the United States Federal Aviation Administration (FAA), Eurocontrol, the Joint Aviation Authorities (JAA) and a manufacturer had been examining the wake turbulence aspects of the Airbus A380. The report of the ad hoc group was expected to be available during the second quarter of 2006, at which time it would be considered by ICAO. In the meantime, ICAO had published interim guidance for the use of States.

3.19 The Group was also informed that a workshop, addressing the question on how to revise wake vortex separation standards, had been arranged by Eurocontrol and was taking place in the Eurocontrol Experimental Centre, Brétigny, France, on 29-30 November 2005.

3.20 The Group stressed the importance of having all wake turbulence events reported to ICAO. The Group agreed that, in support of Strategic Objective A – *Safety*, necessary action should be taken to disseminate the information received to the aviation community, and to study whether there is a need to establish en-route wake turbulence separation minima.

EANPG Conclusion 47/5 - Wake turbulence separation minima

That ICAO:

a) disseminate as widely as possible the available information on en-route wake turbulence events and ensure the awareness within the worldwide aviation community of the hazards associated;

b) having regard for these events, review the need for en-route wake turbulence separation minima, taking into account other activities in the area; and

c) encourage States to ensure the fullest possible reporting of wake turbulence events.

Unmanned aerial vehicles (UAV)

3.21 The Group was provided with information concerning on-going activities with regard to unmanned aerial vehicles (UAV), supporting Strategic Objectives A – *Safety*, and D - *Efficiency*. The Group noted that ICAO had consulted a number of States and international organisations with respect to present and foreseen international civil UAV activities in civil airspace, procedures to obviate danger to civil aircraft posed by UAV operated as state aircraft and States' procedures for the issuance of special operating authorisations for international civil UAV operations. The Group was informed that States foresee a substantial increase in international civil UAV activities taking place outside of segregated airspaces reserved for UAV operations or in airspace over the high seas and that a major constraint appeared to be the lack of sense-and-avoid technology.

3.22 The Group noted that the European Organisation for Civil Aviation Equipment (EUROCAE) is considering the possibility to work on developing UAV standards and that RTCA was currently developing guidance as well as Minimum Aviation System Performance Standards (MASPS) on unmanned aircraft systems (UAS) and that much of the RTCA work related to the needs identified by States and international organisations.

3.23 The Group also noted the progress made towards the integration of Unmanned Aircraft (UA) in the national airspace of the United States of America (USA) and the position taken the Federal Aviation Administration (FAA) when responding to the ICAO consultation on UAV.

3.24 The Group was informed that the Air Navigation Commission has reviewed the results of the Unmanned Aerial Vehicle questionnaire and noted the intention of the Secretariat to convene a meeting of interested States and international organisations on the subject of UAV with the goal of developing a UAV programme plan. This meeting is tentatively scheduled for after the DGCA Meeting in 2006. The Group noted these developments and agreed that States and international organisations of the European Region should support and participate in this initiative.

3.25 The Group recognised that ICAO intends to utilise, to the maximum extent appropriate and subject to the adequacy of a verification and validation process, the work of RTCA and other recognised standards-making organisations, as directed by the 35th Session of the Assembly (Assembly Resolution A35-14, Appendix A, Resolving Clause 4 refers). The Group agreed that ICAO should have a more proactive approach with regard to UAV and welcomed the ICAO initiative to convene a meeting to develop a programme plan to harmonise the UAV related activities occurring around the world.

EANPG Conclusion 47/6 – Unmanned Aerial Vehicles

That European States and international organisations support the ICAO initiative to convene a meeting on Unmanned Aerial Vehicles (UAV) to develop a work programme.

Aviation Safety Seminars/Workshops

3.26 The Group was informed that in support of the Strategic Objective A – *Safety* and in follow-up of the European Air Navigation Planning Group (EANPG) Conclusion 46/43, the European and North Atlantic Office (EUR/NAT) of ICAO organised and conducted an ICAO Safety Management Seminar/Workshop for the States from the Eastern part of the ICAO European Region. The seminar/workshop was held in Almaty, Kazakhstan, in September 2005.

3.27 The seminar/workshop addressed the matter of the systematic establishment and maintenance of safety management in the provision of air navigation services, support of the system safety approach and the need to ensure a harmonised approach to safety management across the entire ICAO European Region.

3.28 The seminar/workshop concluded with the following recommendations:

a) ICAO continue to support States in implementing the safety improvement requirements;

b) ICAO, with the support of States, develop a *Safety management systems implementation* guidance document;

c) ICAO develop a standard training package for safety management issues;

d) States take appropriate actions in order to start implementing "just culture" requirements as well as a reporting and non-punitive safety system; and

e) States actively participate to the set-up of a system to ensure the exchange of safety-related information.

3.29 The Group noted the successful outcome of the Almaty safety management seminar/workshop for the States from the Eastern part of the ICAO European Region and its conclusions. The seminar/workshop was very useful by providing a forum for States to undertake important preliminary coordination work and agreed on the requirement of convening similar seminars/workshops in the near future. It was recognised that a new safety seminar/workshop addressing safety issues to the senior management staff from the States in the ICAO EUR Region would be beneficial in ensuring appropriate safety management awareness.

3.30 In view of the above, and accepting with gratitude the offer of Azerbaijan to host such a seminar in Baku from 5 to 7 April 2006, the Group agreed to support the proposal of organising the ICAO European Region aviation safety seminar, with emphasis on "just culture" implementation requirements.

EANPG Conclusion 47/7 - ICAO European Region Aviation Safety Seminar

That:

a) the ICAO Regional Director, in coordination and with the support from international organisations and States, organise in April 2006 in Baku, Azerbaijan, the ICAO European Region Aviation Safety Seminar, with emphasis on "just culture" implementation requirements; and

b) to obtain maximum benefit from this Seminar, States arrange for participation by senior officials of civil aviation authorities accompanied by officials from the service provider organisations.

4. STANDARDS AND RECOMMENDED PRACTICES (SARPs)

Provisions with special applicability dates

4.1 The Group was provided with information on how the applicability date of provisions adopted by ICAO was determined, including specific applicability dates when a provision was likely to require significant changes. The Group recognized that specific applicability dates could be overlooked or forgotten and expressed its appreciation for the information and for the detailed listings which drew attention to provisions having future applicability dates. In particular, it was noted that the information was listed by applicability date as well as by subject matter. It was recognised that the list greatly facilitated tracking of changes to ICAO provisions and provided a tool to ensure that these changes would not be overlooked. The Group considered that the listing should be kept up-to-date and be made available globally. Therefore, in support of Strategic Objective A - *Safety*, the Group agreed to the following:

EANPG Conclusion 47/8 – List of provisions with specific applicability dates

That ICAO publish on its global web site, a listing of all ICAO provisions having a future common or specific applicability date that have been adopted by the Council.

4.2 The Group also agreed that, in the case of some provisions having a future applicability date, a number of States might experience difficulties in achieving timely implementation. The Group agreed on the importance of implementing adopted provisions in a timely manner. For this reason, the importance of providing States with the necessary time to carry out necessary regulatory changes was stressed. This was particularly relevant in the context of the expanded USOAP. In this connection, it was stressed that the "Blue Cover" edition of Amendments, whether they be to SARPs or PANS, needs to reach States at least four months in advance of the applicability date in order to allow sufficient time to enact and publish the changes. The Group indicated that implementation of amended provisions would be facilitated if the information was provided electronically in a format from which the information could be copied and transposed in national documents. It was agreed that, States should also indicate whether they anticipated any difficulties in achieving timely implementation of new or amended ICAO provisions so that support to assist them can be organised in a timely fashion. Therefore, in support of ICAO Strategic Objectives, the Group agreed to the following:

EANPG Conclusion 47/9 – Provisions with specific applicability dates

That:

a) States be invited to take appropriate action to achieve timely implementation of the ICAO provisions having a specific applicability date;

b) States experiencing difficulties to achieve timely implementation of those provisions be invited to seek assistance and advice from the Regional Office with a view to overcome the difficulties; and

c) the ICAO Regional Director identify means to provide assistance and advice as appropriate on a sub-regional basis as provided for in the unified strategy.

Commenting on amendment proposals

4.3 Through the discussion, the Group reiterated the importance for States to provide timely comments on amendment proposals circulated by ICAO, including those related to Procedures for Air Navigation Services (PANS). The Group felt that timely comments could play a significant role in the early identification of implementation difficulties. However, to ensure that the consultation provides the necessary inputs from States, it was stressed that the time for comment had to be consistent with the complexity of the proposed changes considering that the regulator may have to consult with service providers. Therefore, in support of Strategic Objective A - *Safety*, the Group agreed to the following:

EANPG Conclusion 47/10 - Commenting on amendment proposals

That:

a) States be reminded of the necessity and the importance to provide timely comments on amendment proposals circulated by ICAO; and

b) ICAO provide sufficient time for States to carry out internal coordination regarding proposed changes.

5. PLANNING AND IMPLEMENTATION ISSUES

5.1 Air Traffic Management

Future military airspace requirements as identified by the Eurocontrol Member States

5.1.1 The Group was presented with a copy of a document on the subject of planning for military airspace requirements in the European Region. The document, entitled *Determining Future Military Airspace Requirements in Europe*, had been developed by Eurocontrol as guidance material for all Eurocontrol member States in follow up to the ICAO AN Conf/11 Recommendation 1/2. It provided knowledge and understanding of military airspace requirements for the routine day-to-day training of air, sea and ground forces.

5.1.2 Since modern military aircraft and weapons required large volumes of airspace in order to fully exploit their capabilities, and civil air traffic was expected to increase in the coming years, airspace utilisation had to be optimised to satisfy both the military and civil needs. This could only be achieved with a new flexible approach towards airspace design and management, which would require airspace planners to

be aware of the operational needs of all airspace users. It was pointed out that such an approach was in line with Strategic Objective D - *Efficiency*.

5.1.3 The document provides airspace managers with planning concepts to accommodate military training and operational activities, essential elements to guarantee that the level of capabilities and readiness needed to satisfy national security and defence requirements were being met. It was pointed out that the document had received widespread approval by the Eurocontrol Member States and that airspace planners were already using it in order to ensure that all airspace requirements were taken into account.

EANPG Conclusion 47/11 - Military airspace requirements

That States note the availability of the Eurocontrol Guidance material *Determining Future Military Airspace Requirements in Europe*, and make use of it as they deem appropriate.

Transmission of numbers in flight levels and SSR codes

5.1.4 The Group was presented with a proposal to Amend the ICAO Annex 10 on the subject of the rules for the transmission of the flight levels containing "whole hundreds" (FL100) and for the transmission of SSR Mode A codes ending with three zeros (A1000) when using air-ground voice communications.

5.1.5 The Group was informed that, through the Eurocontrol Level Bust Initiative, an exhaustive investigation into the subject of mitigation of risks associated with level busts had been carried out in 2003. The conclusions and recommendations of the investigation included the need for adherence to standard air-ground Radiotelephony (RTF) phraseology as essential to mitigating against this operational hazard. The report also explicitly highlighted the important issue of ambiguities associated with the transmission of the specific flight levels FL100/200/300,etc., as regards possible confusion with other flight levels (e.g.: FL100 being confused with FL110). It also described the relatively high occurrence of level busts in the vicinity of FL100 and as such recommended that the Radiotelephony procedures, associated with rules for the transmission of levels in radiotelephony, be closely scrutinised, for the purpose of ensuring optimal risk mitigation. This specific issue was investigated in detail from the perspective of reviewing the global procedures associated with the transmission of numbers in air-ground voice communications.

5.1.6 In addition to the foregoing, Eurocontrol had also initiated a limited human factors study related to the transmission of numbers in air-ground voice communications in order to understand how optimal mitigation of risk could best be accomplished. Specifically the issue to be tested concerned the question of "Should the FL100 be transmitted as FLIGHT LEVEL ONE ZERO ZERO or as FLIGHT LEVEL ONE HUNDRED?" The NLR Aerospace Research Laboratories was contracted to undertake this human factors research and the report was made available to the EANPG.

5.1.7 It was recalled that the global provisions pertaining to radiotelephony procedures for the transmission of numbers in air-ground voice communications are contained in ICAO Annex 10, Vol. II and carry the status of Standards. Such provisions have been amended on two occasions since 1987. Prior to July 1987 Flight Level 100 was transmitted as FLIGHT LEVEL ONE ZERO ZERO. From July 1987 to July 1995 FLIGHT LEVEL:ONE HUNDRED was used. Since July 1995 FLIGHT LEVEL ONE ZERO ZERO was used again.

5.1.8 The Group was informed that the ICAO archival material on this subject did identify human factors issues related to ambiguities associated with the understanding of numbers generally, however no singular human factors study was provided as an explicit basis for supporting, or not supporting, one particular method of transmission. In addition, it was important to note that the application of the existing global provisions by States was not uniform. Indeed, differences have been filed to ICAO Annex 10, Vol. II, by European States on this issue.

5.1.9 The Group noted that the Human Factors Study Report supported a change to the global provisions. The study established a preference for the use of the term: HUNDRED in radiotelephony in conjunction with the use of flight levels. The Group agreed that the current ICAO Annex 10 provisions needed to be reviewed to take account of the most recent research, particularly as related to level busts, on this matter. Consideration should also be given to the fact that four States have filed differences and have implemented the provisions of Annex 10 at variance and that anecdotal evidence exists that other States have also implemented at variance. The Group also agreed that any changes to the related ICAO Annex 10 provisions should be based on the following:

a) consideration of national assessments which formed the basis for existing differences filed in the Supplement to Annex 10, Vol. II.;

b) the importance of establishing unified global provisions on this subject, and

c) the outcome of Human Factors Studies.

5.1.10 Given the similarities concerning the transmission, in air-ground voice communications, of numbers related to flight levels and of numbers related to the use of SSR Mode A codes which end in three zeros, (A1000, A2000), the Group was informed that the above mentioned study had been extended to include the transmission of SSR Mode A codes as well. In this connection, the Group acknowledged the current very extensive operational practice of transmitting Mode A codes as ALPHA ONE THOUSAND, in lieu of the ICAO global provisions that require their transmission as ALPHA ONE ZERO ZERO ZERO.

5.1.11 Based on the information that had been made available and the results of the studies, the Group agreed that the current ICAO provisions relating to the transmission of numbers in the assignment of flight levels and SSR codes should be amended. The Group also agreed that such an amendment would be in line with Strategic Objective A - *Safety*. In addition, the representative for IFALPA indicated that the whole question of the transmission of numbers in radiotelephony should be reviewed in order to simplify the phraseology. With this in mind, it was agreed to request ICAO to review all provisions related to the transmission of numbers in the light of the latest research.

EANPG Conclusion 47/12 – Amend the ICAO provisions regarding the voice transmission of numbers

That ICAO:

a) develop an amendment to Annex 10, Volume II taking into account the proposal contained in Appendix B to the EANPG/47 Report; and

b) review the appropriateness of the current provisions of Annex 10, Volume II, paragraph 5.2.1.4 in the light of the latest research, including human factors and safety studies.

The use of SSR code A2000

5.1.12 The Group was presented with a proposal to amend ICAO PANS ATM (Doc 4444) which would require ATC to assign SSR code A2000 to aircraft for operations in “non-SSR areas”, in order to help mitigate against code conflicts when such aircraft enter or re-enter areas of SSR coverage. It was recalled that, this issue had formed the basis of an amendment proposal to the EUR SUPPs, which had been originated by Eurocontrol and published as Amendment 204 on 28 August 2002. That amendment addressed new procedures for the use of SSR codes for aircraft transiting from the EUR Region to other Regions.

5.1.13 Although the new procedures for the assignment of SSR Code A2000 safeguard against code conflicts with regards to aircraft leaving areas of SSR coverage when operating from the Eastern portion of the EUR Region to the MID/ASIA Region, the Regional Supplementary Procedures of other ICAO Regions do not contain provisions to protect against the potential for code conflicts for aircraft entering the EUR Region.

5.1.14 Furthermore, in other ICAO Regions, SSR "holes" exist between SSR coverage areas, which may be in different SSR code allocation areas. In such circumstances, a previously assigned code could conflict with the code assignment in another code allocation area. Therefore, a global requirement for ATC to assign SSR code A2000 for operation through 'non-SSR areas' would provide mitigation against the potential for such code conflicts. It was pointed out that the proposal was already implemented in other parts of the world. The Group agreed that the current provisions were indeed global and should be addressed at a global level and not at the Regional level. It also agreed that such an amendment would support Strategic Objective A - *Safety*. Accordingly, the Group agreed that ICAO be requested to initiate an amendment to Part VIII of the PANS ATM and, at the same time, to initiate a consequential amendment to the EUR SUPPs to remove the current provisions, which would be addressed by the global ones.

5.1.15 In arriving at the above decision, the Group was cognisant that the proposed amendment would allow for the continuation of the existing procedures for traffic entering the North Atlantic Region and would therefore not have any effect on the current procedures contained in the NAT SUPPs.

EANPG Conclusion 47/13 - Protection against SSR code conflicts

That ICAO review the global procedures for SSR code management contained in the Procedures for Air Navigation Services Air Traffic Management (Doc 4444) with a view to the protection against SSR code conflicts in relation to aircraft crossing the borders of code allocation areas, taking due account of the following proposed text:

"8.5.2.2.8 Except for state of emergency, communication failure and unlawful interference situations, and unless otherwise agreed by regional agreement or between a transferring unit and an accepting ATS unit, the transferring unit shall assign, Code A2000 to a controlled flight prior to transfer of communications."

Air Traffic Management Group - Eastern Part of the ICAO EUR Region

5.1.16 The Group was presented with the outcome of the Third Meeting of the Air Traffic Management Group – Eastern Part of the ICAO EUR Region (ATMGE/3) that was held in the ICAO European and North Atlantic Office from 21 to 24 November 2005 (meeting attended by 30 participants from 10 States and four international organisations).

5.1.17 In support of the Strategic Objective A – *Safety*, ATMGE/3 reviewed the work of the two task forces working on safety related issues: the ATM Safety Occurrences Reporting System Task Force - Eastern part of the ICAO EUR Region (ATMGE/SORS/1 meeting held from 19 to 21 October 2005) and the Safety Management Systems in ATM Task Force - Eastern part of the ICAO EUR Region (ATMGE/SMSA/1 meeting held from 17 to 19 October 2005).

5.1.18 Two draft questionnaires developed by the task forces on safety, designed to collect objective data on the current status of implementation regarding the ATM Safety Occurrences Reporting Systems and ATM Safety Management Systems in the States in the Eastern part of the ICAO European Region had been cleared by ATMGE for distribution to States in the Eastern Part of the ICAO EUR Region.

5.1.19 In support of the Strategic Objectives A – *Safety* and D – *Efficiency*, the Chairman of the Originating Region Code Assignment Method (ORCAM) Users Group addressed the Group with a comprehensive presentation covering the SSR code management principles in the ICAO EUR Region and the ORCAM working arrangements. It was underlined that the expansion in the use of SSR transponders to States in the Eastern part of the ICAO EUR Region necessitated, in 1997 and 2003, the establishment of additional participating areas, and consequent updated arrangements for the management of SSR codes.

5.1.20 ATMGE recognised that the strict observance of the ORCAM principles had a direct impact on safety and capacity and efficiency of the ATM system in Europe and agreed on the stringent need to comply strictly with all of the published Procedures and Principles of the ORCAM Plan. It was underlined that the ever increasing demand for the availability of Mode A codes to match the growing volume of civil air traffic in the ICAO EUR Region, would require that all States implement to the utmost extent those ORCAM procedures and principles related to the associated SSR Code Allocation List (CAL). In this regard, the Interstate Aviation Committee (IAC) informed the meeting that they were working together with Kazakhstan and Ukraine to produce a guidance material on the implementation of ORCAM principles. This document would be made available to all CIS States after its endorsement by the IAC early 2006.

5.1.21 In support of raising the awareness on ORCAM requirements, Ukraine offered to host an ICAO workshop in Kyiv, tentatively fixed from 1 to 3 March 2006 in order to present the ORCAM principles in detail and the CAL developed by the ORCAM Users Group, and a comprehensive presentation of the guidance material that should be adopted by CIS States. The offer was accepted by ATMGE with gratitude.

Route Development Group - Eastern Part of the ICAO EUR Region (RDGE)

5.1.22 The Group was presented with the outcome of the Third Meeting of the Route Development Group – Eastern part of the ICAO EUR Region (RDGE/3) that was held in the ICAO European and North Atlantic Office from 15 to 18 November 2005 (attended by 45 participants from 17 States and four international organisations). The work of the RDGE was performed in support of Strategic Objective D – *Efficiency*. Since RDGE/2, extensive work had been undertaken by the States to improve the ATS route network, particularly by Belarus, the Russian Federation and Turkey. IATA reported on the good cooperation with the Russian Federation to develop the Trans-Siberian route network offering interesting alternatives to/from India and Pakistan via Murmansk. The Russian Federation also reported coordination with the ICAO Asia and Pacific Office on Cross-Polar routes to improve the interface with China and Japan.

5.1.23 The ICAO Secretariat handled the circulation and approval of amendment proposals amending 55 new ATS routes/route segments. It also conducted an extensive exercise with the Russian Federation to update the ICARD database, the Tables ATS 1 and CNS 4 of the EUR ANP.

5.1.24 RDGE/3 appreciated the information on future cooperation between Eurocontrol and ICAO to develop, in support of the Strategic Objective D – *Efficiency*, a route planning database tool that would produce the Lists A, B and C of the RNDSG and the RDGE ATS Route Catalogue.

5.1.25 The ICAO Secretariat also reported on the progress of the review of the FIRs of the Eastern part of the ICAO EUR Region. A regional meeting was expected to be held in Paris (tentatively 6 to 10 April 2006), in support of Strategic Objectives D – *Efficiency* and E – *Continuity*, in order to obtain agreement on common points of adjacent FIRs of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

5.1.26 The three RDGE subgroups dealing with Baltic area and its interface, Black Sea and South Caucasus Area and its interface and Middle Asia area and its interface reported that 35 ATS routes/route segment had been implemented or would be implemented until the end of 2005 and a total of 49 new ATS routes had been included in the Route Catalogue for further studies. Consequently, the ICAO Secretariat

was invited to process and circulate proposals for amendment to the Air Navigation Plan - European Region (EUR ANP) (Doc 7754) to reflect 20 new ATS routes/route segments.

5.1.27 It was also reminded that the ATS Route Catalogue should be seen as a living document: States would provide the ICAO Secretariat with regular information regarding the status of implementation of the ATS routes contained in the Route Catalogue, and enabling its updating every AIRAC cycle. In this respect, it was agreed that the ATS Route Catalogue, the RDGE Working Procedures, RDGE Action Plan, Contact List and a blank template of the ATS Route Catalogue for new ATS Routes would be made available for download from the ICAO Paris Office website (http://www.paris.icao.int).

ATMGE and RDGE possible future working arrangements

5.1.28 The ICAO Secretariat invited the ATMGE to assess the proposal of having a combined ATMGE/RDGE meeting, instead of the existing separate sessions. This approach would present obvious advantages as several activities covered by the two groups were interrelated. In addition, the existing RDGE working arrangements (i.e. two working days dedicated for the three established RDGE sub-groups) would easily accommodate for more specialised ATM subjects, if so required. The proposed combined meeting would have two co-chairmen (the existing ATMGE and RDGE chairmen).

5.1.29 It was envisaged that in order to ensure the success of the new working arrangements, some reassurance should be obtained before taking a final decision. In supporting such an arrangement a better structured meeting agenda and a meeting schedule sent in advance would be required in order to ensure the presence of the right experts at the right moment.

5.1.30 The Group took note on the possible future working arrangements to have the next ATMGE and RDGE meetings combined and noted that the next ATMGE and RDGE meetings would be held combined as a "wet run exercise" in order to evaluate the pros and cons and take an informed decision for a stable future meeting arrangement.

Centralized Code Assignment and Management System

5.1.31 In support of the Strategic Objectives A – *Safety* and D – *Efficiency*, this Group was presented with information supporting the initiation for the development of specifications for a Centralized Code Assignment and Management System (CCAMS). This initiative stemmed from the concerns that had been expressed with respect to the foreseen shortage of available SSR codes. The Group was informed that in October 2003, the Originating Region Code Assignment Method (ORCAM) Working Arrangements had recognised that unless radical solutions were implemented, an SSR code shortage situation would occur in the European “core” area in the very near future and that this problem could extend to other parts of the Region. It had therefore been proposed that immediate action be taken in order to ensure that an appropriate number of SSR codes beyond 2005 would be available. The ORCAM Working Arrangements also advised of the need to urgently initiate a study to investigate solutions (operational and/or technical) to alleviate the situation.

5.1.32 The Group was informed that a large number of ORCAM improvements had already been agreed and implemented. Although ORCAM had served the Region extremely well over the years, very few additional improvements could be achieved taking account that the strategic allocation of codes to States has reached a limit beyond which it was difficult to find solutions to meet the continuous growth of air traffic. The warning raised by ORCAM Users Group was based on a series of complex and concurrent factors from which the following main issues can be listed:

a) change of traffic flows in Europe, that has reduced efficiency of a code allocation method designed 20 years ago;

b) new States in Eastern Europe that have to be provided with transit and local codes;

c) use of SSR codes in regions neighbouring the ORCAM region;

d) regular traffic growth, especially high growth in peaks of traffic;

e) use of discrete SSR codes by VFR traffic; and

f) aerodrome surveillance technologies employing the use of discrete SSR codes at busy European aerodromes.

5.1.33 The Group was informed that the output of the studies that had been carried out in support of the CCAMS had produced a Concept of Operations (CONOPS) document which detailed the operations for a system designed to centrally select and distribute to the appropriate ATS units the SSR codes for flights operating within a defined area. It provides information concerning the operational elements and requirements for the users and system functionalities needed to ensure an efficient use of the existing 4096 Mode A/3 codes.

5.1.34 The study also examined the communication requirements needed to sustain the suitable means for the exchange of CCAMS messages, with specific emphasis on the existing network between CFMU and Flow Management Positions (FMPs), other communication means and it evaluated implementation costs for various options. The study concluded that the CCAMS implementation would be technically feasible in terms of communications, the required functionality in ATS system and the impact of CFMU providing appropriate data. It also concluded that the existing means of communication being used between the CFMU and ATS systems would be suitable for message exchange between CCAMS and ATS systems. The analysis in the study indicated that the AFTN could cope with the estimated increase in message traffic that would result from the CCAMS implementation. It was recognised that ATS systems would need to be modified to receive codes from CCAMS.

5.1.35 The study addressed other issues as well, such as an Operational Requirements Document (ORD), a Generic Contingency Plan, which would make provisions for maintaining a suitable level of SSR code management to conduct safe operations during a failure of one or more of the CCAMS components. Safety considerations were taken into account and an initial Functional Hazard Analysis (FHA) had been conducted.

5.1.36 The cost estimates for developing and implementing CCAMS were tentative at this stage. A further developed system architecture design together with other technical elements was a pre-requisite for conducting a full cost benefit analysis. These pre-requisites would be addressed during the development of the specifications phase. However, in order to provide documentation in support of the decision making process, a cost benefit assessment document had been developed, in which costs and benefits were qualitatively addressed.

5.1.37 The Group was informed that CCAMS was considered to be fully complementary to Mode S implementation and could provide support during the transition to full Mode S coverage. CCAMS would allow smooth expansion and implementation of Mode S in other Participating Area (PA).

5.1.38 Should a “NO GO” decision with regards further development and potential implementation of CCAMS be taken, there was a need to find an adequate answer to the outstanding question of how to properly address the concerns expressed by the ORCAM Working Arrangements of how to be able to provide an appropriate number of codes for the foreseen traffic demand. It was emphasised that continuing the strategic allocation of codes would imply a geographical re-organisation of PAs. This could translate into a reduction of the size of PAs or/and extensive use of directional assignment. The disadvantages of continuing the strategic allocation of codes appeared to significantly outweigh the advantages of CCAMS.

5.1.39 Furthermore, the cost of operating the ORCAM was approximately € 300K. However, since the investigation and solution of code shortage problems was becoming increasingly complex, the operating costs of the ORCAM arrangements were expected to significantly increase if CCAMS was not implemented.

5.1.40 The Group was informed that the next step in the process towards a centralised code allocation system was the development of a specifications phase, in which a detailed study of the system architecture would take place, together with modelling of the various possible code management algorithms to be used. In addition, and as soon as the development of the required input to the Cost Benefit Analysis (CBA) had reached a sufficient level of maturity, allowing for a better understanding of the details of the CCAMS system, a full CBA would be performed. The nomination of a "National Focal Point" would provide an adequate coordination with States in the progressing of the development of the specification phase and particularly for gathering inputs from States with regards to building the Cost Benefit Analysis. This work could be completed by the end of April 2006

5.1.41 On the basis of the above, the Group agreed that the CCAMS was the most viable technical and operational solution to the growing code shortage until such time that Mode S becomes a reality and was able to address the problem in an adequate way. It was underlined that two of the key requirements of the new system would be to "keep it simple" (i.e. respond to the operational requirements without unnecessary sophisticated features) and provide for a possible phased implementation. The Group also agreed that, based on the described studies, assessments, concept of operations and operational requirements, CCAMS was a feasible concept and it should be further developed. It was recognised that, owing to the lack of details for system architecture and other necessary technical analysis for CCAMS, cost estimates remained tentative and benefits could only be qualitatively assessed.

5.1.42 In order to progress the work, the Group agreed that States be requested to nominate a National Focal Point to support and coordinate the processes during the development of specifications phase, in order to address local specifics. Through the National Focal Point, it was expected to be able to complete the development of a specifications phase within six months, during which a full CBA and a Safety Case would be developed. Considering that a formal go/no go decision for CCAMS implementation, based on the defined deliverables, needed to be made in the Spring of 2006, it was further agreed that the COG should oversee this programme on behalf of the EANPG, including making the go/no go decision, and report to EANPG/48.

EANPG Decision 47/14 – Delegation of the responsibility for the go/no go decision related to the implementation of CCAMS

That the EANPG Programme Co-ordinating Group (EANPG-COG), be delegated the responsibility to:

a) keep under review planning activities, in close cooperation with the focal points, leading up to the implementation of a Centralized Code Assignment and Management System (CCAMS);

b) make the go/no go decision for CCAMS implementation on the basis of information, including the results of the cost benefit analysis to be provided by States and Eurocontrol; and

c) inform the EANPG of the decisions taken.

ICAO EUR/NAT Regional Databases

5.1.43 The Group noted the good cooperation between ICAO and Eurocontrol for the past ten years in the development and maintenance of the EUR/NAT regional database and the tools developed to assist States and the Eurocontrol Agency in the use of five-letter name-codes and route designators. The web-based ICAO Five-Letter Name Code and Route Designator (ICARD) tool ensured that the provisions of Annex 11 regarding the use of five-letter name-codes and route designators were being met. Another tool was used for the maintenance of the Regional COM Tables, which include air navigation aids, location, frequency and coverage.

5.1.44 The Group noted that ICARD had been developed with the capacity for global use, and since April 2005, has been used by the MID Region and would soon be fully used by the United States.

5.1.45 In respect to future developments, the Group agreed that the global use of a common five-letter name-code and route designator management tool would be beneficial to ICAO Regions. The use of such a tool would provide time savings and more significantly, remove safety hazards by eliminating the use of duplicate five-letter name-codes and route designators.

EANPG Conclusion 47/15 - Global database for Five-Letter Name-Codes and Route Designators

That ICAO use the ICAO Five-Letter Name Code and Route Designator System (ICARD) as the global tool for the assignment and management of five-letter name-codes and route designators.

Proposed Amendments to ICAO Provisions regarding the requirement for read-backs of changes to VHF voice channels

5.1.46 The Group was presented with a proposal to amend the ICAO European Regional Supplementary Procedures for (EUR SUPPs, Doc 7030) to include the mandatory requirement to read-back the instruction to change VHF voice communication channel in order to mitigate prolonged loss of communications related to mistuning problems. It was recalled that there had been considerable discussion on phraseology for air-ground voice communications for channel changes since 8.33 kHz channel spacing for VHF communications channels was implemented. In summary, it was pointed out that VHF communications channels consisting of six digits and, together with long call signs and other ATC voice transmissions were susceptible to mishearing and mistakes. Furthermore, with effect from November 24, 2005, six (6) digits were to be used for the indication of all VHF channels in air-ground voice communications.

5.1.47 In follow up to these discussions, the Netherlands National Aerospace Laboratory (NLR) had carried out a study in 2005. The study had examined 535 occurrences of communication problems in the European Region reported from 1 March 2004 to 1 April 2005. It was suspected that more communication problems occurred during this period, but were not reported or were not available to the NLR. The loss of communication was the most common type of communication problem reported in the data sample – 26% of the occurrences and the most common contributing factors to the occurrences involving loss of communication were:

a) Channel change (35%)

b) Radio equipment malfunction (air) (27%)

c) Pilot workload (4%)

d) Other (34%)

5.1.48 As can been seen from the above figures, changes in channels were the largest contributor to communications problems. Therefore, one of the recommendations from the NLR Study was for air traffic controllers to pay attention to the pilot's read-back and confirm the correct frequency. It was noted that other similar studies recommended the same, and all of them considered channel changes as part of pilot's read-back procedures.

5.1.49 The Group was informed that, according to Annex 11, paragraph 3.7.3, (read-back of clearances and safety related information), there was no explicit requirement for flight crews to read back channel changes. However, if it was considered that a channel change was a safety-related part of an ATC clearance or instruction, then the flight crew would be expected to read-back the channel change instruction.

5.1.50 The Group agreed that a loss of communication could adversely affect the safety of air traffic operations. Furthermore, since 11 September 2001, loss communications has assumed a new significance because, in most instances, air traffic controllers have no way of knowing whether or not a loss of communication was due to an act of unlawful interference. Therefore, the number of interceptions of civil aircraft, with the inherent safety concerns, has increased.

5.1.51 In view of the safety considerations, the Group agreed that changes to VHF voice channels should also be read-back in order to prevent to the extent possible communications loss. It was also felt that, since the process to amend Annex 11 was lengthy, a proposal for amendment of the ICAO EUR SUPPs would be the most appropriate course of action in the short term in order to require read-backs for channel changes. It was therefore agreed that the Regional Director of the ICAO EUR/NAT Office be requested to initiate an amendment proposal to the EUR SUPPs, on behalf of the EANPG, in order to mandate read-backs of VHF voice channel changes. In doing so, the Group was cognizant that this was a global issue and that, eventually, Annex 11 should be amended.

EANPG Conclusion 47/16 – Amend the European Region provisions regarding read back of VHF channel changes

That:

a) the ICAO Regional Director, on behalf of the EANPG, initiate a proposal for amendment to the EUR Regional Supplementary Procedures to include the following provision "All instructions related to VHF voice communication channels changes shall be read back"; and

b) ICAO consider amending Annex 11 to include provisions for the mandatory read-back of VHF channel changes.

5.2 Communication, Navigation, Surveillance

ITU WRC-07 preparations

5.2.1 The ICAO position for the International Telecommunication Union World Radio Conference (ITU WRC-07) had been completed and approved. States were encouraged to familiarise themselves with the contents and ensure it was taken into consideration by their radio regulatory authorities in establishing positions for ITU WRC 2007.

5.2.2 Two of the conference agenda items were of particular interest to the aviation community. These were Item 1.5 (telemetry requirements for flight testing) and item 1.6 (Aeronautical Mobile (R) Service AM(R)S communications requirements). There were many issues involved in the preparations for these agenda items. One in particular was the potential to make use of the currently under-utilised MLS band. In order to bring some more certainty to the discussion, ICAO Paris had sent out a State Letter, requesting

States to revise and clarify their likely future requirements for MLS. This would need to take account of all aviation requirements, including those of State aircraft. This action was in support of Strategic Objective D – *Efficiency*.

DME requirements for RNAV operations

5.2.3 The Eurocontrol Navigation Strategy envisaged that required navigation performance (RNP) Area Navigation (RNAV) operations would become mandatory en-route and in Terminal Control Area (TMA) in European airspace from as early as 2015. These operations would be equally supported by Global Navigation Satellite Systems (GNSS) and Distance Measuring Equipment (DME) initially, while in the long term a gradual transition to GNSS was envisaged. An Infrastructure Evolution Study investigated the minimum number of ground DMEs necessary to be added to the current DME network to meet the initial continuity and availability requirement for the future RNP RNAV operations. About 350 DME ground stations were identified as necessary to enhance the coverage in the area of ECAC States. A critical issue was the ability of the radio frequency band 960-1215 MHz to accommodate this number of additional DME ground stations, while also accommodating new GNSS signals (GNSS L5/E5) and universal access transceiver (UAT) based data links in an already saturated band.

5.2.4 Eurocontrol future work included the investigation of the impact of new DME requirements on double/triple paired services ILS/DME, ILS/DME/MLS and the impact of VOR requirements changes. The initial assumption was that VOR requirement would decrease progressively, and in any case would not increase. The action by ICAO to request States to verify their total current and future MLS requirements (State and civil aviation) could have a significant impact on the number of DME services that were planned, but not currently operational. This action was in support of Strategic Objective D – *Efficiency*.

SAFIRE Developments

5.2.5 The Spectrum and Frequency Information Resource (SAFIRE) was being produced to provide web access to a mechanism for spectrum and frequency management. SAFIRE would provide a secure, centrally managed system that would enable efficient and accurate management of aeronautical frequencies, and provide a comprehensive information resource to facilitate spectrum management and frequency planning. There was a requirement, at least for an interim period for accommodating the current Aeronautical Fixed Telecommunication Network (AFTN) coordination mechanism for those States not in a position to use the new system. The first SAFIRE implementation would be COM 2 (VHF communications) data, which was subject to frequent updates and so would deliver the greatest benefit from the use of the SAFIRE facilities. This action was in support of Strategic Objective D – *Efficiency*.

Proposed changes to Annex 10 – MLS protection implications

5.2.6 The correction of an error in the specification of the MLS transmission had resulted in an amendment proposal to Annex 10 to change the planning criteria to maintain the intended protection levels for MLS receivers.

5.2.7 Without any improvement in the required specification for the transmission mask for the 3rd adjacent channel and beyond, a substantial exclusion zone within which no other MLS could be placed resulted. The transmitter performance of the present generation of MLS (an additional roll-off 2dB per channel) is substantially better than that specified in the original standard. If this possibility for improvement was taken into account (in the standard for the transmitter radiated power mask) then a substantial reduction in the exclusion zone for successive adjacent channels would be possible, resulting in much more efficient utilisation of spectrum.

5.2.8 An exclusion zone for adjacent channels beyond the second adjacent channel has been incorporated into the planning rules within the European Region for MLS until such time as any improvements in the transmitter mask was taken into account.

5.2.9 There were concerns with this late development in the MLS protection criteria. Current spectrum shortages demand that the aviation community be seen to be making progress in the efficient use of spectrum. As a system that so far had only very limited implementation, the MLS would become a serious impediment to aviation credibility with the radio regulation community if the changes to make use current transmitter capabilities were not adopted. A number of EUR States had objected to the proposed SARPs amendment. In support of Strategic Objective D – *Efficiency,* the Group agreed as follows.

EANPG Conclusion 47/17 - Proposed MLS protection changes in Annex 10

That ICAO note the potential impact of the proposed amendment to the MLS protection requirements in Annex 10 and the need for an early resolution of the matter that takes full account of spectrum efficiency requirements.

VDL sub-band deployment progress

5.2.10 Since 2002 a VDL sub-band had been developing in a series of steps. The target for around 2008 was to have four VDL Mode 2 channels and two VDL Mode 4 channels. Aircraft Communications Addressing and Reporting System (ACARS) channels were being re-allocated for an interim phase in order to allow a stepped migration from ACARS to VDL Mode 2 and in order to protect from 2004 on the VDL 2 channel(s) put into operation. The steps completed were i) The migration of ARINC-ACARS from 136.925 MHz to 131.825 MHz was completed September 2004; and ii) All ADS-B/VDL Mode 4 pre-operational services had migrated to 136.925 MHz and all other services on that frequency have been cleared.

5.2.11 The need to maintain two VDL 4 channels in the COM band was questioned. Investment in yet another technology in the VHF band was seen as unrealistic expectation. It was observed that the current VDL4 provisions did not, in the short term, conflict with either the ACARS or the VDL 2 channels, so they could be maintained while Eurocontrol established if there was justification for VDL Mode 4 to operate in addition or replacement of VDL Mode 2 at some future time.

8.33 kHz implementation - revised policy for State Aircraft

5.2.12 The accommodation of non-8.33 kHz equipped State aircraft in 8.33 kHz airspace could lead to increases in ATC workload which needed to be taken into account in order to maintain safety levels. The Eurocontrol Agency was developing a revised policy, which would be to maximise the 8.33 kHz equipage of State aircraft and so reduce the safety hazards. The main elements of the policy, which applied above FL195, were that every effort be made to equip transport-type State aircraft by March 2007 and all State aircraft by March 2009.

5.2.13 Although decisions on the need for 8.33 kHz implementation in Europe had been made as early as 1994, there was concern expressed that the 2009 date or all State aircraft to be equipped could not be met.

8.33 kHz implementation - above FL245

5.2.14 The Horizontal Expansion programme, which was implemented in October 2002, mandated the carriage of 8.33 kHz radio equipment for flights above FL245 in 30 States in the ICAO EUR Region. In 18 of those States 8.33 kHz operations had been implemented which had resulted in 58 of the 71 planned conversions being made.

5.2.15 The number of conversions was constrained by i) Sectors having a lower-limit going below FL-245; ii) Sectors making use of the climax (carrier-offset) system; and iii) Airspace where non-8.33 KHz equipped aircraft could not be handled safely – this issue related to the handling of non-8.33 kHz equipped State aircraft, as well as the need for transition zones at the edge of the mandatory carriage area.

8.33 kHz implementation - above FL195

5.2.16 This implementation phase was necessary because the capacity increase provided by the above FL245 phase could no longer satisfy the demand.

5.2.17 Eurocontrol agreed to the implementation of 8.33 kHz channel spacing above FL195. The supporting Implementation Plan recommends that mandatory carriage be enforced, as a minimum, in the 30 States that required 8.33 kHz above FL245. States had also been requested to publish AICs to provide advanced warning on the above FL195 phase. In support of Strategic Objective D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/18 - 8.33 kHz implementation above FL195

That States that have mandated the requirements for aircraft to be equipped with 8.33 kHz channel spacing radios within their airspace, be encouraged to complete as soon as possible the decision process for the implementation of 8.33 kHz above FL195, in order to enable harmonised implementation and provide advanced information to airspace users, unless they have already done so.

8.33 kHz implementation - below FL195

5.2.18 The Eurocontrol ACG 26 meeting, held May 2005, requested the Eurocontrol Agency to perform the necessary work to enable a decision on 8.33 kHz below FL195 in mid-2006. The main elements of the work being performed include:

- An estimation of future demand for VHF assignments in the band 118-137 MHz in the period up to 2020 – based on traffic forecasts;
- The development of an operational scenario for the deployment of 8.33 kHz below FL195;
- An estimate of the number of 25 to 8.33 kHz conversions arising from the scenario;
- A simulation of the frequency planning benefits arising from these conversions when compared to the estimated VHF demand;
- An assessment of the impact on airspace users;
- A safety assessment.

5.2.19 The results of the above work would be used to develop a business case and a safety assessment report, which will then be the subject of consultation. Recommendations would then be formulated for submission to the ACG and subsequently the Provisional Council. Based on current planning, the business case and safety assessment report were expected to be available by the end February 2006. However, in order to meet these timescales, it was essential that all requested States submit their conversion estimates. In support of Strategic Objective D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/19 - Conversion estimates for 8.33 kHz below FL195

That States, that have mandated the requirements for aircraft to be equipped with 8.33 kHz channel spacing radios within their airspace, provide their 25 kHz to 8.33 kHz conversion estimates for below FL195 at the earliest opportunity, unless they have already done so.

EANPG Decision 47/20 - EANPG procedures for decisions on 8.33 kHz below FL195

That the EANPG COG monitor developments in 8.33 kHz implementation, make any necessary decisions on behalf of EANPG, and report progress to the EANPG/48 meeting.

8.33 kHz implementation - European Commission Mandate

5.2.20 The European Commission had issued Eurocontrol with a mandate to develop a draft implementing rule on reduced air-ground voice channel spacing. The work was being led by the Eurocontrol Regulatory Unit. In particular, issues had arisen with respect to:

- The deployment of 25 to 8.33 kHz conversions on the ground;
- The harmonised application of policies and procedures that can minimise safety hazards and reduce any negative operational impacts, e.g. the enforcement of mandatory carriage;
- The harmonised application of policies and procedures for the handling of non-8.33 kHz equipped State aircraft, including UHF provision.

5.2.21 The first key deliverable from the Mandate work would be the Regulatory Approach, which would consider the scope of the implementing rule, i.e. above and/or below FL195.

8.33 kHz implementation - status of EANPG/46 Conclusion

5.2.22 The Forty-Sixth Meeting of the EANPG concluded as follows on 8.33 kHz implementation.

EANPG Conclusion 46/5 – Planning for 8.33 kHz expansion

That the EANPG, in recognising the importance of the Eurocontrol initiative to hold a workshop dedicated to 8.33 kHz expansion below FL 195 in the beginning of 2005 task:

a) the ICAO European and North Atlantic Office to take an active part in the preparation of this workshop; and

b) the COG to present in December 2005 to the EANPG the proposal of a precise planning and airspace identification for the expansion of 8.33 kHz below FL 195.

5.2.23 Eurocontrol had proceeded directly with the consultation and planning for 8.33 expansion instead of convening the workshop, but was not yet in a position to propose detailed planning for 8.33 kHz implementation below FL195. The below FL 195 case represented a complex undertaking and decisions needed to be based on business case and safety assessments, following thorough consultation. Based on the progress, it was aimed to seek a Eurocontrol decision on 8.33 kHz below FL195 at the Provisional Council level during 2006.

CIDIN/AMHS Gateway Requirements

5.2.24 The Group noted that the four States using Common ICAO Data Interchange Network (CIDIN)/OPMET application (the only CIDIN specific application in use) had ceased to use it as of 31 January 2005, and replaced it with the CIDIN/AFTN application instead. This could avoid the need for the development and procurement of CIDIN/ATS Message Handling Systems (AMHS) gateways, which could be expensive.

5.2.25 It was agreed that the relevant planning bodies, including the Aeronautical Communications Panel, other regional planning groups and training institutions, be advised that a CIDIN/AMHS gateway was

not required in the EUR Region for the transition to AMHS; the AFTN/AMHS would be the only gateway requirement. In support of Strategic Objective D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/21 - AMHS gateway requirements

That ICAO and any other ATS Message Handling System (AMHS) planning bodies note that there was no longer a requirement in the EUR Region for a Common ICAO Data Interchange Network (CIDIN)/AMHS gateway.

AMHS Off-Line Management

5.2.26 The EANPG/45 invited Eurocontrol to consider extending the Common ICAO Data Interchange Network (CIDIN) Management Service (CMC) to provide ATS Message Handling Service (AMHS) off-line network management services, to function in the same administrative framework as the CIDIN management service.

5.2.27 Eurocontrol reported that it was prepared to upgrade the existing CMC and provide the required ATS Message Management Centre service from the first quarter 2007 up to 2009. An alternative funding mechanism would be investigated for use from 2010 on.

Development of an IP based Pan European Network for ATM Services

5.2.28 Work was being carried out in the European Region on the development of an internet protocol (IP) based Pan European Network for ATM Services which would provide proposals for a Pan European Network (PEN) communications infrastructure to support Air Traffic Management (ATM). A PEN was identified in the Eurocontrol EATMP Communications Strategy as a key component of the infrastructure necessary to most effectively support future service needs. Its creation was as much a management as a technical problem.

5.2.29 At the technology level, existing X.25 based data networking had become obsolescent and would be no longer supported by some communications service providers. ANSPs would therefore be obliged to migrate their national networks and associated international connectivity to digital IP networking for both economic and service support reasons. Timescales for this was foreseen as being by the end of 2009.

5.2.30 Voice services were also affected by the drive to digital networking because some telecommunication companies were withdrawing leased analogue voice circuit services. Many requirements were primarily point-to-point between adjacent countries, but there were some provisions of back up routing, which could make use of networking capabilities. Where available, high performance IP networking could potentially permit cost savings by integrating transport of voice traffic also.

5.2.31 Existing and increasing demand for international communications, coupled with the need to update data networks in line with Industry standards and the fragmented nature of current services, was driving the need for an international IP infrastructure providing connectivity across the ECAC area. Such a network would provide a valuable platform for the roll out of AMHS connectivity as it develops beyond the initial stages.

Training of Staff

5.2.32 It was agreed there was a need to provide COM Centre staff in Europe with AMHS Basic training. The first operational connections based on AMHS and the exchange of operational messages would commence in the near future. The new ATS Management Centre will be implemented and the training for the AMHS functions of the ATS Management Centre will be completed. It was recognised there was a need for the CCC Operators to get basic AMHS training in advance of the Management Centre training. Such

Basic AMHS training should be a prerequisite of the CCC training. There were several institutions in Europe that could provide basic training for AMHS, which can be used by the ATSO's and the COM Centre staff. In support of Strategic Objective D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/22 - Staff training requirements for AMHS

That States ensure that COM centre staff receive the appropriate training for the implementation and operation of ATS Message Handling Systems (AMHS).

Material Permitted in AFS Messages

5.2.33 A Filed Flight Plan (FPL) message handling incident was caused by a flight operated by Kabo Air (QNK1340) with an aircraft registration of "5NNNN" entered in the Item 18 of an FPL. This caused a handling failure of the FPL message in the AFS network. If this aircraft registration had been used as the call-sign in Item 7 of the FPL, the problem would have been further exacerbated because the initial flight plan as well as the related messages and the ATFM slot allocation messages would all be affected.

5.2.34 The situation above was caused by the use of character combinations that are reserved for control functions in the AFTN. Start-of-Message Signal (CZ or ZC) and the End-of-Message Signal (NNNN) character combinations were not allowed in the registration of the three-letter designators (Annex 10 Vol II paragraph 4.1.2.6 and ICAO Doc 8585, paragraph 2.4 refer).

5.2.35 The ICAO Annex 7 – "Aircraft Nationality and Registration Marks", paragraph 2.6 provides details of character combinations that should not be used, but does not include those listed in Annex 10. Taking into account the possible worldwide impact of this issue and in order to prevent the future occurrence of similar incident, it was agreed that action was necessary to align the requirements of the two Annexes. In support of Strategic Objectives A – Safety and D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/23 - Annex 7 and Annex 10 character combination restrictions

That ICAO consider the alignment of Annex 7 character combination restrictions with those specified in Annex 10 and Doc 8585, specifically with respect to NN, CZ and ZC.

EUR ANP (Doc 7754) - CNS update

5.2.36 Since the CNS sections of the EUR ANP were last updated there had been many notable developments in the aeronautical communications domain. As a result the proposal for amendment of the EUR ANP, included as an attachment to the working paper on the subject was developed. This would incorporate mature material and reflect the anticipated Regional COM developments within a 3 to 5 year perspective. In support of Strategic Objective D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/24 - Proposal to amend the CNS parts of the EUR ANP

That a proposal for amendment to update the CNS section Air Navigation Plan - European Region (EUR ANP) (Doc 7754) be processed.

A-SMGCS Developments in Europe

5.2.37 There were two major Advanced Surface Movement Guidance and Control Systems (A-SMGCS) projects underway in Europe, these being sponsored by Eurocontrol and the European Commission respectively. The common objectives were for facilitating the harmonised implementation of A-SMGCS

Levels 1 & 2; and ensuring that the operational concepts, systems and procedures necessary for A-SMGCS Levels 3 & 4 were feasible and reached a sufficient level of maturity for implementation.

5.2.38 The A-SMGCS concept had been developed to improve upon current systems, procedures and practices in the face of increasing traffic levels, airport complexity and the need to maintain the highest level of service at all times.

5.2.39 The implementation of A-SMGCS would be evolutionary through the development of several implementation levels, forming a coherent series of increasing system complexity. Level 1 provides surveillance, display systems and procedures to permit comprehensive ATCO situation awareness. Level 2 consists of Level 1 functions together with automated monitoring and alerting functions, initially including the prediction of conflicts on active runways or incursions into restricted areas. Levels 3 and 4 correspond to the introduction of routing, automatic guidance and planning functions.

5.2.40 Many major European airports were in the process of implementing basic surveillance functions for controllers (i.e. Level 1) and control functions for runways (i.e. Level 2). The routing and guidance functions (as well as complete surveillance and control functions) were the subject of further research and development.

5.2.41 During 2006 the main activities of Eurocontrol and the EC projects would be:

- completion of validation (i.e. operational trials) and consolidation of the results from both projects;
- finalisation of generic human factors and business cases;
- update of all requirements documentation (in accordance with validation results);
- identification of training requirements and guidance for controllers;
- development of an 'implementation package' for use by stakeholders;
- development of formal proposals to update ICAO documentation (i.e. Doc 7030 and Doc 9830).

5.2.42 It was agreed that proposals for updating ICAO material relating to A-SMGCS should initially be limited to the ICAO A-SMGCS Manual (Doc 9830) and the European Regional Supplementary Procedures (Doc. 7030). In support of Strategic Objectives A – *Safety* and D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/25 - ICAO documentation for A-SMGCS

That, Eurocontrol and the European Commission develop formal proposals to update the Advanced Surface Movement Guidance and Control Systems (A-SMGCS) manual (ICAO Doc 9830) and to amend the *Regional Supplementary Procedures* (SUPPS) (Doc 7030) to include provisions for A-SMGCS.

EANPG Conclusion 47/26 - Uniformity in A-SMGCS developments

That, the Regional Director inform all ICAO Regional Offices of the European A-SMGCS developments in order to ensure that any divergence in developments can be addressed, in particular with respect to the use of SSR Mode S on the ground.

5.3 Meteorology

Transition from Traditional Alphanumeric Codes to Binary Universal Format

5.3.1 The Group noted that the global plan for the migration to the use of BUFR-coded OPMET messages applies to the exchange of a limited set of OPMET data in BUFR between International OPMET data banks and, subsequently, between States.

The group raised the following issues:

(i) Many States file differences in respect of ICAO Annex 3 provisions concerned with METAR/SPECI, TAF and SIGMET; this situation is not expected to change in the foreseeable future. However, this will cause serious difficulties in the international environment when encoding and decoding between BUFR and TAC .

(ii) METAR/SPECI, TAF and SIGMET templates contain recommended practices that States may or may not choose to apply. However, such provisions cause difficulties when encoding and decoding between BUFR and TAC.

5.3.2 As a result of the above, serious concern was expressed over the additional risks to safety posed by the use of BUFR-coded OPMET messages. BUFR-coded OPMET messages require adherence to rigid formats and units of measurement. However, States use a variety of formats and units of measurement, as described within Annex 3 templates, or alternatively, file a difference and use other units of measurement. Therefore, the integrity of the original information may not be maintained following a process of encode/decode, and the conversion process could lead to a risk to safety. Additionally, it was noted that the implementation of changes to BUFR tables and associated conversion to TAC would need to be simultaneously co-ordinated on a global basis. It was noted that all these issues are being addressed by the appropriate expert teams of the World Meteorological Organization Commission for Basic Systems (WMO CBS), in close coordination with ICAO.

5.3.3 Furthermore the Group considered that there may be significant costs maintaining the BUFR tables and associated code conversion software, particularly in compliance with new safety requirement in Europe, for example Eurocontrol Safety Regulatory Requirement (ESARR 6).

5.3.4 Work undertaken in the EUR Region has identified very substantial technical, operational and safety issues that would need to be addressed in order to implement the WMO Table-driven codes requirement for the aviation community to migrate from TAC to BUFR-coded OPMET messages. The technical issues are the requirement to replace the entire aeronautical fixed network and every terminal used to present OPMET information. Although the future aeronautical telecommunications network (ATN) would provide the necessary network capability, it was not expected to be completed within the transition period. The operational and safety issues elaborated in the above paragraphs. This raised questions about the mechanism in place between ICAO and the WMO, which seemed to have some deficiencies when dealing with issues such as BUFR-coded OPMET messages, in particular the impact of WMO decisions on the whole aviation community. Consequently in support of Strategic Objective A – *Safety* and D - *Efficiency* the Group agreed to the following:

EANPG Conclusion 47/27- Review of the transition to BUFR

That ICAO:

a) consider a review of the transition from TAC to BUFR-coded OPMET messages in particular with respect to the possibility of reducing the negative impact on the aviation community; and

b) bring the BUFR code issue and in particular its related safety issues to the consideration of the relevant WMO bodies.

EANPG Conclusion 47/28 - Consideration of aviation issues in WMO decisions

That ICAO ensure through continued close coordination with the WMO Secretariat that future WMO decisions continue to take full account of all the relevant aviation issues.

Volcanic ash

5.3.5 The sequence of events during the eruption of the Grimsvötn volcano in Iceland on 1 November 2004, very quickly became an aviation hazard in airspace used in the NAT and EUR Regions, due to the extensive dispersion of the volcanic ash cloud. Of particular interest were lessons learned related to the dissemination of Volcanic Ash Advisories, SIGMETs and NOTAMS as well as their interpretation by users, in particular ATM service providers.

5.3.6 Even though this eruption was comparatively weak, the Volcanic Ash Advisory Centres (VAACs) London and Toulouse were concerned about the lack of response from the majority of the ATM community and the potential impact on safety.

5.3.7 This eruption served as a catalyst to bring together States, international organisations and users to try to resolve issues of common interest. As a result an ad hoc Working Group and a Task Force on Volcanic Ash had been established to review the related procedures and to develop an ATM Contingency Plan for the EUR Region. The NAT SPG/41 had formulated Conclusion 41/12 calling for the International Airways Volcano Watch Operations Group (IAVWOPSG) to consider a review of recommendations related to the global provisions for the international airways volcano watch (IAVW). It was agreed that the NAT SPG would act on behalf of the EUR/NAT Regions to bring these issues to the attention of the IAVWOPSG.

5.3.8 As a result, the second meeting of the IAVWOPSG addressed the issues related to Conclusion 41/12 as follows:

a) concerning the observation of ash cloud, during the Grimsvötn eruption in Iceland, the extent of the ash cloud had been almost entirely based on estimation, therefore, to cater for such cases, the group agreed that this element could also be based on an estimation;

b) regarding the areas of responsibility of VAACs, VAAC Toulouse had kindly offered to monitor the uncovered area to the north-east of the current Toulouse area of responsibility; so with the extension of the areas of responsibility of VAACs Toulouse and London, the IAVW had reached coverage that could be considered sufficient for the time being;

c) with respect to the large number of lengthy SIGMET messages, the group noted that since volcanic ash advisories were fully implemented by VAACs and that they contained the same information as the outlook part of the SIGMET, the group agreed to delete the outlook part of the SIGMET which would alleviate the problem;

d) the group agreed to change the responsibility of the VAACs in order to authorise them to issue volcanic ash SIGMET for all States in their area of responsibility;

e) the group agreed to allow a single volcanic ash SIGMET to be issued for an ash cloud that covers multiple FIRs;

f) the group agreed to consider the usefulness of ASHTAM for volcanic ash activity;

g) the group agreed to recommend all VAACs to participate in exercises of regionally agreed ATM volcanic ash contingency plans; and

h) the group agreed to merge guidance material in one document in order to avoid any inconsistencies between the *Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds* (Doc 9691) and the *Handbook on the International Airways Volcano Watch (IAVW) – Operational Procedures and Contact List* (Doc 9766).

Development of a European Region ATM Volcanic Ash Contingency Plan

5.3.9 The Group was informed that the Volcanic Ash Task Force had developed an ATM Volcanic Ash Contingency Plan, which had been endorsed by the COG. The contingency plan would be kept under review by the COG and updated from time to time based on the outcome of the exercises mentioned below.

Contingency plan exercises

5.3.10 In order to ensure the smooth implementation of the ATM volcanic ash contingency plan in case of an actual volcanic eruption, it was recommended that VAACs London and Toulouse, with the assistance of air navigation service providers, MWOs, ATFM units and operators carry out these exercises twice a year.

EUR volcanic ash SIGMET test

5.3.11 The Group was informed that some problems continued to be encountered concerning the headers for volcanic ash SIGMETs. This and other shortcomings clearly showed the need for further tests and the difficulty to maintain seldom used procedures. The tests would be initiated by the issuing of VAAs from the VAACs London and Toulouse and be carried out twice a year. The first test would be undertaken in February 2006. The results would be assessed and an action plan formulated to further improve the volcanic ash SIGMET procedures. In support of Strategic Objective A- *Safety* and D – *Efficiency*, the Group agreed to the following:

EANPG Conclusion 47/29 - EUR volcanic ash contingency plan test

That:

a) the Regional Director issue a State letter to review the MET and ATS procedures to raise the awareness of the volcanic ash problem;

b) invite Volcanic Ash Advisory Centres (VAACs) London and Toulouse to carry out tests twice a year on volcanic ash SIGMETs; and

c) the EANPG Programme Coordinating Group (COG) monitor the results of the tests and take appropriate action.

Distribution of volcanic ash SIGMETs

5.3.12 The Group was informed of the problem that occurred regarding the distribution of volcanic ash SIGMETs to VAACs outside the EUR Region. In order to mitigate this problem it was proposed that the addressing used should be that defined in the EUR ANP FASID Table MET 2B. To carry out this task it was suggested to amend paragraph 4.4.1 c) of the IAVW Handbook. To ensure that VAACs do not get the erroneous impression that graphical data can be transmitted over the AFTN, it was suggested that paragraph 4.5.1 c) be amended as well. In support of Strategic Objectives A - *Safety*, and D - *Efficiency*, the Group agreed to the following:

EANPG Conclusion 47/30 - Amendment of the IAVW handbook

That the International Airways Volcano Watch Operations Group consider to review the IAVW Handbook to bring it in line with the current EUR provisions as far as paragraphs 4.4.1 c) and 4.5.1. c) are concerned.

EUR Operational Meteorological Information (OPMET) Data Management Handbook

5.3.13 The purpose of the EUR OPMET Data Management Handbook is to be the main guidance material aimed at providing detailed procedures for OPMET exchange in the EUR Region under the EUR OPMET schemes for OPMET data users. The Handbook defines the responsibilities and procedures to be followed by the Meteorological Operational Telecommunications Network Europe (MOTNE) centres, as well as the content and format of the OPMET bulletins. ICAO would publish the Handbook on the ICAO EUR/NAT Web-site.

EANPG Conclusion 47/31 - EUR OPMET data management handbook

That:

a) ICAO publish the EUR OPMET Data Management Handbook on the ICAO EUR/NAT web site; and

b) States in the EUR Region be invited to review the operational procedures for OPMET exchange.

Low Level Temperature Inversion

5.3.14 The Group agreed that low-level temperature inversion (LLTI) had a detrimental effect on aircraft performance during take off and landing. For the reporting of LLTI two possibilities exist: one as a specific warning similar to a wind shear warning, and the other as supplementary information in the local MET report and/or in the METAR. Consequently the EANPG agreed on the following:

EANPG Conclusion 47/32 - Low level temperature inversion

That, ICAO consider amending Annex 3 to include the low level temperature inversion information, as this was identified as a meteorological related safety hazard at aerodromes.

Prevailing Visibility

5.3.15 The Group noted concern on the interpretation of prevailing visibility and of possible shortcomings in the definition and in the reporting procedures. In particular two problems had been identified and discussed:

a) the need to be more precise in the 'lowest visibility as less than 50 percent of the prevailing visibility'; and

b) the additional requirement to report the lowest visibility in the METAR/SPECI supplementary to the prevailing visibility when less than 5000 metres at aerodromes with mixed Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) operations.

5.3.16 In relation to the first issue, this already had been addressed by the Aerodrome Meteorological Observing systems Study Group (AMOSSG) and the corresponding proposal resolving this issue would be included in the draft Amendment 74 to Annex 3.

5.3.17 The second issue related to the introduction of the prevailing visibility in METAR, which was only regulated by a recommendation. As some States would not implement this recommendation, the result would be a lack of clarity, since the user cannot determine whether the reported visibility in any METAR is prevailing visibility or a minimum visibility.

5.3.18 The Group agreed that in Annex 2, the visibility concepts were not completely consistent, with those in Annex 3. Therefore it was agreed that the relation between "ground visibility" and "prevailing visibility", should be explained in Annex 2 and in support of Strategic Objective –A- *Safety* and D- *Efficiency*, the Group agreed to the following conclusion:

EANPG Conclusion 47/33 - Prevailing visibility and lowest visibility

That ICAO consider:

a) reviewing the criteria for reporting of minimum visibility when the minimum visibility is less than 5000 metres to meet the requirements at aerodromes with mixed IFR and VFR operations; and

b) harmonising Annex 2 and Annex 3 provisions on the subject of visibility.

Reporting steps of low cloud base in local routine and special reports

5.3.19 The Group noted that at the Joint Eurocontrol/ICAO Workshop on low visibility procedures (LVP), a need had been identified to report the height of cloud base and vertical visibility in increments of 50ft below 300ft in local routine and special reports at aerodromes where LVP were in use. The Group was informed that existing ceilometers were capable of this degree of resolution.

5.3.20 In addition to the above, there were concerns indicating that the location of the necessary sensors be defined in a precise manner in order to standardise not only the reading but to make them consistent from aerodrome to aerodrome. Such an action would take care of unnecessary missed approaches because of possible misunderstandings connected with the dissemination of such information. In support of Strategic Objective A – *Safety* and D- *Efficiency*, the Group agreed to the following:

EANPG Conclusion 47/34 - Reporting increments of low cloud base

That ICAO consider amending Annex 3 concerning reporting of cloud base and vertical visibility values up to 300 feet in steps of 50 feet or less in local routine and special reports at aerodromes where low visibility procedures (LVP) are in use.

Wind reporting at aerodromes

5.3.21 The Group was informed that wind measurement report in METAR/SPECI and in local routine and special report is provided in degrees true and that the same information transposed in Automatic Terminal Information Service (ATIS) being disseminated in degrees magnetic. This constituted an inconsistency likely to create a safety hazard.

5.3.22 The Group agreed that this situation should be reviewed to determine the appropriate action to be undertaken and in support of Strategic Objectives A - *Safety* and D - *Efficiency* the Group agreed to the following:

EANPG Conclusion 47/35 - Wind reporting in ATIS messages

That ICAO consider a review of the global provisions for indication of surface wind direction in Automatic Terminal Information Service (ATIS) messages, with a view to determine whether the inconsistency is a safety issue that should be resolved.

ICAO SARPs in relation to reporting severe meteorological conditions

5.3.23 The Group considered the various aspects and consequences of a severe weather related event reported by France. It was noted that this event was the conjunction of various aggravating factors involving MET and ATS. The MET service to ATS during this event, provided in full accordance with ICAO SARPs, did not prevent a serious safety case.

5.3.24 The Group noted that several States had already implemented at national level modern meteorological tools such as weather radar, lightning detection and /or satellite pictures in view of the need to deliver relevant MET information to ATS. The Group considered that an analysis of the existing systems would be a good basis for the development of ICAO SARPs and guidelines to improve safety, efficiency and regularity of the traffic in case of such severe weather related events.

5.3.25 The Group considered this as a safety related issue and decided to include an associated task in the work program of the METAOP and agreed on the urgent need to get better guidance from ICAO for providing MET support by ATS. In support of Strategic Objective A *Safety* and D- *Efficiency* the Group agreed to the following:

EANPG Conclusion 47/36 - ICAO SARPS in relation to reporting severe meteorological conditions

That, in view of the associated safety implications, ICAO consider a review of the provisions for meteorological support to ATS during severe meteorological conditions.

Implementation of meteorological services in the Eastern part of the EUR Region

5.3.26 The Group was informed of the serious difficulties in several States concerning implementation of the ICAO/WMO provisions for observations at aerodromes. In support of Strategic Objective A - *Safety* and D - *Efficiency*, the Group agreed as follows:

EANPG Conclusion 47/37 - Workshop on meteorological observations at aerodromes

That ICAO invite WMO to arrange, in coordination with ICAO, a workshop to support the implementation of provisions for observations at aerodromes in the Eastern part of the EUR Region.

5.4 Aeronautical Information Service

Implementation of AIS/MAP services in the Eastern part of the EUR Region

5.4.1 The Group was apprised of the outcome of the tenth meeting of ICAO Project Team on AIS/MAP (COG/AIS/MAP/10), which in accordance with its work programme, reviewed the status of

implementation of AIS/MAP requirements in the Eastern Part of the EUR Region. Special attention has been given to the discussion of issues related to AIS automation and Quality Management System.

5.4.2 The meeting was briefed on EAD developments and operational experience. It was also appraised of the progress made by Eurocontrol in the development of eAIP. The necessity of application of uniform Document Type Definition (DTD), during electronic AIP development by the States of the Region as well as the development of necessary specifications and clear provisions related to the eAIP content, structure, and format, taking into consideration the intention of some States having already produced the eAIP to completely stop the AIP distribution in paper form in the nearest future, was highlighted. The question concerning the legal eAIP status and ICAO position on this matter was also repeatedly raised during the meeting.

5.4.3 Based on the foregoing the Group agreed that in support of Strategic Objective A- *Safety*, on the following:

EANPG Conclusion 47/38 – Electronic AIP (eAIP)

That, in order to prevent proliferation of eAIP formats, ICAO consider developing necessary specifications and clear provisions related to the eAIP content, structure, and format (PDF or HTML format, etc), taking into consideration the eAIP specification produced by Eurocontrol and the intention of some States having already produced the eAIP to completely stop AIP distribution in paper form in the nearest future.

5.4.4 The meeting recalled that as a follow-up to the EANPG Conclusion 46/52, the EUR/NAT Office carried out a survey in 2005 related to the update of the publication of certain charts in the AIP. In view of the possible safety implications, all EUR States were invited to review the charts published in their AIPs to ensure that they were free from mistakes and complied with all ICAO provisions. In this context, the Group agreed that a Task Force composed of some of the experts of the COG/AIS/MAP PT be mandated to check the conformity of the procedures published by CIS States on SID, STAR and Instrument Approach Charts to the ICAO requirements (PANS-OPS Doc 8168 and Annex 4).

5.4.5 The Group was informed also that some discrepancies exist in ICAO Annex 4 and Doc 8697 i.e.: divergences on application of the same parameters for various types of charts inside Annex 4 itself or between Annex 4 and Doc 8697. The meeting felt that one of the reasons for such discrepancies is the long delay observed for the publication of Amendments/new Edition of Doc 8697, which has not been updated since 1992. Accordingly, the meeting invited ICAO to review the charting symbols taking into consideration their psycho-physiological perception and graphical visualization. The increased information being displayed on the charts and the problems of their reading by users have also to be considered. Accordingly, the Group agreed, in support of Strategic Objective A – *Safety*, on the following:

EANPG Conclusion 47/39 – Review of Annex 4 and the aeronautical chart manual (Doc 8697)

That ICAO consider the review/amendment of Annex 4 and the Aeronautical Chart Manual (Doc 8697) concerning charting symbols to ensure that both documents are harmonized and current inconsistencies eliminated.

5.4.6 The Group reviewed the current status of implementation of Quality Management Systems (QMS) in the States of the Eastern part of the ICAO European Region and the noted the progress made by some States of this part of the EUR Region in the process of ISO 9001-2000 certification. However, the Group taking note of the relatively low level of implementation of QMS in the CIS States, and considering the importance of the subject, and in support of Strategic Objective A – *Safety* agreed that a Special

Implementation Project (SIP) be carried out by ICAO with a view to assist States in the Eastern part of the EUR Region, to implement QMS within their AISs .

EANPG Conclusion 47/40 - SIP on QMS for AIS/MAP services in the Eastern part of the EUR Region

That ICAO consider carrying out a Special Implementation Project (SIP) for the States of the Eastern part of the EUR Region with a view to assist States to implement Quality Management Systems (QMS) within their AISs.

Electronic Terrain and Obstacle Data (Amendment 33 to Annex 15)

5.4.7 The Group recalled that Amendment 33 to Annex 15 introduced, inter alia, new provisions concerning: electronic terrain and obstacle data (eTOD) with two different applicability dates:

a) 20 November 2008 for those parts of the amendment related to the availability of terrain and obstacle data in accordance with Area 1 specifications and for the availability of terrain data in accordance with Area 4 specifications; and

b) 18 November 2010 for those parts of the amendment related to the availability of terrain and obstacle data in accordance with Area 2 and Area 3 specifications.

5.4.8 The Group noted that some difficulties related to the implementation of Amendment 33 requirements, within the specified time-schedule, have been raised by some States. With a view to expedite the process of implementation of Amendment 33 requirements, the identification of recommended data formats, review of cross-border issues, clarification of terrain and obstacle data integrity requirements, initial assessment of liability and cost recovery issues, etc, are required. In addition, the need for harmonization and coordination of the implementation activities on a regional basis was requested.

5.4.9 Based on the foregoing the Group in support of Strategic Objective A- *Safety* agreed to the following:

EANPG Conclusion 47/41 – Electronic Terrain and Obstacle Data (eTOD)

That:

a) ICAO provide further guidance material as to exactly what information is required, in what format and from which sources;

b) States communicate their plans related to the implementation of eTOD to the Regional Office, as soon as possible, specifying clearly if they would encounter any difficulty to comply with the dates of applicability; and

c) on the basis of the outcome of b), the ICAO Regional Director consider suitable action on implementation of eTOD requirements.

Proposal to Amend the ICAO AIS Manual Doc 8126

5.4.10 The Group noted with satisfaction the extensive work carried out by Eurocontrol related to the review of the NOTAM Selection Criteria (NSC) contained in Doc 8126 and Doc 8400 and the Operating Procedures for AIS Dynamic Data (OPADD) and agreed to submit the proposed amendments to ICAO for action as appropriate. The Group noted in this regard that the proposed amendments concerned primarily

Guidance Materials, contained in the ICAO AIS Manual (Doc 8126) and some consequential minor changes to ICAO Doc 8400 (Abbreviations and Codes) and Annex 15. The Group agreed, in support of Strategic Objective A - *Safety* on the following:

EANPG Conclusion 47/42 – Proposal for amendments of ICAO documentation

That the ICAO Regional Director, on behalf of the EANPG, submit the draft proposal for amendment to Document 8126 regarding the NOTAM selection criteria and operating procedure for AIS dynamic data and the consequential changes to Annex 15 and Document 8400.

5.5 Language Proficiency Requirements

5.5.1 The Group was informed that in order to facilitate the implementation by States of the new language proficiency requirements for pilots and air traffic controllers (Annex 1, 6, 11 and PANS-ATM, Doc 4444 refer), the ICAO Regional Director organised special seminars/workshops. One Language Proficiency Implementation seminar/workshop was conducted in Kyiv, Ukraine, in April 2005 and the joint ICAO – Eurocontrol European Seminar on Language Proficiency for Aeronautical Communications was held in Brussels, Belgium, in the Eurocontrol premises in October 2005.

5.5.2 One of the outcomes of both seminars was a request from States for further assistance in the implementation of these new requirements. In this respect a Recommended Action Plan was developed to assist States to meet the ICAO language proficiency requirements by 5 March 2008.

5.5.3 The Action Plan was divided into two phases: Phase 1 covered the period up to 5 March 2008 and dealt with actions required to reach Level 4 proficiency, and Phase 2 proposed actions for the maintenance of Level 4 proficiency or higher. The Plan is at the **Appendix C** to this Report.

5.5.4 This Action Plan should be regularly up-dated by ICAO as required and would assist States to timely meet the new ICAO language proficiency requirements as well as to maintain acquired language proficiency over time. The Action Plan would be published on the ICAO EUR/NAT Office Web-site at http://www.paris.icao.int.

5.5.5 The Group was informed about the English Language Proficiency for Aeronautical Communication (ELPAC) test which was under development by Eurocontrol for operational air traffic controllers. The test should meet the ICAO Level 4 language proficiency requirements and would be available for implementation in July 2007. The Group was also informed by the European Commission about the language requirements in the Community air traffic controller directive.

5.5.6 Taking into account a limited time period left before March 2008 compared with a number of actions still to be undertaken by States in this respect, IFATCA highlighted the importance and urgency of reinforcing efforts by States in taking actions to achieve the timely implementation of the related ICAO Standards. Thus, the Group, in support of the Strategic Objective A - *Safety* agreed on the following:

EANPG Conclusion 47/43 - Implementation of the ICAO language proficiency requirements

That:

a) States:

i) use the Action Plan as guidance material for the implementation of the ICAO language proficiency requirements and regularly report the progress to the EANPG; and

ii) take all appropriate actions to achieve the timely implementation of the ICAO language proficiency requirements;

b) ICAO:

i) regularly review and update the Action Plan, if and when required; and

ii) continue to provide assistance to States in implementing the ICAO language proficiency requirements.

6. MONITORING

6.1 The EUR Region RVSM safety monitoring report

6.1.1 The Group was presented with the EUR RVSM safety monitoring report for 2005, which had been prepared by Eurocontrol in the role of the European Regional Monitoring Agency (RMA), which it performs on behalf of the EANPG. The main changes with respect to previous years was that new operational error data had been obtained for an 18-month period and a second refined Collision Risk Model (CRM) had been applied for the estimation of operational risk.

6.1.2 In accordance with its European RMA role, Eurocontrol was not only assessing safety within the RVSM airspace on an annual basis, but was also funding the continuous monitoring of aircraft height-keeping performance. The product of this monitoring programme was an essential element in the overall monitoring programme to satisfy the requirement that a small technical risk value was being maintained.

6.1.3 The Group noted that the report was broken down into the four principal safety objectives, which had been endorsed by the EANPG (EANPG Conclusion 42/23 refers). It was recalled that meeting these safety objectives represented the necessary and sufficient condition to assert that the system was safe. The Group noted that each of the four safety objectives were still valid and, in so far as available data permitted, the four safety objectives continued to be met, albeit with some concern in certain areas. It was also recalled that the implementation of RVSM in the EUR Region supported Strategic Objectives D and C – Efficiency and Environment respectively, as it provided a significant enhancement in capacity therefore allowing aircraft to operate at more economic flight levels with the concomitant positive effects on the environment.

6.2 The EUR Region RVSM safety monitoring report – Compliance with the safety objectives

Safety Objective #1 – the vertical collision risk in RVSM airspace due solely to technical height-keeping performance meets the ICAO TLS of 2.5 x 10^{-9} fatal accidents per flight hour.

6.2.1 The Group was informed that the computed vertical collision risk due to technical height-keeping performance (0.13 x 10^{-9}) met the Technical TLS of 2.5 x 10^{-9} fatal accidents per flight hour. This amounted to four times greater than the risk estimated in the 2004 safety monitoring report. Such an increase in the vertical collision risk due to technical height keeping performance was due to the increase in the probability of vertical overlap; this is further explained in the following paragraphs.

6.2.2 In accordance with the ICAO Guidance Material, the estimate for the probability of vertical overlap, or the probability of two aircraft losing procedural vertical separation of 1000 ft, should not be greater than $1.7x10^{-8}$. Based on currently observed Altimetry System Error (ASE) and typical Assigned Altitude Deviation (AAD) reports, the probability of vertical overlap was calculated to be $1.96x10^{-8}$, which did not satisfy the Global System Performance Specification. This was the first time that this situation arose. The Group noted that a detailed investigation had been carried out to determine the cause; but there were still

a number of issues that needed to be properly addressed and discussed with other RMAs prior to coming up with final conclusions.

6.2.3 The Group was informed that one of the contributing factors to the increase in the estimation of the probability of vertical overlap was the increased use of monitoring data from the Strumble Height Monitoring Unit (STU HMU), which is the main monitoring facility for the NAT Region. Therefore, until the different issues related to the measurements were clarified in coordination with the NAT Central Monitoring Agency (CMA), it had been decided to use the estimated value of the probability of vertical overlap of 1.96 x 10^{-8}, which had been determined by combining data from the EUR HMUs (Geneva, Linz and Nattenheim) and the STU HMU, when calculating the overall technical risk for the EUR Region.

6.2.4 In addition, it was noted that most monitoring classifications had shown compliance with technical height keeping requirements and that the quality of the height-monitoring data was satisfactory; more than 90% of the flights were made by operators that met their monitoring targets. The quality of the data supplied, which was used to calculate technical risk, provided the necessary assurance that Safety Objective # 1 was being met.

Safety Objective #2 – the risk of a mid-air collision in the vertical dimension in RVSM airspace meets the ICAO overall TLS of 5 x 10^{-9} fatal accidents per flight hour.

6.2.5 The calculated overall vertical collision risk for operational errors of 2.49 x 10^{-9} was within the ICAO Overall TLS of 5 x 10^{-9} fatal accidents per flight hour. It was pointed out that the estimations of risk had been calculated using the same CRM applied in the 2004 safety monitoring report as well as a refined Model, called the Conditional Model. Despite the differences of both models, results were quite similar.

6.2.6 The Group recalled that since 1 April 2000, Eurocontrol has collected Altitude Deviation Reports (ADR) from the participating States in order to assess the operational risk within RVSM airspace. The fact that the operational error data has not always been available from a sufficient number of States and on a continuous basis has increased the uncertainty in the error rate used in the analysis in the past. Because of the information campaigns that have been carried out, an increasing number of reports from States have been obtained from January 2004 until June 2005. Although the reporting period was lower than two years, it was considered sufficient to provide an accurate and realistic picture of the operational problems in the RVSM airspace for the 12 reporting States. Finally, the Group was informed that the information analysed provided sufficient confidence that Safety Objective # 2 was being met in those States that had reported operational errors.

6.2.7 The Group agreed that efforts should be continued to collect more ADRs for future reports and that efforts should continue to implement the electronic collection, storage and retrieval of the information provided in the ADRs (EANPG Decision 46/47 b) refers). It was also agreed that all ADRs occurring in RVSM airspace, regardless of whether they were RVSM induced errors or not, should be assessed.

6.2.8 The Group noted that the RMA would continue applying the current CRM and the Conditional Model to the operational error data, as this should provide additional evidence on the validity of the operational risk estimations.

6.2.9 In addition, estimations of the overall vertical risk for the EUR RVSM using traffic growth forecasts had confirmed that the Overall TLS would continue to be met in 2010. Nevertheless, this was subject of concern because, despite meeting the Overall TLS, the overall vertical risk was becoming too close to the Overall TLS. This matter would be kept under surveillance in order to detect any early trends that may require corrective action. In this respect, additional estimations of the overall vertical risk for the EUR RVSM over the years would provide greater confidence in the forecast for 2010 and beyond. As

regards corrective action to be taken as a result of the analysis, it was noted that a mechanism was being defined to determine what mitigation was required and that the COG would be associated with this task.

Safety Objective #3 – the continuous operation of RVSM has not adversely affected the overall risk of en-route mid-air collision.

6.2.10 Based on the current available information, the occurrence frequencies for technical errors and Airborne Collision Avoidance System (ACAS) nuisance Resolution Advisory (RA) reports had decreased. However, an increase in the occurrence frequency for ATC and pilot errors had been observed. This was believed to be a consequence of the decision to include in the analysis all the altitude deviation reports regardless of whether they were RVSM-induced or not (paragraph 6.2.7 above refers). Nevertheless, this issue would continue to be investigated.

6.2.11 The Group was informed that, in general, it could be concluded that RVSM had not adversely affected and would not adversely affect the overall vertical risk of en-route mid-air collision for those reporting States. However, as is the case for safety objective # 2, such a statement was difficult to be validated for the overall European RVSM airspace with an appropriate level of confidence, because there was still a considerable number of States that were not reporting operational errors. Nevertheless, it was considered that Safety Objective # 3 was being met.

6.2.12 The Group noted that, in order to provide a more realistic picture of today's operational errors, operational data would continue to be collected and a new estimation of the occurrence frequency would consolidate the values for the post-implementation scenario, validate the occurrence frequency trend over the years and identify potential areas of improvement. It was noted that the COG would monitor this important task and the results would be reported to the EANPG when available.

Safety Objective #4 – all issues that were active when the 2004 Safety Monitoring Report was issued had been addressed satisfactorily.

6.2.13 The Group noted with appreciation that all of the outstanding issues, which existed when the 2004 RVSM Safety Monitoring Report had been presented, had either been resolved or were ongoing within defined programmes. Therefore, Safety Objective # 4 was being met.

6.3 The EUR Region RVSM safety monitoring report - Conclusion

6.3.1 It was agreed that the operational error data collection be continued with the aim of allowing a comparison and an assessment of the operational vertical risk trend. The Group also agreed that States that were not providing ADRs should do so in order to improve the statistical confidence that RVSM had not adversely affected the overall risk for the entire EUR Region. This should also provide the necessary data to define the expected evolution of risk beyond 2010.

6.3.2 In concluding its review of the RVSM safety monitoring report, the Group noted that the risk assessment results obtained from the available information and considering the operational error data received from 12 States, it was agreed that the operation of RVSM in EUR airspace met the four safety objectives set by EANPG/42. However, in the light of the concerns and shortcomings raised, confidence in current operational performance could not be fully guaranteed at a high statistical level of certainty throughout the entire RUR RVSM airspace because only 12 of 41 States had reported operational errors. The Group agreed that the report fully supported the Strategic Objective A – Safety as it provided a vital overview of the level of risk in RVSM airspace and provided a tool to identify and mitigate hazards as they were identified.

6.3.3 Finally, the Group recalled its previous position that long-term monitoring activities were necessary to ensure that aircraft were performing according to the specifications and, in case of problems,

these were identified and follow-up action was taken in order to solve potential safety issues. The Group noted that this matter had been included on the agenda of the forthcoming All Planning and Implementation Regional Groups (ALLPIRG) meeting planned for the end of March 2006. The value of co-ordinating with other RMAs was highlighted as could be seen from the ongoing work with the NAT CMA regarding the calculation of the probability of vertical overlap.

EANPG Conclusion 47/44 – Need for States to provide data on altitude deviations

That all States that have implemented Reduced Vertical Separation Minimum (RVSM), conform to the requirement to provide the European RVSM Regional Monitoring Agency (RMA) with reports of all instances of altitude deviations.

EANPG Decision 47/45 – Status of the EUR RVSM safety objectives

That the operation of Reduced Vertical Separation Minimum (RVSM) within the airspace of the 12 reporting States in the EUR Region between January 2004 and June 2005 met the agreed safety objectives.

EANPG Decision 47/46 – Activities of the European RMA

That the European Regional Monitoring Agency (RMA) continue:

a) to collect more RVSM operational error data using Altitude Deviation Reports (ADR) in order to:

i) monitor the ADR occurrence frequency to gain more statistical confidence in the results;

ii) regularly review the consistency and reliability of the ADR occurrence frequency with the aim of extending the area of applicability of the data set;

iii) monitor the trend related to the number of incidents in RVSM airspace;

iv) finalise the application for collecting operational data electronically; and

v) support additional overall risk estimations to determine the expected evolution of the risk over the years in view to provide an accurate forecast of the overall risk in 2010 and beyond; and

b) to coordinate with other RMAs to determine the causes why the value of the estimate for the probability of vertical overlap was exceeded and the effect on the risk calculations;

c) to apply the Conditional Risk Model to the operational error data and compare results with current Collision Risk Model (CRM);

d) with the technical height-keeping analysis and follow-up process to ensure that all aircraft perform to the specifications and verify the performance for those classifications that have no data; and

e) with the studies on Altimetry System Error (ASE) stability.

7. DEFICIENCIES

Harmful Radio Interference

7.1 In July 2004, the Swiss air navigation service provider, Skyguide, reported harmful interference occurrences on a number of Airbus A-320 aircraft using VHF COM channel 135.985 MHz. This had the effect of making the frequency unusable.

7.2 The Swiss civil aviation authority and the Federal Office for Civil Aviation (FOCA) tried to achieve a mandatory requirement to retrofit all A-320 aircraft with the fix that had been developed by Airbus. Thus, FOCA sent a letter to the French DGAC asking for the publication of an airworthiness directive. DGAC replied that this was not possible because the problem had been classified as minor. This classification was based on the minimum equipment list requirement of two VHF COM transceivers and that the A-320 was equipped with three, with only one of them producing the harmful interference. The DGAC had published a DGAC Recommendation Bulletin concerning this problem, but conformance was not mandatory because there was no direct impact on the safety of the aircraft.

7.3 It was considered that apart from any safety considerations, in the frequency congested area of Europe, the total blocking of a frequency was an unacceptable situation. It was agreed that the ICAO deficiencies mechanism be used to progress the issue. In support of Strategic Objectives A – *Safety* and D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/47 – Harmful radio interference

That the ICAO deficiencies mechanism be used to address the harmful interference problem being transmitted from some Airbus A-320 aircraft.

Aviation Spectrum Planning Deficiencies

7.4 Adequate radio spectrum was an essential requirement for almost all aviation activities and any growth in the size or the requirements of the aviation industry increases its demand for radio facilities. This demand could be addressed by either the aviation community making more efficient use of the available spectrum, or by the allocation of more spectrum for aviation use by the ITU, or a combination of both. Whatever the solution, it would involve long lead times. With the growing scarcity of radio spectrum and the total dependency of the aviation community on the availability of adequate spectrum, it was essential that timely planning decisions be made if a major crisis situation was to be avoided. **Appendix D** provided a graphical presentation of the aviation spectrum issues, showing clearly there are 7 bands with critical capacity shortfalls and 6 bands that require urgent attention. It also gave a clear outline the critical nature of the radio spectrum situation and the need to take more effective planning action if a crisis was to be avoided.

7.5 The most urgent aviation spectrum issue in the European Region was the shortage of VHF communications capacity. Plans for the implementation of reduced channel spacing (from 25 kHz to 8.33 kHz) were agreed in 1996. Implementation above flight level 245 commenced in nine of the central European States in 1999.

7.6 In 1996, when the initial implementation was being planned, the EANPG had identified that vertical expansion of 8.33 kHz airspace was likely to be required by 2003. The need for vertical expansion was deferred by the decision in 2000 to first expand 8.33 airspace horizontally to as many peripheral States as possible. The EANPG had maintained an ongoing effort to ensure timely action was taken to ensure sufficient progress in 8.33 kHz implementation to satisfy communication capacity demand. Despite the findings and Conclusions of the EANPG, the implementation programme had not caught up with the demand for channels.

7.7 The lack of adequate future aviation communications, navigation and surveillance systems planning makes effective spectrum planning impossible. At both the regional and the global level there are no clear future system requirements that give sufficient information for spectrum planning issues to be addressed. The current facility planning processes did not provide sufficient information to enable future spectrum planning. The main reason would seem to be that the issues go across a considerable number of aviation sectors and planning domains. This makes the necessary consolidated high level planning a very difficult exercise.

7.8 In the case of 8.33kHz channel spacing, implementation delays have been largely at a regional level. However the fundamental need was for adequate total spectrum forward planning at the global level. The initial indications were that 8.33 kHz would be a short term solution, but with no global progress on a future system with high capacity and spectrum efficiency, it seemed that full implementation was inevitable in Europe. In support of Strategic Objective D – *Efficiency*, the Group agreed as follows.

EANPG Conclusion 47/48 - Aviation spectrum planning deficiencies

That:

a) the ICAO Regional Director call a meeting of key regional entities involved in the planning and implementation of aviation systems that are related to radio spectrum, in order to identify the blockages to effective planning and implementation at the regional level and propose possible solutions, and

b) ICAO put greater emphasis at the highest levels of air navigation planning on the need for harmonised strategies and systems, that enables a global approach to spectrum planning that covers all aviation operational environments, including those areas with the most stringent spectrum demands.

Implementation of WGS-84 in the CIS States

7.9 The Group was briefed on the current status of WGS-84 implementation in the CIS States and on the WGS-84 activities carried out during the period 2004-2005 in the Eastern part of the ICAO EUR region. Although WGS-84 implementation should have been completed since 1998, the meeting noted with concern that the States in the Eastern part of the ICAO EUR Region, have encountered certain difficulties related to WGS-84 implementation. The meeting recalled that Interstate Aviation Committee (IAC) had been invited by EANPG to coordinate the WGS-84 implementation in the CIS States by means of consulting, organisation of workshops on regular basis and regularly reporting the progress to the EANPG.

7.10 The Group recalled that the EANPG/46 meeting, considering the unsatisfactory level of implementation of WGS-84 in the CIS States developed Conclusion 46/42, which was followed by State Letter Ref.: T 2/13-05-0089.AIS sent by the ICAO EUR/NAT Office inviting States to undertake additional measures in order to eliminate current limitations in the publishing of WGS-84 coordinates and the completion of the transition process to the WGS-84 system.

7.11 The Group noted that the difficulties which impede CIS States to speed up and complete the implementation of WGS-84 are always the same. They could be classified into four categories:

a) adjustment of aviation law concerning WGS-84 implementation;

b) obtaining of the required WGS-84 coordinates/data;

c) application of the WGS-84 data for en-route/terminal instrument flight procedures design based on PANS-OPS criteria and requirements, and

d) publication of information/data in AIPs in accordance with the standards in Annex 4 and Annex 15.

7.12 Based on the information presented by IAC, slight progress has been observed in the WGS-84 implementation in the CIS States. Some of these States have adjusted their aviation law concerning WGS-84 implementation for air navigation. These States have been performing the surveying work to obtain WGS-84 data with required quality.

7.13 The Group noted that, after the comprehensive assessment of the current status of the WGS-84 implementation in the CIS States, the IAC concluded that:

a) The realisation of the WGS-84 Implementation Plans in the CIS States is restricted by the high volume of required work and lack of finance.

b) The CIS States will be able to fulfil the WGS-84 transition successfully only with the appropriate financial support and implementation of modern information technologies; and

c) To implement the WGS-84 in the CIS States as determined by EANPG/46, States needed additional support from ICAO.

7.14 Based on the above, the Group agreed that the ICAO EUR/NAT Office follow-up with those States who have not yet completed WGS-84 implementation and urge them to continue their efforts to eliminate current limitations impeding the publishing of WGS-84 coordinates with a view to complete the transition to WGS-84. In support of Strategic Objective A - *Safety*, the Group agreed on the following:

EANPG Conclusion 47/49 - Implementation of WGS-84

That, the Regional Director when preparing the Special Implementation Projects for 2006, consider the possibility of including a SIP for the CIS States in order to assist them in the implementation of the WGS-84.

Reporting form on air navigation deficiencies

7.15 On the basis of the deficiencies highlighted in the paragraphs above, the Group completed the reporting form on air navigation deficiencies for the European Region which is contained in **Appendix E**.

8. ANY OTHER BUSINESS

Aviation safety management courses

8.1 The Member for the Czech Republic provided information concerning three international activities that will be held in Prague in 2006. The first course "Aircraft Accident Prevention and Investigation" will take place between 27 March and 7 April 2006. The second course which will address "Ramp and Maintenance Safety " will take place from 20 to 24 March 2006. Finally, an International Aircraft Cabin Safety symposium will take place between 7 and 9 June 2006. More /detailed information on website: http://www.scsi-inc.com

EANPG work programme and the associated task list

8.2 The Group agreed to its work programme for 2006, as shown in the **Appendix F** to this Report.

EANPG next meeting

8.3 It was agreed that the EANPG/48 Meeting would be held from 28 November 2006 to 30 November 2006 in the ICAO European and North Atlantic Office.

APPENDIX A – LIST OF PARTICIPANTS

(Paragraph 0.2 refers)

CHAIRMAN
Mr Dirk NITSCHKE*

BALTIC STATES* (Estonia, Latvia, Lithuania)
Mr Maris CERNONOKS*

BELARUS *
Mr Aleksandr AKULENKA*
Mrs Tatiana PANACHEVNAYA

BENELUX * (Belgium, Netherlands, Luxembourg)

BELGIUM
Mr Roland MOINEAU*

NETHERLANDS
Mr Marinus De JONG

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(Armenia, Azerbaijan, Georgia)

ARMENIA
Mr Rafik BADALYAN
Mr Eduard PILOSYAN

AZERBAIJAN
Mr Bala MIRZAYEV

GEORGIA
Mr David GVENETADZE

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Mr Nicos NICOLAOU
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CZECH REPUBLIC *
Mr Ladislav MIKA*

FRANCE *
Mme Geneviève EYDALEINE*
Mr Denis LEMARCHAND
Mr Gilles FARTEK#
Mr Olivier MROWICKI
Mr Denis LAMBERGEON

GERMANY *
Mr Bernd RANDECKER
Mr Erland LORENZEN#

GREECE *
Mr Theodoros PASSAS*

HUNGARY
Mr Istvan MUDRA

IRELAND *
Mr Donie MOONEY*

ITALY *
Mr Pierluigi D'ALOIA*

NORDIC STATES *
(Denmark, Finland, Norway, Sweden)
Mr Jorma ALAKOSKI*

PORTUGAL *
Mr Artur VENTURA*
Mr Carlos MONTEIRO
Mr Abel PARAIBA

ROMANIA
Mr Bogdan BONDOR-NEGRARU
Mr Aurel MOATER
Mr Mihai NECULA
Mr Traian COMSA

RUSSIAN FEDERATION *
Mr Victor KRIVONOSOV*
Mr Alexey BUEVICH
Mrs Elena STEPANOVA
Mr Alexander POLYAKOV
Mr Anri VERESHCHAGIN

SERBIA AND MONTENEGRO
Mr Dragoljub TRGOVCEVIC
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Mr Ivan FERENCZ
Mr Miloslav DANIHELIK

* Member
\# part time

SPAIN *

Mr Jose Antonio RODEA
Mr Javier MARTINEZ

SWITZERLAND *

Mr Bernard SCHWENDIMANN

THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

Mr Toni PRGOMET

TUNISIA

Mr Mohamed Ali BEN ABDELSSALEM

UKRAINE *

Mr Viktor N. NASTASIENKO*
Mr Vitaliy BEZMAL
Mr Aleksiy PESTERNIKOV
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UNITED KINGDOM *

Mr Phil ROBERTS*
Mr Patrick GILES

UNITED STATES

Mr Gerald RICHARD

INTERNATIONAL ORGANISATIONS

ECAC

Mr Jude MARIADASSOU#

EUROCONTROL

Mr Istvan BOZSA
Mr Peter ALTY#
Mr Paul ADAMSON#
Ms Maria Isabel IZQUIERDO#
Mr Anders HALLGREN#
Mr Adrian ENRIGHT#

EUROPEAN COMMISSION

Mr Cesare BERNABEI
Mr Roberto SALVARANI#
Mr Filippo TOMASELLO#
Mr Alfonso ARROYO#

IAC

Mr Oleg K. ERMOLOV
Mr Alexander V. FILATOV

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Mr Cees GRESNIGT

IBAC

Mr Patrick EXPERTON

IFALPA

Mr Heinz FRÜHWIRTH

IFATCA

Mr Patrik PETERS

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* Member
# part time

APPENDIX B – DRAFT PROPOSAL TO AMEND ANNEX 10, VOL II ON TRANSMISSION OF NUMBERS IN RADIOTELEPHONY

(Paragraph 5.1.11 refers)

(Proposed changes are underlines and ~~strikethroughs~~)

5.2.1.4 Transmission of numbers in radiotelephony

5.2.1.4.1 Transmission of numbers

5.2.1.4.1.1 All numbers, except as prescribed in 5.2.1.4.1.2, shall be transmitted by pronouncing each digit separately.

Note.— The following examples illustrate the application of this procedure (see 5.2.1.4.3.1 for pronunciation).

……

flight levels	*transmitted as*
180 *~~200~~*	*flight level **one eight-zero*** *~~flight level **two zero zero**~~*

……

5.2.1.4.1.2 All numbers used in the transmission of altitude, flight levels, cloud height, visibility and runway visual range (RVR) information, which contain whole hundreds and whole thousands as well as numbers used in the transmission of transponder codes which contain whole thousands, shall be transmitted by pronouncing each digit in the number of hundreds or thousands followed by the word HUNDRED or THOUSAND as appropriate. Combinations of thousands and whole hundreds shall be transmitted by pronouncing each digit in the number of thousands followed by the word THOUSAND followed by the number of hundreds followed by the word HUNDRED.

Note.— The following examples illustrate the application of this procedure (see 5.2.1.4.3.1 for pronunciation).

……

flight levels	*transmitted as*
200	*flight level two hundred*
400	*flight level four hundred*

…….

transponder codes	transmitted as
2000	squawk two thousand
4000	squawk four thousand

APPENDIX C - IMPLEMENTING THE ICAO LANGUAGE PROFICIENCY REQUIREMENTS (RECOMMENDED ACTION PLAN)

(Paragraph 5.5.3 refers)

Note: State – national legal and/or regulatory authority responsible for adoption and implementation of ICAO Standards (Annex 1).

ANSP (Air Navigation Service Provider) – organization or entity responsible for the provision of air traffic services (Annex 11).

AO (Airline Operator) – airline or the company responsible for the flight operations (Annex 6).

N	ACTIVITY	RESPONSIBLE BODY /*DATE*	REMARKS
	Phase 1: Actions to reach Level 4 proficiency		
1.	Ensure all stakeholders (pilots, controllers, language teachers, regulators etc.) are familiar with the ICAO language proficiency requirements.	States, ANSPs, AOs. *As soon as possible in case States have failed to do it until now*	Conduct workshops, seminars, meetings at national and regional level.
2.	Adopt/incorporate the ICAO language proficiency requirements (Amendment 164 to Annex 1) into national legislation.	States *As soon as possible in case States have failed to adopt them until now*	
3.	Nominate contact person(s) within States, airlines and ANSPs to be responsible for coordination of matters at the national level dealing with the implementation of the ICAO language proficiency requirements.	States, ANSPs, AOs. *As soon as possible in case States have failed to do it until now*	
4.	Establish a plan to coordinate administrative and training matters (entry testing, number of personnel to be trained, training centres, duration of training, etc.).	States, ANSPs, AOs. *As soon as possible in case States have failed to do it until now*	
5	Develop/select test(s) to meet ICAO language proficiency requirements.	States, ANSPs, AOs. *As soon as possible*	Ensure test meets requirements of the ICAO Doc 9835. *See Note1 below the table*
6.	For the selected test(s): select and train personnel to administer, conduct and rate the test(s) • determine the minimum level of proficiency for testing personnel; • provide training in the specialist functions required of testing; and • establish a programme of accreditation for selected testing personnel.	States, ANSPs, AOs *As soon as possible once a test(s) has(have) been selected, but not later than 05 March 2008*	*See Note 2 and Note 3 below the table for desired profiles and requirements*
7.	Obtain certification and/or accreditation of selected test as "an acceptable means of compliance" from national supervisory authority (regulator/civil aviation authority).	States, ANSPs, AOs *As soon as possible once a test(s) has(have) been selected, but not later than 05 March 2008*	

N	ACTIVITY	RESPONSIBLE BODY /*DATE*	REMARKS
8.	Assess current language proficiency level of controllers and pilots, according to the ICAO rating scale.	States, ANSPs, AOs. *As soon as possible in case States have failed to do it until now*	Determine magnitude of problem, address individual training needs.
9.	Develop language training packages designed to close the gap between current language proficiency level and ICAO Level 4.	States, ANSPs, AOs, providers of language training. *As soon as possible in case States have failed to do it until now*	Training package includes: plan, syllabus, materials, methods. Language training should be considered in context of job. Note: performance below level 3 will require more general language teaching. Aviation specific language training should be introduced once the ICAO level 3 has been attained.
10.	Assess the financial implications needed to meet ICAO language proficiency requirements. Determine if assistance is required and how it might be obtained.	States, ANSPs, AOs. *As soon as possible in case States have failed to do it until now*	Refer to ICAO Doc 9835 chapter 1.3 for guidance on assistance with training programmes. *See Note 1 below the table*
11.	Identify social issues resulting from implementation of the ICAO language proficiency requirements, and prepare measures to resolve these issues.	States, ANSPs, Aos and social partners. *As soon as possible*	
12.	Familiarise pilots and controllers with the format of the test(s) and procedures for administration of the test.	ANSPs, AOs. *As soon as possible once the test has been selected.*	Organise briefings and make sample tests available for pilots and controllers.
13.	Develop language training package to maintain language proficiency and a schedule of language refresher training.	ANSPs, AOs. *In place before 05 March 2008*	Ensure that current Level 4 is not eroded (could be included in refresher training programmes)
14.	Review recruitment and selection procedures and consider a minimum of at least ICAO level 3 in language proficiency before entry to professional training programmes.	Training establishments, ANSPs, AOs. *Not later than 2007.*	
15.	Implement language awareness programmes to ensure that native and expert speakers of English communicate in a manner that is easily understandable to non-native speakers of English (proficient at ICAO Level 4).	States, AOs, ANSPs *Not later than 05 March 2008*	Applies equally where other languages are used in aeronautical communication
16.	Present preliminary reports to ICAO on progress achieved in preparing for implementation of ICAO language proficiency requirements.	States *2005, 2006, 2007.*	*Note: The relevant survey on the status of implementation of LP requirements is being developed by ICAO*

N	ACTIVITY	RESPONSIBLE BODY /*DATE*	REMARKS
	Phase 2: Actions to maintain Level 4 (or higher) proficiency		
17.	Implement testing of pilots and controllers.	States, ANSPs, AOs. *Before 05 March 2008*	
18.	Implement language proficiency maintenance programmes (*see item 13 above*).	States, ANSPs, AOs. *Before 05 March 2008*	
19.	Extend language testing and training programmes to all pilots and controllers unable to meet the 05 March 2008 deadline.	States, ANSPs, AOs. *After 05 March 2008*	
20.	Present a final report to ICAO on implementation of ICAO language proficiency requirements	States *Before 05 March 2008*	

Note 1: ICAO Doc 9835 - Manual on the Implementation of ICAO Language Proficiency Requirement provides guideline material and valuable information on preparing training and testing programmes

Note 2: Suggested profiles for personnel to administer, conduct and rate tests:

Tester/Rater - *ATC or pilot instructor or language teachers with previous experience of administering professional tests/examinations. Level of language proficiency = 5 or above*

Interlocutor *(for tests involving an oral interaction) - ATC or pilot instructor or language teachers very familiar with aviation terminology and with training and experience in interlocution techniques. Level of language proficiency = 6*

Administrator - *person familiar with the preparation and conduct of tests/examinations e.g .logistics, security, candidate briefing (could be any of above persons).*

Note 3: States in the Eastern Part of the ICAO EUR Region undertake maximum efforts in order their raters and testers will be able to meet the requirements on Language Proficiency, mentioned in item 6 of the Plan, as soon as possible, but at any case, Level5 of Language Proficiency is a minimum one for any rater on the initial stage.

APPENDIX D - AVIATION SPECTRUM PLANNING DEFICIENCIES
(paragraph 7.4 refers)

ICAO Paris - Capacity Projections for Aviation Frequency Bands in EUR/NAT Regions

last update 9/09/04 by EANPG Frequency Management Group

Legend

1 all known requirements are satisfied

2 outstanding requirements in areas of saturation can only be accommodated with great difficulty

3 OUTSTANDING UNSATISFIED REQUIREMENTS in areas of saturation

? insufficient data available to make an assessment

				Previous 4 years					Projections for next 20 years																			
	Band	**Service**	***Notes***	2001	2002	2003	2004	**2005**	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1	130 – 526.5 kHz	NDB		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2850 – 22000 kHz	HF COM		3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	1	1	1	1	1	1	1	1
3	74.8 – 75.2 MHz	Marker Beacon	*1*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	108 – 111.975 MHz	ILS LOC/VOR + [GBAS]	*1*	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	?	?	?	?	?
5	111.975 - 117.975	VOR + [GBAS]	*1*	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	?	?	?	?	?
6	117.975 – 137 MHz	VHF COM	*2*	2	3	3	3	3	3	3	3	3	3	3	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?	3 ?
7	328.6 – 335.4 MHz	ILS GP		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	406 – 406.1 MHz	ELT		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	960 – 1215 MHz	DME/GNSS	*1*	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
10	1025 - 1040MHz	SSR GA/ACAS	*4*	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
11	1084 - 1093 MHz	SSR AG/ACAS	*4*	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
12	1215 – 1260 MHz	GNSS & PSR		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	1260 – 1400 MHz	PSR		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	1525 – 1559 MHz	SAT COM	*3*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	1559 – 1626.5 MHz	GNSS & PSR		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	1626.5 – 1660.5 MHz	SAT COM	*3*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	2700 – 3300 MHz	PSR		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	4200 – 4400 MHz	RadioAlt		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	5000 – 5250 MHz	MLS	*1*	1	1	1	1	1	1	1	1	1	1	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
20	5350 – 5470 MHz	Radar - weather		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	8750 – 8850 MHz	Radar - doppler		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	9000 – 9500 MHz	ASDE		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	13.25 – 13.4 GHz	Radar - doppler		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	15.4 – 16.6 GHz	ASDE		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	?	?	?	?	?	?	?	?	?	?
25	31.8 – 33.4 GHz	ASDE		?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?

Note 1 The pairing arrangement that links ILS, VOR, DME and MLS frequency allocations reduces the flexibility and effeciency of frequency allocations in those bands

Note 2 Plans for partial 8.33 kHz implementation go to 2007 (above FL 195), but will not catch up with the demand.
Full implementation of 8.33 kHz in all airspace (controlled and un controlled) will probably meet aviation needs in the 117.975 - 137 MHz AM(R)S band until about 2020,

Note 3 Low aviation utilization, but there are problems in getting more access due to non aviation users operating in the band

Note 4 1025/1090, while a only single frequency facility is saturated the combination of SSR, ACAS, and identification friend or foe (IFF) requirements

APPENDIX E - REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE EUROPEAN REGION

(Paragraph 7.15 refers)

Identification		Deficiencies			Corrective action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Date of completion	Priority for action*
Annex 10 airborne VHF transmitter performance requirements	certain A 320 operators	Radiated interference from certain A 320 a/c blocks the use of VHF com frequency 135.985 MHz	Dec 2004 EANPG/46 paragraph 6.14.2	It had been difficult to identify an entity that could address the issue. IATA undertook at EANPG/47 to encourage any member airlines involved to assist.	Dec 2005 EANPG/47 Con 47/47 - to raise awareness and solicit ideas for corrective action.	None identified		B
Appropriate Spectrum Planning	Whole ICAO EUR Region	The radio spectrum situation is of critical nature. There is a need to take more effective planning action to avoid a crisis situation	Dec 2005 EANPG/47 Conclusion 47/48	Lack of adequate future aviation communications, navigation and surveillance systems planning makes effective spectrum planning impossible	Dec 2005 EANPG/47 Con 47/48 - Aviation spectrum planning deficiencies	a) ICAO b) ICAO EUR/NAT	a) 2006 b) 2006	B
Implementation of WGS-84	Some of the States in the ICAO Eastern Part of the EUR Region	Lack of WGS-84 implementation in States in the Eastern part of the ICAO EUR Region,	Dec 2004 EANPG/46 Conclusion 46/42	The difficulties which impede CIS States to speed up and complete the implementation of WGS-84 are systematic and have legal and financial aspects.	Dec 2005 EANPG/47 Con 47/49 – Implementation of WG-S84 EANPG/47 Report paragraphs 7.9-7.14 refer	a) States Concerned b) Interstate Aviation Committee c) ICAO	a) ASAP b)ASAP c)2006	A

* Priority for action to remedy a deficiency is based on the following safety assessments:

"U" priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

"A" priority = Top priority requirements necessary for air navigation safety.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

"B" priority = Intermediate requirements necessary for air navigation regularity and efficiency.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

APPENDIX F – EANPG WORK PROGRAMME FOR 2006

(Paragraph 8.1 refers)

N°	Reference	Action by	Deliverable	Target
1			**AIR NAVIGATION ISSUES – ATM**	
1-02	EANPG/45	COG (ATMGE)	ATM Safety Management Programme Implementation – progress report. [*to be conducted in coordination with associated action in task -1*] : - Implementation of Safety Management Systems in ATM – activity performed by the "*Safety Management Systems in ATM Task Force – Eastern Part of the ICAO EUR Region*" (ATMGE/SMSA) Task Force; regular meetings in March and September of each year); - Implementation of ATM Safety Occurrences Reporting Systems ATM – activity performed by the "*ATM Safety Occurrences System Task Force - Eastern Part of the ICAO EUR Region*" (ATMGE/SORS) Task Force - regular meetings in March and September of each year).	COG Oct. 2006
1-03	EANPG/47	COG ATMGE	Originating Region Code Assignment Method (ORCAM) principles awareness within the States in the Eastern Part of the EUR Region: - ORCAM Workshop to be organised early 2006 (tentatively: 1-3 March 2006, Kyiv, Ukraine) - develop an ORCAM implementation document for the use of CIS States (tasked to be performed under IAC leadership with support from Kazakhstan and Ukraine)	March 2006 report to next COG 2006
1-04	EANPG/45	COG (ATMGE)	Proposed updates to relevant sections of the CNS/ATM Transition Plan.	Ongoing
1-05	EANPG/45	COG (RDGE)	A list of follow-up actions to be undertaken in the field of ATM by States in the Eastern part of the ICAO European Region.	Ongoing
1-06	EANPG/45	COG (RDGE)	For the Eastern part of the Region maintain: - working procedures and - an ATS Route Catalogue reflecting new routes for easy reference and coordination between States as well as with other International organisations and ICAO regions.	Ongoing

N°	Reference	Action by	Deliverable	Target
1-07	EANPG/45	COG (RDGE)	For the Eastern part of the Region develop and maintain efficient ATS Route network to accommodate major traffic flows through the entire ICAO EUR Region.	Ongoing
1-08	EANPG/45	COG (RDGE)	For the Eastern part of the Region provide a coordination mechanism to enable States to develop and refine their proposals for amendment to the Table ATS1 of ANP. (Doc 7754) without the need for approval by the EANPG. New working procedures put in place (task no. 1-06 refers).	Ongoing
1-09	EANPG Con47/43	COG (TF)	Update of language proficiency action plan and progress report Assistance to States for implementation of new language proficiency requirements	COG Oct. 2006 By 2008
1-10		COG/ICAO	Examine the value of using strategic lateral off-set in the EUR Region (done for the Eastern Part of the Region – ATMGE/2 SoD refers: not applicable for the time being).	COG Oct. 2006
2			**AIR NAVIGATION ISSUES – CNS**	
2-01	AFSG/8 tasks 1-8, 15	COG (AFSG)	Perform oversight of the CIDIN Management Centre (CMC) operations, as determined in the CIDIN Management Manual; and provide a reporting mechanism to address and resolve short term problems in network operations	Ongoing
2-02	AFSG/8 task 11	COG (AFSG)	final draft Regional manual of guidelines for minimum security standards for access (physical & system) to the AFTN/CIDIN network.	COG - June 2006
2-03	AFSG/8 tasks 8 - 15	COG (AFSG)	a) Draft update/amendment material for the Regional ANP and other relevant ICAO documentation, including that necessary for AMHS implementation. b) Draft EUR AMHS Manual – progress report c) [Draft Regional Transition Strategy for ATN] (*action suspended because there are no agreed operational requirements to guide implementation planning*)	COG – Oct. 2006
2-04	FMG/8 task 1	COG (FMG)	Monitor and report to the EANPG the status of available capacity in the various aviation bands	ongoing
2-05	FMG/8 task 2	COG (FMG)	Ensure the effective operation of the coordination process for the necessary agreement to make new frequency assignments	ongoing
2-06	FMG/8 task 3	COG (FMG/ EUROCONTROL)	Coordinated activities for the conduct of the 'block planning' process to provide for new frequency requirements which can only be satisfied the relocation of existing assignments	ongoing

N°	Reference	Action by	Deliverable	Target
2-07	FMG/8 9, 11	COG (FMG)	In coordination with Eurocontrol implement the SAFIRE tool for electronic exchange of coordination data for updating of COM tables	COG - October 2006
2-08	EANPG/46 para 4.2.9	COG	determine the region wide requirements for VDL/4 COM frequency allocations	COG - October 2006
3			**AIR NAVIGATION ISSUES – MET**	
3-01	METG/14 task 1	COG (METG)	EUR OPMET Update procedure and data monitoring, reporting and development, progress report. EUR OPMET Data Management Handbook.	COG - October 2006
3-02	EANPG/47task 5	COG (METG)	Conduct the biannual tests on volcanic ash Contingency Plan and analyse the results for any necessary action.	ongoing
3-03	METG/14 task 8	COG (METG)	Airport Capacity MET Forecast development, progress report	COG - October 2006
3-04	METG/14 task 10	COG (METG)	Implementation of MET services in the Eastern part of the EUR Region, analysis of deficiencies	COG - October 2006
3-05	COG/33	COG (METG)	Operations of MET requirements for airport operations and ATM	COG October 2006
4			**AIR NAVIGATION ISSUES – AOP**	
4-01	EANPG/44 Con 44/23 Con 44/26	COG (AWOG)	Review of MET forecasting and reporting criteria for low visibility operations (in cooperation with MET Group);	Progress Report at COG Oct. 2006
4-02	COG/24-05	Eurocontrol	a) Identify feasible capacity-enhancing ATM procedures –progress report b) Implementation planning for procedures that are possible in the near term.	ongoing
4-04	EANPG/44 Con 44/21	Eurocontrol	Harmonization of alternative parallel taxi routes and development of proposal for global provisions.	COG - October 2006
5			**AIR NAVIGATION ISSUES – AIS**	
5-01	COG/AIS/MAP	COG (AIS/MAP)	Implementation of AIS/MAP services in the Eastern part of the EUR Region, progress report	COG - October 2006

N°	Reference	Action by	Deliverable	Target
6			**IMPLEMENTATION ISSUES**	
6-01	FMG/7 task 8	COG (FMG/ Eurocontrol)	Take the necessary steps and report on the progress for the implementation of the FMG/Eurocontrol VDL frequency plan, progress report	COG - October 2006
6-02	EANPG/45	COG	Identify the ICAO documentation issues associated with the Link 2000 VDL-2 programme	COG - June 2006
6-03	EANPG/45	COG	Identify, at a very basic level, the ICAO documentation issues associated with EGNOS implementation, to determine if a more comprehensive work item is warranted.	COG - June 2006
6-04	EANPG/45	COG (AFSG/METG)	develop plans to accommodate BUFR OPMET transmission within the constraints of the EUR AFS network	COG - October 2006
6-05	EANPG DEC 47/15	COG	monitor progress and make any necessary CCAMS decisions on behalf of EANPG	2006
6-06	EANPG DEC 47/21	COG	monitor progress and make any necessary 8.33 decisions on behalf of EANPG	2006
7			**SAFETY MANAGEMENT**	
7-01	EANPG/45	COG	develop a regional work programme for safety in air navigation for EANPG/48	COG - October 2006

– END –