



European and North
Atlantic Office

NAT Doc 001

NAT SPG HANDBOOK

First Edition - 2011

Amendment 1 - June 2012

Amendment 2 – June 2013

Prepared by the ICAO European and North Atlantic Office

on behalf of the North Atlantic Systems Planning Group (NAT SPG)

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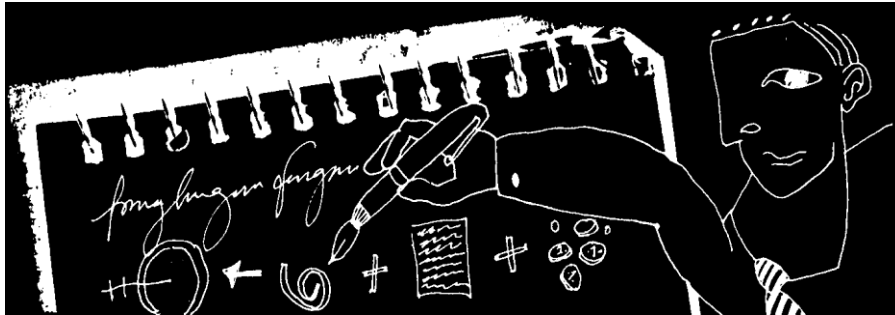
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*And so while the great ones depart for their dinner
The secretary stays, growing thinner and thinner
Racking his brain to record and report
What he thinks that they think that they ought to have thought.*

(Anstey)

RECORD OF AMENDMENTS

| |
|--|
| As of July 2011, the NAT SPG Handbook is published as NAT Doc 001 |
| <i>1st Edition, July 2011 introduced the following changes (NAT SPG Conclusion 47/13 refers)</i> |
| <ul style="list-style-type: none"> • NAT Fast Track Procedure for Safety Occurrences added, to follow the Safety Policy Statement (NAT SPG Conclusion 47/08 refers) • Agenda supporting meetings of the NAT SPG updated (<i>Summary of Discussions and Conclusions of the 47th Meeting of the NAT SPG</i>, paragraph 6.4.4 refers) • List of NAT SPG documents updated and moved to the References section (<i>Summary of Discussions and Conclusions of the 47th Meeting of the NAT SPG</i>, paragraph 6.4.8 refers) • Terms of Reference for the NAT SOG, NAT SG, NAT MWG and NAT CMA updated (NAT SPG Conclusion 47/10 refers) • Policy conclusion regarding the implementation of the NAT Region Data Link Mandate, superseding NAT SPG Conclusion 41/7, added to “Implementation of Data Link” (NAT SPG Conclusion 46/02 refers) • Policy conclusion regarding the vertical and horizontal limits of the NAT Region Data Link Mandate airspace added to “Implementation of Data Link” (NAT SPG Conclusion 47/01 refers) • Policy conclusion regarding an ADS-B eligibility list for the ICAO NAT Region added to “Safety Related Policies” (NAT SPG Conclusion 47/06 refers) • Policy conclusion regarding an updated concept of operations to support RLatSM, superseding NAT SPG Conclusion 45/10, added to “Implementation Planning” (NAT SPG Conclusion 47/02 refers) • Policy conclusion regarding the TLS to support reductions in lateral separation added to “Implementation Planning” (NAT SPG Conclusion 47/04 refers) • Policy conclusion regarding the endorsement of the <i>NAT RCP and ADS-C surveillance performance based operations implementation plan</i> added to “Implementation Planning” (NAT SPG Conclusion 47/05 refers) • Policy conclusions 27/22 and 33/6 supporting reductions in vertical and longitudinal separation, respectively, added to “Implementation Planning” (<i>Summary of Discussions and Conclusions of the 47th Meeting of the NAT SPG</i>, paragraph 6.4.7 refers) • Policy conclusions, 41/7, 45/10 and 43/31, which are no longer extant, and policy conclusions 45/13, 45/29 and 45/30, which are no longer considered necessary for inclusion deleted (<i>Summary of Discussions and Conclusions of the 47th Meeting of the NAT SPG</i>, paragraph 6.4.5 refers) • Policy conclusion regarding the adoption of the GOLD added to “NAT Documentation” (NAT SPG Conclusion 46/8 refers) • Editorial corrections |

Amendment 1, June 2012, introduced the following changes (NAT SPG Conclusion 48/23 refers)

- *Record of Amendments* added
(*Summary of Discussions and Conclusions of the 48th Meeting of the NAT SPG*, paragraph 6.1.1 refers)
- Reference to NAT SPG Conclusion 45/3 added to *Conduct of the meetings of the NAT SPG groups and sub-groups*
- *Formulation of Recommendations to the NAT SPG* added (NAT SPG Conclusion 48/12 refers)
- Ireland and United States NAT SPG representatives updated
- Composition of NAT EFG updated (*Summary of Discussions and Conclusions of the 48th Meeting of the NAT SPG*, paragraph 5.1.20 refers)
- *Inputs from NAT IMG Contributory Groups* added to “The NAT IMG Contributory Groups” (NAT IMG Decision 40/24 refers)
- *Terms of Reference for the NAT OPS/AIR sub-group* updated (NAT IMG Decision 40/31 refers)
- *Terms of Reference for the NAT SOG* updated (NAT SPG Conclusion 48/18 b) refers)
- “The NAT SOG Contributory Groups” added (NAT SOG Decision 06/01 refers)
- NAT SPG Conclusion 48/10 added to *Implementation of Data Link*
- NAT SPG Conclusions 48/18 and 48/21 added to *Safety Related Policies*
- NAT SPG Conclusion 47/2 replaced by NAT SPG Conclusion 48/2 in *Implementation Planning*
- Explanatory Notes added to NAT SPG Conclusion 47/5 in *Implementation Planning*
- NAT SPG Conclusion 48/7 added to *Implementation Planning*
- Explanatory Note added to NAT SPG Conclusion 44/38 in *NAT Documentation*
- *List Of Documents Promulgated by the NAT SPG* updated
(*Summary of Discussions and Conclusions of the 48th Meeting of the NAT SPG*, paragraph 6.1.1 refers)
- *Detailed Oceanic Event Reports Content* added (NAT SPG Conclusion 48/19 refers)

Amendment 2, June 2013, introduced the following changes

- NAT SPG observers (*NAT SPG Conclusion 49/27 & NATSPG/49 Report Appendix Q refer*)
- NAT Doc 008 management (*NATSPG/49 Report paragraph 6.3.6 refers*)
- Process for the nomination/review of chairmanship/rapporteurship of the NAT SPG and its Contributory Groups and updates to Terms of Reference of NAT SPG and its Contributory Bodies NAT SPG Chairman and Vice-Chairman (*NAT SPG Conclusion 49/27 & NATSPG/49 Report Appendix R refer*)
 - Conduct of the meetings – Vice-Chairman (*NAT SPG Conclusion 49/27 & NATSPG/49 Report Appendix R refer*)
 - Election of Chairmen/vice/chairmen/Rapporteurs of NAT SPG and contributory groups
 - Guidelines for basic requirements for Chairmen/Vice-Chairmen/Rapporteurs
- France, Norway and United Kingdom NAT SPG representatives updated
- Updates to Terms of Reference of the NAT SPG and its Contributory Groups (*NAT SPG Conclusion 49/27 & NATSPG/49 Report App S refer*)
- NAT SPG Conclusion 49/02 – Amendments to the list of safety key performance indicators for the ICAO NAT Region – *added*
- NAT SPG Conclusion 48/18 ,a) – *amended, as a consequence of NAT SPG Conclusion 49/02*
- NAT SPG Conclusion 49/05 –RCP and RSP for RLatSM and RLongSM – *added*
- NAT SPG Conclusion 49/09 – Completion of ½ degree coordinates hazard analysis – *added*
- NAT SPG Conclusion 45/22 - *removed, as a consequence of NAT SPG Conclusion 49/09*
- NAT SPG Conclusion 49/13 – Acceptability of I4 Classic Aero sub-network for FANS 1/A data link services – *added*
- NAT SPG Conclusion 49/19 – Mapping of the NAT SDR with the ICAO GANP/ASBU – *added*; as a consequence, NAT Doc 009, *Service Development Roadmap – North Atlantic Region* has been published and *added to the list of NAT documents promulgated by the NAT SPG*
- Satellite Voice Guidance Material (SVGM) – *added to the list of NAT documents promulgated by the NAT SPG*
- Editorial corrections

INTRODUCTION

The North Atlantic Systems Planning Group (NAT SPG) was established in 1965 by the Council of ICAO as the first regional planning group. From its Terms of Reference the NAT SPG shall continuously study, monitor and evaluate the Air Navigation system in the light of changing traffic characteristics, technological advances and updated traffic forecasts.

At the 10th Air Navigation Conference, Montreal 5 - 20 September 1991, the ICAO Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM) System was endorsed, and at the Limited North Atlantic Regional Air Navigation (LIM NAT RAN) Meeting, held in Cascais, Portugal 3 - 18 November 1992, the NAT SPG was tasked to develop proposals for CNS/ATM systems implementation actions as well as proposals for institutional arrangements.

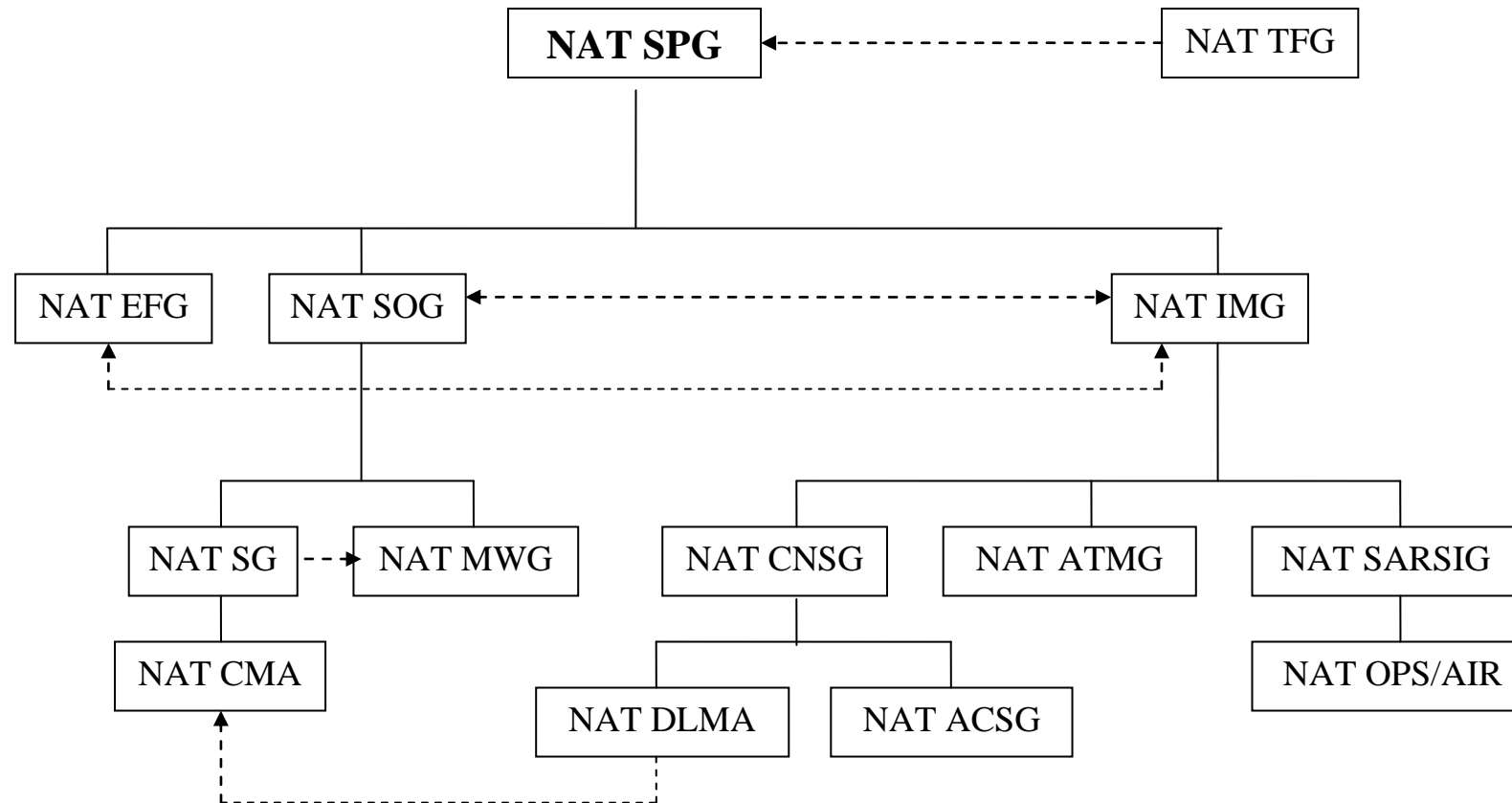
In order to meet these new challenges, a Meeting of North Atlantic High Level Managers, held in Paris 20 - 21 January 1994, created a North Atlantic Implementation Management Group (NAT IMG) to co-ordinate and manage - on behalf of the NAT SPG itself - the NAT Implementation Plan. This led the NAT SPG to review and revise its organization and working methods.

At NAT SPG/45, Paris, 23-26 June 2009, it was agreed to make adjustments to the [NAT SPG working structure](#) and to the terms of reference of its contributory bodies to accommodate the change in emphasis to performance based requirements, as driven by the Global ANP, and to take account of the Global Aviation Safety Plan (GASP). At the same time, the NAT SPG approved a high level [safety policy](#) which would be applicable to its work.

The purpose of the NAT SPG Handbook is to give an overview of the organization of the NAT SPG and its different groups, including terms of reference, working methods, participation, allocated Lines of Action from the NAT Implementation Plan and relevant Points of Contact. The handbook will be helpful to States and international organizations when planning and managing the resources for participation in the work.

The NAT SPG Handbook is published by the ICAO European and North Atlantic Office on behalf of the Chairman of the NAT SPG and distributed to all identified Points of Contact in the NAT SPG organization.

Asgeir PALSSON
Chairman of the NAT SPG

NAT SPG WORKING STRUCTURE

SAFETY POLICY STATEMENT

(As endorsed by NAT SPG/45 in June 2009, NAT SPG Conclusion 45/1 refers)

Safety is one of the NAT SPG's core business functions. The NAT SPG is committed to developing, implementing, maintaining and constantly improving strategies and processes to ensure that all our aviation activities take place under a balanced allocation of organizational resources. The NAT SPG will aim to achieve the highest level of safety performance and meet regional safety objectives in line with national and international standards, the Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan.

OBJECTIVE

The objective of the NAT SPG member States is to maintain and, where possible, improve the agreed safety standards in all activities supporting the provision of air navigation services in the North Atlantic Region:

- All involved States are accountable for the delivery of the agreed level of safety performance in the provision of air navigation services in the North Atlantic Region.
- All involved States are accountable for the delivery of the agreed level of safety performance in aircraft operations in the North Atlantic Region.
- Safety in the NAT Region is managed through the organization and activities of the relevant implementation and oversight groups established by the NAT SPG, in coordination with the non-member States and observers, to achieve its Safety Objective.

Guiding Principles

The NAT SPG will act to:

- **Clearly** define all accountabilities and responsibilities for the delivery of safety performance with respect to the provision of air navigation services and participation in the NAT SPG and its contributory bodies;
- **Support** the safety management activities that will result in an organizational culture that fosters safe practices, encourages effective safety reporting and communication, and actively manages safety within the NAT Region;
- **Share** safety related data, knowledge and expertise with concerned stakeholders;
- **Disseminate** safety information and NAT operating requirements to stakeholders;
- **Establish and implement** hazard identification and risk management processes in order to eliminate or mitigate the safety risks associated with air navigation services supporting aircraft operations in the North Atlantic Region;
- **Establish and measure** NAT Region safety performance against agreed safety standards; and
- **Continually improve** our safety performance through safety management processes

NAT FAST TRACK PROCEDURE FOR SAFETY OCCURRENCES

(As endorsed by NAT SPG/47 in June 2011, NAT SPG Conclusion 47/8 refers)

- Step 1 NAT provider State regulator, NAT CMA, NAT service provider, NAT SPG contributory group and/or NAT user organisation identifies safety issue(s).
- Step 2 The issue is communicated to the EUR/NAT Office of ICAO, who coordinates with the Chairmen of the NAT SPG, the NAT SOG and NAT IMG (icaoeurnat@paris.icao.int).
- Step 3 The issue is communicated to the NAT SOG e-mail list if required.
- Step 4 The NAT SOG determines how the issue(s) will be discussed.
- Step 5 The NAT SOG, after coordination/cooperation with NAT IMG Chairman, deliberates and determines next steps and/or actions to be taken (such as gather more information, share and track mitigation, etc.).
- Step 6 The NAT SOG Chairman coordinates directly with the Chairmen of the NAT SPG and NAT IMG to implement changes or further actions.
- Step 7 Further action is then communicated to the ICAO EUR/NAT office, which takes action as instructed.
-

NORTH ATLANTIC SYSTEMS PLANNING GROUP

(NAT SPG)

(Revised to reflect C-WP/13135, C 183/9 on 18 March 2008 and PRES RK/1560 dated 30 June 2008)

Terms of Reference

The NAT SPG was established by the approval of the ICAO Council on 15 April 1965 (54/20) of Recommendation 4/1 - reproduced below - of the special North Atlantic Meeting, Montreal, 23 February - 20 March 1965, which specified within its sub-paragraphs the composition, terms of reference and method of operation of the Group.

Recommendation 4/1: North Atlantic Systems Planning Group

That, in order to ensure continuity in systems planning in the North Atlantic Region between successive North Atlantic Regional Meetings:

- a) *The governments of Canada, Ireland, France, the Netherlands, the United Kingdom and the United States be invited to designate suitably qualified experts to participate on their behalf in the work of a North Atlantic Systems Planning Group with the following terms of reference:*

“To continuously study, monitor and evaluate the system in the light of changing traffic characteristics, technological advances and updated traffic forecasts, to the end that the North Atlantic Regional Plan may be adjusted on a timely, evolutionary basis. Throughout this work the group shall give close attention to the effectiveness of any suggested changes in relation to their costs.”

- b) *Proposals by States for amendment of the North Atlantic Regional Plan that may be developed as a result of studies undertaken by the Group, be submitted for consideration by other North Atlantic States, either at ICAO North Atlantic Regional Meetings convened for the purpose, or by correspondence in accordance with established procedures.*
- c) *The Group work with the flexibility and informality required to reduce to a minimum the administrative burden imposed on States and on ICAO.*
- d) *The Group may invite, as and when it considers necessary or desirable, the co-operation and participation of other States and of public or private international organizations.*
- e) *The Group meet approximately once a year and at least once every eighteen months either at the ICAO Paris Office, the ICAO Headquarters or elsewhere at the invitation of a State and pursue its work by correspondence between successive meetings.*
- f) *All States of the North Atlantic Region be kept informed of the progress of work in the Group and be encouraged, as well as the international organizations concerned, to submit suggestions to assist the Group in its task*

- Members** All ICAO Contracting States, who are service providers in an air navigation region and part of that region's ANP, should be included in the membership of that region's PIRG. Furthermore, user States are entitled to participate in any other PIRG meetings as a non-member.
- Representatives of Canada, Denmark, France, Iceland, Ireland, Norway, Portugal, the United Kingdom and the United States are Members of the NAT SPG.
- Observers** International organizations recognized by the Council may be invited as necessary to attend PIRG meetings as observers.
- Representatives from the Russian Federation and Spain as well as Observers from IATA, IACA, IFALPA, IAOPA, IBAC, IFATCA, Iridium and Inmarsat are invited to participate in the work of the NAT SPG.
- Requests from any other ICAO Contracting State or an international organization to attend the NAT SPG meetings will be reviewed on a case-by-case basis and decided by the NAT SPG Chairman. Such requests must be supported by the appropriate rationale to attend the meeting*.
- Chairman** The Chairmanship of the NAT SPG will be reviewed by an election every four years*.
- Vice-Chairman**
- In accordance with NAT SPG Conclusion 49/27, the NAT IMG and NAT SOG Chairmen will serve as NAT SPG Vice-Chairmen*.
- Secretary** The ICAO Regional Director, European and North Atlantic Office, serves as the Secretary of the NAT SPG.
- Agenda** The NAT SPG normally meets for 3 working days once a year, and the following agenda is normally adopted for the Meetings:
- Agenda Item 1: Review of significant international aviation developments
 - Agenda Item 2: Proposed air navigation systems performance monitoring and measurement
 - Agenda Item 3: NAT planning and implementation management issues
 - 3.1 Implementation programme updates
 - 3.2 Performance monitoring
 - Agenda Item 4: NAT operational and safety improvements
 - Agenda Item 5: Safety Monitoring
 - Agenda Item 6: NAT Documentation
 - Agenda Item 7: Work programme, including sub-groups
 - Agenda Item 8: Any Other Business

* NAT SPG Conclusion 49/27 refers

Meeting Documentation

Working Papers and Information Papers, presented by States, international organizations or the Secretariat, form the basis of the discussions at the NAT SPG Meetings. Working Papers normally contain material which invites a conclusion by the NAT SPG, while Information Papers are submitted in order to provide the Group with information on which no conclusion is required.

Following a verbal presentation, the contents of Working Papers are discussed at the NAT SPG Meetings. The contents of Information Papers are presented verbally and discussed on request only and are normally not reflected in the Summary of Discussions.

Each NAT SPG Meeting is invited to agree on an English version of a Summary of Discussions of the Meeting, and the final version is distributed by the Secretariat in English.

Conduct of the meetings of the NAT SPG groups and sub-groups (NAT SPG Conclusion 45/3 refers)

Rapporteur – The Rapporteur facilitates the work of the meeting so as to encourage consensus or clearly identify barriers to consensus. The tasks of the Rapporteur include ensuring the efficient conduct of the meeting, ensuring that the tasks associated with the work programme are addressed or reported upon during the course of the meeting and reporting the findings of the meeting to the group(s) specified in the terms of reference. In the NAT SPG working structure, contributory groups to the NAT IMG and NAT SOG operate with Rapporteurs.

Chairman – In addition to the duties of a Rapporteur, the Chairman may make decisions regarding the conduct of the meeting and, in cases where it is not possible to reach consensus, determine the recommendation(s) that will be made by the meeting. In the NAT SPG working structure, the NAT SPG, NAT IMG, NAT SOG and NAT EFG operate with a Chairman.

Vice-Chairman – The vice-Chairmen will be called upon to preside over the meeting should circumstances prevent the Chairmen from being present at the meeting. The vice-Chairmen may also be requested to support the Chairmen in his/her role, taking over some of the Chairmen's work load whenever appropriate. The vice-Chairmen do not automatically succeed as chairmen at the conclusion of the term of the incumbent Chairman. In the NAT SPG working structure, the NAT SPG, NAT IMG and NAT SOG operate with a vice-Chairman. The NAT IMG and NAT SOG Chairmen will serve as NAT SPG vice-Chairmen*.

Election of Chairmen/vice-Chairmen/Rapporteurs of the NAT SPG and its Contributory Groups*

Review of chairmanship will be conducted by a routine process of elections for the NAT SPG, NAT EFG, NAT IMG, NAT SOG and NAT TFG every four years. In the event that a Chairman is unable to complete a term, another election would be held.

Review of vice chairmanship will be conducted by a routine process of elections for the NAT IMG and NAT SOG every four years, normally at the same time as the routine elections of the NAT IMG and NAT SOG Chairmen.

Review of rapporteurship will be conducted by a routine process of elections for the Contributory Groups of the NAT IMG and NAT SOG every four years. Efforts will be made to avoid changes in rapporteurship for multiple groups during the same year.

* NAT SPG Conclusion 49/27 refers

Chairman – Nominations and Election for the NAT SPG

1. Candidates for election to the post of Chairman must be from a NAT SPG member State and nominated by a member State of the NAT SPG and seconded by another member State of the NAT SPG.
2. Nominations should be submitted to the EUR/NAT Office of ICAO and be promulgated by the EUR/NAT Office of ICAO to the NAT SPG member States by e-mail two months before the next meeting of the NAT SPG.
3. The NAT SPG will elect the Chairman from the list of candidates by open vote at the NAT SPG meeting and the newly elected Chairman will assume his functions at the conclusion of the meeting.

Chairman – Nominations and Election for the NAT EFG, NAT IMG, NAT SOG and NAT TFG

1. Candidates for election to the post of Chairman must be from a NAT SPG member State and nominated by a member State of the Group concerned and seconded by another member State of the Group.
2. Nominations should be submitted to the EUR/NAT Office of ICAO and be promulgated by the EUR/NAT Office of ICAO to the NAT SPG member States by e-mail two months before the next meeting of the Group concerned.
3. The Group will elect the Chairman from the list of candidates by open vote at its meeting.
4. The NAT SPG will confirm the election of the Chairman at its meeting and agree that the newly elected Chairman will assume his functions as Chairman at the next meeting of the Contributory Group concerned.

Note: the election of vice-Chairmen of the NAT IMG and NAT SOG will be conducted informally by open vote at the meeting of the Group concerned following the election of the Chairman.

Rapporteur – Nominations and appointment of the NAT IMG and NAT SOG Contributory Groups (NAT ATMG, NAT CNSG, NAT SARSIG, NAT SG, NAT MWG and NAT ACSG, NAT OPS/AIR)

1. Candidates for election to the post of Rapporteur must be from a NAT SPG member State and nominated by a member State of the Group concerned and seconded by another member State of the Group.
2. Nominations should be submitted to the EUR/NAT Office of ICAO and be promulgated by the EUR/NAT Office of ICAO to the NAT SPG member States by e-mail two months before the next meeting of the Group concerned.
3. The Group will elect the Rapporteur from the list of candidates by open vote at its meeting.
4. The parent Group concerned will confirm the election of the Rapporteur and agree that the newly elected Rapporteur will assume his functions at the next meeting of the Contributory Group concerned.

Note: Parent Groups of the Contributory Groups:

| | |
|-------------------|---------------------------------------|
| <i>NAT IMG -</i> | <i>NAT ATMG, NAT CNSG, NAT SARSIG</i> |
| <i>NAT CNSG</i> | <i>NAT ACSG</i> |
| <i>NAT SARSIG</i> | <i>NAT OPS/AIR</i> |
| <i>NAT SOG -</i> | <i>NAT SG, NAT MWG</i> |
| <i>NAT SG -</i> | <i>NAT CMA</i> |

Guidelines for the basic requirements for Chairmen/vice-Chairmen/Rapporteurs of the NAT SPG and its Contributory Groups*

1. Professional background:

- extensive experience in a civil aviation authority, airport, airline, air navigation services or similar aviation-related organization;
- practical experience in the planning and administration of civil aviation programmes; and
- have a good understanding of ICAO's role.

2. Experience with the NAT SPG and its working groups:

- have a clear understanding of and adhere to the terms of reference of the NAT SPG and its Contributory Groups; and
- have a sound knowledge of the NAT SPG working and reporting structure by having participated and contributed to the work of the Group concerned (e.g. participation for a minimum of 4 meetings).

Formulation of recommendations to the NAT SPG†

The NAT SPG contributory groups are to provide reports that are as concise as possible, whilst providing sufficient detail and supporting material for any recommendations which might be made. In order to clarify the intent of contributory group recommendations they are to be formulated in the form of "draft NAT SPG Conclusions". Each draft Conclusion is to be accompanied by sufficient supporting justification, which is to include, at minimum:

- a) a concise summary of the discussion of the group, including the reasons why particular options are or are not supported;
- b) the full text of any material proposed for adoption by the NAT SPG into a NAT SPG or ICAO document;
- c) the full text of proposed revisions to text of an existing NAT SPG or ICAO document, with insertions shown in grey highlight (text to be inserted) and deletions shown in strikethrough (~~text to be deleted~~); and
- d) a clear description of why the NAT SPG should endorse the draft Conclusion, what is expected in order to fully address the conclusion, who should carry out the actions required and when the actions should be completed, using the tabular format described below.

The following table shall be used to summarize why the NAT SPG should endorse the draft Conclusion by describing what is expected to fully address the conclusion, who should carry out the actions required and when the actions should be completed:

| | |
|-------------|--|
| Why | |
| What | |
| Who | |
| When | |

Draft NAT SPG Conclusions shall be presented in the following format:

* NAT SPG Conclusion 49/27 refers

† NAT SPG Conclusion 48/12 refers

Draft NAT SPG Conclusion ##/NATXXXxx/Z – TITLE

That the NAT(Group designation)/ICAO Regional Director, Europe and North Atlantic:

- a) AA;
- b) BB; and
- c) CC.

Where:

TITLE is a concise description of the subject addressed by the proposed draft Conclusion;

is the designation of the next NAT SPG meeting;

NATXXXxx is the designation and meeting number of the NAT SPG contributory group proposing the draft Conclusion; and

Z is a number indicating the sequence of the proposed draft Conclusion as it appears in the contributory group report.

When formulating each draft NAT SPG Conclusion, all acronyms except NAT SPG shall be decoded when they are initially used. This shall be true even for acronyms which have appeared in a previous draft Conclusion. It is acceptable to use an acronym in the title, so long as it is decoded in the body of the draft Conclusion.

NAT SPG REPRESENTATIVES

| | | |
|-------------------------|--|---|
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NAT AIR TRAFFIC FORECASTING GROUP

(NAT TFG)

Terms of Reference

The NAT TFG was established as a result of actions taken by the Special NAT RAN (1965) Meeting. It was considered that the production of forecasts was an essential part of the programme for future action by the NAT SPG. This is reflected in the terms of reference of the NAT SPG itself which states: “*To continuously study, monitor and evaluate the system in light of changing traffic characteristics, technological advances and updated traffic forecasts, to the end that the NAT Air Navigation Plan may be adjusted on a timely evolutionary basis.*”

The above position was reiterated at the 5th NAT RAN (1970) Meeting and is reflected in Recommendation 1/1 of that Meeting which reads as follows:

Recommendation 1/1: Work of the NAT Air Traffic Forecasting Group

That the States responsible for the NAT Air Traffic Forecasting Group ensure that the Group reviews periodically the format and elements in the forecasts, coordinating as necessary with the ICAO Secretariat, and that the traffic forecasts be updated at least every other year and at other times as appropriate in order to reflect developments in air transport and associated changes in the environment, so that all information essential to NAT systems planning are made available in a timely fashion.

The Air Navigation Commission agreed at its 15th meeting of its 127th Session (127-15) for the LIM NAT RAN (1992) Meeting to use the air traffic forecasts developed by the NAT TFG in lieu of the Table of Aircraft Operations specified in *Directives to Regional Air Navigation Meetings and Rules of Procedure for their Conduct*, ICAO Doc 8144, as a basis for revision of the NAT Air Navigation Plan.

In view of the usefulness of the NAT air traffic forecasts in regional planning for the North Atlantic and the comparative advantage over the traditional Table of Aircraft Operations, the LIM NAT RAN (1992) Meeting agreed that the use of the traffic forecasts should be made a permanent feature in Doc 8144 for the NAT Region. For that reason, it was essential that the NAT TFG continue to produce this product annually under the guidance of the NAT SPG. To this end, the following Recommendation was adopted:

Recommendation 6/2: North Atlantic Air Traffic Forecasts

That:

- a) *the North Atlantic Air Traffic Forecasting Group (NAT TFG) produce detailed yearly forecasts for peak and off-peak movements in order to determine air traffic demand in the NAT Region in response to the needs of various users, particularly States and the North Atlantic Systems Planning Group;*
- b) *the forecasts be updated annually and included in the NAT Facilities and Services Implementation Document (FASID); and*
- c) *the North Atlantic Air Traffic Forecasts replace the Table of Aircraft Operations stipulated in Doc 8144, as one of the documents on which the North Atlantic Regional Air Navigation Plan shall be based.*

The above Recommendation was approved by Air Navigation Commission, under delegated authority by the Council, at the 3rd, 4th, 5th and 6th Meetings of its 132nd Session.

Meetings of the NAT TFG

At its Thirty-Second Meeting (1996), the NAT SPG agreed to the following:

“NAT SPG Conclusion 32/5 – Meetings of the NAT Traffic Forecasting Group (NAT TFG)

That:

- a) the NAT TFG meet once every two years to update the short and medium term forecasts; and
- b) long range forecasts be updated every four years as of 1997.”

Composition

The NAT TFG is composed of Members from Canada, Portugal, the United Kingdom and the United States.

Chairman

The Chairmanship of the NAT TFG will be reviewed by an election every four years and confirmed by the NAT SPG*.

Secretary

Secretariat services are provided by the ICAO European and North Atlantic Office.

* NAT SPG Conclusion 49/27 refers

NAT SPG ECONOMIC AND FINANCIAL GROUP

(NAT EFG)

Terms of Reference

The establishment of the NAT EFG was based on NAT SPG Conclusion 36/7 to provide economic and financial advice to the NAT SPG in order to ensure the cost-effective management of the North Atlantic air traffic management system and has the following terms of reference:

1. Provide the NAT SPG with appropriate financial management expertise and advice in the areas of, inter alia, cost identification, cost allocation models, performance and productivity indicators, variance analyses and standardised financial reporting.
2. Provide advice to the NAT SPG as to best practice in the area of cost recovery and charging for the provision of air navigation services.
3. Develop proposals addressing financial and their related organisational aspects for implementing multinational facilities and services employed by provider States in the NAT region.
4. Review and provide input on financial and economic aspects of NAT development plans, in co-operation with the NAT IMG.
5. Address other issues as directed by the NAT SPG.
6. Report to the NAT SPG.

Composition

The NAT EFG is composed of Members from Canada, Denmark, Iceland, Ireland, Norway, Portugal, the United Kingdom and the United States, IACA, IATA and IBAC and with the participation of France as an observer.

The NAT EFG may invite other participants as and when required in order to ensure that the relevant expertise is available when addressing specific tasks or issues.

The Chairmanship of the NAT EFG will be reviewed by an election every four years and confirmed by the NAT SPG*.

* NAT SPG Conclusion 49/27 refers

TERMS OF REFERENCE FOR
THE NAT IMG AND ITS CONTRIBUTORY GROUPS
NAT IMPLEMENTATION MANAGEMENT GROUP
(NAT IMG)

Terms of Reference

The NAT IMG was established by a Meeting of North Atlantic High Level Managers, held in Paris 20-21 January 1994 and NAT SPG/30 decided on its initial terms of reference. Its current terms of reference are:

1. Support the objective of, and abide by the guiding principles of, the NAT SPG Safety Policy whilst carrying out its own activities and directing the activities of its implementation working groups.
2. Develop and manage the NAT Services Development Roadmap, which identifies priorities and sets out timetables with associated milestones.
3. Identify, detail and recommend allocation of tasks and resources required to fulfil the NAT Implementation Plan.
4. Assess the cost-effectiveness of the elements of the NAT Implementation Plan.
5. Approve or amend the terms of reference of NAT implementation working groups and to direct their work programmes.
6. Ensure the necessary co-ordination and/or consultation with NAT Provider States, other States, NAT Users and appropriate International Organizations.
7. Propose to the NAT SPG amendments to the Air Navigation Plan, the Facilities and Services Implementation Document and the Nat Implementation Strategy.
8. Seek guidance from the NAT SPG on issues that the Group cannot resolve.
9. Report to the NAT SPG.

Composition

The NAT IMG is composed of representatives of the NAT SPG member States. In order to ensure that NAT users' views are represented and to provide valuable operational experience, NAT IMG meetings are also attended by representatives from IACA, IATA and IBAC.

The NAT IMG might invite other participants as and when required in order to ensure that the relevant expertise is available when addressing specific tasks.

The Chairmanship and vice-Chairmanship of the NAT IMG will be reviewed by an election every four years and confirmed by the NAT SPG*.

* NAT SPG Conclusion 49/27 refers

THE NAT IMG CONTRIBUTORY GROUPS

General principles applicable to the NAT IMG working structure

The principles listed below apply to all NAT IMG contributory bodies. They should to the extent possible be applied to task forces that the NAT IMG may set up from time to time as well as to the sub groups that the contributory bodies may establish.

Safety management statement

All NAT IMG contributory bodies shall support the objective of, and abide by the guiding principles of, the NAT SPG Safety Policy whilst carrying out their activities. In order to facilitate the exchange of safety management information, all reports of NAT IMG contributory groups shall clearly identify safety management related issues.

Working methods

The NAT IMG working groups will meet face-to-face at least once a year and at other times as required by the work programme. Yearly meeting dates and the requirement for additional face-to-face meetings will be as approved by the NAT IMG.

The working groups will make every reasonable effort to use other means such as teleconference and electronic correspondence to reduce the frequency of face-to-face meetings. Work will be carried out as required using such other means between face-to-face meetings in order to expeditiously carry their business.

Rapporteurship

The Rapporteur of each NAT IMG working group will be nominated from amongst the NAT SPG member States by the NAT IMG. The rapporteurship of each group will be reviewed at least once every two years. Keeping in mind the need to support continuity, changes will be made only when necessary and efforts will be made to avoid changing multiple Rapporteurs in the same year.

Formulation of recommendations to the NAT IMG (NAT IMG Decision 40/2 refers)

Recommendations to the NAT IMG are to be formulated as draft NAT IMG Decisions.

The following table shall be used to summarize why the NAT IMG should endorse the draft Decision by describing what is expected to fully address the decision, who should carry out the actions required and when the actions should be completed:

| | |
|-------------|--|
| Why | |
| What | |
| Who | |
| When | |

Draft NAT IMG Decisions shall be presented in the following format:

Draft NAT IMG Decision/## NATXXXxx/Z – TITLE

That the NAT(Group designation)/ICAO Regional Director, Europe and North Atlantic:

- a) AA;
- b) BB; and
- c) CC.

Where:

is the designation of the next NAT IMG meeting;

NATXXXxx is the designation and meeting number of the NAT IMG contributory group proposing the draft Decision;

Z is a number indicating the sequence of the proposed draft Decision as it appears in the contributory group report; and

TITLE is a concise description of the subject addressed by the proposed draft Decision.

When formulating each NAT IMG Decision, all acronyms except NAT IMG shall be decoded when they are initially used. This shall be true even for acronyms which have appeared in a previous draft Decision. It is acceptable to use an acronym in the title, so long as it is decoded in the body of the draft Decision.

If NAT SPG action will be required, the NAT IMG will take the necessary action to draft a proposed NAT SPG Conclusion as appropriate. All recommendations to the NAT IMG, even those which will likely require the endorsement of the NAT SPG, are to be presented as draft NAT IMG Decisions.

NAT AIR TRAFFIC MANAGEMENT GROUP

(NAT ATMG)

Terms of Reference

The NAT ATMG seeks approval from the NAT IMG for proposed changes to the NAT Region air navigation documentation in accordance with the following terms of reference:

1. Identify and propose remedial action for shortcomings and deficiencies.
2. Develop procedures to support the implementation of planned CNS/ATM initiatives.
3. Develop procedures for the application of agreed reductions in separation minima in the NAT Region.
4. Keep under review the Application of Separation Minima (North Atlantic Region) document and address outstanding issues.
5. Keep under review detailed operational requirements for Air Traffic Services (ATS) Inter-Facility Data Communication (AIDC) messages in support of Air Traffic Management (ATM).
6. Take into account, and develop as required, NAT Region requirements for Air Traffic Flow Management (ATFM) in harmonisation with Air Traffic Flow Management (ATFM) developments in the Caribbean (CAR), EUR and North America (NAM) Regions.
7. Take into account, and develop as required, NAT Region requirements for civil/military coordination
8. Establish the requirements for harmonisation of Flight Data Processing Systems (FDPS) within the NAT Region.
9. Determine the future operational requirements for Airspace Management (ASM) in the NAT Region.
10. In close cooperation with the NAT CNSG, determine the ATM procedures for the implementation of Communications, Navigation and Surveillance (CNS) in the NAT Region.
11. Co-ordinate the development of contingency plans
12. Address other issues as directed by the NAT IMG.

Composition

The NAT ATMG is composed of representatives from NAT SPG member States as well as participants from Spain, IATA, IBAC and IFALPA.

The Group may invite participants from other States, organisations or industry as required.

The Rapporteur of the NAT ATMG will be reviewed by an election every four years and confirmed by the NAT IMG*.

* NAT SPG Conclusion 49/27 refers

NAT SAFETY ANALYSIS AND REDUCED SEPARATION IMPLEMENTATION GROUP (NAT SARSIG)

Terms of Reference

The NAT SARSIG makes recommendations regarding changes to separation minima, procedures, safety compliance monitoring requirements, the implementation of new technologies and the safety assessments necessary to sustain changes to the NAT Region air navigation system, as assigned by the NAT IMG. It has the following terms of reference:

1. Develop a work programme for those tasks assigned to the group by the NAT IMG.
2. Develop material for elaboration of safety cases to be used for the proposed reductions or changes in application of separation minima or regional implementation of new technologies.
3. Ensure that collision risk assessments, including functional hazard and risk analysis, are carried out and if required, identify necessary mitigations for reductions or changes in application of separation standards or regional implementation of new technologies.
4. Ensure that an appropriate Target Level of Safety (TLS) is adopted for use in evaluating reductions of separation minima or changes in application of separation standards.
5. Identify those elements which are critical in the assessment of collision risk and suggest areas where safety improvements would be effective in reducing risk.
6. Assess the effects that projected increases in traffic would have on risk.
7. Ensure that Collision Risk Models (CRM), when used in the NAT Region, are appropriate.
8. As part of a safety case, determine the Communications Navigation and Surveillance (CNS) elements necessary to progressively reduce horizontal separation.
9. Study the aircraft operational issues related to the implementation of RNP in the NAT Region.
10. Address other issues as directed by the NAT IMG.
11. Report to the NAT IMG.

Composition

The NAT SARSIG is composed of representatives from NAT SPG member States as well as participants from IATA and IFALPA.

The Group may invite participants from other States, organisations or industry as required.

The Rapporteur of the NAT CNSG will be reviewed by an election every four years and confirmed by the NAT IMG*.

* NAT SPG Conclusion 49/27 refers

NAT OPERATIONS AND AIRWORTHINESS SUB-GROUP

(NAT OPS/AIR)

Terms of Reference

The NAT OPS/AIR sub-group serves as a forum for State and aviation industry specialists to harmonise policy on airworthiness and operations issues related to separation standards. Its specific responsibilities are:

1. Coordinate with appropriate groups and organisations on issues which may arise in the application of the Minimum Aircraft System Performance Specifications (MASPS).
2. Initiate necessary action to amend aeronautical charts to correctly reflect navigational requirements related to operational procedures and requirements in the ICAO NAT Region related to the application of separation.
3. Study operational issues related to the role of Airborne Collision Avoidance System (ACAS) and develop recommendations as appropriate.
4. Harmonise aircraft operational and airworthiness policy for Automatic Dependent Surveillance (ADS), Controller Pilot Data Link Communications (CPDLC) and other data link initiatives supporting performance based operations.
5. Coordinate with the NAT ATMG and the NAT CNSG in the development of aircraft operational issues as directed by the NAT SARSIG.
6. Study other aircraft operational issues as directed by the NAT SARSIG and develop recommendations as appropriate.
7. Report to the NAT SARSIG.

Composition

Representatives from members and observers of the NAT SPG and from manufacturers.

Note: The *Rapporteur* may invite participants from other States, organisations or industry as required.

The NAT OPS/AIR sub-group meets when required.

The *Rapporteur* of the NAT OPS/AIR will be reviewed by an election every four years and confirmed by the NAT SARSIG*.

* NAT SPG Conclusion 49/27 refers

NAT COMMUNICATIONS, NAVIGATION AND SURVEILLANCE GROUP (NAT CNSG)

Terms of Reference

The NAT CNSG is responsible to the NAT IMG for the harmonisation, overall monitoring and reporting of CNS systems implementation conducted in the NAT Region and other related tasks directed by the NAT IMG. The principle tasks of the NAT CNSG are:

1. Develop the methodology for the CNS systems implementation process including harmonisation of implementation activities, monitoring requirements, reporting functions and arrangements among its members for use and distribution of CNS related data.
2. Develop success criteria and methodology, inclusive of a safety analysis, for assessment of implementation programs.
3. Evaluate CNS systems' end to end performance.
4. Establish and oversee configuration management for the implementation of CNS systems for the NAT Region.
5. Identify and resolve procedural and technical issues critical to the success of CNS systems implementation.
6. Develop application level messages for ground/ground forwarding of data between ATC units.
7. Implement and administer a CNS performance/problem monitoring and reporting system.
8. Develop procedural and/or technical improvements to the use of CNS systems in the NAT Region.
9. Address other issues as directed by the NAT IMG.
10. Report to the NAT IMG.

Composition

The NAT CNSG is composed of representatives from NAT SPG member States as well as participants from IATA, IBAC and IFALPA.

The Group may invite participants from other States, organisations or industry as required.

NAT AERONAUTICAL COMMUNICATIONS SUB GROUP (NAT ACSG)

Terms of Reference

The NAT ACSG reports to the NAT CNSG and is responsible for monitoring and analyzing the efficiency and effectiveness of NAT voice communications facilities and the Aeronautical Fixed Services (AFS).

The main tasks of the NAT ACSG are:

1. Monitor and analyze the efficiency and effectiveness of tools available to general purpose radio communications facilities including HF, GP/VHF and SATCOM voice systems.
2. Address short term issues and propose solutions to problems related to fixed/mobile services.
3. Keep under review the current network management arrangements including the distribution of traffic over the HF families of frequencies and make reservations to resolve unequal distribution of traffic.
4. Provide advice on the operational voice communications requirements related to transition issues associated with the implementation of data link communications technologies.
5. Provide advice/comment, as required, to the NAT CNSG and NAT ATMG on the impact of the implementation of communications systems and/or changes in ATC procedures on voice communications.
6. Address and report to the NAT CNSG regarding issues related to planning and implementation, as directed by the NAT CNSG

Composition

The NAT ACSG is composed of representatives from Canada, Iceland, Ireland, Norway, Portugal, the United States and IATA.

The Rapporteur of the NAT ACSG will be reviewed by an election every four years and confirmed by the NAT CNSG*.

Working Methods

Through correspondence to the extent possible. Meetings may be required from time to time.

* NAT SPG Conclusion 49/27 refers

NAT DATA LINK MONITORING AGENCY

(NAT DLMA)

Terms of Reference

The NAT Data Link Monitoring Agency (DLMA) will report to the NAT CNSG with respect to data link implementation, trials and operations.

It will receive and process routine and ad-hoc data and problem reports from end users and interested parties

The main tasks of the NAT DLMA are:

1. Monitor and report communications performance, availability and problems, with respect to requirements.
2. Develop and promulgate forms, specifications and procedures required for reporting of problems and routine data.
3. Monitor and report message traffic statistics.
4. Co-ordinate end-to-end system functionality, performance and interoperability.
5. Co-ordinate in order to diagnose and resolve system problems.
6. Co-ordinate the development of ground system navigation databases.
7. Report ATSUs' data link capabilities with respect to trials and operational requirements for the Region. Receive advisories of same from ATS providers.
8. Co-ordinate with similar agencies for other airspaces.
9. Collect notices of service disruptions, restorations and major system changes. Correlate the information same to problems reported.

NAT SAFETY OVERSIGHT GROUP

(NAT SOG)

Terms of Reference

The NAT SOG is responsible to the NAT SPG for safety oversight in the NAT Region, and will:

1. Review system safety performance in the NAT Region.
2. Share data on safety-related occurrences in the NAT Region.
3. Support the development of best practices in the management of safety in the NAT Region.
4. Keep under review and, when appropriate, propose revisions to the safety Key Performance Indicators (KPI) established for the ICAO NAT Region;
5. Ensure safety-related occurrences in the NAT Region are analysed by the appropriate NAT SOG contributory groups to determine root causes.
6. Identify areas where mitigation is required and report to the NAT SPG and coordinate with NAT IMG. Assess the effectiveness of implemented mitigation measures.
7. Keep under review safety monitoring methods and analysis and recommend improvements to the process as appropriate.
8. Monitor safety cases in progress and review completed safety cases prepared to support changes to the NAT air navigation system.
9. Collect data on and monitor safety KPIs;
10. Advise the NAT SPG annually on the performance of the ICAO NAT Region in relation to the safety KPIs;
11. Address other safety-related issues as necessary.
12. Use the fast track to advance safety concerns between formal meetings.
13. Report to the NAT SPG.

Composition

The NAT SOG is composed of representatives from the NAT SPG member States. State representatives should be in a position to address service delivery and flight operations regulatory issues in the NAT Region, and as necessary regulatory issues related to the conduct of flight operations in the NAT Region. In order to ensure that NAT users' views are represented and to provide valuable operational experience, NAT SOG meetings are also attended by representatives from Spain, IATA, IBAC, IFALPA and IFATCA. The NAT SOG may invite participants from other States or organisations as required.

The Chairmanship and vice-Chairmanship of the NAT SOG will be reviewed by an election every four years and confirmed by the NAT SPG*.

* NAT SPG Conclusion 49/27 refers

THE NAT SOG CONTRIBUTORY GROUPS

Formulation of recommendations to the NAT SOG (NAT SOG Decision 06/01 refers)

The NAT SOG contributory groups are to provide reports that are as concise as possible, whilst providing sufficient detail and supporting material for any recommendations which might be made. In order to clarify the intent of contributory group recommendations they are to be formulated in the form of "draft NAT SOG Decisions". Each draft Decision is to be accompanied by sufficient supporting justification, which is to include, at minimum:

- a) a concise summary of the discussion of the group, including the reasons why particular options are or are not supported;
- b) the full text of any material proposed for adoption by the NAT SOG into a NAT SPG or ICAO document;
- c) the full text of proposed revisions to text of an existing NAT SPG or ICAO document, with insertions shown in grey highlight (text to be inserted) and deletions shown in strikethrough (~~text to be deleted~~); and
- d) a clear description of why the NAT SOG should endorse the draft Decision, what is expected in order to fully address the decision, who should carry out the actions required and when the actions should be completed, using the tabular format described below.

The following table shall be used to summarize why the NAT SOG should endorse the draft Decision by describing what is expected to fully address the decision, who should carry out the actions required and when the actions should be completed:

| | |
|-------------|--|
| Why | |
| What | |
| Who | |
| When | |

Draft NAT SOG Decisions shall be presented in the following format:

Draft NAT SOG Decision ##/NATXXXXxx/Z – TITLE

That the NAT(Group designation)/ICAO Regional Director, Europe and North Atlantic:

- a) AA;
- b) BB; and
- c) CC.

Where:

TITLE is a concise description of the subject addressed by the proposed draft Decision;

is the designation of the next NAT SOG meeting;

NATXXXXxx is the designation and meeting number of the NAT SOG contributory group proposing the draft Decision; and

Z is a number indicating the sequence of the proposed draft Decision as it appears in the contributory group report.

When formulating each NAT SOG Decision, all acronyms except NAT SOG shall be decoded when they are initially used. This shall be true even for acronyms which have appeared in a previous draft Decision. It is acceptable to use an acronym in the title, so long as it is decoded in the body of the draft Decision.

If NAT SPG action will be required, the NAT SOG will take the necessary action to draft a proposed NAT SPG Conclusion as appropriate. All recommendations to the NAT SOG, even those which will likely require the endorsement of the NAT SPG, are to be presented as draft NAT SOG Decisions.

NAT MATHEMATICIANS' WORKING GROUP

(NAT MWG)

Terms of Reference

The NAT MWG reports to the NAT SOG and is responsible for providing mathematical and statistical advice relating to the on-going monitoring of safety through the assessment of collision risk and any other tasks as determined by the NAT SOG. It has the following terms of reference:

1. Estimate monthly and annually the lateral and vertical occupancies (traffic densities) in the NAT Region.
2. Estimate the current lateral, longitudinal and vertical collision risks to show whether the estimated risks meet the respective Target Levels of Safety (TLS).
3. Identify trends that may not be identified within the SG Report including component elements of the collision risk model and highlight where safety improvements could prove most effective.
4. To reflect changes in operating conditions within the NAT region, review the collision risk model.
5. Periodically perform other data collections (e.g. core navigation studies) in order to ensure that the parameter values within the mathematical collision risk models remain current.
6. Review other mathematical aspects as directed by the NAT SOG and/or the NAT SPG.
7. Coordinate with the NAT SG.
8. Report to the NAT SOG.

Composition

The NAT MWG is composed of experts from the NAT SPG member States, Spain, IATA and IFALPA. Representatives from EUROCONTROL may also be invited as observers in order to ensure consistency between related European and North Atlantic work programmes.

The Rapporteur of the NAT MWG will be reviewed by an election every four years and confirmed by the NAT SOG*.

Working Methods

The NAT MWG conducts its work via correspondence to the extent possible.

* NAT SPG Conclusion 49/27 refers

NAT SCRUTINY GROUP

(NAT SG)

Terms of Reference

The NAT SG is responsible to the NAT SOG for ensuring the correct categorization of NAT Region reported occurrences for the purposes of mathematical analysis and other safety management activities. To that end, the NAT SG will:

1. For the purpose of mathematical analysis, and in close cooperation with the NAT MWG, categorise navigational errors and altitude deviations of 300ft or more occurring in NAT MNPS airspace.
2. For the purpose of safety management activities, categorize reported occurrences in the NAT Region as directed by the NAT SOG.
3. Analyse occurrences in order to allow the study of trends and prevalent causes.
4. Evaluate the effect of, and provide advice and recommendations to the NAT SOG on the implemented mitigations in the NAT region.
5. Work in close co-operation with the NAT CMA to compile data necessary to conduct safety analysis in the NAT Region.
6. Keep under review the procedures for collecting and categorising occurrence reports.
7. Address other related issues as directed by the NAT SOG.
8. Report at least twice per year to the NAT SOG; the reports should include findings from all tasks of the SG (vis-à-vis ToRs). Ensure that reports are sent to the SOG at least 2 weeks prior to SOG's biannual meetings.
9. Report once per year on the categorisation of occurrences for mathematical analysis to the NAT MWG.

Composition

The NAT SG is composed of nominated experts from the NAT SPG member States, Spain, NAT MWG, NAT CMA, IATA, IBAC, IFALPA and IFATCA.

The Rapporteur of the NAT SG will be reviewed by an election every four years and confirmed by the NAT SOG*.

Working Methods

The NAT SG conducts its work via correspondence to the extent possible.

* NAT SPG Conclusion 49/27 refers

NAT CENTRAL MONITORING AGENCY

(NAT CMA)

Terms of Reference

The NAT CMA is responsible to the NAT SOG for certain aspects of operations monitoring and reporting in the NAT Region. Specifically, its principle functions are:

1. Establish and amend, as required, mechanisms for the collection and analysis of occurrence data, including operational errors, for use in the risk assessment and safety assurance process.
2. Establish and operate a database of RVSM approvals, for the NAT Region, issued by State aviation authorities.
3. Categorize all reported occurrences in the NAT Region and take follow-up action with State aviation authorities as required after relevant analysis.
4. Establish a mechanism for the tactical monitoring of aircraft approvals and take follow-up action with State aviation authorities as required.
5. Act as the custodian of all aircraft technical height keeping data collected as part of the NAT Region monitoring process and take follow-up action, as required, with operators and State aviation authorities of aberrant or non-compliant aircraft.
6. Responsibility for the amendment and publication of the “NAT Minimum Monitoring Requirements” table after co-ordination with the NAT MWG and NAT SOG.
7. Provide NAT customers and State aviation authorities with height monitoring data on request.
8. Ensure that the requisite height monitoring is completed by operators of aircraft listed in the RVSM approvals database and to take appropriate action where necessary.
9. Produce a quarterly report on operational performance in the NAT Region for distribution to the NAT SPG, the NAT SOG and other interested parties.
10. Liaison with other regional monitoring agencies in order to achieve an exchange of monitoring and RVSM approvals data amongst the regions.

NAT IMG COST EFFECTIVENESS GROUP

(NICE)

Terms of Reference

The NICE Group is responsible to the NAT IMG for the maintenance of the simulation capability needed to support NAT implementation planning. The principle tasks are:

1. Assess the various elements of the NAT ATM plan.
2. Conduct cost efficiency studies related to the NAT ATM plan.
3. Carry out studies assigned to it by the NAT IMG.

Composition

The Group is composed of Members from Iceland, the United Kingdom, and the United States and is supported by IATA.

Rapporteur

Iceland

Working Methods

The Group carries out its work by correspondence and only meets when required. The composition of NICE meetings is determined by resources needed for the assigned task.

Inputs to the NICE Programme from the NAT IMG working groups are essential. Work packages are allocated to the working groups by the NAT IMG through the NICE Programme Manager.

NAT DOCUMENT MANAGEMENT OFFICE

(NAT DMO)

Terms of Reference

The NAT DMO is responsible to the NAT SPG for ensuring the currency and consistency of the documentation relating to NAT operations with the following terms of reference:

1. Track changes to external source or reference documents and ensure that relevant NAT documentation is duly updated.
2. Apprise NAT Groups of any changes or potential changes to provisions which could impact their work.
3. Undertake, solicit and/or review changes to NAT documentation which might follow from the work of NAT Groups.
4. Apprise the NAT IMG of any need for changes to NAT documentation and seek approval for such work.
5. Brief the NAT SPG annually on all changes affecting NAT documentation.
6. Coordinate/liaise with commercial vendors of NAT-specific data to endeavour to ensure global consistency and currency of information and guidance available to users.
7. Maintain contact via an established contact point with the ATS and AIS units of NAT Region and NAT bordering states to ensure that planned or effected changes to any services or facilities that affect NAT operations are appropriately reflected in NAT documentation.
8. Review all relevant ICAO amendment proposals and apprise the NAT IMG of any potential impact on NAT operations.

Composition

The NAT DMO service will be provided by Iceland on behalf of the NAT SPG.

NAT SPG POLICIES

IMPLEMENTATION OF DATA LINK

NAT SPG Conclusion 42/6 – Operational Status of the FANS 1/A ADS and CPDLC Trials

That the Future Air Navigation Systems (FANS) Automatic Dependent Surveillance (ADS) Waypoint Position Report (WPR) and Controller Pilot Data Link Communications (CPDLC) trials be declared operational with the following provisos:

- a) phase IV CPDLC has been implemented;
- b) the current strategic operating concept remains the basis for service provision;
- c) the current HF system remains;
- d) continuous monitoring of system performance is carried out by the FCMA, with at least an annual report being provided to the SMCG.

NAT SPG Conclusion 44/6 – Data Link Harmonisation Strategy

That the Secretariat update the entries in the NAT SPG Handbook to replace NAT SPG Conclusion 43/1 with the following:

- a) Any additional aircraft implementation of Automatic Dependent Surveillance - Contract (ADS-C) should either;
 - i) utilise without change the existing DO-258A/ED-100A* (FANS-1/A) ADS-C, or
 - ii) move to the full implementation of the internationally agreed common technical definition that will be defined based on relevant provisions and guidance material (*Manual of Air Traffic Services Data Link Applications* (Doc 9694)) developed by ICAO and its technical bodies

Partial or divergent aircraft data link evolutions should not be pursued, as they will continue to promote divergent paths to the detriment to the broader community. Interim steps or phases toward full implementation of the common technical definition in ground systems should only be pursued on a regional basis, after coordination between all States concerned.

* *RTCA/EUROCAE Interoperability Requirements for ATS Applications Using ARINC 622 Data Communications (FANS 1/A INTEROP Standard)*

- b) Any additional aircraft implementation of Controller-Pilot Data Link Communications (CPDLC) should either;
 - i) utilise without change the existing DO-258A/ED-100A (FANS-1/A) or DO-280B/ED-110B (ATN) CPDLC for ACM/ACL/AMC data link services, or
 - ii) move to the full implementation of the internationally agreed common technical definition, based on Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444), and other operational material as appropriate

Partial or divergent aircraft data link evolutions that result in excluding messages from aircraft systems should not be pursued, as they will continue to promote divergent paths to the detriment to the broader community. Interim steps or phases toward full implementation of the common technical definition in ground systems should only be pursued on a regional basis, after coordination between all States concerned.

- c) Harmonization of operational procedures for implementation of the above packages is considered essential. States, planning and implementation regional groups, air navigation services providers and other ATS coordinating groups should adopt common procedures to support seamless ATS provision across flight information region boundaries, rather than each State or Region developing and promulgating unique procedures for common functions.

NAT SPG Conclusion 45/12 – Inter-regional coordination of data link requirements

That the ICAO Regional Director, Europe and North Atlantic, on behalf of the NAT SPG:

- a) coordinate with adjacent regions to facilitate a mutual understanding and harmonisation of data link equipage requirements and implementation plans between the NAT and adjacent regions; and
- b) provide updates to the NAT SPG to support maintenance of the NAT data link implementation plan.

NAT SPG Conclusion 46/2 - NAT Region Data Link Mandate

That:

- a) the United Kingdom submit the North Atlantic Regional Supplementary Procedures proposal for amendment (PfA) regarding a NAT Region data link mandate, as provided at Appendix F to this report, to the European and North Atlantic Office of ICAO as soon as possible;
- b) the ICAO Regional Director, European and North Atlantic, process the submitted PfA in accordance with the formal procedure;
- c) the NAT Implementation Management Group (NAT IMG) undertake a study to determine the vertical and horizontal limits of the area of application of the NAT Region data link mandate;
- d) the NAT IMG undertake a study to specify the accommodation procedures for aircraft unable to equip in the framework of the NAT Region data link mandate;
- e) the NAT IMG develop guidance material on the application of the NAT Region data link mandate to operators and aircraft; and
- f) the NAT IMG report progress to NAT SPG/47.

NAT SPG Conclusion 47/1 – Vertical and horizontal limits of airspace associated with the ICAO NAT Region Data Link Mandate

That the limits of the airspace within the ICAO NAT Region where the carriage and operation of data link is mandatory shall be:

- a) in the vertical plane, flight level 360 to flight level 390 inclusive; and
- b) in the horizontal plane, no more than two tracks within the NAT Organised Track System designated as core tracks in accordance with the rules detailed in Appendix D of this report and identified as such on the NAT Track Message.

Appendix D of the NAT SPG/47 Report:

Appendix D – Designation of Core Tracks

(Paragraph 3.1.4 refers)

For the purpose of designating exclusionary airspace associated with the NAT Region Data Link Mandate, the following will apply:

1. *A “split track structure” is an organised track structure with at least two entry points between one group of organised tracks and another.*
2. *Core Tracks shall be designated in accordance with the following:*
 - a) *the first basis for determining which organised track would be a “core” organised track, which defines the area of applicability, would be a track whose predicted loading was in the higher percentage of the overall predicted OTS loading, on that day (the core tracks would be identified when the NAT Track message was promulgated);*
 - b) *the method of predicting track loadings would be the same as used today for the creation of the OTS and operational tactical planning purposes;*
 - c) *core organised tracks would have an adjacent non core organised OTS track available one degree north or south to allow for non equipped aircraft;*
 - d) *an adjacent OTS track would be defined as an OTS organised track whose:*
 - i) *Entry point was no more than 1 degree different to the core organised track; and*
 - ii) *Exit point was no more than 2 degrees different to the core organised track; and*
 - e) *the number of core organised tracks in any one OTS would be no more than two.*

NAT SPG Conclusion 48/10 - Acceptability of various sub-networks' performance for FANS 1/A data link services

That FANS 1/A or equivalent over Inmarsat I3 Classic Aero, Iridium Short Burst Data and Very High Frequency (VHF) sub-networks demonstrate performance acceptable for the use of data link services.

NAT SPG Conclusion 49/13 – Acceptability of I4 Classic Aero sub-network for FANS 1/A data link services

That FANS 1/A over Inmarsat I4 Classic Aero sub-network demonstrate performance acceptable for the use of data link services on a continuous basis.

SAFETY RELATED POLICIES**NAT SPG Conclusion 42/1 - ICAO 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 as provided for in the unified strategy.

NAT SPG Conclusion 43/4 - Determination of an appropriate value for the safety case to support a reduction to ½ degree track spacing

That the NAT Implementation Management Group (NAT IMG) ensure that all safety analyses supporting the implementation of ½ degree track spacing use a value that accommodates the requirements of the Gentle Slope Rules for the proposed lateral spacing between tracks.

NAT SPG Conclusion 45/5 – Exchange of safety management related information

That, recognising the importance of all NAT SPG contributory groups being aware of safety management issues in the NAT Region and thereby maximising contributions to the resolution of these issues and to facilitate the exchange of safety management information, each meeting of every NAT SPG contributory group shall:

- a) review the safety management sections of the most recent reports of all other NAT SPG contributory groups; and
- b) document any relevant comments in the safety management section of their own report.

NAT SPG Conclusion 45/14 - Convening NAT users meeting

That ICAO, on the basis of a recommendation from the NAT Implementation Management Group (NAT IMG) or of the NAT Safety Oversight Group (NAT SOG) and with the assistance of NAT service providers convene Conferences from time to time to explain to those directly involved with operations in the NAT Region current and future developments, especially those that affect safety.

NAT SPG Conclusion 45/17 - Establishment of a NAT Data Link Monitoring Agency (NAT DLMA)

That the:

- a) United States establish by 31 December 2009 a NAT DLMA;
- b) NAT Implementation Management Group coordinate all safety related matters with the NAT Safety Oversight Group; and
- c) NAT IMG provide a report to NAT SPG/46.

NAT SPG Conclusion 45/25 - Implementation of Air Traffic Services (ATS) Inter-Facility Data Communication (AIDC) throughout the NAT Region

That:

- a) all States make arrangements to fully implement AIDC, including the re-negotiation function, by 15 November 2012;
- b) the NAT Implementation Management Group (NAT IMG) oversee the development of a detailed implementation plans to assist Air Navigation Service Providers (ANSP) to meet the 15 November 2012 date;
- c) the NAT IMG direct its contributory groups to assist in the development of a harmonised multi-regional AIDC Interface Control Document (ICD);
- d) the NAT Safety Oversight Group keep under review the impact that the gradual implementation of AIDC may have on reducing risk; and
- e) the NAT SPG be provided with regular progress reports.

NAT SPG Conclusion 48/18 – Establishment of safety KPIs for the ICAO NAT region.

That the NAT SPG:

- a) adopts the safety Key Performance Indicators (KPI) in the area of safety for the ICAO NAT Region as amended by NAT SPG Conclusion 49/02 below;
- b) adds to the NAT Safety Oversight Group terms of reference the responsibility to:
 - i) collect data on and monitor the safety KPIs as listed in a);
 - ii) advise the NAT SPG annually on the performance of the ICAO NAT Region in relation to the safety KPIs; and
 - iii) keep under review and, when appropriate, propose revisions to the safety KPIs.

NAT SPG Conclusion 49/02 – Amendments to the list of safety key performance indicators for the ICAO NAT Region

That the list of Key Performance Indicators (KPI) in the area of safety for the ICAO NAT Region be amended as follows:

- (i) number of hull loss events;
- (ii) number of Airborne Collision Avoidance System (ACAS) Resolution Advisory (RA) events;
- (iii) number of Large Height Deviation (LHD) events-involving data link equipped aircraft;
- (iv) number of LHD events involving non data link equipped aircraft;
- (v) number of minutes that data link equipped aircraft spend at the wrong flight level;
- (vi) number of minutes that non data link equipped aircraft spend at the wrong flight level;
- (vii) performance in the vertical dimension against the vertical Target Level of Safety (TLS);
- (viii) number of Gross Navigation Error (GNE) events involving data link equipped aircraft;
- (ix) number of GNE events involving non data link equipped aircraft;
- (x) performance in the lateral dimension against the lateral TLS; and
- (xi) number of losses of separation.

NAT SPG Conclusion 48/21 - Lateral deviation classifications

That the:

- a) following definitions be used when classifying reports made to the NAT Central Monitoring Agency (NAT CMA):
 - i) a lateral deviation is any actual deviation from the cleared track other than those covered by the Strategic Lateral Offset Procedures (SLOP);
 - ii) a Gross Navigation Error (GNE) is a lateral deviation from a cleared track by 10 Nautical Miles (NM) or more;
 - iii) an ATC iIntervention is an event where the Air Traffic Controller (ATCO) caught and corrected a lateral deviation before it developed into a GNE; and
 - iv) an ATC pPrevention is an event where the ATCO intervention prevented a lateral deviation; and
- b) NAT CMA initiate GNE-related follow up actions in regard to GNEs of 25 NM or more.

IMPLEMENTATION PLANNING

NAT SPG Conclusion 27/22 – Definition of a Target Level of Safety (TLS) for the Implementation of the Reduced VSM in the NAT Region

That the TLS be defined as follows:

- a) the TLS for collision risk in the vertical dimension due to all causes be 5.0×10^{-9} fatal accidents per flight hour and that the overall collision risk in the vertical plane be assessed against this TLS; and
- b) the TLS would not be partitioned into separate components for the different types of risk. However, assessments of height-keeping performance would need to be conducted with reference to a safety constraint of 2.5×10^{-9} , as this is the value which has been used to derive the Minimum Aircraft System Performance Specification.

NAT SPG Conclusion 33/6 - Target Level Of Safety (TLS) to support reductions in longitudinal separation minima

That a TLS of 5.0×10^{-9} fatal accidents per flight hour be used for planning purposes in carrying out the work required to sustain reductions in longitudinal separation minima.

NAT SPG Conclusion 43/5 - Changes to the NAT IMG work programme to take account of global planning

That the NAT Implementation Management Group (NAT IMG):

- a) adjust its work programme to include specific reductions in lateral and longitudinal separation minima based on definable improvements to Communications Navigation Surveillance (CNS) performance; and
- b) provide the NAT SPG with regular updates.

NAT SPG Conclusion 48/2 – Updated NAT RLatSM Concept of Operations

That:

- a) the NAT Implementation Management Group use the updated RLatSM Concept of Operations provided in Appendix D to this report to further develop an implementation plan for reducing lateral separation to 25 nautical miles in the ICAO NAT Region;
- b) the ICAO Regional Director, Europe and North Atlantic:
 - i. coordinate with ICAO Headquarters in order to initiate the development of global provisions; and
 - ii. publish the updated RLatSM Concept of Operations on the ICAO EUR/NAT website no later than 1 July 2012; and
- c) this conclusion supersedes NAT SPG Conclusion 47/2.

Appendix D of the NAT SPG/48 Report:

Appendix D - Updated RLatSM Concept of Operations

(Paragraph 3.1.8 refers)

The following concept of operations shall be used to develop an implementation plan for reducing lateral separation to 25 NM in the ICAO NAT Region:

- a) *Each implementation phase shall be harmonized to an appropriate step or benchmark (as determined by the NAT IMG) contained in the NAT MNPS to PBN Transition Plan for the ICAO NAT Region.*
- b) *Phase 1 shall introduce 25 NM lateral separation by implementing ½ degree spacing between the two core tracks within the vertical limits applicable to the airspace associated with the NAT Region Data Link Mandate (NAT SPG Conclusion 46/2 refers); only aircraft with the appropriate Required Navigation Performance (RNP) approval, Automatic Dependent Surveillance-Contract (ADS-C) and Controller Pilot Data Link Communications (CPDLC) would be permitted to operate on the ½ degree spaced tracks.*

Note 1 – Each Phase will be applicable in whatever vertical band is currently associated with NAT Region data link mandatory airspace.

Note 2 - The dates will also be harmonized with the dates applicable to the *NAT Performance Based Communication and Surveillance Implementation Plan*.

- c) *Phase 2 shall expand the introduction of 25 NM lateral separation by implementing ½ degree spacing through the entire NAT Organised Track System (OTS), within the vertical limits applicable to the airspace associated with the NAT Region Data Link Mandate; only aircraft with the appropriate RNP approval, ADS-C and CPDLC would be permitted to operate on the ½ degree spaced tracks.*
- d) *Phase 3 shall introduce 25 NM lateral separation throughout the entire ICAO NAT Region, including for converging and intersecting track situations, within the vertical limits applicable to the airspace associated with the NAT Region Data Link Mandate. The application of the reduced separation standard between targets of opportunity should be permissible in any part of the ICAO NAT Region outside the OTS (mixed mode operations).*

NAT SPG Conclusion 47/6 – ADS-B Eligibility List for the ICAO NAT Region

That Canada maintain an eligibility list on behalf of the ICAO NAT Region detailing aircraft which, it has been confirmed, meet the requirements specified in the European Aviation Safety Agency (EASA) Acceptable Means of Compliance (AMC) 20-24 or equivalent.

NAT SPG Conclusion 47/4 – Target Level of Safety (TLS) to support reductions in lateral separation minima

That a TLS of 5×10^{-9} fatal accidents per flight hour be used for planning purposes in carrying out the work required to sustain reductions in lateral separation minima in the ICAO NAT Region.

NAT SPG Conclusion 47/5 – Approval of the NAT RCP and ADS-C Surveillance Performance based operations implementation plan*

That:

- a) the NAT RCP and ADS-C surveillance performance based operations implementation plan (Appendix G [of the NAT SPG/47 report] refers) be endorsed;
- b) the NAT IMG
 - i) include the management and execution of the NAT RCP and ADS-C surveillance performance based operations implementation plan on its work programme; and
 - ii) provide updates to the NAT SPG.

NAT SPG Conclusion 49/03 – Updated NAT PBCS Implementation Plan

That the ICAO Regional Director, Europe and North Atlantic take appropriate actions to publish and promulgate the updated NAT Performance Based Communication and Surveillance (PBCS) Implementation Plan V.2013.1 and the NAT PBCS Status Report V.2013.1.

NAT SPG Conclusion 48/7 - Applicability of communication and surveillance performance specifications

That:

- a) The current separation standards/minima are strategic in nature and not predicated on Required Communication Performance (RCP) and Required Surveillance Performance (RSP);
- b) Communication and surveillance performance specifications will be prescribed when required for reduced separation minima (e.g., Reduced Longitudinal Separation of 5 minutes between Automatic Dependent Surveillance – Contract (ADS-C) equipped aircraft (RLongSM) and Reduced Lateral Separation of 25 Nautical Miles (NM) (RLatSM)) that are predicated on communications and surveillance performance;
- c) Although current separation minima are not predicated on RCP or RSP, NAT data link operations will use RCP and RSP for gauging communications and surveillance performance as follows:
 - i) Controller Pilot Data Link Communications (CPDLC) performance will be measured against RCP 240, as defined in the *Global Operational Data Link Document (GOLD)*;
 - ii) ADS-C performance will be measured against RSP 180, as defined in the GOLD.

* re-titled “NAT Performance Based Communication and Surveillance Implementation Plan” (NAT IMG/40-2012)

- d) the performance specifications envisaged for the operational RLongSM and RLatSM implementations, RCP 240 and RSP 180 are the candidate specifications to be prescribed, subject to validation by the RLongSM and RLatSM trials; and
- e) Further applications of RCP/RSP to communication and surveillance capability may be considered by NAT SPG in situations where it has been found to be beneficial. At such time, the *NAT Performance Based Communication and Surveillance Implementation Plan* would be amended.

NAT SPG Conclusion 49/05 – RCP and RSP for RLatSM and RLongSM

That the Required Communication Performance (RCP) 240 and Required Surveillance Performance (RSP) 180 are applicable to 25 NM lateral separation minimum (RLatSM) and 5 min longitudinal separation minimum (RlongSM) implementations in the NAT with the following additional provisos:

- a) When the actual communication transaction time or surveillance data delivery time does not meet the 95% values, appropriate action should be taken to improve performance to an acceptable level before providing the air traffic service (ATS) function predicated on RCP/RSP;
- b) The 99.9% values provide a target value for design changes to the overall system to improve performance;

Note 1 – Guidance concerning RCP and RSP specifications, application and performance requirements, including elements to be considered when calculating the 99.9% value, can be found in the Global Operational Data Link Document (GOLD);

Note 2 – With regards to the 99.9% criteria, if the performance is less than 99 % contact the data link monitoring agency (DLMA), operator and/or communications service provider (CSP) to determine any action that can improve the performance;

and

- c) When the actual communication transaction time or surveillance data delivery time does not meet the 99.9% target value, the air navigation service provider (ANSP) should assess the effects of actual performance against local factors, such as increased controller workload, increases in fleet equipage and expanded use of the data link services and implement appropriate controls and mitigation measures as appropriate.

NAT SPG Conclusion 49/09 – Completion of ½ degree coordinates hazard analysis

That:

- a) the Safety Analysis of Input and Display of ½ Degree Coordinates in Support of Reduced Lateral Separation Minima (RLatSM) meets the requirements set forth in NAT SPG Conclusion 45/22; and
- b) NAT IMG work programme be updated to include actions to address the mitigation of ½ degree misconstrued flight routes, and to facilitate the use of automated systems to upload routes directly into the flight management computer (FMC).

NAT SPG Conclusion 49/19 – Mapping of the NAT SDR with the ICAO GANP/ASBU

That:

- a) the *NAT Service Development Roadmap (SDR)* and executive summaries (Appendix A to this [NATSPG/49] Report) is endorsed as a formal document providing a mapping of the NAT Region implementation plans with the *ICAO Global Air Navigation Plan (Doc 9750)* and *Aviation System Block Upgrades (ASBU)* modules, identifying priorities and setting targets; and
 - b) the ICAO Regional Director, Europe and North Atlantic, take appropriate actions to amend the *NAT SPG Handbook*, the *ICAO NAT Air Navigation Plan (Doc 9634)* and *Facilities and Services Implementation Document (Doc 9635)* to include a reference to the *NAT Service Development Roadmap (SDR)* and its executive summaries.
-

REFERENCE DOCUMENTATION

| NAT DOCUMENTS PROMULGATED BY THE NAT SPG | | |
|---|--|---|
| NUMBER | TITLE & notes on configuration management | CURRENT EDITION/VERSION |
| NAT Doc 001 | NAT SPG Handbook <i>Amendments approved by NAT SPG</i> | First Edition Amendment 2 - July 2013 |
| NAT Doc 002 | The North Atlantic Common Coordination Interface Control Document (NAT CC ICD) <i>Kept under review by NAT CNSG - Amendments approved by NAT IMG</i> | Version 1.3.1 September 2012 Version 1.3.0 - September 2011 becomes effective 15 November 2012 |
| NAT Doc 003 | High Frequency Management Guidance Material for the North Atlantic Region <i>Kept under review by NAT ACSG of the NAT CNSG - Amendments approved by NAT IMG</i> | Version 2.0 November 2012 |
| NAT Doc 004 | Common Aeradio Communications Interface Control Document <i>Kept under review by NAT CNSG - Amendments approved by NAT IMG</i> | Version 1.4 November 2011 |
| NAT Doc 005 | Future ATM Concept of Operations for the North Atlantic Region <i>Kept under review by NAT IMG - Amendments approved by NAT SPG</i> | <i>2nd Edition,</i> <i>November 2012</i> |
| NAT Doc 006 | Part I – Air Traffic Management Operational Contingency Plan – North Atlantic Region <i>Kept under review by NAT IMG - Amendments approved by NAT SPG</i> Part II – Volcanic Ash Contingency Plan – EUR and NAT Regions (also designated as EUR Doc 019) <i>Kept under review by NAT IMG - Amendments approved by NAT SPG</i> | First Edition Amendment 07, July 2013 December 2010 |
| NAT Doc 007 | <i>North Atlantic Operations and Airspace Manual*</i> <i>Kept under review by the NAT DMO - Amendments approved by NAT SPG</i> <i>* new name as of 2012, NAT SPG Conclusion 48/24 refers. Former name "Guidance Concerning Air Navigation In and Above the North Atlantic MNPS Airspace"</i> | Edition 2012 |
| NAT Doc 008 | Application of Separation Minima – North Atlantic Region <i>Kept under review by NAT ATMG - Amendments approved by NAT IMG after coordination with NAT SOG</i> | 1 st Edition Amendment 2, June 2013 |
| NAT Doc 009 | Service Development Roadmap – North Atlantic Region (NAT SDR) <i>Kept under review by the NAT IMG and its contributory groups - Amendments approved by NAT SPG</i> | 1 st Edition August 2013 |

NAT DOCUMENTS PROMULGATED BY THE NAT SPG

| NUMBER | TITLE & <i>notes on configuration management</i> | CURRENT EDITION/VERSION |
|--|--|---|
| | North Atlantic International General Aviation Operations Manual <i>Amendments approved by NAT SPG</i> | Third Edition Version 2.1 – 2004 |
| | Minimum Monitoring Requirements: North Atlantic RVSM Including the West Atlantic Route System <i>Kept under review by NAT CMA - Amendments approved by NAT SOG</i> | 29 June 2010 |
| | Oceanic Errors Safety Bulletin <i>Kept under review by NAT SG - Amendments approved by NAT SOG</i> | Regularly updated and issued as NAT OPS Bulletins |
| | Sample Oceanic Checklists <i>Kept under review by NAT SG - Amendments approved by NAT SOG</i> | Regularly updated and issued as NAT OPS Bulletins |
| NAT OPS Bulletins have individual serial numbers | NAT Operations Bulletins <i>Note – The NAT OPS Bulletins Checklist lists the currently valid NAT OPS Bulletins</i> <i>Content is managed by originators - originators are noted on the cover pages</i> | NAT OPS Bulletins have individual validity dates |
| GOLD | The NAT SPG has adopted the <i>Global Operational Data Link Document (GOLD)</i> as regional guidance for use by States and airspace users as the basis for operating Automatic Dependent Surveillance-Contract (ADS-C) and Controller Pilot Data Link Communications (CPDLC) in the ICAO NAT Region. This document has also been endorsed by the Asia/Pacific Air Navigation Planning and Implementation Management Group (APANPIRG). Configuration control is, accordingly, subject to coordination and not solely under the control of the NAT SPG. Note: <i>the GOLD Edition 2.0 is frozen in order to allow the progress of the work at global level aiming at approving GOLD as a global ICAO document. (NAT SPG Conclusion 49/20 refers)</i> | Edition 2.0 (2013) |
| SVGM | Satellite Voice Guidance Material V-1 Note: <i>revised cover page : 3 April 2013</i> | Edition 1 – 24 July 2012 |

These documents are intended as reference for operators and service providers in the ICAO NAT Region and for their respective regulators.

DETAILED OCEANIC EVENT REPORTS CONTENT

In accordance with NAT SPG Conclusion 48/19, occurrence reports submitted to the NAT CMA should contain at least the following information:

- a) event type;
- b) date the event occurred;
- c) start and end times and locations (expressed as latitude/longitude) of the occurrence;
- d) location where the event occurred;
- e) type of airspace involved (i.e. MNPS, below MNPS, etc.);
- f) whether the event occurred within, north or south of the NAT OTS;
- g) type of aircraft operation (i.e. commercial, general aviation or military);
- h) operator name;
- i) aircraft identification, type, departure and destination;
- j) assigned flight level and, if different, the observed flight level;
- k) whether or not the aircraft entered the reporting OCA at an uncoordinated flight level;
- l) assigned speed and, if different, the observed or reported speed;
- m) assigned route and if different, the observed or reported route, including for a subsequent route portion not yet flown:
- n) flight plan;
- o) if applicable, the duration at uncleared flight level;
- p) if applicable, the duration at uncleared speed;
- q) type(s) of communication being used at the time of the occurrence;
- r) identification of the unit, flight information region or sector from which the flight entered the OCA of the unit providing the report;
- s) communications or surveillance mode used to detect the event (i.e. Mode C, ADS-B, ADS-C, pilot report, etc.);
- t) whether the flight crew was advised of the event;
- u) any comments provided by the flight crew;
- v) whether the event was reported to the NAT DLMA;
- w) if applicable, whether or not the appropriate contingency procedure(s) was(were) followed;
- x) if the applicable contingency procedure was not followed, details concerning the action taken by the flight;
- y) an initial event summary (to be included with the initial report to the NAT CMA);
- z) findings and conclusions (including causes and contributory factors) arising from the unit's investigation of the event;
- aa) when applicable, the name of the unit(s) whose breakdown in procedure led to the event;
- bb) corrective actions taken in response to the event; and
- cc) mitigations, if any, put in place to address the event.

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| OCCURRENCE CLASSIFICATION CODES |
|--|

General

| | |
|-------------|---------------------------------|
| CF | Communications failure |
| CI | Crew Injury |
| CR | Crew Request |
| CW | Cracked window |
| DW | Destination Weather |
| ED | Engine Defect |
| ES | Engine Shutdown |
| F | Fire |
| FL | Fuel Leak |
| FPD | Fuel Pump Defect |
| FS | Fuel shortage |
| HP | Hydraulic Problem |
| IRSF | IRS Failure |
| LFT | Low Fuel Temperature |
| ME | Medical Emergency |
| PD | Passenger Disturbance |
| PEI | Precautionary-Engine Indication |
| PR | Pressurisation problem |
| S | Smoke |
| SIC | Smoke in Cockpit |
| TP | Technical Problem |
| W | Weather |

Contingency Action

CA

| | |
|------------|------------------------|
| CF | Communications failure |
| CI | Crew Injury |
| CR | Crew Request |
| CW | Cracked window |
| DW | Destination Weather |
| ED | Engine Defect |
| ES | Engine Shutdown |
| F | Fire |
| FL | Fuel Leak |
| FPD | Fuel Pump Defect |

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|--|
| OCCURRENCE CLASSIFICATION CODES |
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| | | |
|-------------|--|------------|
| FS | Fuel shortage | |
| HP | Hydraulic Problem | |
| IRSF | IRS Failure | |
| LFT | Low Fuel Temperature | |
| ME | Medical Emergency | |
| PD | Passenger Disturbance | |
| PEI | Precautionary-Engine Indication | |
| PR | Pressurisation problem | |
| S | Smoke | |
| SIC | Smoke in Cockpit | |
| TP | Technical Problem | |
| W | Weather | |
| | Diversion | DIV |
| D | Failed to comply with restriction in clearance | |
| L | ATC error | |
| | Horizontal Separation Erosion | HSE |
| C | Crew error | |
| ISO | Followed flight plan iso clearance | |
| L | ATC error | |
| L4 | ATC Co-ordination error | |
| | Intervention | INT |
| A | Committed by aircraft not certified for operation in MNPS airspace | |
| B1 | ATC Loop Error - Controller error | |
| B2 | ATC Loop Error - Poor information exchange between CONTROLLER and the third party communicator | |
| B3 | ATC Loop Error - Poor information exchange between PILOT and the third party communicator | |
| B4 | ATC Loop Error - Poor centre to centre co-ordination | |
| C | Crew error | |
| C1 | Equipment control error encompassing incorrect operation of fully functional FMS or navigation system. | |

| |
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| OCCURRENCE CLASSIFICATION CODES |
|--|

| | | |
|------------|--|-----|
| C2 | Incorrect transcription of ATC clearance or re-clearance into the FMS. | |
| | Wrong information faithfully transcribed into the FMS e.g. flight plan followed rather than ATC clearance or original clearance followed instead of re-clearance | |
| C3 | | |
| D | Other with failure to notify ATC in time for action | |
| E | Other with failure to notify ATC too late for action | |
| F | Other with failure not notified/received by ATC | |
| G | Inter-facility co-ordination problem | |
| ISO | Followed flight plan iso clearance | |
| L | ATC error | |
| W | Weather | |
| | Lateral Deviation <25nm | L |
| | Lateral Deviation <15nm | L15 |
| A | Committed by aircraft not certified for operation in MNPS airspace | |
| B1 | ATC Loop Error - Controller error | |
| B2 | ATC Loop Error - Poor information exchange between CONTROLLER and the third party communicator | |
| B3 | ATC Loop Error - Poor information exchange between PILOT and the third party communicator | |
| B4 | ATC Loop Error - Poor centre to centre co-ordination | |
| C1 | Equipment control error encompassing incorrect operation of fully functional FMS or navigation system. | |
| C2 | Incorrect transcription of ATC clearance or re-clearance into the FMS. | |
| | Wrong information faithfully transcribed into the FMS e.g. flight plan followed rather than ATC clearance or original clearance followed instead of re-clearance | |
| C3 | | |
| D | Other with failure to notify ATC in time for action | |
| E | Other with failure to notify ATC too late for action | |
| F | Other with failure not notified/received by ATC | |
| G | Inter-facility co-ordination problem | |
| W | Weather | |

| |
|--|
| OCCURRENCE CLASSIFICATION CODES |
|--|

GROSS NAVIGATION ERRORS

The GNE occurred in MNPS airspace and the aircraft was observed exiting the ocean through the windows and the deviation $\geq 30\text{Nm}$.

Alpha (eta)

The GNE occurred in MNPS airspace and the aircraft was observed exiting the ocean through the windows and the deviation $\geq 50\text{Nm}$ or ≥ 1 deg, as appropriate.

Alpha
(zeta, risk-bearing)

The GNE occurred in MNPS airspace, was NOT observed exiting the ocean through the windows and the deviation $\geq 25\text{Nm}$ or WAS observed exiting the ocean through the windows and the deviation $\geq 30\text{Nm}$.

B

The GNE occurred above or below MNPS airspace (not necessarily at the windows) and the deviation $\geq 25\text{Nm}$

C

| | |
|----------|--|
| C | Crew error |
| D | Failed to comply with restriction in clearance |
| E | Climb/descent without ATC clearance. |
| L | ATC error |
| W | Weather |

Longitudinal Separation Erosion

LSE

| | |
|-----------|------------|
| C | Crew error |
| L | ATC error |
| MA | Mach no. |
| WP | Waypoint |

Time-Related Incident

TRI

| | |
|-----------|------------------------|
| CF | Communications failure |
| CI | Crew Injury |
| CR | Crew Request |

| |
|--|
| OCCURRENCE CLASSIFICATION CODES |
|--|

| | |
|-------------|---------------------------------|
| CW | Cracked window |
| DW | Destination Weather |
| ED | Engine Defect |
| ES | Engine Shutdown |
| F | Fire |
| FL | Fuel Leak |
| FPD | Fuel Pump Defect |
| FS | Fuel shortage |
| HP | Hydraulic Problem |
| IRSF | IRS Failure |
| LFT | Low Fuel Temperature |
| ME | Medical Emergency |
| PD | Passenger Disturbance |
| PEI | Precautionary-Engine Indication |
| PR | Pressurisation problem |
| S | Smoke |
| SIC | Smoke in Cockpit |
| TP | Technical Problem |
| W | Weather |

Turnback

TB

| | |
|-----------|---|
| A | Contingency action due to engine fault. |
| B | Contingency action due to pressurization failure. |
| C | Contingency action due to other cause. |
| D | Failure to climb/descend as cleared. |
| E | Climb/descent without ATC clearance. |
| F | Entry to RVSM airspace at an incorrect level. |
| G | ATC FL re-clearance resulting in a loss of lateral or longitudinal separation. |
| H | Deviation due to TCAS. |
| I | Aircraft unable to maintain level. |
| J | ATC failure to correctly record, coordinate, or follow through on FL changes and/or other clearances. |
| K | Aircrew not maintaining level as cleared. |
| L1 | ATC failure to capture incorrect read back of control instructions. |

OCCURRENCE CLASSIFICATION CODES

| | | |
|-----------|---|---|
| L2 | ATC failure to maintain situational awareness. | |
| L3 | ATC failure to resolve transposed call signs. | |
| L4 | ATC Co-ordination error | |
| M | Actions taken due to mechanical or equipment failure. | |
| O | Other | |
| W | Weather | |
| | Final level within RVSM airspace | 1 |
| | Final level above RVSM airspace | 2 |
| | Final level below RVSM airspace | 3 |

– **END** –