AMENDMENT SUMMARY

Amendment No. 1 incorporates additions/changes to:

a) CAR/SUPPS, Chapter 2 concerning area navigation (RNAV) specifications (2.1.2), required navigation performance (RNP) specifications (2.1.3); Chapter 4 concerning RNAV 10 (RNP 10) (4.1.1.1, 4.1.1.1.1, 4.1.1.1.2, 4.1.1.1.3, 4.1.1.1.4); Chapter 6 concerning separation lateral (6.2.1.1); Chapter 7 concerning airspace monitoring RNAV (7.2.2.1, 7.2.2.2).

b) EUR/SUPPS, Chapter 2 concerning controller-pilot data link communications (CPDLC) (2.1.14, 2.1.14.1); Chapter 3 concerning VHF Datalink (VDL) Mode 2 – system characteristics of ground and airborne installations (3.7.1, 3.7.1.1, 3.7.1.2, 3.7.1.3).

c) MID/ASIA SUPPS, Chapter 4 concerning area navigation (RNAV) specifications, RNAV 10 (RNP 10) (4.1.1.1.1, 4.1.1.1.2).

d) NAT/SUPPS, Chapter 2 concerning area navigation (RNAV) specifications (2.1.2.1), required navigation performance (RNP) specifications (2.1.3.1); Chapter 3 concerning HF operations (3.5.2.1); Chapter 4 concerning RNAV 10 (RNP 10) (4.1.1.1, 4.1.1.1.1, 4.1.1.1.2, 4.1.1.1.3, 4.1.1.1.4); Chapter 6 concerning separation lateral (6.2.1.1, 6.2.1.2); Chapter 7 concerning RNAV 10 (RNP 10) (7.2.2.1, 7.2.2.1.1, 7.2.2.1.2), MNPS (7.2.2.2, 7.2.2.2.1).

as well as changes of an editorial nature.
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Chapter 2.  FLIGHT PLANS

2.1 CONTENT – GENERAL
(A2 – Chapter 3; P-ATM – Chapter 4 and Appendix 2)

2.1.1 Date of flight

Nil.

2.1.2 Area navigation (RNAV) specifications

Nil.

2.1.3 Required navigation performance (RNP) specifications

2.1.3.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNP type prescribed, has been appropriately approved and can comply with all conditions of that approval.

2.1.4 Minimum navigation performance specifications (MNPS)

Nil.

2.1.5 Reduced vertical separation minimum (RVSM)-approved aircraft

2.1.5.1 The letter W shall be inserted in Item 10 (Equipment) of the flight plan or Item Q of the repetitive flight plan (RPL) if the aircraft and operator have received RVSM State approval, regardless of the requested flight level. The aircraft registration shall be inserted in Item 18 of the flight plan.

2.1.6 Non-RVSM-approved aircraft

Note.— Non-RVSM aircraft intending to operate above FL 410 will need to flight plan in accordance with RVSM procedures of neighbouring regions, should the flight commence or terminate in those regions.

2.1.7 Non-RVSM-approved State aircraft

2.1.7.1 Operators of non-RVSM-approved State aircraft with a requested flight level of 290 or above shall insert STS/NON RVSM in Item 18 of the flight plan.

Note.— Non-RVSM aircraft intending to operate above FL 410 will need to flight plan in accordance with RVSM procedures of neighbouring regions, should the flight commence or terminate in those regions.
2.1.8 Indication of 8.33 kHz channel spacing capability
Nil.

2.1.9 Route
Nil.

2.1.10 Estimated times
Nil.

2.1.11 Mach number

2.1.11.1 For turbo-jet aircraft intending to operate at or above FL 250 within FIR Canarias, the planned true Mach number shall be specified in item 15 of the flight plan.

2.1.12 Alternative flight level
Nil.

2.1.13 Special handling (STS)
Nil.

2.1.14 Controller-pilot data link communications (CPDLC)
Nil.

2.2 CONTENT -- AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)
Nil.

2.2.2 Flight plan addressing and distribution
Nil.

2.2.3 Slot allocation exemptions
Nil.
Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL
(A2 – Chapter 3; P-ATM – Chapter 4 and Appendix 2)

2.1.1 Date of flight
Nil.

2.1.2 Area navigation (RNAV) specifications

2.1.2.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNAV specification prescribed, has been appropriately approved and can comply with all conditions of that approval. Additionally, the letter Z shall be inserted in Item 10 and NAV/RNP 10 or NAV/RNP 4, as appropriate, inserted in Item 18.

2.1.3 Required navigation performance (RNP) specifications

2.1.3.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNP specification prescribed, has been appropriately approved and can comply with all conditions of that approval. Additionally, the letter Z shall be inserted in Item 10 and NAV/RNP 10 or NAV/RNP 4, as appropriate, inserted in Item 18.

2.1.4 Minimum navigation performance specifications (MNPS)
Nil.

2.1.5 Reduced vertical separation minimum (RVSM)-approved aircraft

2.1.5.1 The letter W shall be inserted in Item 10 (Equipment) of the flight plan if the aircraft and operator have received RVSM State approval, regardless of the requested flight level. The aircraft registration shall be inserted in Item 18 of the flight plan.

2.1.6 Non-RVSM-approved aircraft
Nil.

2.1.7 Non-RVSM-approved State aircraft
Nil.
2.1.8 Indication of 8.33 kHz channel spacing capability

Nil.

2.1.9 Route

2.1.9.1 Flight plans for flights or portions thereof along oceanic routes not defined by specified reporting points shall be made in accordance with the following:

a) for flights whose flight path is generally oriented in an east-west direction, the planned track shall normally be defined by significant points formed by the intersection of half or whole degrees of latitude and meridians spaced at intervals of 10 degrees;

b) for flights whose flight path is generally oriented in a north-south direction, the planned track shall normally be defined by significant points formed by the intersection of whole degrees of longitude with specified parallels of latitude spaced at 5-degree intervals.

2.1.10 Estimated times

Nil.

2.1.11 Mach number

2.1.11.1 For turbo-jet aircraft intending to operate within the control areas of Houston Oceanic, Mexico, Miami Oceanic and San Juan FIRs at or above FL 200 and west of 60°W, the planned true Mach number shall be specified in Item 15 of the flight plan.

2.1.12 Alternative flight level

Nil.

2.1.13 Special handling (STS)

Nil.

2.1.14 Controller-pilot data link communications (CPDLC)

Nil.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)

Nil.
2.2.2 Flight plan addressing and distribution

Nil.

2.2.3 Slot allocation exemptions

Nil.

2.3 SUBMISSION

2.3.1 General

Nil.

2.3.2 Amendments

Nil.

2.4 REPETITIVE FLIGHT PLANS (RPLs)

Nil.
Chapter 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

Note.— As the Caribbean (CAR) Region transitions to PBN as contained in the Performance-based Navigation (PBN) Manual (Doc 9813), the contents of 4.1 will be amended.

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

Note.— RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation (PBN) Manual (Doc 9613), 1.2.3.5.

Area of applicability

4.1.1.1.1 A lateral separation minimum of 93 km (50 NM) may be applied between flights operating on oceanic routes or areas:

a) within the control area of the San Juan FIR, the Atlantic portion of the Miami Oceanic control area or the West Atlantic Route System (WATRS); and

b) outside WATRS within the control area of the New York Oceanic FIR, except minimum lateral separation between aircraft transitioning from airspace in the New York Oceanic FIR/CTA to MNPS airspace shall be 110 km (60 NM).

Note.— The WATRS area is defined as beginning at a point 27°00'N/77°00'W direct to 20°00'N/67°00'W direct to 18°00'N/62°00'W direct to 18°00'N/60°00'W direct to 38°30'N/60°00'W direct to 38°30'N/69°15'W, thence counterclockwise along the New York Oceanic control area/FIR boundary to the Miami Oceanic control area/FIR boundary, thence southbound along the Miami Oceanic control area/FIR boundary to the point of beginning.

Note.— The NAT MNPS are set forth in NAT SUPPS, 4.3. NAT MNPS airspace is identified in NAT SUPPS.

4.3.1.1

Means of compliance

4.1.1.1.2 For application of 4.1.1.1.1, operators and civil aviation authorities must follow the provisions listed below.

4.1.1.1.3 The aircraft and operator must be approved RNP 10 or RNP 4 by the State of the Operator or the State of Registry, as appropriate. RNP 10 is the minimum navigation specification for the application of 93 km (50 NM) lateral separation.

4.1.1.1.4 States shall ensure, when granting approval for RNP 10 or RNP 4, that operators establish programmes to mitigate the occurrence of large lateral track errors due to equipment malfunction or operational error.

Note.— The Performance-based Navigation (PBN) Manual (Doc 9613) provides guidance on aircraft, operations and maintenance programmes for the initial achievement and continued compliance with the authorized navigation specification.
4.1.1.2 RNAV 5

Nil.

4.1.1.3 RNAV 2

Nil.

4.1.1.4 RNAV 1

Nil.

4.1.1.5 Pre-PBN navigation specifications

4.1.1.5.1 Minimum navigation performance specifications (MNPS)

Area of applicability

4.1.1.5.1.1 For flights in transit to or from the NAT MNPS airspace, while operating in the control area of the San Juan FIR, a lateral separation minimum of 110 km (60 NM) may be applied.

Means of compliance

4.1.1.5.1.2 Aircraft must meet the NAT MNPS specifications.

Note.—The NAT MNPS area and specifications are set forth in the NAT SUPPS, Chapter 4.

4.1.2 Required navigation performance (RNP) specifications

4.1.2.1 RNP 4

Nil.

4.1.2.2 Basic RNP 1

Nil.

4.1.2.3 Advanced RNP 1

Nil.
4.2 REDUCED VERTICAL SEPARATION MINIMUM (RVSM)

Area of applicability

4.2.1 A minimum vertical separation of 300 m (1 000 ft) shall be applied between FL 290 and FL 410 inclusive in the following FIRs:

Barranquilla, Central America, Curacao, Georgetown, Havana, Houston Oceanic, Kingston, Maiquetia, Mazatlan Oceanic, Mexico, Miami Oceanic, Panama, Paramaribo, Piarco, Port-au-Prince, Rochambeau, Santo Domingo and San Juan.

Note.— The volume of airspace referred to as "CAR/SAM RVSM airspace" includes the FIRs listed in the area of applicability of vertical separation in the CAR and SAM Regional Supplementary Procedures.

Means of compliance

(A2 – Chapter 5 and Appendix 3; A6, Part I – Chapters 3, 4 and 7; A8, Part II – Chapters 3 and 7; A8, Part IIIA – Chapter 8; A11 – Chapter 2)

4.2.2 Operators intending to conduct flights within the CAR Region where RVSM is applied shall require an RVSM approval either from the State of Registry or the State of the Operator. The State of Registry or the State of the Operator, as appropriate, should verify that the height-keeping performance capability of approved aircraft meets the requirements specified in Annex 6, Parts I and II.

Note.— Guidance material regarding the initial achievement and continued maintenance of the height-keeping performance in 4.2.2, is contained in the Guidance Material on the Implementation of a 300 m (1 000 ft) Vertical Separation Minimum (VSM) for Application in the CAR/SAM Regions.
Chapter 6. AIR TRAFFIC SERVICES

6.1 AIR TRAFFIC CONTROL (ATC) CLEARANCES
(A11 – Chapter 3; P-ATM – Chapter 4)

6.1.1 Content
Nil.

6.1.2 Adherence
Nil.

6.2 SEPARATION

6.2.1 Lateral
(A11 – Attachment B; P-ATM – Chapters 5 and 15)

6.2.1.1 Minimum lateral separation shall be:

a) 93 km (50 NM) between aircraft approved RNP 10 or RNP 4 meeting the provisions in 4.1.1.1;

b) 110 km (60 NM) between aircraft which meet the North Atlantic minimum navigation performance specifications (MNPS) which, while operating in the control area of San Juan FIR, are in transit to or from the NAT MNPS airspace;

Note.— The NAT MNPS area is set forth in NAT SUPPS, Chapter 4.

c) 167 km (90 NM) between aircraft not approved RNP 10 or RNP 4 operating between the United States, Canada or Bermuda and points in the CAR Region in the control areas of San Juan and New York Oceanic FIRs and the Atlantic portion of the Miami Oceanic control area;

d) 185 km (100 NM) west of 60°W (only in oceanic areas) between aircraft not covered in a), b) or c) above, and between aircraft in the control area of Piarco FIR west of 55°W; and

e) 223 km (120 NM) between aircraft operating east of 60°W in the New York Oceanic FIR, and between aircraft in the control area of Piarco FIR east of 55°W;

except that lower minima as detailed in 5.4.1.1.2 of the PANS-ATM may be applied, or further reduced in accordance with 5.11, where the conditions specified in the relevant PANS-ATM provisions are met (see 5.4).
6.2.2 Longitudinal
(P-ATM – Chapter 5)

6.2.2.1 Between turbo-jet aircraft at or above FL 280 on oceanic published routes operating in the West Atlantic Route System (WATRS), or at or above FL 280 operating west of 60°W when transitioning to or from the WATRS area, the longitudinal separation shall be in accordance with the PANS-ATM, 5.4.2.4.

Note.— The WATRS area is defined as beginning at a point 27°00'N/77°00'W direct to 20°00'N/67°00'W direct to 18°00'N/62°00'W direct to 16°00'N/60°00'W direct to 38°30'N/60°00'W direct to 38°30'N/69°15'W, thence counterclockwise along the New York Oceanic control area/FIR boundary to the Miami Oceanic control area/FIR boundary, thence southbound along the Miami Oceanic control area/FIR boundary to the point of beginning.

6.2.2.2 Between turbo-jet aircraft operating at or above FL 200 and west of 60°W within the Houston Oceanic, applicable parts of Mexico FIR (Merida and Monterrey CTAs), Miami Oceanic and San Juan CTA/FIR control areas, the longitudinal separation with Mach number technique applied in accordance with the relevant provisions of the PANS-ATM, 5.4.2.4, shall be:

a) 15 minutes; or

b) this separation may be reduced to:

1) 10 minutes at the entry point into oceanic controlled airspace, if the preceding aircraft is maintaining a speed of at least Mach 0.03 greater than that of the following aircraft; or

2) 5 minutes at the entry point into oceanic controlled airspace, if the preceding aircraft is maintaining a speed of at least Mach 0.06 greater than that of the following aircraft.

6.2.2.3 Between aircraft operating below FL 200 west of 55°W and between aircraft operating at all levels east of 55°W within the San Juan and Piarco FIRs and the Paramaribo and Rochambeau upper flight information regions (UIRs), 20-minute longitudinal separation shall be applied. This minimum may also be applied if the aircraft have not reported over the same reporting point when it is possible to ensure, by radar or other means approved by the State, that the appropriate time interval will exist at the common point from which they follow either the same track or continuously diverging tracks.

6.2.2.4 Between turbo-jet aircraft meeting the MNPS and operating in the New York Oceanic control area wholly or partly in MNPS airspace, the minimum longitudinal separation with Mach number technique shall be in accordance with the PANS-ATM, 5.4.2.4. In cases where the aircraft concerned have reported over a common point and follow continuously diverging tracks until some other form of separation is provided:

a) at least 10-minute longitudinal separation shall exist at the point where the tracks diverge; or

b) at least 5-minute longitudinal separation will exist where lateral separation is achieved; and

c) lateral separation will be achieved at or before the next significant point (normally 10 degrees of longitude along track(s)) or, if not, within 90 minutes of the time the second aircraft passes the common point or within 1 112 km (600 NM) of the common point, whichever is estimated to occur first.

6.2.2.5 For turbo-jet aircraft meeting the MNPS and operating in the New York Oceanic control area wholly or partly in MNPS airspace but not meeting the requirements of 6.2.2.4, 15-minute longitudinal separation shall be applied.

6.2.2.6 Between aircraft operating outside MNPS airspace in the New York Oceanic control area the minimum longitudinal separation shall be:

30/11/07
Chapter 7. SAFETY MONITORING

7.1 STRATEGIC LATERAL OFFSET PROCEDURES (SLOP)

Nil.

7.2 AIRSPACE MONITORING

7.2.1 General

Nil.

7.2.2 RNAV

7.2.2.1 A target level of safety (TLS) of $5 \times 10^{-9}$ fatal accidents per flight hour per dimension shall be established for route systems operating a 93 km (50 NM) lateral separation minimum. The safety level of such airspace shall be determined by an appropriate safety assessment.

Note.—*Detailed guidance material on conducting safety assessments is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689) and the Safety Management Manual (SMM) (Doc 9859).*

7.2.2.2 Adequate monitoring of flight operations shall be conducted to provide data to assist in the assessment of the achieved lateral navigation performance of the aircraft population in relation to the lateral separation minimum. A safety assessment shall be carried out periodically, based on the data collected, to confirm that the safety level continues to be met. Data shall include operational errors due to all causes.

Note.—*Monitoring will be conducted in accordance with the appropriate guidance material issued by ICAO. Detailed guidance is contained in Docs 9689 and 9859.*

7.2.3 RNP

Nil.

7.2.4 RVSM

7.2.4.1 Target level of safety (TLS)

7.2.4.1.1 Application of RVSM in the airspace designated in 4.2.1 shall meet a TLS of $5 \times 10^{-9}$ fatal accidents per aircraft flight hour due to all causes of risk in the vertical dimension.
7.2.4.1.2 Adequate monitoring of flight operations in the CAR/SAM RVSM airspace shall be conducted to assist in the assessment of continuing compliance of aircraft with the height-keeping capabilities in 4.2.2. Monitoring shall include assessment of other sources of risk to ensure that the TLS specified in 7.2.4.1.1 is not exceeded.

Note.—Details of the policy and procedures for monitoring established by the CAR/SAM Monitoring Agency (CARSAMMA) are contained in the Guidance Material on the Implementation of a 300 m (1000 ft) Vertical Separation Minimum (VSM) for Application in the CAR/SAM Regions.
b) the requested flight level below FL 290 for that portion of the route commencing at the entry point.

*Note.— Refer to 6.10.2.4.1 for related ATC requirements.*

2.1.6.3 Operators of non-RVSM-approved aircraft intending to operate from a departure aerodrome to a destination aerodrome, both of which are within the lateral limits of RVSM airspace, shall include, in Item 15 of the flight plan, a requested cruising level below FL 290.

*Note.— Refer to 6.10.2.4.2 for related ATC requirements.*

2.1.6.4 Operators of non-RVSM-approved aircraft intending to operate from a departure aerodrome within the lateral limits of RVSM airspace to a destination aerodrome outside the lateral limits of RVSM airspace at a cruising level of FL 290 or above shall include the following in Item 15 of the flight plan:

a) the requested flight level below FL 290 for that portion of the route within the lateral limits of RVSM airspace; and

b) the exit point at the lateral limits of RVSM airspace and the requested flight level for that portion of the route commencing at the exit point.

*Note.— Refer to 6.10.2.4.3 for related ATC requirements.*

2.1.6.5 Operators of non-RVSM-approved aircraft intending to operate at a cruising level between FL 290 to FL 410 inclusive from a departure aerodrome to a destination aerodrome, both of which are outside the lateral limits of RVSM airspace, with a portion of the route within the lateral limits of RVSM airspace, shall include the following in Item 15 of the flight plan:

a) the entry point at the lateral limits of RVSM airspace and the requested flight level below FL 290 or above FL 410 for that portion of the route commencing at the entry point; and

b) the exit point at the lateral limits of RVSM airspace and the requested flight level for that portion of the route commencing at the exit point.

*Note.— Refer to 6.10.2.4.4 for related ATC requirements.*

2.1.7 Non-RVSM-approved State aircraft

2.1.7.1 Operators of non-RVSM-approved State aircraft with a requested cruising level of FL 290 or above shall insert STS/NONRVSM in Item 18 of the flight plan.

*Note.— Refer to 2.1.6.4 and 2.1.6.5 for flight planning provisions related to operating to/from RVSM airspace from/to adjacent non-RVSM airspace.*

2.1.8 Indication of 8.33 kHz channel spacing capability

2.1.8.1 For flights conducted wholly or partly in the volume of airspace where the carriage of 8.33 kHz channel spacing radio equipment is mandatory, as specified in 3.2.1, in addition to the letter S and/or any other letters, as appropriate, the letter Y shall be inserted in Item 10 of the flight plan for aircraft equipped with 8.33 kHz channel spacing capable radio equipment, or the indicator STS/EXM833 shall be included in Item 18 for aircraft not equipped but which have been granted exemption from the mandatory carriage requirement. Aircraft normally capable of operating above FL 195 but planning to fly below this level shall include the letter Y as specified above.
Note.— In the case of "STS/EXM833", a list of exemptions will have to be published in the States' AIPs. The absence of the letter 'Y' in Item 10 will be taken as a lack of 8.33 kHz capable equipment.

2.1.8.2 In case of a change in the 8.33 kHz capability status for a flight planned to operate in the area specified in 3.2.1, a modification message shall be sent with the appropriate indicator inserted in the relevant item.

2.1.9 Route
Nil.

2.1.10 Estimated times
Nil.

2.1.11 Mach number
Nil.

2.1.12 Alternative flight level
Nil.

2.1.13 Special handling (STS)
Nil.

2.1.14 Controller-pilot data link communications (CPDLC)

2.1.14.1 Flights planning to use CPDLC over the aeronautical telecommunication network (ATN) shall include in Item 18 of the flight plan the indicator CODE/ followed by the 24-bit aircraft address (expressed in the form of alphanumerical code of six hexadecimal characters).

Example: CODE/F00001

2.2 CONTENT — AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)

2.2.1.1 When RVR information is included in Item 18 of the flight plan ("RVR/nnn") to indicate the minimum RVR requirement of the flight, it may be used for air traffic flow management (ATFM) purposes.
2.2.2.2 Flight plan addressing and distribution
(P-ATM – Chapter 11)

2.2.2.1 Flight plans and associated messages for all IFR flights, including the IFR portions of mixed IFR/VFR flights, entering, overflying or departing the IFPS zone (IFPZ), shall be addressed only to the two integrated initial flight plan processing system (IFPS) addresses for that portion of the flight within the IFPZ. The IFPS addresses to be included in flight plans and associated messages submitted by operators that intend to fly into or through the IFPZ are as follows:

<table>
<thead>
<tr>
<th>Network</th>
<th>IFPS Unit Addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IFPU1 Haren, Belgium</td>
</tr>
<tr>
<td></td>
<td>IFPU2 Brétigny, France</td>
</tr>
<tr>
<td>AFTN</td>
<td>EBBDZMFP</td>
</tr>
<tr>
<td>SITA</td>
<td>BRUEP7X</td>
</tr>
<tr>
<td></td>
<td>PAREP7X</td>
</tr>
</tbody>
</table>

2.2.2.2 IFPS will ensure distribution of the accepted flight plan to all relevant ATS units within their area of responsibility. Flight plan message originators filing to IFPS are responsible for ensuring that the flight plan and any modifications made thereto are addressed to all the relevant ATS units outside the IFPZ. In order to ensure consistency between the flight plan data distributed within the IFPZ and that distributed outside the IFPZ, the Central Flow Management Unit (CFMU) has established a “re-addressing function”. The “re-addressing function” is intended primarily for flights originating within the IFPZ and proceeding outside the IFPZ.

Note.— Detailed procedures and information applicable to flight plan addressing and distribution are contained in the EUROCONTROL “Basic CFMU Handbook”.

2.2.3 Slot allocation exemptions

2.2.3.1 The following flights are exempted from ATFM slot allocations:

a) flights carrying Head of State or equivalent status ["ST/HEAD"]; and

b) flights conducting search and rescue operations ["STS/SAR"].

2.3 SUBMISSION
(A2 – Chapter 3; P-ATM – Chapters 3 and 4)

2.3.1 General

2.3.1.1 A centralized flight planning processing and distribution service has been established under the authority of the EUROCONTROL CFMU. The service is provided through the IFPS and covers part of the ICAO EUR Region known as the IFPZ.

2.3.1.2 For all IFR flights, including the IFR portions of mixed IFR/VFR flights, entering, overflying or departing the IFPZ, a flight plan shall be submitted to IFPS either directly or via the Air Traffic Services Reporting Office (ARO) serving the aerodrome of departure.

8/1/09
No. 1
2.3.1.3 Flight plans for flights which may be subject to ATFM shall be submitted at least 3 hours before the EOBT.

2.3.2 Amendments
(P-ATM – Chapter 11)

2.3.2.1 Any changes to the EOBT of more than 15 minutes for any IFR flight within the IFPZ shall be communicated to the IFPS.

2.3.2.2 When an individual flight plan (FPL) or a repetitive flight plan (RPL) has been filed but it is decided, within 4 hours of EOBT, to use an alternative routing between the same aerodromes of departure and destination, either a modification message (CHG) may be sent or alternatively:

a) a cancellation message (CNL) with priority "DD" shall be sent to IFPS;

b) not less than 5 minutes after sending the CNL message, a replacement flight plan (RFP) in the form of an FPL with identical call sign shall be transmitted;

c) the RFP shall contain, as the first element of Item 18, the indication "RFP/Qn", where RFP signifies "Replacement Flight Plan" and "n" is "1" for the first replacement, "2" for the second replacement, and so on; and

d) the last RFP shall be filed at least 30 minutes before EOBT.

Note.— The submission of a replacement flight plan is normally accepted as fulfilling a State’s requirement for advance notification of flight (diplomatic clearance).

2.4 REPETITIVE FLIGHT PLANS (RPLs)
(P-ATM – Chapter 16 and Appendix 2)

Note.— Detailed provisions for the handling of RPLs within the IFPZ are specified in the EUROCONTROL “Basic CFMU Handbook”.

2.4.1 In order to avoid a disproportionate workload on ATS units, RPLs will not be accepted for any flight conducted on 25 December. On this day, individual flight plans shall be filed for all flights.

2.4.2 All operators filing RPLs shall include, in Item Q of the RPL, all equipment and capability information in conformity with Item 10 of the flight plan. This includes appropriate indicators/designators as specified in 2.1.2.1, 2.1.2.2, 2.1.5.1 and 2.1.8.1.

2.4.3 When there is a change of equipment or capability for a flight which is subject to an RPL, a modification message (CHG) for the day of operation shall be sent not earlier than 20 hours before the estimated EOBT.

2.4.4 Similarly, other changes, delays, or cancellations for the day of operation shall be sent not earlier than 20 hours before the EOBT.

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3.7 RADIO CHANNELS/FREQUENCIES

3.7.1 VHF Datalink (VDL) Mode 2 – system characteristics of ground and airborne installations
(A10, Vol. III, Part I)

3.7.1.1 With effect from 1 January 2010, all VDL Mode 2 ground transmitters in the European Region shall meet the provisions specified in Annex 10, Volume III, Part I, 6.2.4.1.1, 6.2.4.2.1, 6.2.4.2.2 and 6.2.4.3.1, relating to adjacent channel emissions.

3.7.1.2 With effect from 1 January 2010, all VDL Mode 2 airborne transmitters in the European Region shall meet the provisions specified in Annex 10, Volume III, Part I, 6.3.4.1.1, 6.3.4.2.1, 6.3.4.2.2 and 6.3.4.3.1, relating to adjacent channel emissions.

3.7.1.3 With effect from 1 January 2010, the receiving function of all VDL Mode 2 installations in the European Region shall meet the provisions specified in Annex 10, Volume III, Part I, 6.3.5.3.1, relating to the specified error rate.
Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL
(A2 – Chapter 3; P-ATM – Chapter 4 and Appendix 2)

2.1.1 Date of flight
Nil.

2.1.2 Area navigation (RNAV) specifications

2.1.2.1 State aircraft operating in the ICAO MID Region

2.1.2.1.1 Operators of State aircraft not equipped with RNAV equipment meeting RNP 5 shall not insert the designator “S” or “R” in Item 10 of the flight plan.

2.1.2.1.2 Since such flights require special handling by air traffic control, “STS/NONRNAV” shall be inserted in Item 18 of the flight plan.

2.1.3 Required navigation performance (RNP) specifications

2.1.3.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNP type prescribed, has been appropriately approved and can comply with all conditions of that approval.

2.1.3.2 Operators of aircraft fitted with RNAV having a navigation accuracy meeting RNP 5 shall insert the designator “R” in Item 10 of the flight plan for operation in the ICAO MID Region, as specified in 4.1.1.5.3.

2.1.4 Minimum navigation performance specifications (MNPS)
Nil.

2.1.5 Reduced vertical separation minimum (RVSM) approved aircraft

2.1.5.1 The letter W shall be inserted in Item 10 (Equipment) of the flight plan if the aircraft and operator have received RVSM State approval, regardless of the requested flight level. The aircraft registration shall be inserted in Item 18 of the flight plan.

2.1.6 Non-RVSM-approved aircraft
Nil.

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2.1.7 Non-RVSM-approved State aircraft
   Nil.

2.1.8 Indication of 8.33 kHz channel spacing capability
   Nil.

2.1.9 Route
   Nil.

2.1.10 Estimated times
   Nil.

2.1.11 Mach number

2.1.11.1 For turbo-jet aircraft intending to operate within airspace and on air routes to which longitudinal separation minima utilizing Mach number technique will be applied, the planned true Mach number shall be specified in Item 15 of the flight plan.

2.1.12 Alternative flight level
   Nil.

2.1.13 Special handling (STS)
   Nil.

2.1.14 Controller-pilot data link communications (CPDLC)
   Nil.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)
   Nil.
2.2.2 Flight plan addressing and distribution

Nil.

2.2.3 Slot allocation exemptions

Nil.

2.3 SUBMISSION

2.3.1 General

Nil.

2.3.2 Amendments

Nil.

2.4 REPETITIVE FLIGHT PLANS (RPLs)

Nil.
Chapter 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

Note.— As the Middle East and Asia (MID/ASIA) Regions transition to PBN as contained in the Performance-based Navigation Manual (Doc 9613), the contents of 4.1 will be amended.

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

Note.— RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation Manual (Doc 9613), 1.2.3.5.

Area of applicability

4.1.1.1.1 For flights on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Melbourne, Nauru, New Zealand, Port Moresby, Sanya and Singapore FIRs, a lateral separation minimum of 93 km (50 NM) may be applied.

4.1.1.1.2 For flights on designated controlled oceanic routes or areas within the Auckland Oceanic, Brisbane, Fukuoka, Ho Chi Minh, Hong Kong, Honiara, Kuala Lumpur, Melbourne, Nauru, New Zealand, Port Moresby, Sanya and Singapore FIRs, a longitudinal separation minimum of 93 km (50 NM) derived by RNAV may be applied between RNAV-equipped aircraft approved to RNP 10 or better, in accordance with the provisions of the PANS-ATM, 5.4.2.6.

Means of compliance

4.1.1.3 For application of 4.1.1.1.1 and 4.1.1.1.2, the aircraft and the operator must have been approved by the State of Registry or the State of the Operator, as appropriate, to meet the following requirements (or equivalent):

a) aircraft navigation performance shall be such that the standard deviation of lateral track errors shall be less than 8.7 km (4.7 NM) (or the aircraft approved to RNP 10); and

b) operator programmes shall be established to mitigate the occurrence of large navigational errors due to equipment malfunction or operational error:

1) operator in-flight operating drills shall include mandatory navigation cross-checking procedures to identify navigation errors in sufficient time to prevent aircraft from inadvertent deviation from ATC-cleared route; and

2) the operator shall establish programmes to provide for the continued airworthiness of aircraft navigation systems necessary to navigate to the degree of accuracy required.
4.1.1.2 RNAV 5

Nil.

4.1.1.3 RNAV 2

Nil.

4.1.1.4 RNAV 1

Nil.

4.1.1.5 Pre-PBN navigation specifications

4.1.1.5.1 RNP 12.6

Area of applicability

4.1.1.5.1.1 For flights on controlled oceanic routes across the Tasman Sea within the Auckland Oceanic, Brisbane, Melbourne and New Zealand FIRs and for flights across the South China Sea within Bangkok, Hanoi, Ho Chi Minh, Hong Kong, Kota Kinabalu, Kuala Lumpur, Manila, Taipei and Singapore FIRs, the minimum lateral separation shall be 110 km (60 NM).

Means of compliance

4.1.1.5.1.2 For application of 4.1.1.5.1.1, aircraft must be RNAV-equipped and RNAV-approved using inertial navigation systems (INS) provided that:

a) the INS is updated at least every 4.5 hours;

b) the standard deviation of lateral track errors shall be less than 11.7 km (6.3 NM);

c) the proportion of the total flight time spent by aircraft 55.5 km (30 NM) or more off the cleared track shall be less than $5.3 \times 10^{-4}$; and

d) the proportion of the total flight time spent by aircraft between 93 and 130 km (50 and 70 NM) off the cleared track shall be less than $13 \times 10^{-5}$.

Such navigation performance capability shall be verified by the State of Registry or the State of the Operator, as appropriate. Lateral separation of 185 km (100 NM), or greater if required, shall be used if the track-keeping capability of the aircraft has been reduced for any reason.

Note.— The navigation performance accuracy contained in b) is considered to be comparable to RNP 12.6 or better.

4.1.1.5.1.3 When granting approval for operations as indicated in 4.1.1.5.1.1, either the State of Registry or the State of the Operator shall ensure that in-flight operating drills include mandatory navigation cross-checking procedures which will identify navigation errors in sufficient time to prevent the aircraft from inadvertently deviating from the ATC-cleared route.

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Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL

2.1.1 Date of flight
Nil.

2.1.2 Area navigation (RNAV) specifications
Nil.

2.1.3 Required navigation performance (RNP) specifications
Nil.

2.1.4 Minimum navigation performance specifications (MNPS)
Nil.

2.1.5 Reduced vertical separation minimum (RVSM)-approved aircraft

2.1.5.1 The letter W shall be inserted in Item 10 (Equipment) of the flight plan if the aircraft and operator have received RVSM State approval, regardless of the requested flight level. The aircraft registration shall be inserted in Item 18 of the flight plan.

2.1.6 Non-RVSM-approved aircraft
Nil.

2.1.7 Non-RVSM-approved State aircraft
Nil.

2.1.8 Indication of 8.33 kHz channel spacing capability
Nil.

2.1.9 Route
Nil.

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2.1.10 Estimated times
   Nil.

2.1.11 Mach number
   Nil.

2.1.12 Alternative flight level
   Nil.

2.1.13 Special handling (STS)
   Nil.

2.1.14 Controller-pilot data link communications (CPDLC)
   Nil.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)
   Nil.

2.2.2 Flight plan addressing and distribution
   Nil.

2.2.3 Slot allocation exemptions
   Nil.

2.3 SUBMISSION

2.3.1 General
   Nil.
2.3.2 Amendments

Nil.

2.4 REPETITIVE FLIGHT PLANS (RPLs)

Nil.
Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL
(A2 – Chapter 3; P-ATM – Chapter 4 and Appendix 2)

2.1.1 Date of flight
Nil.

2.1.2 Area navigation (RNAV) specifications
2.1.2.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNAV specification prescribed, has been appropriately approved and can comply with all conditions of that approval. Additionally, the letter Z shall be inserted in Item 10 and NAV/RNP 10 or NAV/RNP 4, as appropriate, inserted in Item 18.

2.1.3 Required navigation performance (RNP) specifications
2.1.3.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNP specification prescribed, has been appropriately approved and can comply with all conditions of that approval. Additionally, the letter Z shall be inserted in Item 10 and NAV/RNP 10 or NAV/RNP 4, as appropriate, inserted in Item 18.

2.1.4 Minimum navigation performance specifications (MNPS)
2.1.4.1 All MNPS-approved aircraft intending to operate in the NAT Region shall insert the letter "X" in Field 10 of the flight plan.

2.1.5 Reduced vertical separation minimum (RVSM)-approved aircraft
2.1.5.1 The letter W shall be inserted in Item 10 (Equipment) of the flight plan if the aircraft and operator have received RVSM State approval, regardless of the requested flight level. The aircraft registration shall be inserted in Item 18 of the flight plan.

2.1.6 Non-RVSM-approved aircraft
Nil.

2.1.7 Non-RVSM-approved State aircraft
Nil.
2.1.8 Indication of 8.33 kHz channel spacing capability

Nil.

2.1.9 Route

2.1.9.1 General

2.1.9.1.1 Flights conducted wholly or partly outside the organized tracks shall be planned along great circle tracks joining successive significant points. Flight plans shall be made in accordance with the following.

2.1.9.1.2 Flights operating between North America and Europe shall generally be considered as operating in a predominantly east-west direction. However, flights planned between these two continents via the North Pole shall be considered as operating in a predominantly north-south direction.

2.1.9.2 Flights operating predominantly in an east-west direction

2.1.9.2.1 For flights operating south of 70°N, the planned tracks shall normally be defined by significant points formed by the intersection of half or whole degrees of latitude with meridians spaced at intervals of 10 degrees from the Greenwich meridian to longitude 70°W.

2.1.9.2.2 For flights operating north of 70°N, the planned tracks shall normally be defined by significant points formed by the intersection of parallels of latitude expressed in degrees and minutes with meridians normally spaced at intervals of 20 degrees from the Greenwich meridian to longitude 60°W.

2.1.9.2.3 The distance between significant points shall, as far as possible, not exceed one hour’s flight time. Additional significant points should be established when deemed necessary due to aircraft speed or the angle at which the meridians are crossed, e.g.:

a) at intervals of 10 degrees of longitude (between 5°W and 65°W) for flights operating south of 70°N; and

b) at intervals of 20 degrees of longitude (between 10°W and 50°W) for flights operating north of 70°N.

2.1.9.2.4 When the flight time between successive significant points is less than 30 minutes, one of these points may be omitted.

2.1.9.3 Flights operating predominantly in a north-south direction

2.1.9.3.1 For flights whose flight paths are predominantly oriented in a north-south direction, the planned tracks shall normally be defined by significant points formed by the intersection of whole degrees of longitude with specified parallels of latitude which are spaced at intervals of 5 degrees.

2.1.9.4 Flights operating on an organized track

2.1.9.4.1 For flights conducted along one of the organized tracks from the entry point into the NAT FIRs to the exit point, the organized track shall be defined in the flight plan by the abbreviation "NAT" followed by the code letter assigned to the track.
2.1.9.5 Flights operating along fixed ATS routes

2.1.9.5.1 For flights operating along the fixed ATS route network between Canada, the United States, Bermuda and the CAR Region, the track shall be defined by appropriate reference to this route network.

2.1.10 Estimated times

2.1.10.1 For flights conducted along one of the organized tracks from the entry point into the NAT FIRs to the exit point, the accumulated estimated elapsed time only to the first oceanic FIR boundary should be specified in Item 18 of the flight plan.

2.1.10.2 For flights conducted wholly or partly outside the organized tracks in the NAT Region, accumulated estimated elapsed times to significant points en route shall be specified in Item 18 of the flight plan.

2.1.11 Mach number

2.1.11.1 For turbo-jet aircraft intending to operate within the Boda Oceanic, Gander Oceanic, New York Oceanic, Reykjavik, Santa Maria Oceanic and Shanwick Oceanic control areas, the planned true Mach number for any portion of their flight within these control areas shall be specified in Item 15 of the flight plan.

2.1.12 Alternative flight level

2.1.12.1 For turbo-jet aircraft intending to operate within the Gander Oceanic, New York Oceanic, Reykjavik, Santa Maria Oceanic and Shanwick Oceanic control areas, requests for a suitable alternative flight level may be included in Item 18 of the flight plan.

2.1.13 Special handling (STS)

Nil.

2.1.14 Controller-pilot data link communications (CPDLC)

Nil.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)

Nil.

2.2.2 Flight plan addressing and distribution

Nil.
2.2.3 Slot allocation exemptions

Nil.

2.3 SUBMISSION
(A2 – Chapter 3; P-ATM – Chapter 4)

2.3.1 General

2.3.1.1 Flight plans for flights departing from points within adjacent regions and entering the NAT Region without intermediate stops shall be submitted as early as possible.

2.3.2 Amendments

Nil.

2.4 REPETITIVE FLIGHT PLANS (RPLs)

Nil.
3.4 SATELLITE VOICE COMMUNICATIONS (SATCOM)
(A2 – Chapter 3; P-ATM – Chapter 15; P-OPS, Vol. 1)

3.4.1 Within the NAT Region, aircraft equipped for SATCOM voice shall restrict the use of such equipment to emergencies and non-routine situations. An unforeseen inability to communicate by voice radio constitutes a non-routine situation. Since oceanic traffic typically communicates through aeradio facilities, a SATCOM call due to an unforeseen inability to communicate by other means should be made to such a facility rather than the ATC centre unless the urgency of the communication dictates otherwise. Dedicated SATCOM telephone numbers (short codes) for aeradio facilities and air traffic control facilities are published in national AIPs.

3.5 AERONAUTICAL MOBILE SERVICE

3.5.1 Selective calling (SELCAL)

3.5.1.1 While operating in an HF air-ground communications environment, pilots shall maintain a listening watch on the assigned radio frequency. This will not be necessary, however, if a SELCAL watch is maintained and correct operation is ensured. Correct SELCAL operation shall be ensured by:

a) the inclusion of the SELCAL code in the flight plan;
b) the issue of a correction to the SELCAL code if subsequently altered due to change of aircraft or equipment; and
c) an operational check of the SELCAL equipment with the appropriate radio station at or before initial entry into oceanic airspace. This SELCAL check must be completed successfully before commencing a SELCAL watch.

Note.— A SELCAL watch on the assigned radio frequency should be maintained, even in areas of the region where VHF coverage is available and used for air-ground communications.

3.5.2 HF operations
(A10, Vol. II – Chapter 5)

3.5.2.1 Procedures for the distribution of the NAT HF aeromobile message traffic of the users on the NAT routes between the various NAT HF families are indicated in the table below.

Note.— In the following table, under route flown, the letters "A", "B", "C", "D" and "E" refer to NAT frequency families A, B, C, D and E.

<table>
<thead>
<tr>
<th>Designated for</th>
<th>Southern route</th>
<th>Central route</th>
<th>Northern route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft registered in the hemisphere W of 30°W</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Aircraft registered in the hemisphere E of 30°W</td>
<td>A</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

30/11/07
<table>
<thead>
<tr>
<th>Designated for</th>
<th>Southern route</th>
<th>Central route</th>
<th>Northern route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft flying northern routes outside the organized track system (OTS) tracks</td>
<td>—</td>
<td>—</td>
<td>D</td>
</tr>
<tr>
<td>Aircraft flying southern routes</td>
<td>E</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note 1.— Southern routes are those which enter the New York Oceanic or Santa María Oceanic FIRs. The central and northern routes comprise all the others.

Note 2.— Use of the NAT-D radiotelephony network frequencies is extended to the Arctic area of the Anchorage Arctic FIR, via Cambridge Bay Radio.

Note 3.— Aircraft registered in Australia will use families designated for aircraft registered East of 30°W.

3.5.2.2 In the event of overloading of a family actually occurring or being anticipated, aircraft of one or more operators may be offloaded from that family to another appropriate family, for the expected duration of the condition. The offloading may be requested by any station, but Shannon and Gander will be responsible for taking a decision after coordination with all the NAT stations concerned.

3.5.2.3 Procedures to follow when unable to obtain an oceanic clearance using HF communications
   (P-ATM – Chapter 15)

3.5.2.3.1 Aircraft experiencing radio communication failure shall maintain their current flight level, route and speed to the Oceanic exit point. Thereafter, it shall follow the radio communication failure procedure applicable for that airspace.

Note.— In this context, the current flight level is the last cleared level unless the preceding units’ radio communication failure procedure dictates otherwise. In all cases, aircraft should stay in level flight in the oceanic area. Current speed should be the initial oceanic Mach number in the flight plan, if the aircraft does not have a speed clearance.

3.6 AERONAUTICAL FIXED SERVICE

3.6.1 AFTN rationalization

Nil.

3.7 RADIO CHANNELS/FREQUENCIES

Nil.
Chapter 4. NAVIGATION

4.1 PERFORMANCE-BASED NAVIGATION (PBN)

Note — As the North Atlantic (NAT) Region transitions to PBN as contained in the Performance-based Navigation (PBN) Manual (Doc 9613), the contents of 4.1 will be amended.

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

Note.— RNAV 10 retains the RNP 10 designation, as specified in the Performance-based Navigation (PBN) Manual (Doc 9613), 1.2.3.5.

Area of applicability

4.1.1.1.1 A lateral separation minimum of 93 km (50 NM) may be applied between flights operating within the control area of the New York Oceanic FIR.

Means of compliance

4.1.1.1.2 For application of 4.1.1.1.1, operators and civil aviation authorities must follow the provisions listed below.

4.1.1.1.3 The aircraft and operator must be approved RNP 10 or RNP 4 by the State of the Operator or the State of Registry, as appropriate. RNP 10 is the minimum navigation specification for the application of 93 km (50 NM) lateral separation.

4.1.1.1.4 States shall ensure, when granting approval for RNP 10 or RNP 4, that operators establish programmes to mitigate the occurrence of large lateral track errors due to equipment malfunction or operational error.

Note.— The Performance-based Navigation (PBN) Manual (Doc 9613) provides guidance on aircraft, operations and maintenance programmes for the initial achievement and continued compliance with the authorized navigation specification.

4.1.1.2 RNAV 5

Nil.

4.1.1.3 RNAV 2

Nil.

4.1.1.4 RNAV 1

Nil.
4.1.1.5 Pre-PBN navigation specifications

4.1.1.5.1 Minimum navigation performance specifications (MNPS)

Area of applicability

4.1.1.5.1.1 The MNPS shall be applicable in that volume of airspace between FL 285 and FL 420 within the Oceanic Control Areas of Santa Maria, Shanwick, Reykjavik, Gander Oceanic and New York Oceanic, excluding the area west of 60°W and south of 38°30’N.

Note.—This volume of airspace is referred to as the "MNPS airspace".

Means of compliance
(A2 – Chapter 5; A6, Part I – Chapters 3, 4 and 7; A6, Part II – Chapters 3 and 7; A8 – Chapter 8)

4.1.1.5.1.2 For flights within the volume of airspace specified in 4.1.1.5.1.1 aircraft shall have lateral navigation performance capability such that:

a) the standard deviation of lateral track errors shall be less than 11.7 km (6.3 NM);

b) the proportion of the total flight time spent by aircraft 56 km (30 NM) or more off the cleared track shall be less than $5.3 \times 10^{-4}$; and

c) the proportion of the total flight time spent by aircraft between 93 and 130 km (50 and 70 NM) off the cleared track shall be less than $1.3 \times 10^{-5}$.

4.1.1.5.1.3 The State of Registry or the State of the Operator, as appropriate, should verify that the lateral navigation capability of approved aircraft meets the requirements specified in 4.1.1.5.1.2.

Note.—Guidance material of use to those involved in the initial achievement and continued maintenance of the navigation capability set forth in 4.1.1.5.1.2 has been issued by ICAO under the title Guidance and Information Material Concerning Air Navigation in the North Atlantic Region (NAT Doc. 001) and will be supplemented and updated as required and as new material becomes available.

4.1.1.5.1.4 When granting approval for operations in MNPS airspace, States of Registry shall ensure that in-flight operating drills include mandatory navigation cross-checking procedures which will identify navigation errors in sufficient time to prevent the aircraft inadvertently deviating from the ATC-cleared route. Guidance on procedures are detailed in NAT Doc 001 and North Atlantic MNPS Airspace Operations Manual.

4.1.2 Required navigation performance (RNP) specifications

4.1.2.1 RNP 4

Nil.

4.1.2.2 Basic RNP 1

Nil.

8/1/09
No. 1
4.1.2.3 Advanced RNP 1

Nil.

4.2 REDUCED VERTICAL SEPARATION MINIMUM (RVSM)

Area of applicability

4.2.1 RVSM shall be applicable in that volume of airspace between FL 290 and FL 410 inclusive in all FIRs of the NAT Region.

Means of compliance

(A2 – Chapter 5 and Appendix 3; A6, Part I – Chapters 3, 4 and 7; A6, Part II – Chapters 3 and 7; A8, Part IIIA – Chapter 8, A11 – Chapter 2)

4.2.2 Operators intending to conduct flights within the NAT Region where RVSM is applied shall require an RVSM approval either from the State of Registry or the State of the Operator. The State of Registry or the State of the Operator, as appropriate, should verify that the height-keeping performance capability of approved aircraft meets the requirements specified in Annex 6, Parts I and II.

Note.—Guidance material of use to those involved in the initial achievement and continued maintenance of the height-keeping performance has been issued by ICAO under the title Guidance and Information Material Concerning Air Navigation in the North Atlantic Region (NAT Doc. 001) and will be supplemented and updated as required and as new material becomes available.
Chapter 6. AIR TRAFFIC SERVICES

6.1 AIR TRAFFIC CONTROL (ATC) CLEARANCES

6.1.1 Content
(A11 – Chapter 3; P-ATM – Chapters 4 and 11)

6.1.1.1 An abbreviated clearance shall only be issued by ATS when clearing an aircraft to follow one of the organized tracks throughout its flight within the NAT control areas or when clearing an aircraft to follow its flight plan route. In all other circumstances, full details of the cleared track shall be specified in the clearance message.

6.1.1.2 When an abbreviated clearance is issued to follow one of the organized tracks, it shall include:
   a) cleared track specified by the track code;
   b) cleared flight level(s);
   c) cleared true Mach number (if required); and
   d) if the aircraft is designated to report meteorological information in flight, the phrase “SEND MET REPORTS”.

6.1.1.3 On receipt of an abbreviated clearance, the pilot shall read back the contents of the clearance message. In addition, when cleared to follow one of the organized tracks, the pilot shall read back full details of the track specified by the code letter, except where alternative procedures using VHF techniques exist which include provision for the confirmation of cleared track by the pilot.

6.1.1.4 When an abbreviated clearance is issued to follow the flight plan route, it shall only be issued using direct controller-pilot communication and shall include:
   a) the expression "cleared via flight planned route”;
   b) cleared flight level(s); and
   c) cleared true Mach number (if required).

6.1.1.5 On receipt of an abbreviated clearance, the pilot shall read back the contents of the clearance message. In addition, when cleared via “flight planned route”, the pilot shall read back full details of the flight plan route.

6.1.1.6 A pilot-in-command shall, if at any time in doubt, request a detailed description of the route from ATS.

6.1.1.7 The ATC-approved true Mach number shall be included in each clearance given to subsonic turbo-jet aircraft operating within Bodø Oceanic, Gander Oceanic, New York Oceanic, Reykjavik, Santa Maria Oceanic and Shanwick Oceanic control areas.
6.1.2 Adherence
(A2 – Chapter 3)

6.1.2.1 If an aircraft has inadvertently deviated from the route specified in its ATC clearance, it shall forthwith take action to regain such route within 185 km (100 NM) from the position at which the deviation was observed.

6.1.2.2 Unable to obtain oceanic clearance using HF voice
(P-ATM – Chapter 15)

6.1.2.2.1 Aircraft operating outside VHF coverage that are unable to contact ATC on HF to obtain an Oceanic clearance shall continue to operate at the last assigned flight level and along the cleared route of flight until communications are re-established.

Note.— Failure of HF communications often stems from poor signal propagation, frequently because of sun spot activity, and is likely to simultaneously affect multiple aircraft operating in a particular region. ATM systems dependent on HF are designed around the assumption that communication may be temporarily interrupted and that aircraft affected will continue to operate in accordance with the last received and acknowledged clearance, until communication is restored.

6.2 SEPARATION

6.2.1 Lateral
(A11 – Attachment B; P-ATM – Chapter 5)

6.2.1.1 Minimum lateral separation shall be:

a) 93 km (50 NM) between aircraft meeting the provisions in 4.1.1.1, except minimum lateral separation between aircraft transitioning from MNPS airspace in the New York Oceanic FIR/CTA to other MNPS airspace shall be 110 km (60 NM);

Note.— NAT MNPS airspace is defined in 4.1.1.5.1.1.

b) 110 km (60 NM) between aircraft which meet the minimum navigation performance specifications (MNPS) provided that a portion of the route of the aircraft is within, above, or below MNPS airspace;

c) 167 km (90 NM) between aircraft operating outside the MNPS airspace and at least one aircraft does not meet the MNPS:

1) between the Iberian Peninsula and the Azores Islands; and

2) between Iceland and points in Scandinavia and in the United Kingdom;

d) 167 km (90 NM) between aircraft not approved RNP 10 or RNP 4 operating outside MNPS airspace where no portion of the route of the aircraft is within, above, or below MNPS airspace:

1) between the United States/Canada and Bermuda; and

2) west of 55°W between the United States, Canada or Bermuda and points in the CAR Region;

Note.— MNPS airspace is defined in 4.1.1.5.1.1
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... except that lower minima in 5.4.1.1.2 of the PANS-ATM may be applied, or further reduced in accordance with 5.11. when the conditions specified in the relevant PANS-ATM provisions are met (see 5.4).

6.2.1.2 In the practical application of the minima in 6.2.1.1 a), b), c) d) and e), tracks may be spaced with reference to their difference in latitude, using one degree instead of 110 km (60 NM); one and one-half degrees instead of 167 km (90 NM); and two degrees instead of 223 km (120 NM); provided that in any interval of ten degrees of longitude, the change in latitude of at least one of the tracks does not exceed:

a) three degrees at or south of 58°N;

b) two degrees north of 58°N and south of 70°N; and

c) one degree at or north of 70°N and south of 80°N.

At or north of 80°N, or where the above rates of change of latitude are exceeded, the required lateral separation must be ensured by reference to the track spacing expressed in nautical miles.

6.2.2 Longitudinal
(P-ATM – Chapter 5)

6.2.2.1 Minimum longitudinal separation between turbo-jet aircraft shall be:

a) 15 minutes; or

b) 10 minutes, provided the Mach number technique is applied whether in level, climbing or descending flight; and the aircraft concerned have reported over a common point to follow continuously diverging tracks until some other form of separation is provided; and:

1) at least 10-minute longitudinal separation exists at the point where the tracks diverge; and

2) at least 5-minute longitudinal separation exists where lateral separation is achieved; and

3) lateral separation will be achieved at or before the next significant point (normally ten degrees of longitude along track(s)) or, if not, within 90 minutes of the time the second aircraft passes the common point or within 1 112 km (600 NM) of the common point, whichever is estimated to occur first.

Note.— The minima contained in 6.2.2.1 b) are in addition to those found in the PANS-ATM, 5.4.2.4.

6.2.2.2 Minimum longitudinal separation between non-turbo-jet aircraft shall be:

a) 30 minutes; and

b) 20 minutes in the West Atlantic route system (WATRS) area.

Note.— The WATRS area is defined as beginning at a point 27°00′N/77°00′W direct to 20°00′N/67°00′W direct to 18°00′N/62°00′W direct to 18°00′N/60°00′W direct to 38°30′N/60°00′W direct to 38°30′N/69°15′W, thence counterclockwise along the New York Oceanic control area/FIR boundary to the Miami Oceanic control area/FIR boundary, thence southbound along the Miami Oceanic control area/FIR boundary to the point of beginning.
6.2.3 Composite

Nil.

6.2.4 Vertical

6.2.4.1 Between FL 290 and FL 410 inclusive, 300 m (1,000 ft) vertical separation shall be applied in the NAT Region.

6.2.4.2 At or above FL 450, vertical separation between supersonic aircraft, and between supersonic aircraft and any other aircraft, shall be considered to exist if the flight levels of the two aircraft differ by at least 1,200 m (4,000 ft).

6.2.5 Radar

Nil.

6.2.6 Reduction in separation minima

(A11 – Chapter 3; P-ATM – Chapter 5)

6.2.6.1 Where, circumstances permitting, separation minima lower than those specified in 6.2.1 and 6.2.2 will be applied in accordance with the PANS-ATM, appropriate information should be published in AIPs so that users of the airspace are fully aware of the portions of airspace where the reduced separation minima will be applied and of the navigation aids on which those minima are based.

6.2.7 Airspace reservations

6.2.7.1 Separation minima between moving temporary airspace reservations

6.2.7.1.1 Lateral separation shall be:

a) 110 km (60 NM) between the closest tracks of any aircraft for which the airspace is reserved, provided all aircraft or formation flights meet the MNPS; or

b) 223 km (120 NM) between the closest tracks of any aircraft for which the airspace is reserved, except that in the New York oceanic control area (OCA) west of 60°W, 167 km (90 NM) may be applied.

Note.—A formation flight with at least one of the aircraft in the formation meeting MNPS is deemed to meet the requirement for the application of 110 km (60 NM) in a).

6.2.7.1.2 Longitudinal separation shall be 60 minutes.

6.2.7.2 Separation minima between stationary temporary airspace reservations

6.2.7.2.1 Lateral separation shall be:

a) 110 km (60 NM) between the boundaries of stationary temporary airspace reservations, provided the requesting agencies have guaranteed to confine their activities to the requested airspace, except that in the New York OCA west of 60°W, 84 km (45 NM) may be applied; or
b) 223 km (120 NM) between the boundaries of the airspace reservations, if no guarantees have been given, except that in the New York OCA west of 60°W, 167 km (90 NM) may be applied.

6.2.7.3 Separation minima between moving temporary airspace reservations and other aircraft

6.2.7.3.1 Lateral separation shall be:

a) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned and the closest track of any of the aircraft for which the airspace is reserved, provided all aircraft meet the MNPS requirements and a portion of the route of the aircraft is within, above or below MNPS airspace; or

b) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned and the track of a formation flight for which the airspace has been reserved, provided at least one aircraft in the formation and the aircraft operating under the control of the ATC unit meet the MNPS requirements and a portion of the route of the aircraft is within, above or below MNPS airspace; or

c) 223 km (120 NM) between the track of an aircraft operating under the control of the ATC unit concerned and the closest track of any of the aircraft for which the airspace is reserved, except that in the New York OCA west of 60°W, 167 km (90 NM) may be applied.

6.2.7.4 Separation minima between stationary temporary airspace reservations and other aircraft

6.2.7.4.1 Lateral separation shall be:

a) 56 km (30 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, provided the aircraft meets the MNPS requirements and a portion of the route of the aircraft is within, above or below MNPS airspace and the requesting agency has guaranteed to confine its activities to the requested airspace; or

b) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, provided the aircraft meets the MNPS requirements and a portion of the route of the aircraft is within, above or below MNPS airspace and the requesting agency has not guaranteed to confine its activities to the requested airspace; or

c) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, when the aircraft does not meet the MNPS requirements and the requesting agency has guaranteed to confine its activities to the requested airspace, except that in the New York OCA west of 60°W, 84 km (45 NM) may be applied; or

d) 223 km (120 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, when the aircraft does not meet the MNPS requirements and the requesting agency has not guaranteed to confine its activities to the requested airspace, except that in the New York OCA west of 60°W, 167 km (90 NM) may be applied.
6.3 MINIMUM FLIGHT LEVEL

6.3.1 Establishment

Nil.

6.4 ATS ROUTES

6.4.1 Track systems

6.4.1.1 Establishment and use of organized track system (OTS)

6.4.1.1.1 When necessary in order to permit the optimum use of the airspace, the area control centres serving Gander Oceanic, New York Oceanic, Santa Maria Oceanic and Shanwick Oceanic control areas may, subject to coordination with each other and, when appropriate, with Reykjavik area control centre, establish an organized track system. The procedures in 6.4.1.1.2 and 6.4.1.1.3 shall then be applied.

6.4.1.1.2 Operators conducting scheduled or non-scheduled flight operations at or above FL 280 within Gander Oceanic, New York Oceanic, Shanwick Oceanic and Santa Maria (North of 30°N) Oceanic control areas shall provide information to the area control centres concerned regarding the tracks likely to be requested by turbo-jet aircraft during peak traffic periods. Such information shall be provided as far in advance of the anticipated peak periods as practicable and as specified in appropriate aeronautical information publications.

6.4.1.1.3 Based on the above information, an OTS may be established. The location of the organized tracks will depend on traffic demand and other relevant factors. The related organized track messages will be disseminated to operators by Shanwick Oceanic area control centre for the predominantly westbound flow of air traffic and by Gander Oceanic area control centre for the predominantly eastbound flow of air traffic. These messages shall be disseminated at least three hours in advance of each anticipated peak traffic period. Any subsequent change made to the track system shall be notified to the operators as soon as possible.

6.4.1.2 Mandatory carriage of the OTS message

6.4.1.2.1 All aircraft operating in or above MNPS airspace shall carry a copy of the current OTS message.

6.4.1.3 Flights along the northern or southern boundaries of Gander Oceanic and Shanwick Oceanic flight information regions

6.4.1.3.1 Aircraft operating along tracks through successive points situated on the northern or southern boundaries of Gander Oceanic and Shanwick Oceanic flight information regions shall be provided with air traffic services by Gander or Shanwick area control centre as appropriate.

6.4.2 RNAV

Nil.

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Chapter 7: SAFETY MONITORING

7.1 STRATEGIC LATERAL OFFSET PROCEDURES (SLOP)

Nil.

7.2 AIRSPACE MONITORING

7.2.1 General

Nil.

7.2.2 RNAV

7.2.2.1 RNAV 10 (RNP 10)

7.2.2.1.1 A target level of safety (TIS) of $5 \times 10^{-9}$ fatal accidents per flight hour per dimension shall be established for route systems operating a 93 km (50 NM) lateral separation minimum. The safety level of such airspace shall be determined by an appropriate safety assessment.

Note.— Detailed guidance material on conducting safety assessments is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9889) and the Safety Management Manual (SMM) (Doc 9859).

7.2.2.1.2 Adequate monitoring of flight operations shall be conducted to provide data to assist in the assessment of the achieved lateral navigation performance of the aircraft population in relation to the lateral separation minimum. A safety assessment shall be carried out periodically, based on the data collected, to confirm that the safety level continues to be met. Data shall include operational errors due to all causes.

Note.— Monitoring will be conducted in accordance with the appropriate material issued by ICAO. Detailed guidance is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9889) and the Safety Management Manual (SMM) (Doc 9859).

7.2.2.2 MNPS

7.2.2.2.1 Adequate monitoring of flight operations in the NAT Region shall be conducted to assist in the assessment of continuing compliance of aircraft with the lateral navigation capabilities specified in 4.1.1.1.4.

Note.— Monitoring will be conducted in accordance with the appropriate guidance material issued by ICAO.
7.2.3 RNP

Nil.

7.2.4 RVSM

7.2.4.1 Adequate monitoring of flight operations in the NAT Region shall be conducted to assist in the assessment of continuing compliance of aircraft with height-keeping requirements.
Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL
(A-2, Chapter 3; P-ATM – Chapter 4 and Appendix 2)

2.1.1 Date of flight
Nil.

2.1.2 Area navigation (RNAV) specifications
Nil.

2.1.3 Required navigation performance (RNP) specifications

2.1.3.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNP type prescribed, has been appropriately approved and can comply with all conditions of that approval for all operations in airspace or on ATS routes where an RNP type has been designated.

2.1.4 Minimum navigation performance specifications (MNPS)
Nil.

2.1.5 Reduced vertical separation minimum (RVSM)-approved aircraft

2.1.5.1 The letter W shall be inserted in Item 10 (Equipment) of the flight plan if the aircraft and operator have received RVSM State approval, regardless of the requested flight level. The aircraft registration shall be inserted in Item 18 of the flight plan.

2.1.6 Non-RVSM-approved aircraft
Nil.

2.1.7 Non-RVSM-approved State aircraft
Nil.

2.1.8 Indication of 8.33 kHz channel spacing capability
Nil.

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2.1.9 Route

Nil.

2.1.10 Estimated times

Nil.

2.1.11 Mach number

2.1.11.1 For turbo-jet aircraft intending to operate within the Anchorage Oceanic and Oakland Oceanic FIRs, the planned true Mach number shall be specified in Item 15 of the flight plan.

2.1.12 Alternative flight level

Nil.

2.1.13 Special handling (STS)

Nil.

2.1.14 Controller-pilot data link communications (CPDLC)

Nil.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)

Nil.

2.2.2 Flight plan addressing and distribution

Nil.

2.2.3 Slot allocation exemptions

Nil.
2.3 SUBMISSION

2.3.1 General
Nil.

2.3.2 Amendments
Nil.

2.4 REPETITIVE FLIGHT PLANS (RPLs)
Nil.
Chapter 2. FLIGHT PLANS

2.1 CONTENT – GENERAL
(A2 – 3.3; P-ATM – Chapter 4 and Appendix 2)

2.1.1 Date of flight

Nil.

2.1.2 Area navigation (RNAV) specifications

Nil.

2.1.3 Required navigation performance (RNP) specifications

2.1.3.1 The letter R shall be inserted in Item 10 (Equipment) of the flight plan to indicate the aircraft meets the RNP type prescribed, has been appropriately approved and can comply with all conditions of that approval.

2.1.4 Minimum navigation performance specifications (MNPS)

Nil.

2.1.5 Reduced vertical separation minimum (RVSM)-approved aircraft

2.1.5.1 The letter W shall be inserted in Item 10 (Equipment) of the flight plan if the aircraft and operator have received RVSM State approval, regardless of the requested flight level. The aircraft registration shall be inserted in Item 18 of the flight plan.

2.1.6 Non-RVSM-approved aircraft

Nil.

2.1.7 Non-RVSM-approved State aircraft

Nil.

2.1.8 Indication of 8.33 kHz channel spacing capability

Nil.

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2.1.9 Route

Nil.

2.1.10 Estimated times

Nil.

2.1.11 Mach number

2.1.11.1 For turbo-jet aircraft intending to operate:

a) within airspace and/or routes between Santiago and Lima FIRs and the adjacent control areas of the PAC Region; or

b) at or above FL 250 within the Dakar Oceanic, Recife and Sal Oceanic FIRs; or

c) along area navigation routes;

the planned true Mach number shall be specified in Item 15 of the flight plan.

2.1.12 Alternative flight level

Nil.

2.1.13 Special handling (STS)

Nil.

2.1.14 Controller-pilot data link communications (CPDLC)

Nil.

2.2 CONTENT – AIR TRAFFIC FLOW MANAGEMENT (ATFM)

2.2.1 Runway visual range (RVR)

Nil.

2.2.2 Flight plan addressing and distribution

Nil.
2.2.3 Slot allocation exemptions

Nil.

2.3 SUBMISSION

2.3.1 General

Nil.

2.3.2 Amendments

Nil.

2.4 REPETITIVE FLIGHT PLANS (RPLs)

Nil.