

Airline Dispatchers Federation

Annual Symposium 2012 Flight Plan, North Atlantic Initiatives

Presented to: Symposium Attendees

By: Gordy Rother, AFS-240

Date: October 11, 2012



Federal Aviation
Administration



Agenda

- **2012 ICAO Flight Plan**
- **North Atlantic Initiatives**
- **Resources**



2012 Flight Plan

(FPL-EIN105-IS
-B763/H-E3J4M2SR YWX/HB2U2V2G1
-ZZZZ1200
-N0400F100 DENUT UL610 LAM UL10 BPK UN601 LESTA UP6
MIMKU/M082F320 NATB YAY/N0464F320 N188B YRI/N0462F340 DCT NOTAP
DCT TVC PMM5
-KORD0700 KATL
-STS/ATFMX MARS A FLTCK PBN/A1C3L1 NAV/GBAS SBAS DAT/NO
SPECIFIC DESIGNATORS SUR/ADDITIONAL INFO DEP/MALAHIDE
5327N00609W DOF/080622 TYP/2F15 3F5 DLE/NTM0130
ORGN/EBBDZMFP PER/A TALT/EIDW RMK/PRESSURISATION PROB
UNABLE ABOVE F120)

Digits in Field 10a & b

Up to 20 chars in Field 10b !

New Field or Element
New or Modified content



2012 Flight Plan Overview

- **What's changing**
- **Field dependencies**
- **MEL implications**



What's Changing

- **Effective November 15, 2012 the equipment codes in the ICAO flight plan are changing.**
- **Worldwide all ANSP's have been working to amend the software to accept the new formatted fields 10 and 18 in the ICAO Flight Plan.**
- **Field 10A equipment and authorization codes have been changed and surveillance codes in 10B have also changed to accurately identify the operational CNS capabilities.**



What's Changing

- **Field 18 has been greatly expanded. The codes filed in this field further identify the CNS capabilities.**
 - NAV/
 - PBN/
 - COM/
 - SUR/



Field Dependencies

- If **R** is filed in field **10a** then
 - - **PBN/** must have **an entry** (and vice versa)
 - **NEW Format:**
 - (FPL-QFA597-IS
 - -A332/H-SDE2E3FJ2J4J5M1HIZW**R**GY/LB1D1
 - -YBBN0450
 - -N0465F380 WIZZA DCT HARDD DCT DOUGY DCT RACHL T33
 - MACLA/N0465F400 T33 LEC J141 KG Q41 HAMTN Q158 PH DCT
 - -YPPH0455
 - -**PBN/A1B2B3B4B5D1L1** NAV/RNAVD1E2A1 DOF/YMMDD REG/VHEBP
 - EET/YMMM0054 SEL/FHEG PER/C RIF/FRT N640 AD YPAD
 - RMK/TCAS)
- RNAV Capable
- PBN Codes

Dependencies

- If **B1, B2, C1, C2, D1, D2, O1 or O2** is included in **PBN/** - then **G** must be included in field **10a**.

GPS/GNSS

- (FPL-QFA597-IS
- -A332/H-SDE2E3FJ2J4J5M1HIZWR**G**Y/LB1D1
- -YBBN0450
- -N0465F380 WIZZA DCT HARDD DCT DOUGY
DCT RACHL T33 MACLA/N0465F400 T33 LEC
J141 KG Q41 HAMTN Q158 PH DCT YPPH0455
PBN/A1**B2**B3B4B5**D1**L1

Dependencies

- If **B1, B3, B4, C1, C3, C4, D1, D3, D4, O1, O3 or O4** is included in **PBN/**
 - then **D** must be included in field **10a.** DME
- (FPL-QFA597-IS
- -A332/H-S**D**E2E3FJ2J4J5M1HIZWRGY/LB1D1
-YBBN0450
-N0465F380 WIZZA DCT HARDD DCT DOUGY DCT
RACHL T33 MACLA/N0465F400 T33 LEC J141 KG
Q41 HAMTN Q158 PH DCT
-YPPH0455
-PBN/A1B2**B3**B4B5**D1**L1

Dependencies

- If **B1** or **B4** is included in **PBN/**
 - then **O** or **S** must be included in field **10a**
- (FPL-QFA597-IS
 - A332/H-**SD**E2E3FJ2J4J5M1HIZWRGY/LB1D1
 - YBBN0450
 - N0465F380 WIZZA DCT HARDD DCT DOUGY DCT
RACHL T33 MACLA/N0465F400 T33 LEC J141 KG
Q41 HAMTN Q158 PH DCT
 - YPPH0455
 - PBN/A1B2B3**B4**B5D1L1

Dependencies

- If **B1, B5, C1, C4, D1, D4, O1** or **O4** is included in **PBN/**
 - then **I** must be included in field **10a INS/IRS/IRU**
- (FPL-QFA597-IS
 - A332/H-SDE2E3FJ2J4J5M1HIZWRGY/LB1D1
 - YBBN0450
 - N0465F380 WIZZA DCT HARDD DCT DOUGY DCT RACHL T33 MACLA/N0465F400 T33 LEC J141 KG Q41 HAMTN Q158 PH DCT
 - YPPH0455
 - PBN/A1B2B3B4**B5**D1L1

Dependencies

- If **B1, B5, C1, C4, D1, D4, O1** or **O4** is included in **PBN/**

- then **I** must be included in field **10a**

- (FPL-QFA597-IS

- A332/H-S**D**E2E3FJ2J4J5M1H**I**ZWR**G**Y/LB1D1

- YBBN0450

- N0465F380 WIZZA DCT HARDD DCT DOUGY DCT
RACHL T33 MACLA/N0465F400 T33 LEC J141 KG
Q41 HAMTN Q158 PH DCT

- YPPH0455

- PBN/A1B2B3B4B5**D1**L1

MEL Impact

- **FAA Order 8900.1 Volume 4, Chapter 4 Section 1 para 4-635 requires the air carrier's MEL to contain customized remarks and exceptions applicable to the type and area of operation.**
 - e.g. Generic Master MEL language such as “May be inoperative provided procedures don't require its use” or “May be inoperative unless required by FAR” should NOT be in the operators MEL.

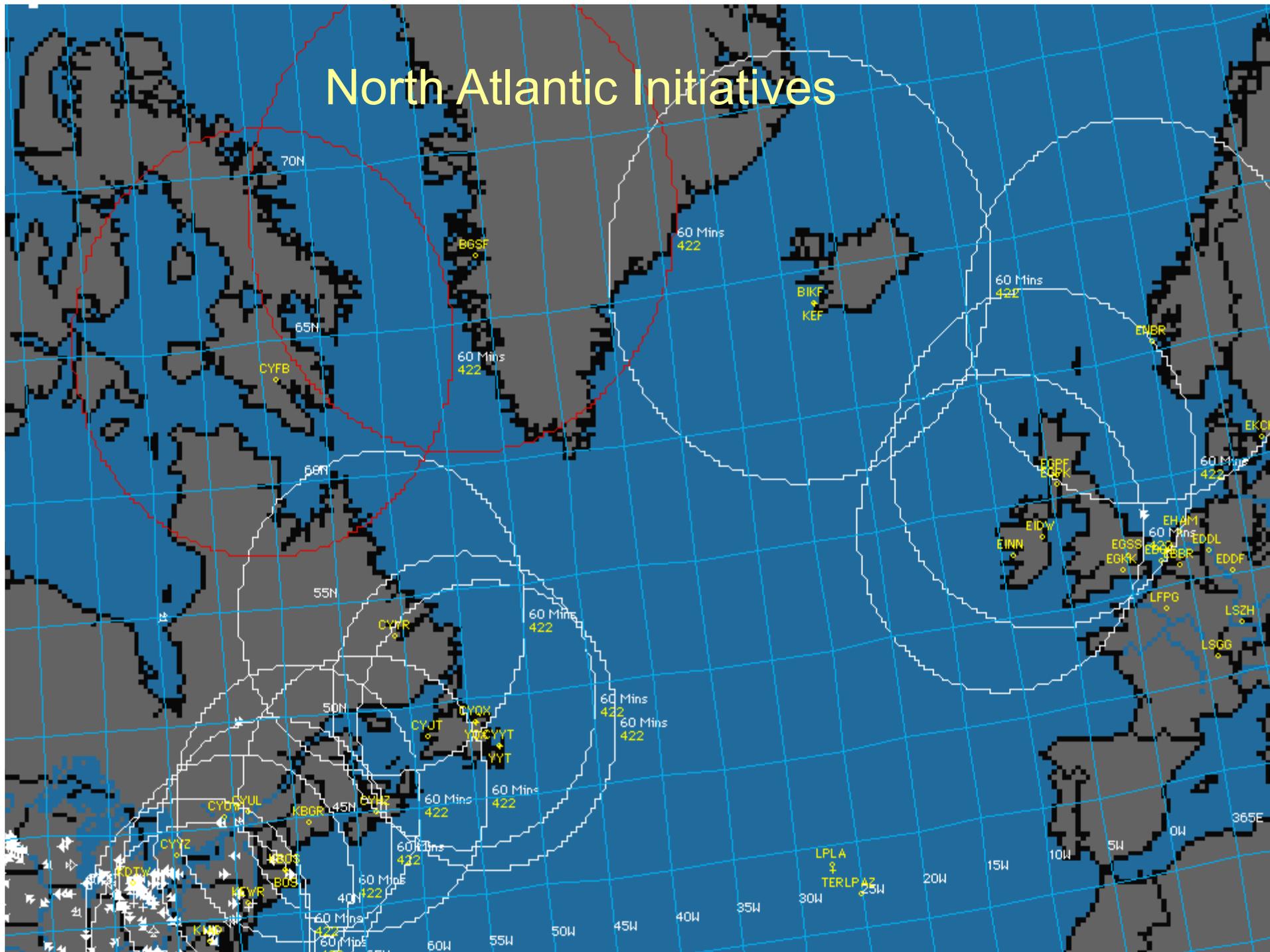


MEL Impact

- **Any Communications, Navigation or Surveillance (CNS) equipment MEL should contain either guidance or manual reference to flight plan filing codes in the ICAO flight plan.**
- **e.g. MEL 34-58-1 GPS inoperative, would require amendment to Field 10A removing the G and Field 18 the following codes, if filed, must be removed or amended; *B1, B2, C1, C2, D1, D2, O1 or O2***



North Atlantic Initiatives



North Atlantic Initiatives Overview

- **Data Link Mandate**
- **1/2 Degree Latitude Track Spacing**
- **Required Communication Performance (RCP) and Required Surveillance Performance (RSP) requirements being established**
- **MNPS to PBN Transition**
- **In Trail Procedures (ITP) trial**
- **Mass Turn Back/Mass Divert procedure**
- **D50 (50nm longitudinal) 30/30 Separation in WATRS**
+



Data Link Mandate

- **Phase 1: on 7 Feb 2013, Data Link equipage and operations mandated between FL 360-390 on two OTS tracks identified in NAT Track message. (OTS tracks to be made available one degree north and one degree south of DLM tracks for aircraft not data link equipped).**
- **Phase 2 planned for 5 Feb 2015. DLM boundaries and policies not yet established for Phase 2. U.S. delegations to NAT sub-groups have started discussion and will participate in Fall 2012 sub-group meetings.**



Data Link Mandate

- **Communication (C) CPDLC requires SATCOM data, Inmarsat , ICAO FP field 10A Code J5, or Iridium, ICAO FP field 10A code J7**
- **Surveillance (S) requires ADS-C, ICAO FP field 10B code D1**



1/2 Degree Latitude Track Spacing

- **Phase 1 target is 2015 time frame.**
- **Draft plan projects exclusionary airspace on 2 + 1 core OTS tracks --- in FL spectrum that is harmonized with DL Mandate FL' s. Third track to be established between 2 core tracks at 1/2 degree track spacing.**
- **1/2 degree waypoint insertion error is one area of concern for crew training and oceanic clearance.**



1/2 Degree Latitude Track Spacing

If you are FANS/1A equipped and authorized RNP-4.

CNS equipment required:

Satcom CPDLC, RNP 4 navigation approval and ADS-C. You will be able to file the core tracks spaced 25nm or 1/2 degree latitude.

Field 10A File RG(J5, or J7) WX

Field 10B File D1

Field 18 PBN/L1

1/2 Degree Track Spacing

- **Challenges**

- 11 character display of 1/2 degree

N5030W04000

- ARINC 424 format:

- Whole degree N5000/W0400 = 5040N

- Half degree N5030/W0400 = N5040

- Aircraft Navigation Display:

- 7 character display truncates 1/2 degree
N50W040

- Both 424 and 7 character have Human Factor issues with transposition of the N or miss interpretation of the ND 7 character display waypoint.

Required Communication Performance (RCP) and Required Surveillance Performance (RSP)

- **RCP 400 for HF communication and RCP 240 for Satcom are being developed as the standards to be applied against for reduced separation, reliability integrity, and continuity.**
- **RSP 180 for ADS Contract has been established as the standard for ADS-C surveillance.**
- **NATSPG is currently evaluating FANS 1/A over Inmarsat Classic Aero and Iridium Short Burst Data networks to meet the RCP 240 and RSP 180 standards.**



MNPS to PBN Transition

- **The NAT MNPS airspace is being changed to NAT PBN.**
 - Two Navigation performance requirements currently exist but not mandated in the NAT
 - RNP10
 - RNP4
- **However, the NAT PBN transition, as discussed in the Data Link Mandate and 1/2 degree track spacing, will require more than navigation performance for operations. Really the airspace is transitioning to the NAT PBA not PBN.**



ITP Trial

- **Currently some airlines are in trial for in trail climb and descent that allows the longitudinal separation to be reduced.**
- **This trial is based on ADS-B IN data displayed on a Cockpit Display of Traffic Information CDTI.**
- **Flight plans must accurately reflect the ADS-B IN capability in fields 10B and SUR in field 18.**



Mass Turn Back/Mass Divert Procedure

- **Developed as a contingency in case of :**
 - National Emergency (Airspace Closed)
 - Volcanic Ash
- **Will be a standardized procedure for flight crew to follow if a MTB is needed and crew is unable to obtain an ATC clearance.**
- **Crew will have to declare an emergency if unable to turn back.**



D50 in WATRS+

- **50nm longitudinal separation for operationally equipped and authorized aircraft.**
 - (C) Com, CPDLC
 - (N) Nav, Aircraft must be capable of RNP10 or RNP4 operations
 - (S) Sur, ADS-C 27 minute reports for RNP10 or 32 minutes for RNP 4 aircraft



30/30 Separation in WATRS+

- **30 lateral and 30 longitudinal separation will be applied to appropriately equipped aircraft.**
- **CNS requirement will be FANS 1/A over Iridium or Inmarsat, ADS-C and RNP4 operationally equipped and authorized aircraft.**



Resources

- **ICAO 2012 resources available are**
 - PANS ATM 4444 Chapter 4
 - Aeronautical Information Manual
 - FPL 2012 Quick Reference Guide
 - InFO xxxxx currently in coordination
 - http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/flight_plan_filing/general/icao_2012/



Resources

- **ICAO 2012 Flight Plan Implementation Tracking System (FITS)**
 - <http://www2.icao.int/en/FITS/Pages/home.aspx>
- Click on the Documents Tab for useful information on status of ANSP readiness.



Resources

North Atlantic Guidance

- **ICAO Paris Website**

- 1) Go to website www.paris.icao.int

- 2) Go to "EUR and NAT Docs" on the left hand column

- 3) Go to "NAT Docs" in the middle

- 4) Go to "NAT Doc 007-Ed.2011" in the middle

- **Download the latest**

GUIDANCE CONCERNING AIR NAVIGATION IN AND ABOVE
THE NORTH ATLANTIC MNPS AIRSPACE Edition 2011

Resources

- **Datalink mandate notice**
 - **NORTH ATLANTIC FANS 1/A DATA LINK MANDATE**

- **Section Two NTAP**
 - http://www.faa.gov/air_traffic/publications/notices/index.cfm?print=go



Resources

- **Changes in the North Atlantic can be monitored by reading the NATSPG reports**
 - 1) Go to website www.paris.icao.int
 - 2) Go to "EUR and NAT Docs" on the left hand column
 - 3) Go to "NAT SPG Documents" at the end
 - 4) Go to "NAT SPG Reports" third selection
 - 5) Go to page two and open the latest report, currently SPG 48



Resources

- **Other resources for International Flight Planning**
 - http://www.skybrary.aero/index.php/Main_Page
 - <https://www.public.cfm.eurocontrol.int/PUBPORTAL/gateway/spec/index.html>



Questions

- **Contact**

Gordy Rother

AFS-240 New Program Implementation and
International Support Branch

612-253-4409

gordon.rother@faa.gov

