Case Study: Considerations for Implementation of Amendment 1, Doc 4444 in the United States

Federal Aviation Administration

Workshop on the ICAO 2012 Flight Plan Provisions (2012 FPL)

Nairobi, Kenya

14-15 February 2011

Overview

- Assembling a Focus Team
- Identification of Affected Systems
- Analysis of System Changes
- Identification of Operational Impacts
- Formulation of a Transition Plan
- Harmonization with Adjacent ANSPs
- Execution of Test Strategy
- Communication with Users/Filers

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Assembling a Focus Team

- Consider **expertise** needed for success
  - Engineering
  - Operational
  - Organizational
  - Flight data & flight planning
- **Educate** team members
  - Amendment 1 & ICAO Transition Guidance
  - Regional transition guidelines & strategies
- Set **regular meetings**, timelines & due dates
- Name participant to **regional task forces**

Identification of Affected Systems

- **List systems** which may be affected
  - Internal (owned), external (contracted), user/filer
- Determine **system category**
  - **Filers**: Individuals/organizations that file an FPL/ATS message
  - **Flight Planning Services**: Systems that send an FPL/ATS message over AFTN to an FDP System
    - *Examples*: *flight service organizations, commercial services*
  - **FDP Systems**: Flight data processing systems that accept & process an FPL/ATS message for ATC purposes
  - **Flight Data Users**: Systems that receive data derived from an FPL/ATS message, but do not directly receive an FPL/ATS message

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Analysis of System Changes

Step 1: Evaluate each system using "Implementation Guidance and Checklist"

- **Overview**: How to use the spreadsheet
- **Guidance**: Describes 27 substantive changes (non-editorial) in Amendment 1 with probable impacts to each system category
- **Checklist**: Spreadsheet with impact questions to answer on the 27 substantive changes
- **Detailed changes**: All 150 changes mapped to the 27 substantive changes or to editorial
- **A/C Perf Cat**: Description of ICAO aircraft performance category (info only)

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Analysis of System Changes (cont.)

Step 2: Use "Detailed Changes" tab

– Filter on change being evaluated

– Shows each line-by-line amendment relating to change

Step 3: Tabulate information on the checklist spreadsheet or other means

– Use "Checklist" tab to enter evaluation results

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Identification of Operational Impacts

- Assess **impacts** to procedures
  - Pilot/controller phraseology
  - ATC-to-ATC coordination
- **Computer Human Interface** (CHI) for input of NEW data
  - Flight plan entry/correction
- Develop information for incorporation into **publications**
  - AIP, Regulations, etc.
- **Training** for controllers, flight data units, pilots & other affected personnel

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Formulation of a Transition Plan

- How will you:
  - Harmonize implementation in **multiple systems**?
  - Harmonize with **adjacent ANSP** systems?
  - **Plan & test** changes prior to transition implementation?

- Will software delivery occur once, or does it need to be grouped into phases?
  - Software with format changes to allow testing
  - Software to translate **NEW** to **PRESENT**
  - Software to accept messages up to 120 hours in advance

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Harmonization with Adjacent ANSPs

- Implementation dates
  - All-at-once?
  - Phases?
- Testing
  - System testing
  - Interface testing
- Translation table for **NEW** to **PRESENT**
  - FPLs & CPLs
  - Associated Messages
- Advance acceptance of messages

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FAA Inter-Regional Coordination

- Task Forces
  - **FAA/NavCanada Bilateral TF (N12)**
  - **FAA/SENEAM Bilateral TF (S12)**
  - **Asia/Pacific Region:** ICAO Flight Plan & ATS Messages Implementation (FPL&AM/TF)
  - **European Region:** 2012 Task Force (2012 FPL TF)
  - **Caribbean/South America Region:** CAR/SAM Project C3, *Implement the new ICAO flight plan format*
  - **North Atlantic Region:** EANPG, NAT IPG
- Technical support & information exchange
  - **Middle East Region:** ICAO New Flight Plan Format Study Group (INFPL SG)

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Inter-Regional Transition Strategy

Phased transition approach

- Uses internal system, ANSP-to-ANSP & user testing to mitigate risk of single-day global transition

➢ Phase 1: **January to March 2012** *

- ANSP software delivery & internal testing

➢ Phase 2: **April to June 2012**

- ANSP external testing & implementation

➢ Phase 3: **July to November 15, 2012**

- Airspace users testing & implementation

* NOTE: FAA software delivery by end of 2011 due to testing complexities

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Execution of Test Strategy

- If multiple systems are involved, critical to test **internal system compatibility**

- Determine detailed test procedures & schedules for **external systems interface testing**

- Provide **testing opportunities for filers/users** to test their system changes
  - Manual review to assure format understood
  - Submission of messages to test system
  - May need to test in the "live" environment

Communication with Users/Filers

- Provide **forum for issue discussion** & questions
  - Telcons
  - Website
  - Briefings
- Provide **education** on changes & impacts
  - Provisions of Amendment 1
- **Communicate** Transition Plans
  - ICAO Transition Guidance
    - User/filer choices for **NEW** or **PRESENT**
  - Regional Transition Strategies
  - ANSP Transition Plan

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Questions?

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