



Agenda Item 5:

Air Navigation Matters

- 5.1 Review of the implementation of the RPBANIP, the new NAM/CAR ANI/WG, Results of the Twelfth Air Navigation Conference (AN-Conf/12), the Global Air Navigation Plan (GANP), implementation of Aviation System Block Upgrades (ASBUs) and impact on regional plans**

THE MINI-GLOBAL DEMONSTRATION

(Presented by United States)

SUMMARY

This paper presents information on the U.S. Federal Aviation Administration’s (FAA) Mini-Global Demonstration. The program is currently under development, with a demonstration planned for 2014. The program’s main goal is to work with other air navigation service providers (ANSPs) to simulate seamless and more efficient operations across Flight Information Regions (FIRs).

Strategic Objectives

This information paper is related to Strategic Objectives:
A. Safety – Enhance global civil aviation safety
C. Environmental Protection and Sustainable Development of Air Transport

1. Introduction

1.1 In an effort to increase the compatibility of varying air navigation systems across the globe, the FAA is developing a program called the Mini-Global Demonstration. This project is aimed at collaborating with other air navigation service providers (ANSPs) to work towards greater seamless operations across FIRs.

1.2 The FAA is currently developing plans for the Mini-Global Demonstration, which will be held in 2014. Other ANSPs are invited to participate or observe. This demonstration will help users observe the benefits of using up-to-date and more efficient modes of communication to transmit data, ultimately creating greater efficiencies in the air traffic control system. It also aims to reduce the use of antiquated flight plan formats.

2. Discussion

2.1 The FAA believes that the Aviation System Block Upgrades (ASBUs) initiative is the best approach to reach the international aviation community's modernization goals. The ASBUs enable global interoperability, and allow for flexibility and scalable building blocks. Every section of the ASBU system is not applicable to every State. However, SARPs developed within an ASBU section would need to be accepted by States for the areas implemented.

2.2 The US program for modernization is the Next Generation Air Transportation System, or NextGen. It is transforming U.S. airspace from one that is patterned on ground-based infrastructure to one that uses satellite technology.

2.3 NextGen is a fundamental change in the management and operation of flight, and includes advances in communication, navigation, surveillance, air traffic management technologies, safety, energy, and the environment. And, the success of NextGen relies in part on effective collaboration with operators, other air navigation services providers, and international partners.

2.4 To travel internationally, operators must be able to easily traverse multiple FIRs. To facilitate this, the Mini-Global Demonstration will seek to advance collaborative flight information exchanges among operators and other ANSPs worldwide.

2.5 To achieve flight information exchanges across FIRs, operators and ANSPs must effortlessly share common information describing each flight. This common information is the flight object (FO), and the standard global definition for sharing is the flight information exchange model (FIXM).

2.6 The Mini-Global Demonstration is being developed during 2013 to validate both the FO concept and the FIXM standard. The actual demonstration will be held with global partners in 2014. The demonstration will help participants realize the benefits of using more up-to-date and efficient methods of communication. This will ultimately create greater efficiencies and will allow users to save time and money. A basic internet connection will enable participants to be part of, or to observe, the Mini-Global Demonstration.

2.7 The demonstration intends to show how ANSPs and flight operators can share common flight information to:

- Improve collaborative decision-making (CDM)
- Improve air traffic management (ATM)
- Promote international standardization of flight information
- Reduce the reliance on antiquated flight plan formats

2.8 The Mini-Global Demonstration will provide a testing scenario to support a seamless global sky, allowing carriers to traverse various regions of the world. It also supports the effective communication of data from ANSP to ANSP. Participants will be able to test or observe the transfer of their data. This will enable ANSPs to determine their current capabilities and areas for potential development. The demonstration will help to identify and convey the benefits that can be achieved with the global harmonization of data exchange.

3. Conclusion

3.1 The Mini-Global will promote international harmonization via data exchange with other international ANSPs, operators, and the aviation industry. It will assess the compatibility of partner ATM systems with respect to flight object (FO) standards (FIXM / WXXM / AIXM). It will also provide the foundation for new operational capabilities and procedures utilizing international data exchange. Assessing the compatibility of FO standards will also work to improve the fidelity of predicted flight behavior, enabling optimized planning for all phases of the flight. Included in this is also the goal of ultimately reducing the dependence on antiquated flight plans formats.

3.2 Please consider participating in or observing the 2014 Mini-Global Demonstration. For further information on this initiative or how to participate, contact Ed Rodriguez, FAA Senior Representative for the Caribbean, at ed.rodriguez@faa.gov or Ian Ross, FAA NextGen Office – International Programs, at ian.ross@faa.gov.