



International Civil Aviation Organization

**The Twenty-Second Meeting of the APANPIRG ATM/AIS/SAR Sub-Group
(ATM/AIS/SAR/SG/22)**

Bangkok, Thailand, 25-29 June 2012

**Agenda Item 5: Provision of ATM/AIS/SAR in the Asia/Pacific Region, including associated
CNS matters**

**INTRODUCTION OF THE COLLABORATIVE TRAJECTORY OPTIONS PROGRAM
(CTOP)**

(Presented by the United States of America)

SUMMARY

This paper presents information on U.S. efforts to improve Air Traffic Flow Management (ATFM) services through the collaborative development and deployment of ATFM Tools.

This paper relates to –

Strategic Objectives:

A: Safety – Enhance global civil aviation safety

D: Efficiency – Enhance the efficiency of aviation operations

Global Plan Initiatives:

GPI-6 Air traffic flow management

GPI-7 Dynamic and flexible ATS route management

GPI-9 Situational awareness

1. INTRODUCTION

1.1 As Air Navigation Service providers, states are challenged to optimize air traffic flow across their National Airspace System (NAS) in a manner that preserves system safety and efficiency while allowing its stakeholders the ability to optimize their response to ATFM initiatives and achieve each stakeholder's distinctive business model efficiencies. An enhanced ATFM solution is one which preserves the safety and efficiency of the NAS and provides users an opportunity to mitigate impacts and maximize responses to ATFM initiatives.

2. DISCUSSION

2.1 The U.S. continues to evolve ATFM tools to improve ATFM solutions. Collaborative Decision Making (CDM) is utilized in the planning, designing, development, deployment, and sustainment of Traffic Flow Management (TFM) products and services.

2.2 U.S. CDM is a joint government/industry initiative aimed at improving AFTM through increased information exchange among aviation community stakeholders. CDM is comprised of representatives from government, general aviation, airlines, private industry and academia who work together to create technological and procedural solutions to the ATFM challenges faced by managing an airspace system as efficiently as possible.

2.3 CDM is an operating paradigm where ATFM decisions are based on a shared, common view of the airspace and an awareness of the consequences these decisions may have on the system and its stakeholders. There are two central tenants to CDM; that better information will lead to better decision-making, and tools and procedures need to be in place to enable air navigation service providers and the flight operators to more easily respond to changing conditions. By sharing information, values and preferences, stakeholders learn from each other and build a common pool of knowledge, resulting in Air Traffic Management (ATM) decisions and actions that are most valuable to the system.

2.4 The FAA is working with a CDM workgroup to develop automation that will generate Traffic Management Initiatives (TMIs) that can take into account individual flight preferences and apply these preferences when balancing system capacity with the demand on the system. The workgroup’s primary concept TMI is called the Collaborative Trajectory Options Program (CTOP).

2.5 CTOP utilizes automation to share information with stakeholders on system constraints and identified optional routes that are available to mitigate these system constraints. This automation link will allow the stakeholders to identify optimal routes and respond back to CTOP identifying their optimized route request. In the ACC, the CTOP’s automation link delivers the stakeholders’ requests and reduces ACC workload by automatically inputting the approved stakeholder’s route choice into the ACC flight planning system, eliminating or significantly reducing the amount of keyboard inputs required to issue an amended route to a flight.

2.6 CTOP’s core concept is collaboration of constraint management through stakeholder route preferences and follows the FAA process of TMI handling (see attachment 1).

3. Conclusion

3.1 The meeting is invited to note the information presented in this paper.

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Attachment 1

TMI Process

