



International Civil Aviation Organization

MIDANPIRG Air Traffic Flow Management Task Force

Fifth Meeting (ATFM TF/5)
(Virtual, 25 – 27 May 2021)

Agenda Item 2: Regional Framework

**THE CANSO AIR TRAFFIC FLOW MANAGEMENT (ATFM) DATA
EXCHANGE NETWORK FOR COOPERATIVE EXCELLENCE
(CADENCE) OPERATIONAL INFORMATION SYSTEM (OIS)**

*(Presented by CANSO ATFM Data Exchange Network for Cooperative Excellent (CADENCE)
Task Force (TF) Co-Chair)*

SUMMARY

The CANSO Air Traffic Flow Management (ATFM) Data Exchange Network for Cooperative Excellence Task Force (CADENCE TF) was created to support the implementation of a regional Operational Information System (OIS). The purpose of this OIS to accelerate the implementation of regional ATFM through the CADENCE offered OIS capabilities based on the CANSO ATFM Data Exchange Network for the Americas (CADENA) OIS.

Action by the meeting is at paragraph 5.

1. INTRODUCTION

1.1 The CANSO Air Traffic Flow Management (ATFM) Data Exchange Network for Cooperative Excellence Task Force (CADENCE TF) was created on 24 March 2021 as a strategic initiative to develop a network for operational coordination and information sharing among air navigation service providers (ANSPs) in flight information regions (FIRs) around the world. The CADENCE TF will focus on the enhancement and implementation of regional ATFM/collaborative decision making (CDM) processes and procedures. The CADENCE TF is a subgroup of the CANSO Operations Standing Committee (OSC).

1.2 The objectives of the CADENCE TF are listed below:

- 1) In collaboration with the OSC Air Traffic Flow Management (ATFM)/Airport Collaborative Decision Making (A-CDM) Work Group (WG), provide strategic leadership and support in the development, enhancement, implementation, and sustainability of regional and trans-regional CDM;
- 2) Review the effectiveness of existing and/or the need for regional and trans-regional CDM capabilities;
- 3) Support the establishment of regional and trans-regional agreements that allow for information exchange between ANSPs and enable common situational awareness;
- 4) Support the implementation of regional and global Operational Information Systems (OIS) as platforms to facilitate common situational awareness and CDM;

- 5) Support the establishment of an action plan to enable effective use of the OIS platform for regional and trans-regional CDM;
- 6) In collaboration with the OSC ATFM/A-CDM WG, recommend appropriate mechanisms for the on-going review and improvement of regional and trans-regional CDM; and
- 7) Maintain close coordination among the ANSPs and the OSC to optimize the use of available resources and experience.

1.3 Each region is unique in terms of ATFM/CDM development stage and background. To support the regional ATFM/CDM implementation needs, the CADENCE TF will work with the respective regional ICAO office, ANSPs, and other ATFM stakeholders closely and flexibly.

1.4 The distinguished contribution to regional ATFM/CDM by CADENCE would be the implementation of a basic, regional OIS at no cost.

2. BACKGROUND

2.1 CANSO and CGH Technologies, Inc. signed an agreement that secures the provision of a purpose built collaborative software platform (a.k.a. OIS) based on the successful regional initiative CADENA (CANSO ATFM Data Exchange Network for the Americas).

2.2 The new platform will be made available in all regions, supported by CGH Technologies, Inc., the developer of the CADENA platform. The CADENCE OIS will enable ANSPs and airlines to share information on factors affecting airspace demand and capacity, facilitate situational awareness, and engage all stakeholders in the development of collaborative approaches to optimise air traffic.

2.3 The baseline OIS offered to regions consists of CADENA OIS version 3.2 functions that are described in the “CADENA Operational Information System (OIS) Manual, version 3.2.2” dated 3 December 2020.

2.4 The CADENA Regional Implementation Group (RIG) has accomplished the objectives described in the introduction section by effectively working together to reduce air traffic delays, lessening environmental impact and improving collaborative planning on everything from runway construction to the management of air traffic following natural disasters. CADENA has been incredibly successful in Latin America and the Caribbean and we look forward to working with other regions to mirror this success.

3. ICAO MID ATFM REGIONAL IMPLEMENTATION THROUGH INFORMATION EXCHANGE

3.1 This section describes what it takes to implement the regional OIS in the region assuming that the MID region is interested in the CADENCE offer.

3.2 It will begin with forming a Regional Implementation Group (RIG). The ICAO MID already has a strong regional ATFM Task Force with an appropriate structure and state/ANSP participation that could serve this function.

3.3 The decision on what operational information could be shared will be determined by the participants in the ICAO MID ATFM TF.

3.4 A CADENCE offered OIS platform is capable of sharing a wide variety of operational information and described in CADENA OIS Manual. The OIS supported information to be exchanged includes:

- 1) Regional Traffic Management Measures (TMMs)
- 2) Active Reroutes and Route database
- 3) Airport Delays (arrival and departure)
- 4) Advisories (Urgent or FYI)
- 5) ATFM Daily Plan
- 6) Email Push Notification
- 7) Contingency Forms
- 8) Airport/Airspace Capacity

3.5 The CADENCE TF will help implement the MID regional OIS including ANSP and airline training to use the OIS effectively.

3.6 The CADENCE TF will host a MID Region Operational CADENCE demonstration Web conference, including the development of operational information to be exchanged and conference procedures.

4. USEFUL INFORMATION

4.1 The public view of the existing CADENA OIS is accessible via <https://www.cadenoais.org>.

4.2 The ANSP and/or airline specific CADENA OIS capability demonstration will be made available upon request

4.3 When the regional OIS is implemented, it will be supported by technical staff at CGH Technologies' offices in Herndon, Virginia, USA. The technical staff is normally available from 1200 UTC to 0000 UTC

4.4 If the region wishes to enhance its regional OIS beyond the base OIS offered by CADENCE, the region will need to work with CANSO and CGH Technologies to define the enhancements and establish any associated enhancement costs.

4.5 The CADENCE TF will continue to support the enhanced version of regional OIS and regional ATFM TF/RIG activities.

5. ACTION BY THE MEETING

5.1 The meeting is invited to:

- review the contents of this working paper;
- discuss the material and provide any feedback;
- evaluate if the regional OIS is beneficial for CDMATFM implementation in the ICAO MID region to support regional ATFM;
- evaluate if the CADENCE support is beneficial to implement the regional OIS; and
- if the CADENCE support is desirable, contact the CADENCE TF for further discussion.