



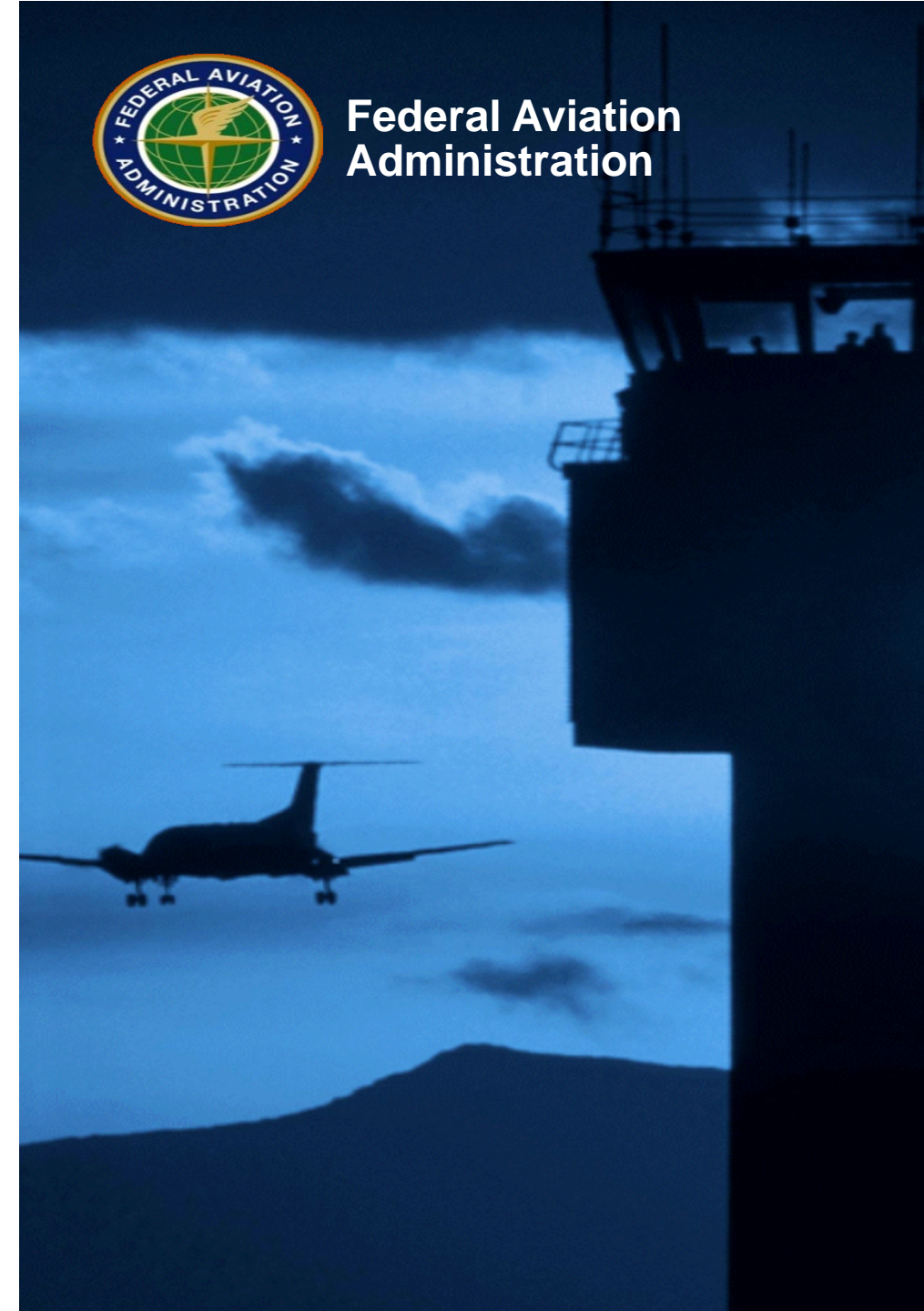
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# NAM ICD

## FAA NAM/CAR Activities

NAM/CAR/NAM/ICD/4

9-11 March 2021



# Topics

- **Automated Handoff with NAV Canada Overview**
  - Automated Handoff NAM Direct IP Interface
  - Automated Handoff Application Software
- **NAM Common Coordination ACC to ACC ICD**
- **NAM ICD Canada/United States Boundary Agreement**
- **NAM ICD/Boundary Agreement Planning Information**
- **ERAM NAM Direct IP IRD and ICD**



# Automated Handoff With NAV Canada Overview

## En Route Automation Modernization (ERAM) North American (NAM)

### Automated Handoff Program is divided into two Software Releases:

- **NAM Direct IP Interface Infrastructure - Non US interface: Deployment starting April 2021**
  - Migrates flight plan coordination messages exchanged today via NADIN to NAM Direct IP
  - Provides the infrastructure necessary for real-time message exchange
  - Message exchange occurs directly between neighboring U.S. and Non-U.S. ACCs
  - Status of NAM Direct IP Interfaces displayed to air traffic controllers when not using NADIN
  - FAA Telecommunications Infrastructure (FTI) provides the networks between U.S. sites and Non-U.S. security gateways
    - NAS Enterprise Security Gateways (NESG) at Salt Lake City and Atlanta NEMCs (SLC and ATL) and associated ERAM National Applications (NAP) in adjacent ERAM National Sites (ZLC and ZTL)
- **Automated Radar Handoff Application with NAV Canada: Deployment planned Fall 2022**
  - Adds new messages (Class 3) to support automated handoff enabled by the new NAM Direct IP interface
  - Software development is complete; integration testing and risk reduction testing are underway

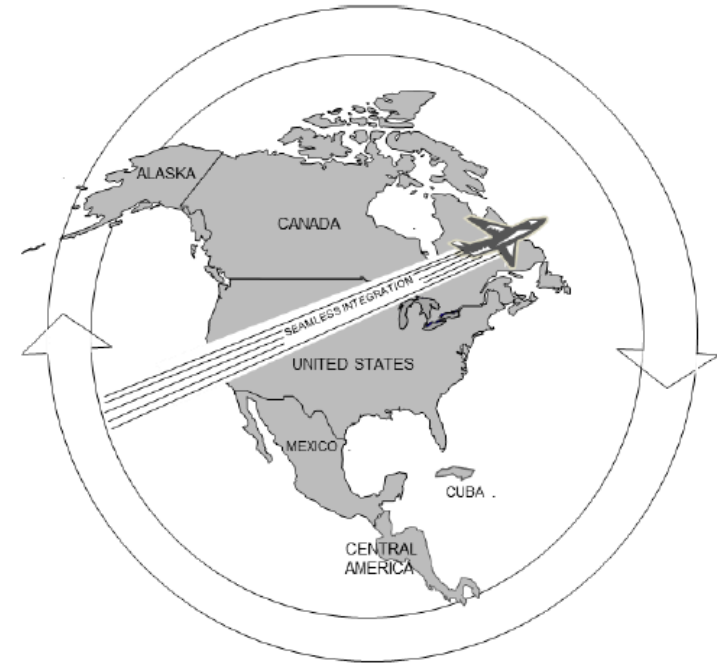


# NAM Common Coordination ICD ACC to ACC

- **NAM ICD Current Version: Revision E**
  - NAS-IC-21009205 Rev. E, dated 15 April 2016
- **Future NAM ICD Update: Revision F TBD**
  - Includes changes for the Automated Handoff messaging

North American (NAM) Common Coordination  
Interface Control Document (ICD)

Area Control Center (ACC) to ACC



NAS-IC-21009205  
Revision E  
15 April 2016

North American, Central American and Caribbean Automation Systems Interface



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# NAM ICD Message Classes Overview

- **Class 1 Capabilities**

- Active flight plans for IFR Flights (via CPL)
- Proposed flight plans for IFR Flights (via FPL) – where agreed between ANSPs
- Logic Accept Message (LAM)

- **Class 2 Capabilities**

- Filed flight plans for IFP flights (via FPL and EST)
- Modifications to CPL/FPLs that were activated by an EST (via MOD)
- Cancellation of CPL/FPL (via CNL)
- Logical Reject Message (LRM)

- **Class 3 Capabilities - Handoff**

- Radar Handoff (via RTI, RTU, RTA, RLA)
- Interface Management Messages – IRQ, IRS, TRQ, TRS, ASM
- Point Outs (via POI, POA, POJ)



# ERAM NAM Direct IP IRD and ICD

- The NAM ICD covers application-level and interface management messages exchanged between adjacent country automated Air Traffic Service (ATS) systems
- Two new documents were developed to cover the lower levels of the Open System Interconnection (OSI) model for communications not covered by the NAM ICD (transport, network, data link, and physical layers)
  - [NAS-IR-82422100 ERAM/NAM non-U.S. ACC Interface Requirements Document \(IRD\), Version 2, 2 June 2019](#)
    - Provides the requirements to support NAM Direct TCP/IP interfaces between the ERAM system and Non-US ACC systems via the FAA NAS Enterprise Security Gateway (NESG) and the FAA Telecommunications Infrastructure (FTI)
    - This IRD supports the exchange of messages defined in the NAM Common Coordination ICD ACC to ACC Rev E, NAS-IC-21009205. Section 1 (Historical) of the NAM ICD provides the Air Navigation Service Provider (ANSP) context for this IRD
  - [NAS-IC-82422100 ERAM/NAM non-U.S. ACC Interface Control Document \(ICD\), Version 1](#)
    - Specifies the design characteristics to support Direct TCP/IP interfaces (NAM Direct IP) between the ERAM system and non-U.S. ACC systems via the FAA NAS Enterprise Security Gateway (NESG) and FTI.
    - This ICD supports the exchange of messages defined in the NAM Common Coordination ICD ACC to ACC, Rev E, NAS-IC-21009205. Section 1 (Historical) of the NAM ICD provides the ANSP context for this ICD
- Both documents apply to all NAM interfaces with the U.S. and have no country-specific differences
  - All non-U.S. countries will need to use these documents for Automated Handoff NAM Direct IP Interface



# NAM Canada/U.S. Boundary Agreement

- **Canada/United States Boundary Agreement - NAM ICD “Attachment 2”**
  - Documents the details of the interface management initialization with NAV Canada
  - Documents all Proposed changes to NAM ICD as a result of Automated Handoff (Both NAM Direct IP and Application)
  - Changes will be incorporated into the NAM ICD Revision F, and as result some information will be removed from the Boundary Agreement when Rev F of the NAM ICD is completed



# Update on Activities in the NAM/CAR Region

- **Dominican Republic**
  - Santo Domingo/Miami/San Juan have had Class I messages since 2019 December
  - Santo Domingo/Miami/San Juan plan to move to Class II messages (MOD only; CNL TBD) in March 2021
- **Cuba**
  - Havana/Houston plan to implement Class I messages June 2021, in support of new route





Keith Dutch

FAA – Air Traffic Organization

ATO – International

Keith.dutch@faa.gov



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