Technical Aspects to Consider in AIDC Implementation

Jamaica AIDC Go-Team Mission
January 21 to 23, 2020

Aeronautical Messaging System (AFTN / AMHS)

- Validation of messages

  - Should allow messages not specified in ICAO Doc 4444 (e. g. MOD)

  - ICDs usually more restrictive than Doc. 4444, so messages with same indicators should pass (CPL, CHG).

Aeronautical Messaging System (AFTN / AMHS)

- Carriage return case

(CPL-UAL621/A5120-IS

–A320/M-S/C

–KBOS-HFD/1341A220A200A

–N0420A220 V3 AGL V445

–KLGA

–0)
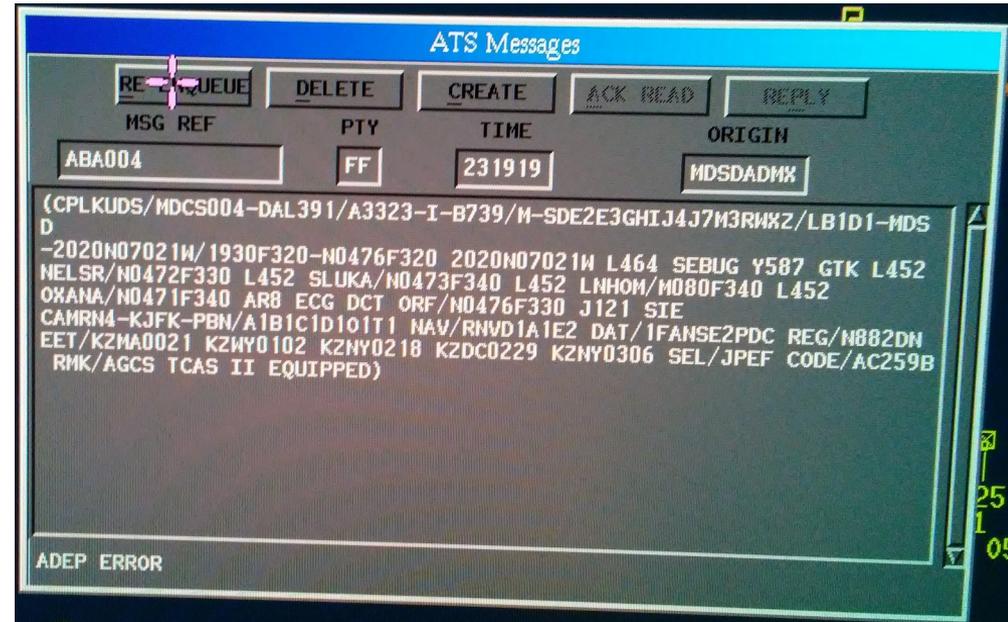
Aeronautical Messaging System (AFTN / AMHS)

- ## Communication channel

  - Messaging system more critical now

  - More need for stability, availability

  - Contingency measures

Structure of the ATC System Database

- Coherence in data between FIRs

  – Aircraft Wake Turbulence

  – Aircraft Type

  – Airports

Other aspects

- Test system

- Address for operational system vs address for Area Control

- Configuration management/control

- Fallback procedures

- System limits. Can be negotiated and changed.

Other aspects – System Limits

6. DATAGEN CAPACITIES

Ref	Database	Maximum	Comments
1	POINT	50 000	No relation to MAP GENERATOR points.
2	RUNWAY	60	
3	AIRWAY	300	
4	AIRWAY POINT	300	Each AIRWAY route definition contains up to 300 points.
5	RPL	5 000	
6	DEFAULT SSR Group	1	For SSR allocation purposes per flight category.
7	Destination country	50	For SSR allocation purposes per flight category.
8	Exit FIR	10	For SSR allocation purposes per flight category.
9	SSR Validities	4	Number of validities per exit point per exit type per category.
10	Exclusion Code Group	50	Applies to each of: AFDA, DAIW, MSAW, STCA Exclusion Groups and AIW Inclusion Group
11	AIRCRAFT CLASS	35	
12	AIRCRAFT	3 000	
13	AIRCRAFT REGISTRATION	3000	
14	Distance To FIR	700	(FIR DISTANCE)
15	FIR	1	Only the current FIR boundary point list is writable to.
16	FIR BOUNDARY	100	Current FIR boundary contains up to 100 limit points.
17	SID	100	
18	STAR	100	
19	SID POINT	30	Each SID Route definition contains up to 30 Points.

Maintenance and upgrade procedures.

- "Patch Tuesdays"
  - After implementation and as an ongoing task there will be many updates
  - Establish a regular process for updating static data in the system

Maintenance and upgrade procedures.

- ## Coordination between FIRs for AIDC and AMHS

  - Maintenance activities for any system that affects AIDC must be coordinated with adjacent

  - Requirements established in LOA

Maintenance and upgrade procedures.

- ## Close coordination with ATM/AIM for route/procedure changes

  – Maintenance personnel should be in the loop regarding changes in the airspace that impact the database, for timely updates

  – Take into account effective dates of changes