



# AIDC/NAM COORDINATION DATA BASE

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**COCESNA - INDRA**

**DATABASE SELECTION**

chengdu\_sts\_4may2012

April 8 – 11 México 2019

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# AIDC/NAM COORDINATION

COCESNA initiated AIDC / NAM coordination since 2015, currently establishing NAM coordination with Cuba and Mexico, with both control centers there is no voice coordination, the reduction of coordination using the ATS channel reduced by 95%.

The Asia /Pacific protocol is used with Panama, El Salvador, Guatemala, Nicaragua and Ecuador. Panama is the only one with no voice coordinations.

Cenamex is currently doing AIDC tests with Belize and Costa Rica and next week with Colombia.

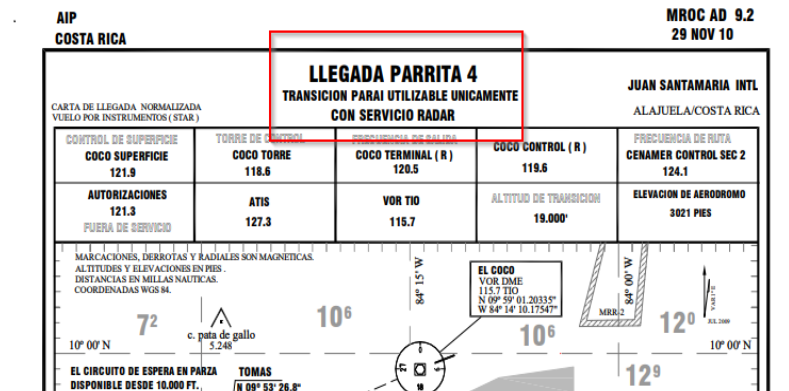
AIDC / NAM coordinations are affected by different situations:



- 1.- Flight plan with errors, lack of flight plan, duplication of flight plan.
- 2.- Databases not updated periodically in control centers.
- 3.- Inhomogeneous database between control centers.
- 4.- Lack of exchange of relevant information between ATS units.
- 5.- Databases with limited capabilities originated in factory.
- 6.- Fragmented routes in database.
- 7.- Publications of SID and STAR out of regulation.
- 8.- Use of 6 or 7 characters in SID or STAR by airlines.



# SID AND STAR PUBLICATIONS WITH MORE THAN SEVEN CHARACTERS



- The flight plans remain in the queu window which overloads the controller's work.
- The use of the AIDC communications protocol is impossible, the percentages of coordination do not increase.
- The update of database is in impossible, the system does not support more than 7 characters in SID and STAR.

FF MHCCZQZX  
040220 SKEDZQZX  
FPL-LRC692/A2377-IS  
-A319/M-SWDE2E3FGHIR/S  
-SKBO0200  
-N0458F340 VASIL UL423 OPKOL DCT DAV UA502 COTOS UR773  
PARRI **PARITA4**  
-MROC0204 MNMG  
-PBN/A1B1C1D1O1S2T1 DOF/190404 REG/N522TA SEL/BDGS PER/C)

FF MHCCZQZX  
040248 MPTOZPZX  
(FPL-ABX230-IS  
-B763/H-DFHIRSWXYZ/H  
-MPTO0845  
-N0474F340 TBG UG440 ISEBA **PARITA4**  
-MROC0059 KMIA  
-PBN/A1B5C4D4O4 NAV/RNVD1E2A1 DOF/190404 REG/N219CY  
EET/MHTG0032 SEL/JQMP OPR/ABX AIR RMK/PTP)

PARRITA 4

PARITA 4

PARIT 4



## LIMITED CAPACITY IN DATABASE

1. Capacity of only 75 elements between SID and STAR per country.
2. Flight routes with capacity for only 25 fixes.
3. Different capacities to load fixes in each SID or STAR which makes impossible to have identical information.
4. At the FIR boundary, the system does not allow the entry of an INTERNAL FIX POINT followed by a STAR.
5. A defined working area that can not be extended.
6. Flight plan templates not validated 100 % in ICAO's Doc.4444

### Aircraft types outdated in data base

One of the major problems that currently exists are outdated databases due to:

- Types of aircraft with different vertical limit.
- Types of aircraft with different acceleration capacity.
- New aircraft types.

**RESULT:**

**CONFUSION IN AIDC FLIGHT LEVEL COORDINATION**





# AIRCRAFT OUTDATED DATA BASE

The system required:

1. Group name
2. Minimum speed
3. Maximum speed
4. Cruise speed
5. Wake turbulence
6. Layers definition
  - a) Upper altitude
  - b) Climb speed
  - c) Descent speed
  - d) Climb rate
  - e) Descent rate

Exit Esc    Modify

GROUP NAME : A306

MAXIMUM ALTITUDE (Hundred ft) : 410

**Speeds (Knots)**

MINIMUM : 127  
CRUISE : 481  
MAXIMUM : 619  
MAXIMUM CAS : 335

MAXIMUM MACH : 0.82

WAKE TURBULENCE :  Low  
 Medium  
 Heavy  
 Super Heavy

**Layers Definition**

Upper Alt. (Hft)	Speed (Knots)	Climb/Descent (ft/min)	Rates (ft/min)
5	157	131	1925 698
10	158	132	1907 714
15	159	138	1889 730
20	166	149	1974 774
30	167	181	1955 988
40	190	230	2289 1287
60	225	233	2695 1306
80	272	272	2973 1520
100	280	280	2846 1561
120	357	334	2879 1984
140	367	344	2706 2027
160	378	354	2527 2071
180	389	365	2344 2075
200	401	376	2156 2119
220	413	387	1962 2163
240	425	399	1765 2206
260	438	412	1563 2248
280	452	425	1357 2289
290	466	438	1147 2330
310	468	445	1499 2349
330	464	459	1359 2388
350	459	459	1111 3297
370	455	455	842 3198
390	453	453	511 2882
410	453	453	229 2873

TYPES : A306

**Layer Edition**

Ok    Cancel

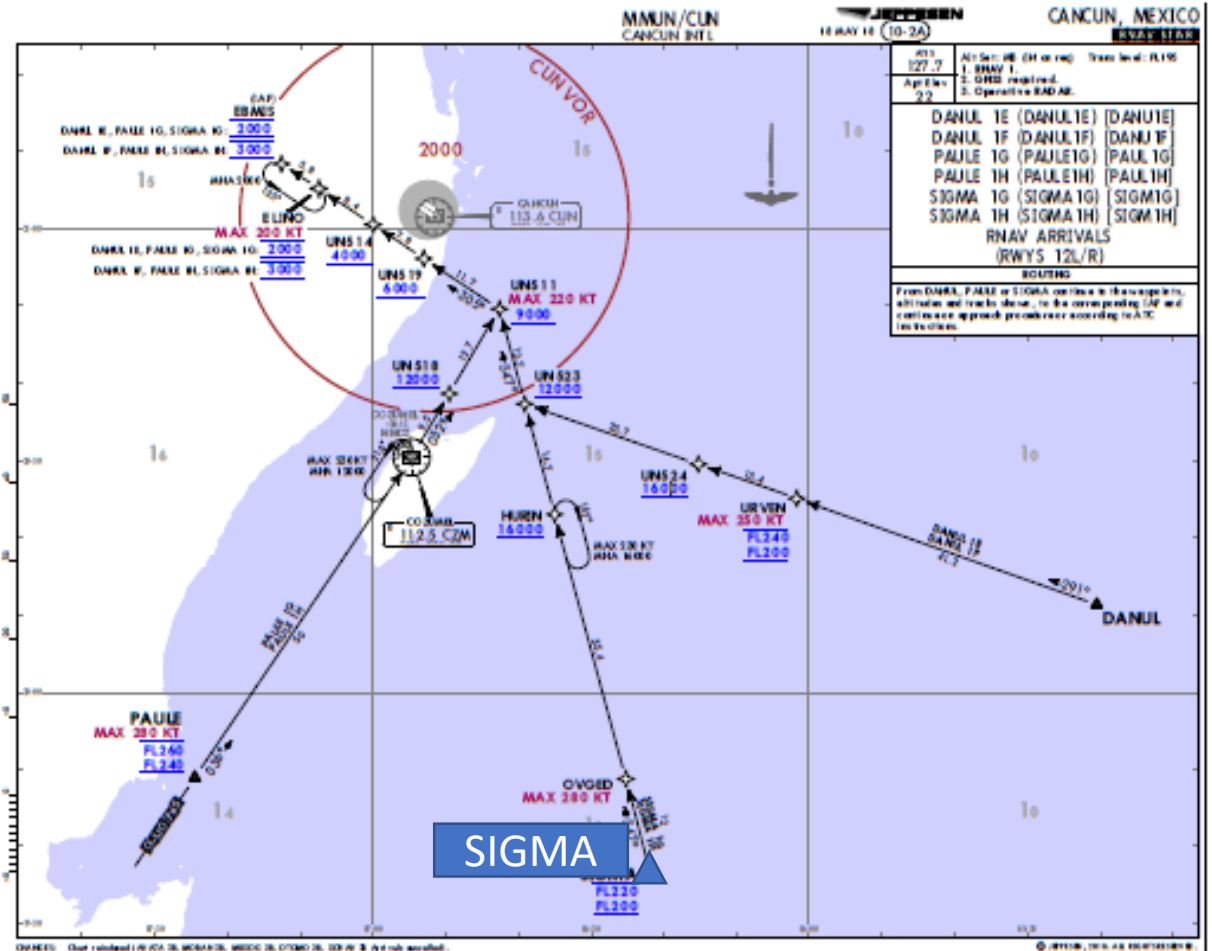


# AIDC/NAM COORDINATION

A very common case is that the database requires an INTERNAL and EXTERNAL FIX POINT at the FIR boundary but the database does not accept to write the name of a STAR instead of a FIX POINT.

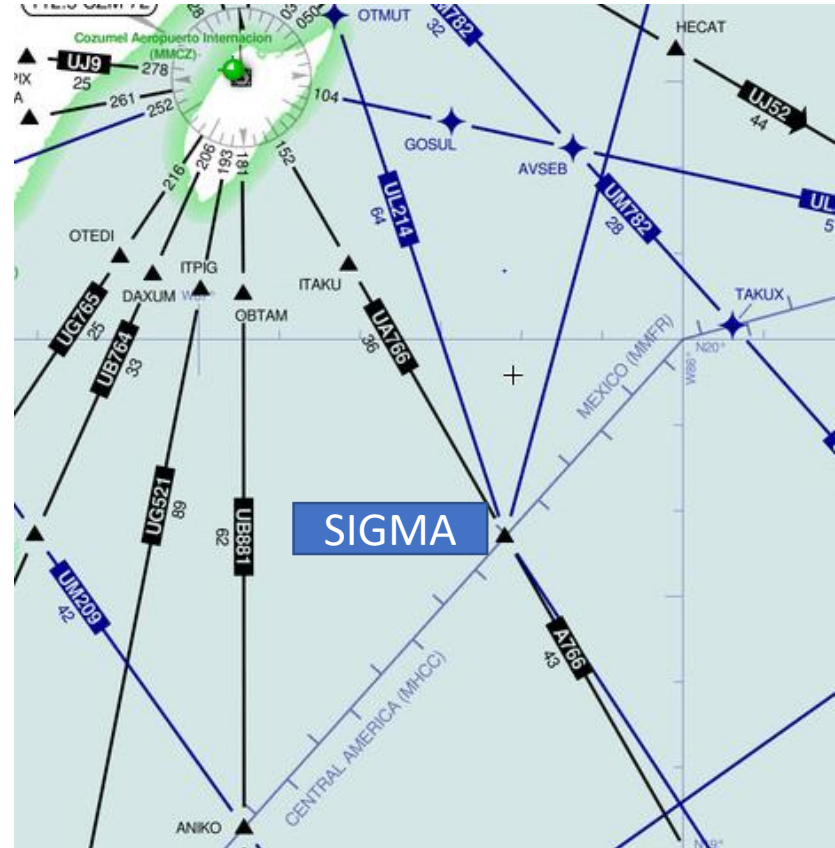
This situation happens when a Standard procedure starts exactly at the INTERNAL FIX POINT located at the FIR boundary.

RESULT:  
**NO AIDC/NAM COORDINATION**  
 THE FPL STOPS AT QUEU WINDOW



## FIR BOUNDARY STAR

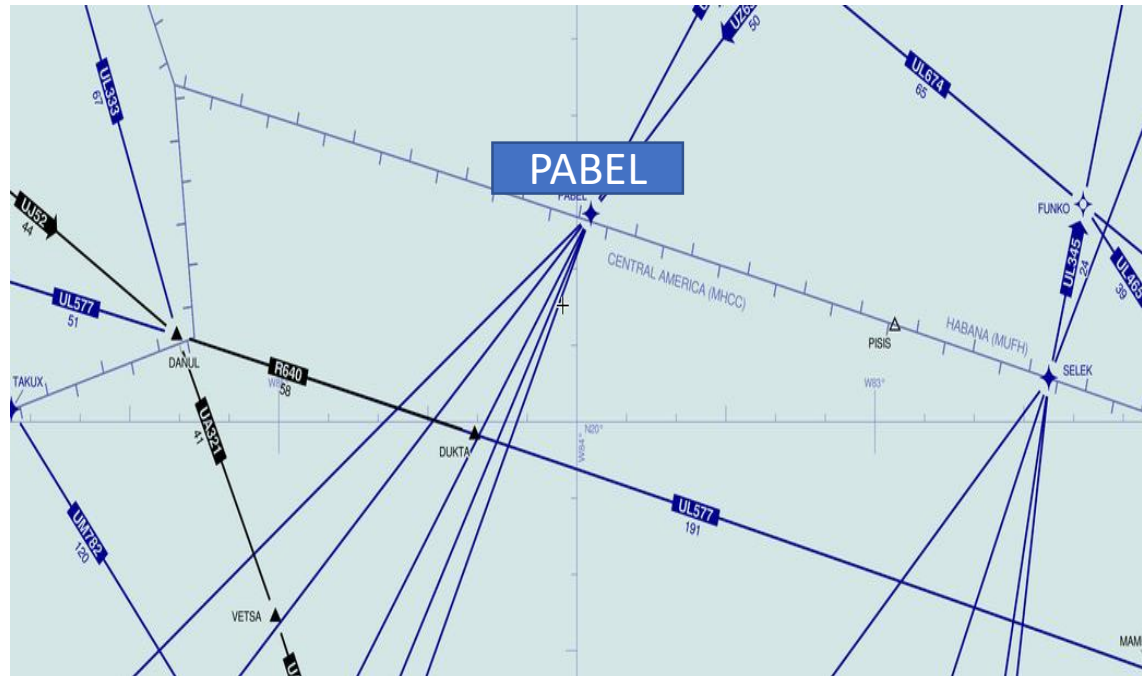
FF MHCCZQZX  
021505 SKBOZPZF  
(FPL-AIJ941-IS  
-A321/M-DGIRSWY/S  
-SKBO2105  
-N0452F380 TOBK1R VASIL UQ112  
ARORO UG447 SPP UA552 PZA UR899  
KITIS UA766 SIGMA **SIGMA1H**  
-MMUN0301 MMMD  
-PBN/A1B1O1S1 DOF/190402  
EET/MPZL0039 MHTG0140  
MMFR0238 OPR/INTERJET RMK/TCAS  
EQUIPPED)





## FIR BOUNDARY STAR

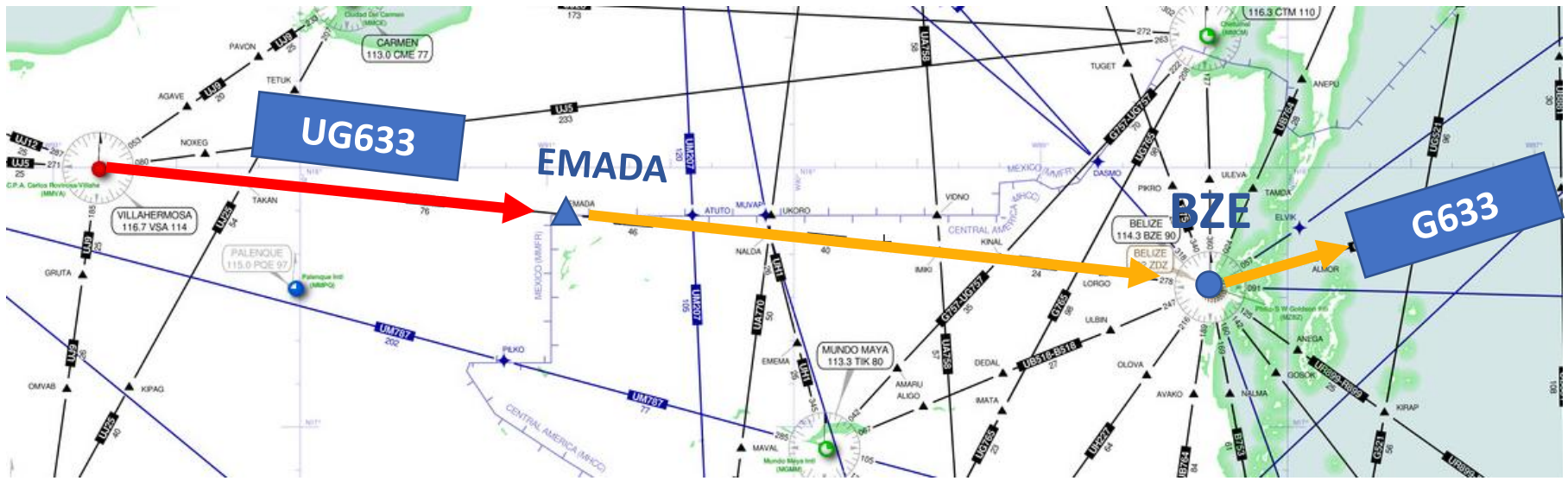
FF MHCCZFZX MHCCZQZX  
271316 EDDFTAIX  
(FPL-TAI450-IS  
-A320/M-SDE2E3FGHIRW/S  
-MSLP1450  
-N0453F340 ATUMA3C  
ATUMA UH225 NAGEL UL471  
PABEL HUTER3A  
-MUHA0141 MUVR  
-PBN/A1B1C1D1O1  
DOF/190227 REG/N680TA  
EET/MUFH0108 SEL/AFDS  
PER/C  
RALT/MSLP MUHA)





# ROUTE NAME THAT ARE NO CONTINUOUS

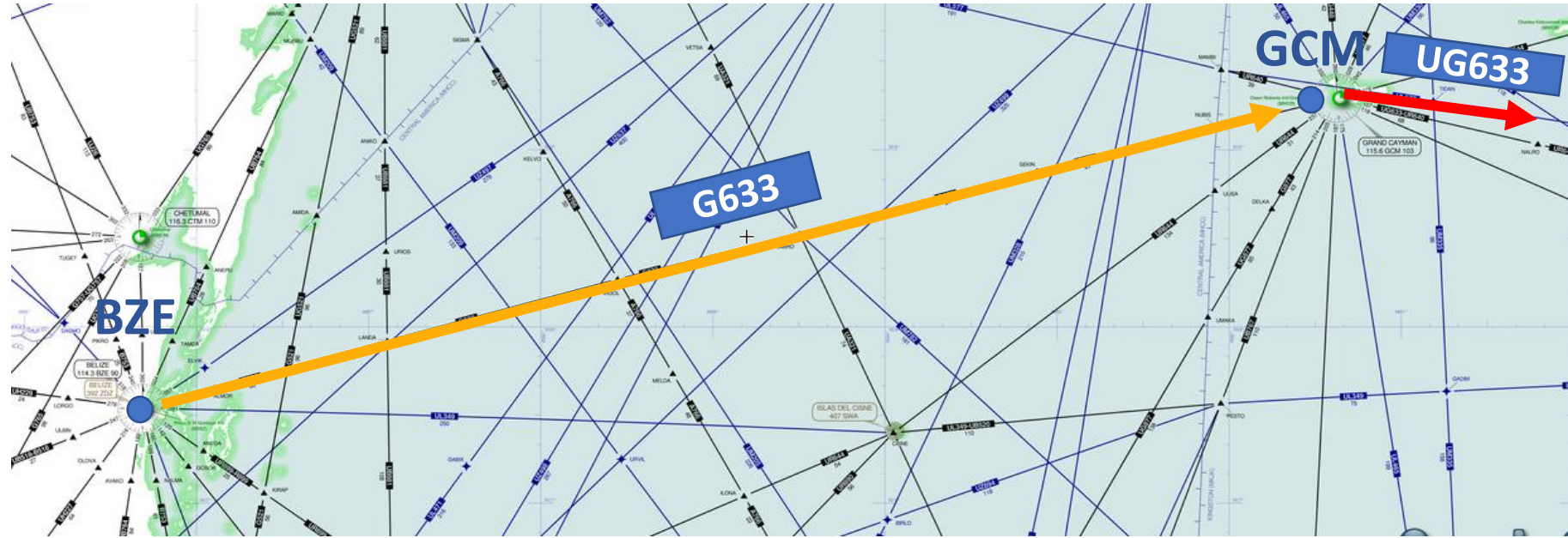
## UG633 / G633





# ROUTE NAMES THAT ARE NO CONTINUOUS

## AEROVIA UG633 / G633





# DATA BASE UPDATE PROJECT

An update of the APP control centers in Central America and the Cenamer area control center is analyzed together with INDRA. The objective is to install the most recent version of the Indra system in all the control centers of the area.

## **HARDWARE**

Includes change of servers, etc. that allows to process the software changes.  
The useful life would return to time zero.

## **SOFTWARE**

This project would allow to have identical systems.  
It is a program that will take about two years, in several years in theory a renovation plan will be necessary.

## **RESULT**

Exchange and update of database information at the same time, use of the same database in any control center in Central America.



THAAAANKS!

Any question?

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