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# 14<sup>th</sup> CADENA Regional Implementation Group Meeting

Date: Monday, February 13, 2023

# Opening Remarks

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**Ernie Snyder**



**Jose Ruiz**



**Javier Vanegas**

# Introductions

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<b>Monday February 13, 2023</b>	
<b>Time</b>	<b>Topic</b>
<b>08:30 – 09:00</b>	<b>Reception and Check In</b>
<b>09:00 – 09:20</b>	<b>Welcome and Opening Remarks</b>
<b>09:20 – 09:45</b>	<b>Introductions and Agenda</b>
<b>09:45 – 10:30</b>	<b>CADENA Operational Web Planning Conference</b>
<b>10:30 – 10:50</b>	<b>Break</b>
<b>10:50 – 11:20</b>	<b>CADENA Accomplishments</b>
<b>11:20 – 11:50</b>	<b>CADENA Present Activities</b>
<b>11:50 – 12:50</b>	<b>Lunch</b>
<b>12:50 – 1:05</b>	<b>CADENA CDM Merida Meeting Action Item Update</b>
<b>1:05 – 1:20</b>	<b>Introduction and Background: MIA – BOG Offload Trial</b>
<b>1:20 – 1:35</b>	<b>Introduction and Background: MMUN UM219 Offload Trial</b>
<b>1:35 – 2:35</b>	<b>ANSP Updates</b>
<b>2:35 – 3:00</b>	<b>Break</b>
<b>3:00 – 4:00</b>	<b>Brainstorm Session: CADENA Next Steps</b>

*Note: All times are Eastern Standard Time*





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# CADENA Operational Planning Web Conference

(We will be back at 10:50 EST)

Monday February 13, 2023



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# CADENA Accomplishments: Aug 2022 to Present



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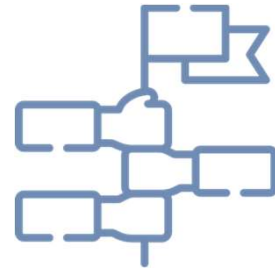
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# CADENA Accomplishments: Twice a Week Web Planning Conference

Julian Ahumada

# When did it start?

- Since its initiation in December 2016 until January 2023, CADENA members held weekly ATFM Operational Planning Web Conferences following CDM processes among regional ANSPs and stakeholders each Thursday at 1500 UTC (1400 UTC during U.S. daylight savings time).
- The CADENA Regional Implementation Group (RIG) works together to effectively guide and improve day-to-day operations and develop longer-term strategies to share information and vital operational data in these web conferences.



→ **Action item from 13th CADENA RIG:**

Based on stakeholders' feedback and requests, the 13th CADENA RIG Meeting brought to light:

- ! The importance to the stakeholders of information about day-to-day operations in the LAC region.
- ! The desire to see daily CADENA Operational Planning Web Conferences.



# “Paso a paso”



→ Some adjustments were necessary regarding the information included in the ANSPs' briefings.

→ To avoid introducing a significant workload on the participating Flow Management Units, the steps to follow were:



- ✓ Eliminate the COVID-19 Limitations slide from the CADENA Weekly Planning Web Conference.

- ✓ Streamline the FMU briefings so only items that reduce airport/airspace capacity and safety of flight issues are briefed (e.g., convective weather, volcanic activity, etc.).

- ✓ Only one slide would be used for each ANSP.

→ Participating CADENA FMUs received a training session prior to the transition to the twice-weekly CADENA Planning Web Conference.

→ Participating CADENA FMUs agreed on the most appropriate and effective method by which each Host can help to shorten the duration of a CADENA Planning Web Conference and help us stay below our goal of 30 minutes.

# How has it been working?

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- On Monday, January 9, 2023, CADENA transitioned from a once-weekly schedule for the CADENA Planning Web Conference to a twice-weekly one.
- The Operational Planning Web Conferences are now held each Monday and Thursday at 1500 UTC (1400 UTC during U.S. daylight savings time).
- To reflect the new twice-weekly schedule for hosting the CADENA Planning Web Conferences, changes were included in accordance with **updated version 5.9** of the CADENAATFM/CDM Procedures Manual (effective January 9, 2023).



# How has it been working?



## ❖ Version 5.9 includes:

Updates to Chapter 3: CADENA Web Conferences and Communication

### 3.2 Twice-Weekly Planning Web Conferences

#### 3.2.2 Primary and Backup Hosts

The same ANSP serves as Host on Monday and Thursday of the week they are scheduled.

To ensure continuity of the CADENA Planning Web Conferences in the case of the scheduled Primary Host's inability to participate, a Backup Host is scheduled for Monday and Thursday each week. The schedule of Primary and Backup Host can be accessed on the CADENA OIS after login through the ANSP home page.

#### 3.2.5 Host: Post-conference responsibilities

- ✓ Prioritises work activities based on plan changes and outcomes.
- ✓ Prepares the Host Master slide deck and uploads it through the CADENA OIS within one hour from the completion of the web conference each Monday and Thursday.

**NOTE: The Host Master slide deck will be displayed on the CADENA OIS to be accessible to the public.**

#### 3.2.1 Attendance

**NOTE: FAA ATO Space Operations will only be asked to brief on Thursday of each week.**



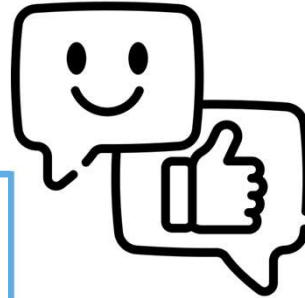
# Feedback received from ANSPs/Airlines



## Feedback received from Stakeholders

Just keep in mind that:

- ! The most important information to include is information that will lead to TMMs, reduced capacity, delay vectors, etc. (e.g., runway closures, severe weather).
- ! No need to include information if there is no impact.



## Feedback received from Stakeholders

- 👉 Find the twice-weekly web conferences very helpful and the information provided is  *fresher*.
- 👉 Has been going smoothly with no problems.
- 👉 The information provided is  *fresher*.

## Feedback received from ANSPs

- 👉 Adjustments on the slides reduced workload, making it easier to brief on.
- 👉 The information provided is  *more relevant*.
- 👉 Beneficial for the high season.
- 👉 Has been going smoothly with no problems.





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# CADENA Accomplishments: Virtual Support Team Update

Curtis Fraser



# Introduction

- Background
  - CADENA Virtual Support was staffed initially by a few individuals;
  - In order to improve efficiency and share workload, the CADENA Virtual Support Team (VST) was developed.
- Purpose
  - To enhance collaboration between FMUs and stakeholders to ensure effective communication and coordination among all CADENA participants when disruptive factors disturb or threaten to disturb normal traffic operations
- Objective
  - Share a common operational picture and situational awareness
  - Strengthen and empower teamwork across the region



# CADENA Members/Participants

- Staffing for the CADENA Virtual Support Team (VST) is derived from leaders within the CADENA Team who volunteer to serve as support
- Currently, the VST is Staffed by Five (5) CADENA Participants:
  - Flavia Moreno (EANA)
  - Curtis Fraser (TTCAA)
  - Kent Ramnarace-Singh (TTCAA)
  - Al Castillo (FAA support)
  - Joe Hof (FAA support)
- VST Duties are rotated weekly. The schedule is maintained on the 'Host Calendar' section of the CADENA OIS

# CADENA Members/Participants



- We would like to encourage participants with FMU experience to volunteer



# Training

- Provided by CADENA Headquarters and by representatives currently staffing the VST, to everyone who volunteers
- Regional ATFM/CDM duties include:
  - Monitor email, WhatsApp, CADENA OIS, Chat messages, for any reports on disruptions to normal operations and associated requests by airspace users
  - Monitor the FAA ATCSCC OIS, twice daily, for any initiatives that may impact on air traffic within the region, e.g. adherence to HARP and Snowbird Routes
  - Coordinate with ANSPs that are impacted by unusual situations
  - Provide feedback to the requesting airspace users
  - Host weekly conferences
  - Other related duties

# *Virtual Support Team Activities since 13<sup>th</sup> CADENA RIG Meeting*



Hurricane and Tropical Storm Events	Space Operations Coordination	Operational Issues	Introduction to CADENA Briefings for Representatives from:
Tropical Storm Fiona	SpaceX Boca Chica launch preparation	ATC-Zero events: <ul style="list-style-type: none"> <li>• Maiquetia ACC</li> <li>• Suriname ACC</li> <li>• Albuquerque ARTCC</li> </ul>	SENEAM American Airlines Jet Blue Viva Aerobus
Hurricane Ian	CADENA hosted multiple Ad Hoc web conferences	ATC disruption events: <ul style="list-style-type: none"> <li>• Port-Au-Prince</li> <li>• Miami ARTCC ground stop</li> <li>• MEVA outages</li> <li>• US NOTAM system outage</li> </ul>	Emirates Airlines ASUR (Cancun Airport Authority)
Tropical Storm Lisa			
Tropical Storm Roslyn			

# Benefits to Volunteering

- Opportunity to learn about the various types of disruptions and constraints that affect the region and contribute towards alleviating these constraints
- Further enhanced collaboration and communication between FMUs and stakeholders as there is greater coverage from the CADENA Virtual Support System
- Gives participants the opportunity to become more involved and to improve on their traffic management, collaboration and communication skills.



# Thank You!

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# CADENA Accomplishments: CADENA Trial Benefits

Midori Tanino

# CIIFRA Benefits Updates



## Trial UPR (previously PASA Optimized E2E Routes)

In addition to the original 6 Trials, we also have the Trials below:

- MMUN → SAEZ (one-way) – done on Nov 23, 2022
- SKBO → KATL (one way) – done on Jan 17, 2023
- MPTO ↔ KLAX (one month) Nov 25 -Dec 25, 2022
- KATL ↔ SCEL – Dec 1, 2022 – Feb 28, 2023
- KATL ↔ SAEZ – Dec 1, 2022 – Feb 28, 2023

DAL conducted couple more KATL-SAEZ Trials to add more op routes





# Benefits of ongoing UPR Trials

KATL↔SAEZ Dec 1 2022 -Jan 31, 2023				KATL↔SCEL Dec 1, 2022 -Jan 31, 2023				SKBO→KATL Oct 20, 2022 -Jan 31, 2023			
Savings	62-Day	1-Year	Per Flt	Savings	62-Day	1-Year	Per Flt	Savings	104-Day	1-Year	Per Flt
Time (min)	615	3,621	5.4	Time (min)	554	3,261	4.8	Flight min:	518	1,818	5.6
Fuel (kg):	123,882	729,306	1,096	Fuel (kg):	80,864	476,056	703	Fuel (kg):	69,320	243,288	745
CO2 (kg):	391,468	2,304,607	3,464	CO2 (kg):	255,531	1,504,336	2,222	CO2 (kg):	219,052	768,789	2,355
Cost (\$):	162,552	956,958	1,439	Cost (\$):	121,362	714,468	1,055	Cost (\$):	108,345	380,250	1,165

62-day trial with 113 applicable flights

62-day trial with 115 applicable flights

104-day trial with 93 applicable flights

# CIIFRA Benefits Updates

## SENEAM Strategic Direct Routing

- Aero Mexico
- Delta Airlines
- United Airlines
- Viva Aerobus



# SENEAM SDR – Benefits Summary



1-yr Estimate	Time (min)	Fuel (kg)	CO2 (kg)	Cost (\$)
<b>AeroMexico</b>	1,168	51,157	161,655	\$ 158,749
<b>Delta</b>	517	51,586	163,012	\$ 93,805
<b>Emirates</b>	76	10,783	34,073	\$ 16,446
<b>United</b>	1,626	178,122	562,865	\$ 278,298
<b>VivaAerobus</b>	4,998	216,186	675,040	\$ 677,073
<b>Total</b>	8,385	507,834	1,596,645	\$1,224,371

# SENEAM SDR – VivaAerobus Benefit Updates



Nov 1 - Dec 31, 2022									
Nov 1 - Dec 31, 2022		Saved				Per Flight			
City Pair	No.	Time (min)	Fuel (lb)	CO2 (kg)	Cost (\$)	Time (min)	Fuel (lb)	CO2 (kg)	Cost (\$)
KLAX-MMGL	24	88.0	3,592	11,351	11,745	3.7	150	473	489
KLAX-MMMX	28	28.0	1,134	3,583	3,730	1.0	41	128	133
KORD-MMGL	26	67.0	2,358	7,451	8,634	2.6	91	287	332
KORD-MMLO	2	5.0	199	629	663	2.5	100	314	332
MMGL-MMTJ	22	26.0	1,930	6,099	4,183	1.2	88	277	190
MMLO-MMTJ	9	44.0	1,600	5,056	5,712	4.9	178	562	635
MMMD-MMMX	31	93.0	3,254	10,283	11,968	3.0	105	332	386
MMMX-MMMD	25	51.0	1,588	5,018	6,402	2.0	64	201	256
MMMX-MMTJ	11	22.0	1,016	3,211	3,033	2.0	92	292	276
MMTJ-MMGL	111	61.0	8,346	26,373	12,944	0.5	75	238	117
MMTJ-MMMX	48	265.0	6,678	21,102	31,976	5.5	139	440	666
MMTJ-MMMY	35	35.0	2,296	7,255	5,383	1.0	66	207	154
MMTJ-MMUN	24	48.0	2,040	5,095	6,473	2.0	85	212	270
Total	396	833.0	36,031	112,507	112,845				
1 Year		4,998	216,186	675,040	677,073				



# SENEAM SDR – Initial Assessment of Emirates Benefit

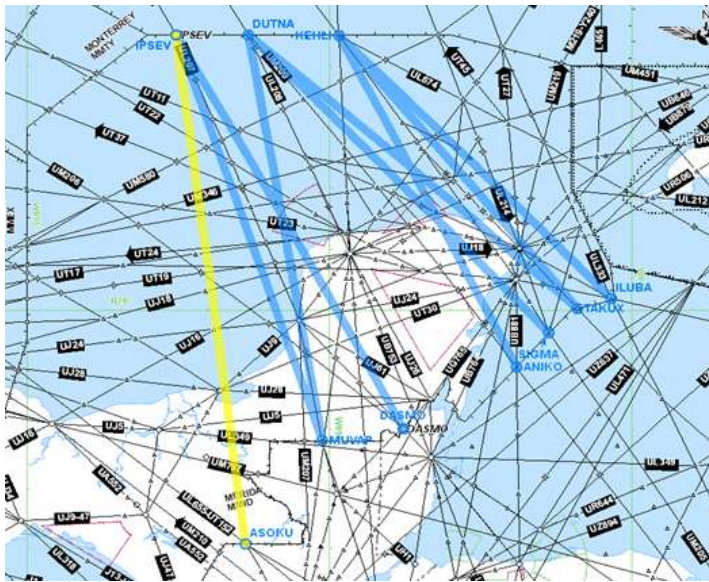


Jan 16 -Feb 8, 2023									
Nov 1 - Dec 31, 2022		Saved				Per Flight			
City Pair	No.	Time (min)	Fuel (kg)	CO2 (kg)	Cost (\$)	Time (min)	Fuel (lb)	CO2 (kg)	Cost (\$)
DEEF-MMMX	1	1	121	382	199	1.0	121	382	199
LEZG-MMMX	5	4	519	1,640	826	0.8	104	328	165
MMM-XLAX	2	-	69	218	57	-	35	109	28
Total	8	5.0	709	2,240	1,081				
1 Year		76	10,783	34,073	16,446				





# SENEAM SDR – UAL 4-Month Data



MONTHLY SDR USAGE BY FLIGHT									
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOTAL/FLIGHT
UAL63 SBGR-KIAH	10	10	24	25					69
UAL818 SAEZ-KIAH	22	24	23	26					95
UAL128 SBGL-KIAH	12	16	25	24					77
UAL855 SPJC-KIAH	6	0	0	0					6
UAL846 SCEL-KIAH	22	20	16	26					84
UAL206 SKBO-KIAH	5	3	10	10					28
UAL2083 SEQM-KIAH	7	4	1	2					14
UAL1907 MGGT-KIAH	3	0	28	28					59
<b>TOTAL/MONTH</b>	<b>87</b>	<b>77</b>	<b>127</b>	<b>141</b>					

SDR USAGE BY DCT SEGMENTS									
	UAL63 SBGR-KIAH	UAL818 SAEZ-KIAH	UAL128 SBGL-KIAH	UAL855 SPJC-KIAH	UAL846 SCEL-KIAH	UAL206 SKBO-KIAH	UAL2083 SEQM-KIAH	UAL1907 MGGT-KIAH	TOTAL/DCT
TAKUX-KEHLI	49	4	54						107
TAKUX-DUTNA			2						2
ILUBA-KEHLI	13		17						30
SIGMA-DUTNA	4		2		1	10	9		26
MUVAP-IPSEV		71		6	72	1	3		153
MUVAP-DUTNA		18			7		1		26
ANIKO-KEHLI	3	2	2			15			22
DASMO-IPSEV					4	2	1		7
ASOKU-IPSEV								59	59
<b>TOTAL/FLIGHT</b>	<b>69</b>	<b>95</b>	<b>77</b>	<b>6</b>	<b>84</b>	<b>28</b>	<b>14</b>	<b>59</b>	





# Getting Ready to Assess Benefits

## MIA-BOG Offload Trial

### Focus on Departure Delays for the trial benefits

From 12/18/2022D\_ To 12/24/2022 ; Departure=MIA ;  
Arrival=SKBO : Use Flight Plan

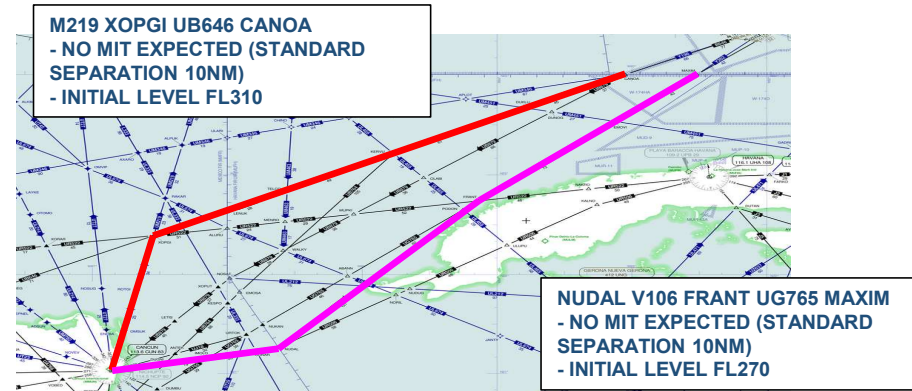
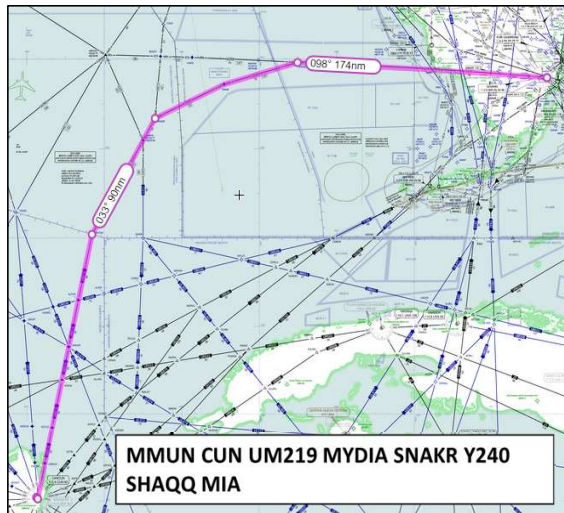
	Date	Flt ct	On-Tm Dep	%	Ave Dep Dly
Su	12/18/2022	7	3	42.86%	44.71
Mo	12/19/2022	11	7	63.64%	12.36
Tu	12/20/2022	12	3	25.00%	30.08
We	12/21/2022	10	7	70.00%	11.20
Th	12/22/2022	10	5	50.00%	23.00
Fr	12/23/2022	9	5	55.56%	18.67
Sa	12/24/2022	8	8	100.00%	0.88

It is expected that the MIA Departure Delay will improve with offloading traffic from MIA to BOG Trial.

# Getting Ready to Assess Benefits



## MMUN U219 Offload Trials



The 757 will need almost 1.4 gallons of fuel per mile. (9.52lb/mile or 4.32kg/mile)	4.32
Use 81.6 cents per kg	81.6
Use \$100/min	100
Departuredelay saving of 15 min and \$40/min	40

	Miles	Time	Distance (Mile)	Flt Time (min)	Save Fuel (kg)	Save Fuel (\$)	Save Flt Time (\$)	Dep Dly (min)	Save Dep Dly (\$)	Over Flt Fee (\$)	Save Fuel+ Timel (\$)
Baseline	556.4	1:28									
via XOPGI	472.3	1:14	84.1	0:14	363	\$ 29,646	\$ 1,400	0:15	\$ 600	\$(338.36)	\$ 31,308
via NUDAL	485.6	1:17	70.8	0:11	306	\$ 24,958	\$ 1,100	0:15	\$ 600	\$(406.01)	\$ 26,252

# Cuba's Route Fees



As established on the Resolution Number 369, from December 26, 2020, signed by the Cuban Transport Minister. These are the applicable fees for flights overflying Habana FIR:

<b>MTOW (KG)</b>	<b>Fee for routes over cuban territory (including the 12 NM offshore territorial waters)</b>	<b>Fee for oceanic routes</b>
<b>Until 15 000</b>	<b>USD 74.62</b>	<b>USD 62.17</b>
<b>More than 15 000 until 30 000</b>	<b>USD 120.73</b>	<b>USD 100.40</b>
<b>More tan 30 000 until 70 000</b>	<b>USD 153.53</b>	<b>USD 127.99</b>
<b>More tan 70 000 until 100 000</b>	<b>USD 197.42</b>	<b>USD 166.09</b>
<b>More tan 100 000 until 200 000</b>	<b>USD 252.26</b>	<b>USD 210.20</b>
<b>More tan 200 000</b>	<b>USD 406.01</b>	<b>USD 338.36</b>

The information is available in AIP Cuba, GEN 4.2 AIR NAVIGATION SERVICES CHARGES. Taking this to the operational scenario, all traffic operating on M346, B646 and B879 are considered "oceanic" and those using NUDAL V106 FRANT G765 MAXIM are considered "territorial" and also, besides the fee increment, must request an overfly permit with our CAA, that's why the offload route M219 XOPGI UB646 CANOA is more attractive.

*Note: Information provided by ECNA.*



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# CADENA Accomplishments: CADENA CDM Merida Meeting

Al Castillo

# CADENA CDM Meeting, Merida, Mexico - Participants



- November 18 to December 1, 2022
- Participants:



# CADENA CDM Meeting, Merida, Mexico - Outcomes



- 19 Technical Issues identified.
- Steps (action items) were developed collaboratively to resolve the Technical Issues.
- Action items are actively being pursued.

Technical Issue	Action Item	Status	Target Date	
TI 1 - MMUN has a 50% airline arrival SENEAM help	TI 1.1 [ACTION ITEM] Horacio Castañeda will continue to send CADENA arrival slot non-compliance data.	Ongoing	N/A	
	TI 1.2 [ACTION ITEM] CADENA will continue to share MMUN slot non-compliance data with airlines.	Ongoing	N/A	
	TI 14.1 [ACTION ITEM] Ricardo Martinez (ECNA) (COMPLETED) will submit the request to Cuban Aviation Authorities for approval.	Completed		
TI 2 up d item mee				
TI 14 MIA durir com redu	TI 4 - SENEAM is requesting reduced longitudinal separation between Houston ARTCC and Merida ACC	TI 4.1 [ACTION ITEM] Dan Ayotte and Steve Pinkerton will research ICAO DOC 4444 ADS-B separation rules concerning the use of anticipated radar separation between Houston ARTCC and Merida ACC and advise ZHU of the results. Target date for completion is January 18, 2023.	In Progress	January 18, 2023
TI 3 MM take offle purg dela prop wee tact	TI 5 - SENEAM is requesting that the latest Boca Chica Launch information be uploaded to the CADENA OIS.	TI 5.1 [ACTION ITEM] Garrett Campanell (ATCSCC Space Ops) will research the possibility of adding the latest Boca Chica Launch information on the CADENA OIS. Target date for completion is December 21, 2022.	Completed	January 5, 2023
TI 15 the l depe	TI 6 - Airline equipment capabilities (specifically, RNP5) that operate across the Gulf of Mexico should be considered.	TI 6.1 [ACTION ITEM] Jaime Abigantus (IATA) will provide the percentage of RNP5 equipped aircraft that operate across the Gulf Of Mexico. Target date for completion January 18, 2023.	Completed	January 18, 2023
	TI 7 - Mazatlán ACC has received demand information by sector from ATCSCC; however, the coordinates that define the Mazatlán ACC sectors have changed. Mazatlán ACC is requesting that ATCSCC update the Mazatlán sector coordinates for the daily demand reports.	TI 7.1 [ACTION ITEM] (IN PROGRESS) Vern Payne will coordinate to update the Mazatlán ACC sector coordinates for the demand reports.	In Progress	
		TI 7.2 [ACTION ITEM] Ernie Snyder will assist SENEAM Mexico City in developing appropriate FEAs that provide sector demand.	In Progress	
	TI 8 - FAA ADS-B equipment housed by SENEAM is being filtered at the MMFR FIR boundary thus preventing controllers in Mexico from seeing inbound traffic.	TI 8.1 [ACTION ITEM] Paty Manzo will provide Dan Ayotte the agreement between FAA and SENEAM on ADS-B data sharing.	Completed	
		TI 8.2 [ACTION ITEM] Dan Ayotte will research who is filtering the ADS-B data. Target date of completion is January 18, 2023.	In Progress	January 18, 2023

Sample Technical Issues with action items



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# CADENA Present Activities: August 2022 to Present



# Present Activities: Identifying Trial UPRs Ready for AIC AIP Publication

Al Castillo



# Purpose of the Trial UPR



**Trial User Preferred Routes (UPR)** [previously Optimized End-to-End Routes] – Routes requested by the airlines that optimize the route between a specific city-pair. UPRs must be approved by all ANSPs, through their Flow Management Units, Area Control Center managers, or Civil Aviation Authorities, as applicable, in which any segment of the route occurs. Once a UPR is approved for the trial, it will be available for a specified period of time (i.e., trial period) and a specific airline. **The purpose of the route trials is to determine the operational feasibility of the routes and once the operational feasibility of the routes is verified, to have them published via AIC/AIP.** After the States publish the route segments within their AIC/AIPs, those segments may be used by all airlines for any city pair until further notice.

# Trial UPR 90-Day Trial Period?



- Before the CIIFRA Team identifies a Trial UPR as ready to be published in an AIC/AIP, the following conditions must be met:
  - A trial period of 90 days must be completed.
  - ANSP feedback must indicate operational viability.
  - Airline feedback must indicate a benefit.
- Once the conditions above are met, the Trial UPR is identified as ready to publish and the following steps are taken:
  - The CIIFRA Team initiates coordination with the appropriate ANSP/State for AIC/AIP publication.
  - A 1-year extension of the Trial UPR is requested with the appropriate ANSP.



Sample Trial UPR (Route)

# Trial UPRs to be Coordinated for AIC/AIP Publication - 2023



**Routes to Coordinate for Publication in AIC/AIP 2023**

City Pair	Southbound Route	Northbound Route	Date Coordination Initiated
ARG SAEZ - KJFK – SAEZ	No Southbound Route	SAEZ PTA6A KUKEN UL324 MIGOT UM402 BVI UM423 KIKER DCT DONQU L454 OKONU DCT YAALE Y495 CAMRN DCT KJFK	
BWA TTPP - KMIA – TPPP	KMIA SKIPS2 SKIPS Y290 HAGIT Y421 HARBG L452 ANADA UG449 PERGA ITRAK NAPKO LEXOR TALUS TTPP	TTPP DCT ANADA DCT MUNOZ DCT HARBG Y330 FODED DCT MADIZ DCT FOXID DCT FLIPR FLIPR7 KMIA	
COPA MPTO - SBGL – MPTO	MPTO DCT OREPI DCT DAKMO UW36 VASIL DCT OBKIL DCT GAVIT DCT ILKOD DCT 0835S05957W DCT PALEP DCT 1404S05339W DCT NAXIV DCT SAMGA DCT OGMUK UTBOM2A SBGL	SBGL EVRAD1A ENSOD DCT VULER DCT GELIB DCT NAXIV DCT SAMAR DCT ESDAG DCT 0901S05939W DCT MIMUM DCT 0428S06440W DCT GAVIT DCT OBKIL UM549 DAKMO DCT ISOKO ISOKO1 MPTO	
Aerolinas Argentinas (ARG)	MMUN CZM1A CZM UB881 ANIKO DCT RADIM DCT LIXAS UL203 ARNEL UM542 TAL UV1 JCL UL550 ROS UT672 MULTA UW24 SNT SNT7U SAEZ	None	



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# Delta Airline's Regional Route Coordination

William Rubiano



## Notes:

- **Colombia, Bolivia, Paraguay, Ecuador, and Peru are approved until 30JUN.2023 for ATL-EZE-ATL, ATL-SCL-ATL.**
- **For BOG-ATL Colombia and Jamaica approval is for 6 month March 2023 and extended until 30JUN.2023**
- **New BOG-JFK Colombia, Jamaica approval until 30JUN.2023**
- **ATL-EZE-ATL Directs trials began on DEC.2022 until 30JUN.2023.**
- **ATL-SCL-ATL Directs trials began on DEC.2022 until 30JUN.2023.**
- **They Objective is to have Colombia, Chile, Paraguay and Bolivia publish this UPR's in their AIP so any airline can use.**
- **In early December we check the situation in Cuba regarding the approval of direct routes past 2022. It did not change and was not approved for any trials in 2023, we had to change our routes in our database to comply with Cuban routes requirements via (airways), but also keeps the directs within the other countries.**

# KATL – MMRP - KATL



KATL – MMRP - KATL	
Southbound Leg (KATL - MMRP)	Northbound Leg (MMRP – KATL)
<b>CANSO1:</b> KATL KAJIN2 STNGA DCT AEX DCT IAH DCT LRD J22 NLD DCT UKRAK DCT AXABA DCT KEDMA UT1 TNY UJ37 PVR DCT MMRP	<b>CANSO1:</b> MMRP XUDED1A XUDED DCT AXABA DCT DEVOE J29 PSX DCT VUH DCT LCH DCT MCB DCT FRDDO GNDLF2 KATL
<b>CANSO2:</b> KATL POUNC2 STEIT DCT MERDN DCT LCH J22 PSX J29 DEVOE DCT ESTIV DCT KEDMA UT1 TNY UJ37 PVR DCT MMRP	<b>CANSO2:</b> MMRP XUDED1A XUDED DCT OMIXA DCT NLD DCT LRD DCT PSX DCT VUH DCT LCH DCT MCB DCT FRDDO GNDLF2 KATL
<b>CANSO3:</b> KATL POUNC2 STEIT DCT MERDN DCT MCB DCT LFT DCT PEKON DCT BRO DCT MAM DCT SESNO DCT URVIK DCT KEDMA UT1 TNY UJ37 PVR DCT MMRP	<b>CANSO3:</b> MMRP XUDED1B XUDED DCT OMIXA DCT NLD DCT LRD DCT PSX DCT VUH DCT LSU DCT SHYRE GNDLF2 KATL
<b>CANSO4:</b> KATL POUNC2 GRGIA DCT ARNNY DCT SJI DCT TBD M345 AXEXO DCT OTITI DCT NOTUP UJ14N PVR DCT MMRP	

**NOTE 1: MMRP is Puerto Vallarta airport**

# KLAX – MROC - KLAX



KATL – MROC - KATL	
Southbound Leg (KLAX - MROC)	Northbound Leg (MROC – KLAX)
<b>CANSO1:</b> KLAX PNDAH2 TCATE DCT PPE DCT ALGUN DCT OTOSO DCT ANEGI DCT VOLIS DCT BEROS DCT OTOBA DCT AVSEN DCT NUBEL DCT ONGIG DCT EMADA DCT BENES DCT NAKAN DCT LEPAX DCT BERTA DCT MGA UZ512 LIB BARA3L MROC	<b>CANSO1:</b> MROC UA502 ULAPO UA502 MGA DCT ATUMA DCT ASOKU DCT GOTAS DCT COPOS DCT XOSIM DCT VOKES DCT OTUPA DCT AXASA DCT ASUTA DCT AMMOR OLAAA2 KLAX
<b>CANSO2:</b> KLAX PNDAH2 TCATE DCT PPE DCT ALGUN DCT OTOSO DCT CDR DCT IREKO DCT TMN DCT UGATA DCT ASOKU DCT KAPAN UG436 LIB BARA3L MROC	<b>CANSO2:</b> MROC UA502 ULAPO UA502 MGA UA317 TAP J13 IZT UJ47 DCT XOPVO DCT DUPUD DCT VEVRA DCT IKNOR DCT LIDUK DCT AXASA DCT ASUTA DCT AMMOR OLAAA2 KLAX
<b>CANSO3:</b> KLAX PNDAH2 TCATE DCT PPE DCT ALGUN DCT OTOSO DCT ANEGI DCT VOLIS DCT BEROS DCT OTOBA DCT AVSEN DCT NUBEL DCT ONGIG DCT EMADA DCT TALAG UZ512 LIB BARA3L MROC	<b>CANSO3:</b> MROC UA502 ULAPO UA502 MGA DCT BERTA DCT LEPAX DCT TADIN DCT PILKO DCT AVIVI DCT MELNO DCT IPSAG DCT OTUPA DCT ASUTA DCT AMMOR OLAAA2 KLAX
<b>CANSO4:</b> KLAX PNDAH2 TCATE DCT PPE DCT DUMBO DCT CUU DCT MTY DCT DUSAT DCT NUDAN UM206 BZE UZ512 LIB BARA3L MROC	

**NOTE 1:** MROC is Juan Santamaria airport serving San Jose, Costa Rica

# KLAX – MSLP - KLAX



KATL – MSLP - KATL	
Southbound Leg (KLAX - MSLP)	Northbound Leg (MSLP – KLAX)
<b>CANSO1:</b> KLAX PNDAH2 TCATE DCT PPE DCT ALGUN DCT OTOSO DCT CDR DCT IREKO DCT TMN DCT UGATA DCT ASOKU DCT KAPAN DCT MSLP	<b>CANSO1:</b> MSLP OLIS3A OLISU G436 KAPAN DCT ASOKU DCT UGATA DCT TMN DCT IREKO DCT CDR DCT OTOSO DCT ALGUN DCT PPE J93 ASUTA DCT AMMOR OLAAA2 KLAX
<b>CANSO2:</b> KLAX PNDAH2 TCATE DCT PPE DCT ALGUN DCT OTOSO DCT IPSAG DCT IPSIS DCT TAM DCT OMPAN DCT ASOKU DCT KAPAN DCT MSLP	<b>CANSO2:</b> MSLP OLISU3 OLISU UG436 AUR UA552 GABEN DCT MTT DCT AVALI DCT IREKO DCT CDR DCT OTOSO DCT ALGUN DCT PPE J93 ASUTA DCT AMMOR OLAAA2 KLAX
	<b>CANSO3:</b> MSLP DCT RELTA UA758 NOVOG DCT ASOKU DCT UGATA DCT TMN DCT IREKO DCT CDR DCT OTOSO DCT ALGUN DCT PPE J93 ASUTA DCT AMMOR OLAAA2 KLAX

**NOTE 1:** MSLP is El Salvador International Airport



# KATL-SAEZ-KATL



KATL – SAEZ – KATL Until April 16, 2023	
Southbound Leg (KATL –SAEZ)	Northbound Leg (SAEZ – KATL)
<p><b>CANSO1:</b> KATL VRSTY3 NOKIE DCT YANTI Q89 SHRKS DCT CRG DCT DEBRL DCT OMN DCT URSUS UP406 BILSI UL795 LENAX UL417 NEFTU UP525 EMABU DCT BOBKA DCT VULNO DCT LONAX DCT PUPAS DCT LET DCT ARNUB DCT ISARA DCT PUBUM UL417 TOPOG UL404 ISOPO UT672 MULTA UW24 SNT SNT7V SAEZ</p>	<p><b>CANSO1:</b> SAEZ BIVA2A BIVAM UW8 PAR UL417 PUBUM DCT CITRA DCT PUDBU DCT ARUXA DCT LONAX DCT IROTI DCT NEVPA UL417 LENAX UL795 ALTIB UM779 ZEUXX Y217 OCTAL Q77 SHRKS DCT LAIRI DCT LARZZ JJED3 KATL</p>
<p><b>CANSO2:</b> KATL VRSTY3 NOKIE DCT YANTI Q89 SHRKS DCT CRG DCT DEBRL DCT OMN DCT URSUS UP406 BILSI UL795 LENAX UL417 NEFTU UP525 EMABU DCT SINID DCT GEKAR DCT LONAX DCT PUPAS DCT LET DCT ILPOL DCT ISARA DCT PUBUM UL417 TOPOG UL404 ISOPO UT672 MULTA UW24 SNT SNT7V SAEZ</p>	

**NOTE: Colombia, Bolivia, Paraguay, Ecuador, Peru are approved until June 30 2023**

# KATL – SCEL - KATL



## KATL – SCEL – KATL (Until June 1, 2023)

Southbound Leg (KATL –SCEL)	Northbound Leg (SCEL – KATL)
<b>CANSO1:</b> KATL SMLTZ3 WALET DCT ZPLEN Q79 MCLAW Y442 FUNDI UM335 LEPON DCT ARNAL DCT TINPA DCT VAMOS DCT GYV DCT VAKUD DCT TRU DCT ISREN DCT MOXES DCT SORTA UL780 SULNA DCT TOY DCT EMBAL DCT SIMOK SIMO6B SCEL	<b>CANSO1:</b> SCEL DONT4ABDONTI DCT VUTRA DCT LIVOR DCT SORTA DCT MOXES DCT ISREN DCT TRU DCT VAKUD DCT GYV DCT UGUPI DCT BUXOS DCT IRUKA DCT ARNAL DCT ATUVI UG448 UCL UG448 IKBIX DCT PEAKY Q118 SHEEK Q110 DAWWN DCT BEORN GNDLF2 KATL
<b>CANSO2:</b> KATL SMLTZ3 WALET DCT ZPLEN Q79 MCLAW Y442 FUNDI UM335 LEPON DCT ARNAL DCT PUMRI DCT IRUKA DCT BUXOS DCT UGUPI DCT GYV DCT VAKUD DCT TRU DCT ISREN DCT MOXES DCT SORTA UL780 SULNA DCT TOY DCT EMBAL DCT SIMOK SIMO6B SCEL	<b>CANSO2:</b> SCEL DONT4B DONTI UT131 ATEDA DCT IREMI DCT ILMAR DCT TOPIX DCT ISREN DCT MIPAS DCT AKTUK UM542 ARNEL DCT ANRAX UM542 TINPA DCT RODAX DCT ARNAL DCT ATUVI UG448 UCL UG448 IKBIX Y183 PEAKY DCT RSW DCT LAL DCT TAY DCT LARZZ JJEDI3 KATL
<b>CANSO3:</b> KATL SMLTZ3 WALET DCT ZPLEN Q79 MCLAW Y442 FUNDI UM335 LEPON DCT ARNAL DCT TINPA DCT ANRAX UM542 AKTUK DCT MIPAS DCT ISREN DCT TOPIX DCT ILMAR DCT IREMI UL302 TOY DCT EMBAL DCT SIMOK SIMO6B SCEL	<b>CANSO3:</b> SCEL DONT4B DONTI DCT VUTRA DCT LIVOR DCT SORTA DCT MOXES DCT ISREN DCT TRU DCT VAKUD DCT GYV DCT VAMOS DCT TINPA DCT MORLI DCT ARNAL DCT ATUVI UG448 UCL UG448 IKBIX Y183 PEAKY Q118 BRUTS DCT LAIRI DCT LARZZ JJEDI3 KATL

**NOTE 1:** Colombia, Bolivia, Paraguay, Ecuador are approved until June 30, 2023

# KATL-SPJC-KATL



## KATL – SPJC – KATL (Until April 16, 2023)

Southbound Leg (KATL –SPJC)	Northbound Leg (SPJC – KATL)
<b>CANSO1:</b> KATL..SMLTZ3.WALET..ZPLEN.Q79.MCLAW.Y442.FUNDI.UM335.LEPON..ARNAL..TINPA..VA MOS..GYV..VAKUD..ATATU.ATATU2..SPJC	<b>CANSO1:</b> SPJC DCT ISRE2F ISREN DCT VAKUD DCT GYV DCT VAMOS DCT TINPA DCT MORLI DCT ARNAL DCT ATUVI UG448 UCL UG448 IKBIX Y183 PEAKY Q118 BRUTS DCT LAIRI DCT LARZZ JJEDI3 KATL
<b>CANSO2:</b> KATL SMLTZ3 WALET DCT ZPLEN Q79 MCLAW Y442 FUNDI UM335 LEPON DCT ARNAL DCT PUMRI DCT IRUKA DCT BUXOS DCT UGUPI DCT GYV DCT VAKUD DCT ATATU ATATU2 SPJC	<b>CANSO2:</b> SPJC ISRE2F ISREN DCT VAKUD UL780 GYV DCT VAMOS DCT TINPA DCT LEVOR DCT ATUVI UG448 UCL UG448 IKBIX Y183 PEAKY Q118 BRUTS DCT LAIRI DCT LARZZ JJEDI3 KATL
<b>CANSO3:</b> KATL SMLTZ3 WALET DCT ZPLEN Q79 MCLAW Y442 FUNDI UM335 LEPON DCT ARNAL DCT TINPA DCT ANRAX DCT SIDIK DCT ARNEL UM542 TAL DCT ATATU ATATU2 SPJC	<b>CANSO3:</b> SPJC ISRE2F ISREN DCT VAKUD UL780 GYV DCT UGUPI DCT BUXOS DCT IRUKA DCT ARNAL DCT ATUVI DCT UG448 UCL UG448 IKBIX Y183 PEAKY Q118 SHEEK Q110 DAWWN DCT BEORN GNDLF2 KATL
<b>CANSO4:</b> KATL SMLTZ3 WALET DCT ZPLEN Q79 MCLAW Y442 FUNDI UM335 LEPON DCT ARNAL DCT TINPA DCT ANRAX DCT MIBAR DCT ARNEL DCT TAL DCT ATATU ATATU2 SPJC	<b>CANSO4:</b> SPJC DCT ATAT2F ATATU UV1 TRU UL780 VAKUD DCT GYV DCT UGUPI DCT BUXOS DCT IRUKA DCT PUMRI DCT ARNAL DCT ATUVI UG448 UCL UG448 IKBIX Y183 PEAKY DCT RSW DCT LAL DCT CAMJO DCT LAIRI DCT LARZZ JJEDI3 KATL
	<b>CANSO5:</b> SPJC ISRE2F ISREN UM542 ARNEL DCT MIBAR DCT ANRAX CT IRASO DCT ALGEN DCT ARNAL DCT ATUVI UG448 UCL UG448 IKBIX Y183 PEAKY DCT RSW DCT LAL DCT CAMJO DCT LAIRI DCT LARZZ JJEDI3 DCT KATL
	<b>CANSO6:</b> SPJC ISRE2F ISREN UM542 ARNEL DCT MIBAR DCT ANRAX UM542 TINPA DCT RODAX DCT ARNAL DCT ATUVI UG448 UCL UG448 IKBIX Y183 PEAKY DCT RSW DCT LAL DCT CAMJO DCT LAIRI DCT LARZZ JJEDI3 KATL

**NOTE: Colombia, Bolivia, Paraguay, Ecuador, Peru are approved until April 16APR 2023 / Trial Complete**

**Note 2: Does not reflect new STARs/SIDs to/from LIM**



# SKBO-KATL (1 of 2)



SKBO – KATL (Until June 30, 2023)	
FIR	Northbound Leg (SKBO – KATL)
*Colombia	<b>Option1</b> SID OSUSU2R DCT GIKPU DCT PADUD DCT DIBAM DCT KILER DCT <b>GAXER ... KATL</b>
	<b>Option2</b> SID OSUSU2R DCT GIKPU DCT PADUD DCT DIBAM DCT NEVPA UL417 <b>BORDO ... KATL</b>
	<b>Option3</b> SID OSUSU2R DCT GIKPU DCT PADUD DCT DIBAM DCT BOBKA DCT ULDAR UR625 <b>NEFTU ... KATL</b>
	<b>Baseline:</b> SKBO OSUSU2R GIKPU UQ120 PADUD DCT OPNIR DCT CTG UM779 ZEUSS Y217 OCTAL Q77 SHRKS DCT LAIRI DCT LARZZ SITTH2 KATL

**\*NOTE1:** Currently working with Colombia Aerocivil in creating a new waypoint fix that will eventually connect directly with KILER, NEVPA, BOBKA.

**NOTE2:** Optimized routes from BORDO, NEFTU and GAXER (in red)

# SKBO-KATL (2 of 2)



Jamaica Approved Direct Routings (Until June 30,2023)	
DAL980 BOG - ATL	DAL 254 BOG - JFK
KILER DCT GAXER	KILER DCT GAXER
KILER DCT EPSIM	KILER DCT EPSIM
KILER DCT ULDAR	KILER DCT ULDAR
NEVPA DCT ULDAR	NEVPA DCT GAXER
BOBKA DCT ULDAR	NEVPA DCT EPSIM
	NEVPA DCT ULDAR
	BOBKA DCT GAXER
	BOBKA DCT EPSIM
	BOBKA DCT ULDAR

*NOTE: Kingston can approve the Direct routings as per this table for six months until June 30 2023*



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# TSD Thin Client Request Process

Midori Tanino

# TSD Thin Client Request Process

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- **Step 1:** Submit the “Letter of Intent” to the FAA ATO International. Template is available.
- **Step 2:** Establish the “Air Traffic Flow Management Flight Data Exchange Bilateral agreement”. (a.k.a. IDP Data Exchange Agreement). Typical agreement language is available. Note that the agreement language will be tailored depending on the existing relationship/situation between your ANSP and the FAA.
- **Step 3:** Submit the “Letter of Request” to the FAA AJR-1 to gain the access to the TSD Thin Client. Template is available.
- **Step 4:** Implement the capability access TSD Thin Client.

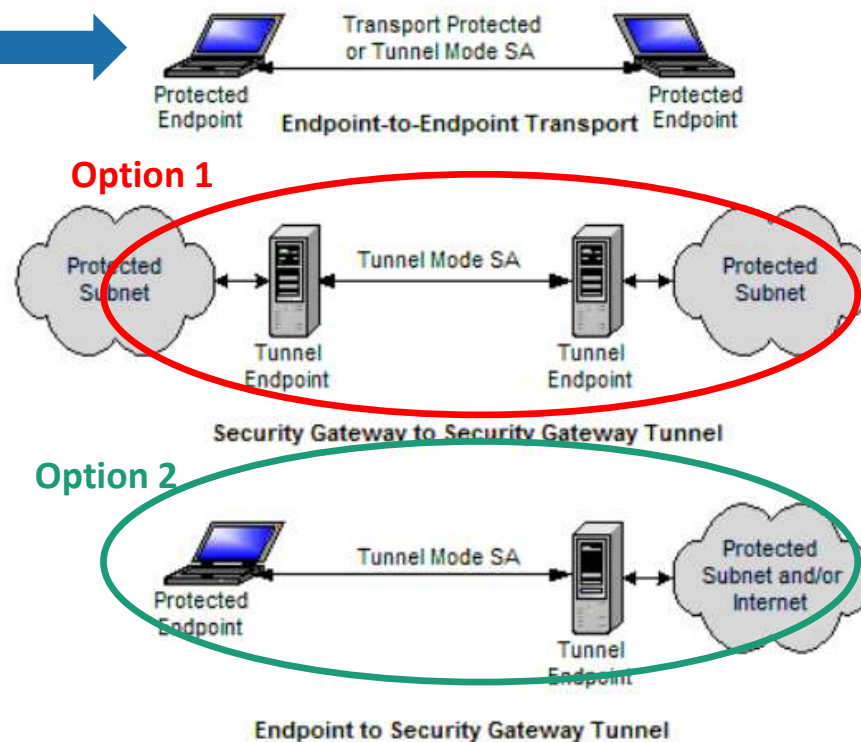
# TSD Thin Client: Connectivity

Connectivity for the web client can be established via a VPN to the FAA NextGen Enterprise Secure Gateway

Options 1 and 2: To connect to the TSD Thin-Client, you will need to make some network changes:

- Supply new hosts for thin-client access, if necessary
- Allow 2-4 weeks for configuration
- Network changes can be scheduled in advance

All options: Establish connectivity first to the FAA NextGen Testbed (Test) domain, prior to cutting over to production







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# CADENA Present Activities: CADENA and GESEA

# CADENA and GESEA



- CADENA and Grupo de Estudio e Implantacion del Espacio Aereo SAM (GESEA) are working together to develop a collaborative working relationship to harmonize the CIIFRA Trial UPRs throughout the LAC region.
- CADENA is participating in GESEA Meetings.
- Example of harmonization efforts – Align Route Terminology Definitions (e.g., PASA, PASA E2E, Trial UPR etc.)
- Future efforts will continue to harmonize ATFM and CDM in the LAC region and development of Free Route Airspace.

**Trial User Preferred Routes (UPR) [previously Optimized End-to-End Routes]** – Routes requested by the airlines that optimize the route between a specific city-pair. UPRs must be approved by all ANSPs, through their Flow Management Units, Area Control Center managers, or Civil Aviation Authorities, as applicable, in which any segment of the route occurs. Once a UPR is approved for the trial, it will be available for a specified period of time (i.e., trial period) and a specific airline. The purpose of the route trials is to determine the operational feasibility of the routes and once the operational feasibility of the routes is verified, to have them published via AIC/AIP. After the States publish the route segments within their AIC/AIPs, those segments may be used by all airlines for any city pair until further notice.

# CADENA CDM Meeting in Merida – Action Item Update

**Al Castillo**

# CADENA CDM Meeting, Merida, Mexico



- November 18 to December 1, 2022
- Participants:



# Technical Issue 1 and 2 Status



Technical Issue	Action Item	Status	Target Date
<b>TI 1</b> - MMUN has a 50% airline arrival slot non-compliance. SENEAM is working with ASUR; however, other organizations can help (e.g., CADENA, IATA, etc.).	<b>TI 1.1 [ACTION ITEM]</b> Horacio Castañeda will continue to send CADENA arrival slot non-compliance data.	Ongoing	N/A
	<b>TI 1.2 [ACTION ITEM]</b> CADENA will continue to share MMUN slot non-compliance data with airlines.	Ongoing	N/A
	<b>TI 1.3 [ACTION ITEM]</b> CADENA will work with IATA to improve MMUN arrival slot non-compliance. CADENA will set up a meeting with IATA NLT <u>January 13, 2023</u> , to brainstorm ideas on encouraging airline slot compliance.	COMPLETE 1/11/2023	January 13, 2023
	<b>TI 1.4 [ACTION ITEM]</b> CADENA will follow up by checking the monthly airline arrival slot non-compliance and monitor for improvements. CADENA will provide and update and feedback to SENEAM by <u>June 30, 2023</u> .	Ongoing	June 30, 2023
<b>TI 2</b> - There is a need to follow up on progress from the action items identified during this meeting.	<b>TI 2.1 [ACTION ITEM]</b> CADENA will coordinate a virtual meeting with all those participating in the Merida CDM meeting in March 2023 to follow up on progress made, challenges faced, etc.		March 31, 2023
	<b>TI 2.2 [ACTION ITEM]</b> CADENA will coordinate an annual face to face meeting with the participants of the Merida CDM meeting to review progress on identified action items and to discuss new challenges. The target date for the meeting in November/December 2023.		Nov/Dec 2023

**TI 1 – SENEAM will continue to send CADENA Slot Compliance data. CADENA will notify the airlines. IATA will carry MMUN slot compliance on their agenda.**

# Technical Issue 3 Status



Technical Issue	Action Item	Status	Target Date
<p>TI 3 - From 10AM to 6 PM, MMUN is requesting flights to take alternate (tactical) routes to offload departures for the purpose of reducing departure delays while balancing routes. A proposal was made to do a 2 week test of assigning the tactical route based on city-pairs.</p>	<p>TI 3.1 [ACTION ITEM] Vern Payne will coordinate with AJR-G to conduct a two month analysis of MMUN departures that enter ZHU and ZMA airspace. Target completion date is <u>December 21,2022</u>.</p>	Complete	December 21,2022
	<p>TI 3.2 [ACTION ITEM] Vern Payne will coordinate a virtual meeting with MMUN, Merida ACC, ZHU, ZMA and stakeholders for the <u>first week of January 2023</u> to discuss the results of the analysis and determine a trial period for MMUN offloads. (Note: CADENA can assist with setting up the meeting).</p>	In Progress	3 <sup>rd</sup> Week of February

- **Departure analysis complete.**
- **Plan to meet in February**

# Technical Issue 4 – 6 Status



Technical Issue	Action Item	Status	Target Date
TI 4 - SENEAM is requesting reduced longitudinal separation between Houston ARTCC and Merida ACC	TI 4.1 [ACTION ITEM] Dan Ayotte and Steve Pinkerton will research ICAO DOC 4444 ADS-B separation rules concerning the use of anticipated radar separation between Houston ARTCC and Merida ACC and advise ZHU of the results. Target date for completion is <u>January 18, 2023</u> .	In Progress	Update March 8th
TI 5 - SENEAM is requesting that the latest Boca Chica Launch information be uploaded to the CADENA OIS.	TI 5.1 [ACTION ITEM] Garrett Campanell (ATCSCC Space Ops) will research the possibility of adding the latest Boca Chica Launch information on the CADENA OIS. Target date for completion is December 21, 2022.	Complete	January 5, 2023
TI 6 - Airline equipment capabilities (specifically, RNP5) that operate across the Gulf of Mexico should be considered.	TI 6.1 [ACTION ITEM] Jaime Abigantus (IATA) will provide the percentage of RNP5 equipped aircraft that operate across the Gulf Of Mexico. Target date for completion <u>January 18, 2023</u> .	Complete	January 18, 2023

**TI 4 Status: Steve Pinkerton and Dan Ayotte are still researching and will provide an update at the next ZHU meeting in March 8th.**



# Technical Issue 7 – 8 Status



Technical Issue	Action Item	Status	Target Date
<b>TI 7 - Mazatlán</b> ACC has received demand information by sector from ATCSCC; however, the coordinates that define the Mazatlán ACC sectors have changed. Mazatlán ACC is requesting that ATCSCC update the Mazatlán sector coordinates for the daily demand reports.	<b>TI 7.1 [ACTION ITEM] (IN PROGRESS)</b> Vern Payne will coordinate to update the Mazatlán ACC sector coordinates for the demand reports.	Complete	
	<b>TI 7.2 [ACTION ITEM]</b> Ernie Snyder will assist SENEAM Mexico City in developing appropriate FEAs that provide sector demand.	In Progress	
<b>TI 8 - FAA ADS-B</b> equipment housed by SENEAM is being filtered at the MMFR FIR boundary thus preventing controllers in Mexico from seeing inbound traffic.	<b>TI 8.1 [ACTION ITEM]</b> Paty Manzo will provide Dan Ayotte the agreement between FAA and SENEAM on ADS-B data sharing.	Complete	
	<b>TI 8.2 [ACTION ITEM]</b> Dan Ayotte will research who is filtering the ADS-B data. Target date of completion is January 18, 2023.	In Progress	Update March 8th

**TI 7 – New sector coordinates have been received and are in the process of being updated. Ernie is assisting with FEA development.**

**TI 8 – Steve Pinkerton is working with SYSOPS, Security and the Surveillance Broadcasting Office. We are expecting an update at the next ZHU meeting in the March 8<sup>th</sup> meeting.**



# Technical Issue 9 – 10 Status



Technical Issue	Action Item	Status	Target Date
<p><b>TI 9</b> – Houston ARTCC must provide Monterrey and Mazatlán ACCs 60-80NM MIT, at all times, on the MEX OBGY WEST 1, MEX OBGY WEST 2, MEX OBGY WEST 3 and MEX MRF WEST playbook routes. ZHU is requesting a reduction of MIT.</p>	<p><b>TI 9.1 [ACTION ITEM]</b> Houston ARTCC, Monterrey ACC and Mazatlán ACC will work on increasing capacity (i.e., reducing MIT) for the MEX OBGY West 1, 2, and 3, and the MEX MRF WEST playbook routes during a breakout session.</p>	<p><b>Complete</b></p>	
<p><b>TI 10</b> – Merida and Monterrey ACC are requesting a reduction of longitudinal separation with Houston ARTCC from 80 NM to 50 NM based on an RNAV RNP environment not using ADS-C (* ICAO DOC 4444 sec-5.4.2.6.3.1). A tentative agreement was reached to reduce longitudinal separation from 80 NM to 50 NM.</p>	<p><b>TI 10.1 [ACTION ITEM] (In Progress)</b> Houston ARTCC will schedule a virtual meeting with Merida and Monterrey ACCs in <u>mid January</u> to confirm the agreement and coordinate an implementation date.</p>	<p><b>In Progress</b></p>	<p>Next Update March 8th</p>

**TI 9 – SENEAM and ZHU will conduct a trial. Expect an update at the March 8th ZHU meeting.**

**TI 10 – Issue is being researched. Expect an update at the March 8th ZHU meeting.**

# Technical Issue 11 – 12 Status



Technical Issue	Action Item	Status	Target Date
TI 11 - Merida ACC requested to develop manual handoff procedures with Houston ARTCC.	TI 11.1 [ACTION ITEM] Houston ARTCC will schedule a virtual meeting in mid January 2023 with Merida ACC to develop procedures for manual handoffs between the two centers. (AID, BCN, Position, and altitude – Approximately 5 Minutes).	In Progress	Next Update March 8th
TI 12 - Merida ACC requested assistance developing offload routes for MMUN departures and overflights for constraints such as weather and volume.	TI 12.1 [ACTION ITEM] Houston ARTCC will conduct a TMU data review of MMUN departures and overflights.		Next Update March 8th
	TI 12.2 [ACTION ITEM] Houston ARTCC will schedule a virtual meeting mid January 2023 with Merida ACC to discuss the results of the TMU data review and coordinate next steps.		Next Update March 8th

- **TI 11 - We need to confirm that the ZHU system and the SENEAM system confirm ADS-B equipage the same way. Need to improve SENEAM ADS-B visibility before this (TI 11) can be resolved (see TI 08).**
- **TI 12 – Expect update at the March 8<sup>th</sup> ZHU meeting**

# Technical Issue 14 & 15 Status



Technical Issue	Action Item	Status	Target Date
<b>TI 14</b> - JCAA is requesting to move some MIA – BOG traffic east of the normal route during a specific period of time to decrease complexity/ volume which will result in reduced MIT.	<b>TI 14.1 [ACTION ITEM]</b> Ricardo Martinez (ECNA) (COMPLETED) will submit the request to Cuban Aviation Authorities for approval.	Complete	
	<b>TI 14.2 [ACTION ITEM]</b> Deano Ledford (JCAA) (COMPLETED) will request approval of the new routes from Colombia. Note: Colombia approved request.	Complete	
	<b>TI 14.3 [ACTION ITEM]</b> JCAA and CADENA will coordinate with ECNA, Colombia and ZMA TMO.	Complete	
	<b>TI 14.4 [ACTION ITEM]</b> Jaime Abigantus (IATA) will give all impacted airlines a heads up on the JCAA offload route (MIA- BOG).	Complete	
	<b>TI 14.5 [ACTION ITEM]</b> Chris Tomlin (East/South DDSO) will give American Airlines a heads up on JCAA offload route (MIA – BOG).	Complete	
	<b>TI 14.6 [ACTION ITEM]</b> Deano Ledford (JCAA) will issue a NOTAM detailing the offload route and effective days/times.	Complete	
	<b>TI 14.7 [ACTION ITEM]</b> Ricardo Martinez (ECNA) will issue a NOTAM detailing the offload route and effective days/times after JCAA publishes their NOTAM.	Complete	
<b>TI 15</b> - SENEAM requested a reduction on the UM219 20 MIT /3 MINIT for MMUN departures.	<b>TI 15.1 [ACTION ITEM]</b> ZHU and East/South DDSO will research any possible opportunities to reduce the MIT/MINIT and will provide the results on or before January 9, 2023.	Complete	January 9, 2023
	<b>TI 15.2 [ACTION ITEM]</b> ZHU will set up a meeting with ECNA, SENEAM, ZMA on or before January 9, 2023, to discuss the results of their research.	In Progress	Next Update March 8th

- **TI 14** The MIA – BOG offload trial is ongoing. More details later in the meeting.
- **TI 15** MMUN UM219 offload trial is being researched. More detail later in the meeting.

# Technical Issue 16 - 19 Status



Technical Issue	Action Item	Status	Target Date
TI 16 - Merida, Mazatlán and Monterrey ACCs have technical issues with Los Angeles, Oakland and Albuquerque ARTCCs	TI 16.1 [ACTION ITEM] Al Castillo (CADENA) will coordinate and set up a virtual meeting with Merida, Mazatlán, Monterrey ACCs and Los Angeles, Oakland, Albuquerque ARTCCs to discuss technical issues. The target meeting date is March – April 2023.		March to April 2023
TI 17 - SENEAM is requesting the sharing of RADAR data from the EL Paso site with Monterrey ACC.	TI 17.1 [ACTION ITEM] Dan Ayotte and Steven Pinkerton (FAA) will research the possibility of sharing El Paso RADAR data with Monterrey ACC.	In Progress	Next Update March 8th
TI 18 - SENEAM is requesting the sharing of RADAR data from the ZLA site with Mazatlán ACC. The RADAR used to cover ZLA's Sectors 30 & 31 could provide coverage for Mazatlán's Sector 1.	TI 18.2 [ACTION ITEM] Dan Ayotte and Steven Pinkerton (FAA) will research the possibility of sharing ZLA RADAR used by sector 30 and 31 with SENEAM Mazatlán Sector 1.	In Progress	Next Update March 8th
TI 19 – SENEAM will update AIC Circular 08/21 – Preferred Routes	TI 19.1 ACTION ITEM: SENEAM (Mario Hernandez) will update the AIC Circular 08/21 – Preferred Routes. Target completion date <u>last week of January</u> .	In Progress	Last week of February 2023

- TI 16 - Coordination for a virtual CDM meeting will start 3<sup>rd</sup> week of February.
- TI 17 and TI 18 – are being researched. Expect update at the March 8<sup>th</sup> ZHU meeting.
- TI 19 – The AIC circular should be ready by the end of February.

# JCAA MIA – BOG Offload Trial

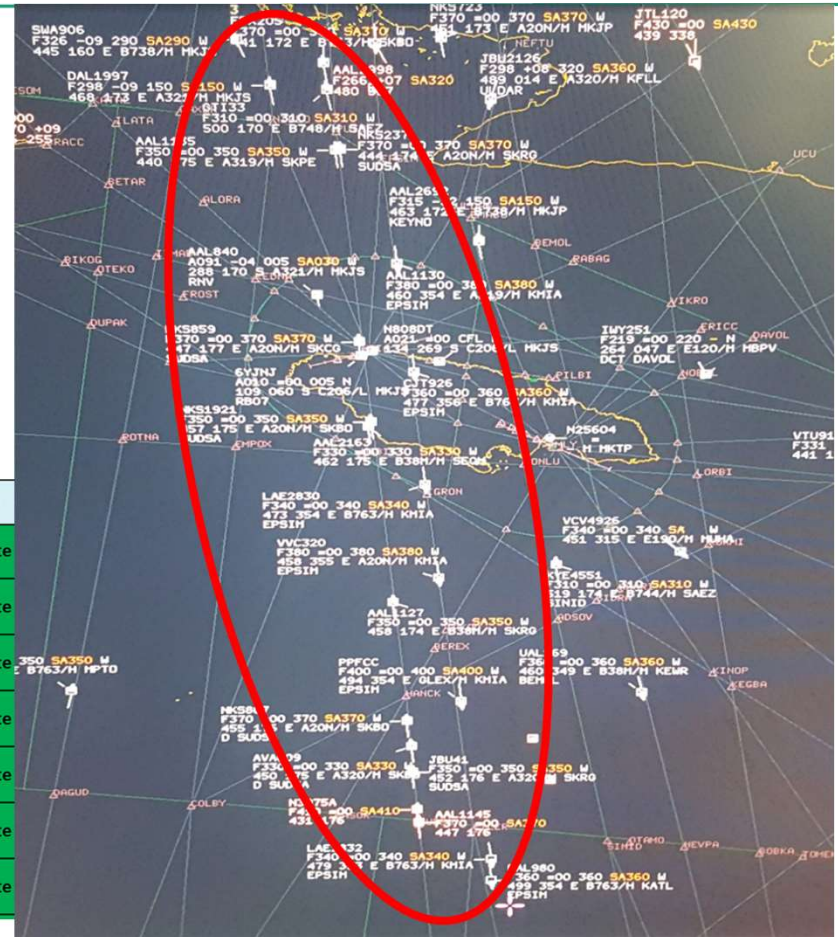
Troy Blackwood



# CADENA CDM – TI 14



- Challenges presented by JCAA at the CADENA Merida CDM meeting:
  - Increase in traffic going to Colombia
  - Overlapping data blocks (system doesn't allow data block re-size)
  - Volume and complexity resulted in MIT restrictions



Technical Issue	Action Item	Status
TI 14 - JCAA is requesting to move some MIA – BOG traffic east of the normal route during a specific period of time to decrease complexity/ volume which will result in reduced MIT.	TI 14.1 [ACTION ITEM] Ricardo Martinez (ECNA) (COMPLETED) will submit the request to Cuban Aviation Authorities for approval.	Complete
	TI 14.2 [ACTION ITEM] Deano Ledford (JCAA) (COMPLETED) will request approval of the new routes from Colombia. Note: Colombia approved request.	Complete
	TI 14.3 [ACTION ITEM] JCAA and CADENA will coordinate with ECNA, Colombia and ZMA TMO.	Complete
	TI 14.4 [ACTION ITEM] Jaime Abigantus (IATA) will give all impacted airlines a heads up on the JCAA offload route (MIA- BOG).	Complete
	TI 14.5 [ACTION ITEM] Chris Tomlin (East/South DDSO) will give American Airlines a heads up on JCAA offload route (MIA – BOG).	Complete
	TI 14.6 [ACTION ITEM] Deano Ledford (JCAA) will issue a NOTAM detailing the offload route and effective days/times.	Complete
	TI 14.7 [ACTION ITEM] Ricardo Martinez (ECNA) will issue a NOTAM detailing the offload route and effective days/times after JCAA publishes their NOTAM.	Complete

CADENA CDM Merida Meeting TI 14

# JCAA Proposed Solutions

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- **Short Term Solution**
  - Issue TMM's during peak traffic times
- **Mid Term Solution**
  - Reroute some of the traffic out of the congested flow to the east
  - MIA – BOG traffic offload to the east
- **Long Term Solution**
  - Restructure sectors
  - Stratify the impacted sector to reduce volume and complexity (i.e., data block overlap)

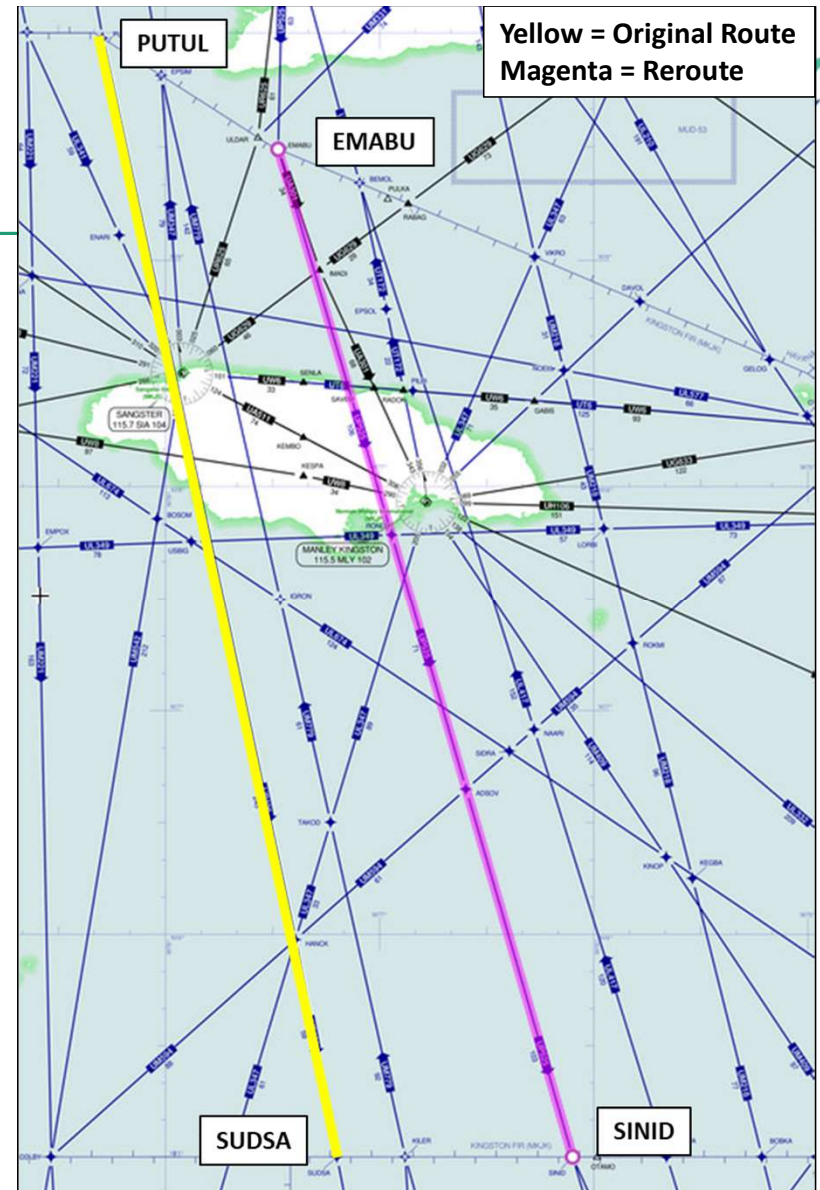
# JCAA MIA – BOG Offload Trial

- Trial began on January 23, 2023
- All Miami departures destined to Bogota from 1400Z to 2000Z
- Original (base) route: PUTUL UP406 SUDSA
- Reroute: EMABU UP525 SINID
- JCAA will provide more details on Tuesday

**MKJK KINGSTON (CITY,ACC,FIC)**

A0040/23 - FLOW CONTROL PROCEDURE ACTIVATED. ROUTING OF ALL TRAFFIC DEPARTING MIAMI DESTINED BOGOTA SHALL ROUTE IN KINGSTON FIR VIA EMABU UP525 SINID. 08 1846-2000, 09-28 1400 - 2000, 08 FEB 18:46 2023 UNTIL 28 FEB 20:00 2023. CREATED: 08 FEB 18:47 2023

**MKJK Reroute NOTAM**





# MMUN Departure UM219 Offload Trial

Al Castillo

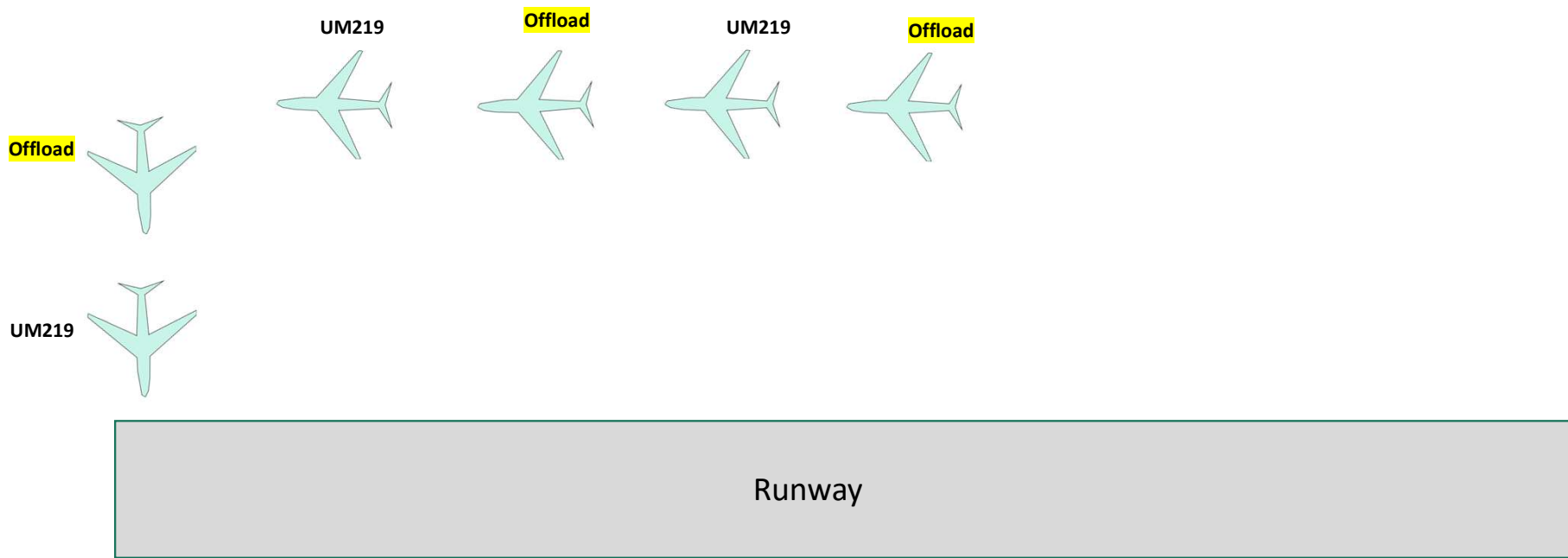
# Introduction



Technical Issue	Action Item	Status	Target Date
TI 15 - SENEAM requested a reduction on the UM219 20 MIT /3 MINIT for MMUN departures.	TI 15.1 [ACTION ITEM] ZHU and East/South DDSO will research any possible opportunities to reduce the MIT/MINIT and will provide the results on or before January 9, 2023.		January 9, 2023
	TI 15.2 [ACTION ITEM] ZHU will set up a meeting with ECNA, SENEAM, ZMA on or before January 9, 2023, to discuss the results of their research.		January 9, 2023

- The ZHU UM219 20 MIT/ 3 MINIT TMM is causing departure delays at MMUN.
- January 4th - ZHU and ZMA discussed TI 15 (i.e., UM219 20 MIT/2 MINIT) and ZMA agreed to make sure they they are not putting out MIT when not needed and to continue to evaluate the need of the restrictions.
- January 9<sup>th</sup> - Follow up virtual meeting hosted by ZHU. Not possible to remove UM219 20 MIT/3 MINIT due to volume and complexity.
- **Other Solution:** Find the best alternative route for UM219 offloads which would allow MMUN departures to be alternated and reduce the impact of the UM219 20 MIT/3 MINIT TMM.

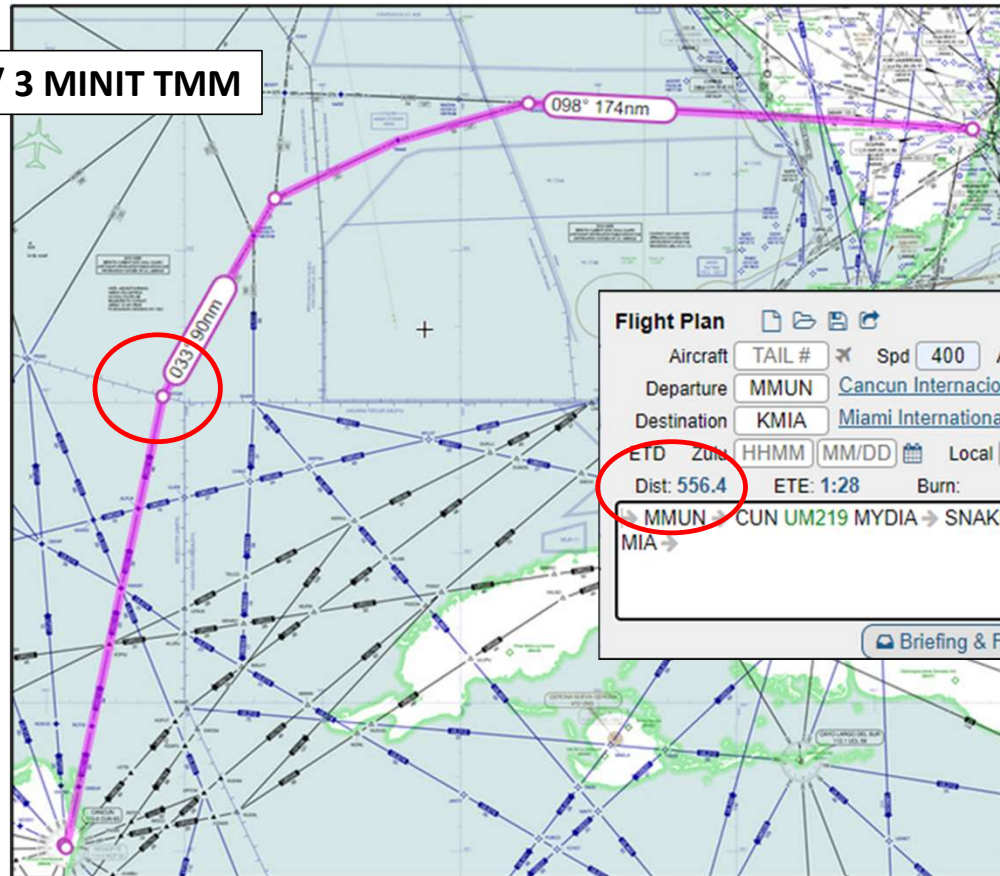
# UM219 Offload Trial – Taxi Queue



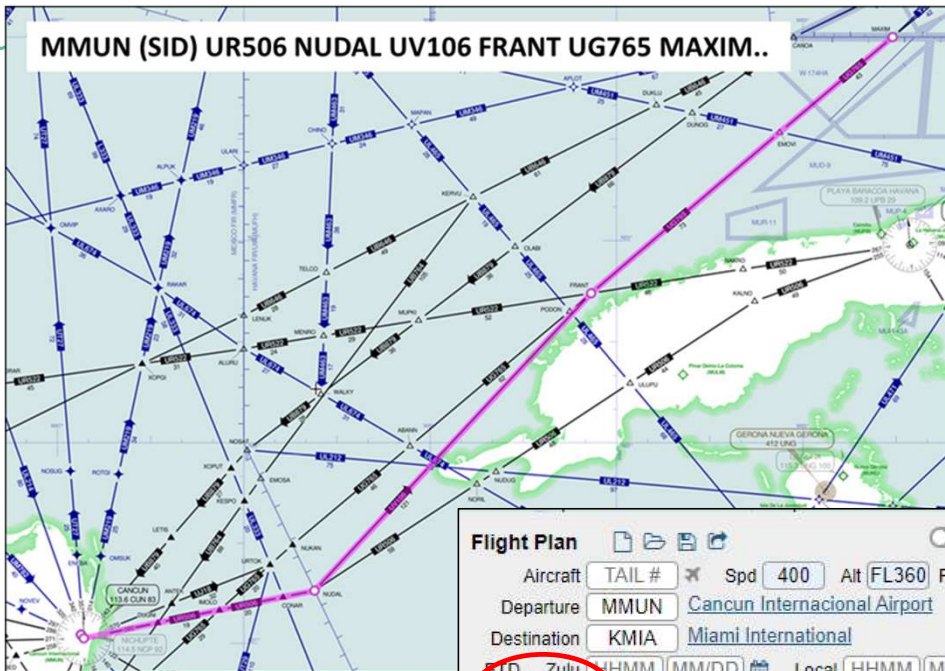
UM219 offloads would allow MMUN departures to be alternated and reduce the impact of the UM219 20 MIT/3 MINIT TMM.

# UM219 MYDIA SNAKR SHAQQ..

20 MIT / 3 MINIT TMM



# UM219 Offload Route Proposals



**Flight Plan**

Aircraft: TAIL # Spd 400 Alt FL360 Fuel 0

Departure: MMUN Cancun Internacional Airport

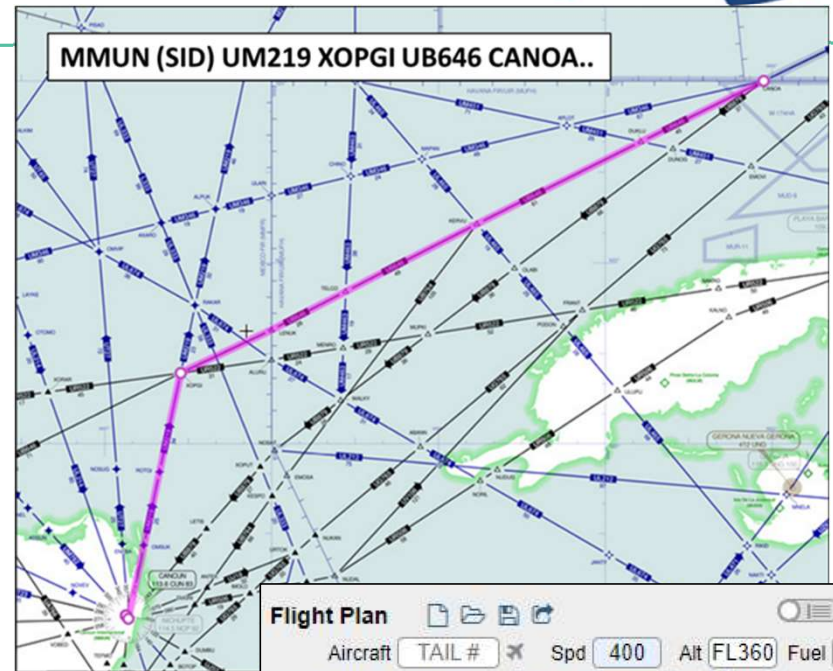
Destination: KMIA Miami International

ETD Zulu HHMM MM/DD Local HHMM MM/DD

Dist: 472.3 ETE: 1:14 Burn: Routes

MMUN → CUN UR506 NUDAL UV106 FRANT UG765  
MAXIM → MIA →

Briefing & Filing Nav Log



**Flight Plan**

Aircraft: TAIL # Spd 400 Alt FL360 Fuel 0

Departure: MMUN Cancun Internacional Airport

Destination: KMIA Miami International

ETD Zulu HHMM MM/DD Local HHMM MM/DD

Dist: 485.6 ETE: 1:17 Burn: Routes

MMUN → CUN UM219 XOPGI UB646 CANOA →

Briefing & Filing Nav Log

# Proposed UM219 Offload Trial

## SAMPLE Details

---



- Trial details are still in coordination and are tentative.
- Departures from MMUN to the following destinations will be routed via the offload routes:
  - MIA, FLL, MCO (TBD)
  - IAD, BWI, PHL (TBD)
- Proposed trial dates and times:
  - ???? to ???? (Friday – Sunday), 1600Z to 2200Z



# ANSP Updates





UPDATED REPORT IDAC ATFM-CDM  
CADENA RIG MEETING FEBRUARY 2023 MIAMI





## PRESENT SITUATION

- DOMINICAN REPUBLIC HAS SHOWN VISIBLE SIGN OF RECOVERY FROM THE COVID PANDEMIC DURING 2021 UP TO NOW AS FOLLOWS.
- THE CIVIL AVIATION AUTHORITY AND THE DEPARTMENT OF TOURISM MINISTER ARE EXPECTING AN INCREASE OF PASSENGER OF ABOUT A MINIMUM OF 15% PER CENT PER YEAR.
- NEW AIRLINES BASED IN DOMINICAN REPUBLIC HAVE BEEN CREATED AND THEY HAVE PLANS TO ADD MORE AIRPLANES IN THE NEAR FUTURE, LIKE SKY CANA AND ARAJET.
- OPEN SKY AGREEMENT HAVE BEEN SIGNED WITH MANY COUNTRIES AND THE LAST ONE WITH CANADA AND NEXT WITH THE UNITED STATES TO BRING MORE AIRLINES.



## PRESENT SITUATION



- THE GOVERNMENT IS FOCUSED IN CREATING A NEW TOURISTICAL AREA CALLED BAHIA DE LAS AGUILAS IN PEDERNALES, OPPOSITE TO PUNTA CANA .
- THE GOVERNMENT IS PLANNING THE CONSTRUCTION OF A NEW INTERNATIONAL AIRPORT IN PEDERNALES BAHIA DE LAS AGUILAS THAT WILL INCREASE THE TRAFFIC FLOW IN SANTO DOMINGO FIR.

# Location new airport in pedernales



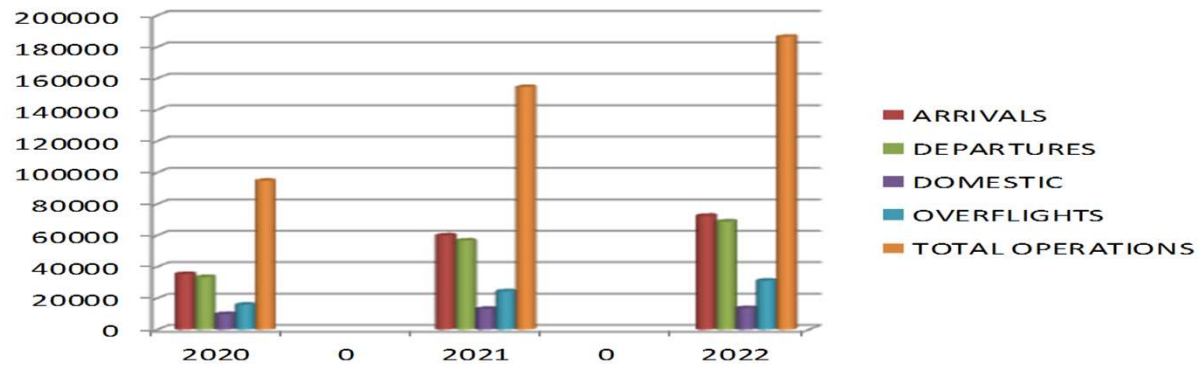


**CANSO**



TOTAL OPERATIONS 2020 2021 2022

YEAR	ARRIVALS	DEPARTURES	DOMESTIC	OVERFLIGHTS	TOTAL OPERATIONS
<b>2020</b>	35439	33491	9941	15984	<b>94855</b>
<b>2021</b>	60036	56790	13279	24460	<b>154565</b>
<b>2022</b>	72538	68902	13784	31236	<b>186460</b>



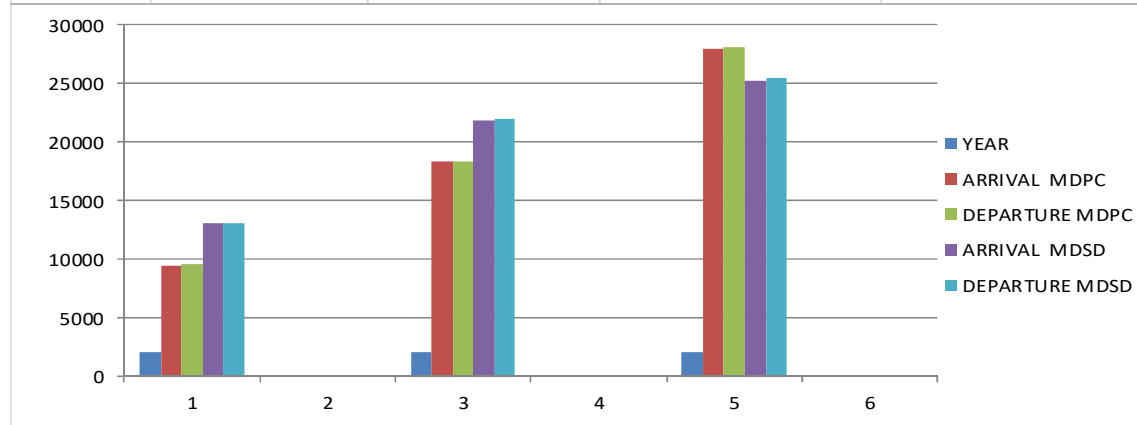




**CANSO**



YEAR	ARRIVAL MDPC	DEPARTURE MDPC	ARRIVAL MDSD	DEPARTURE MDSD
2020	9502	9540	13070	13044
2021	18346	18400	21836	22009
2022	27931	28106	25245	25472

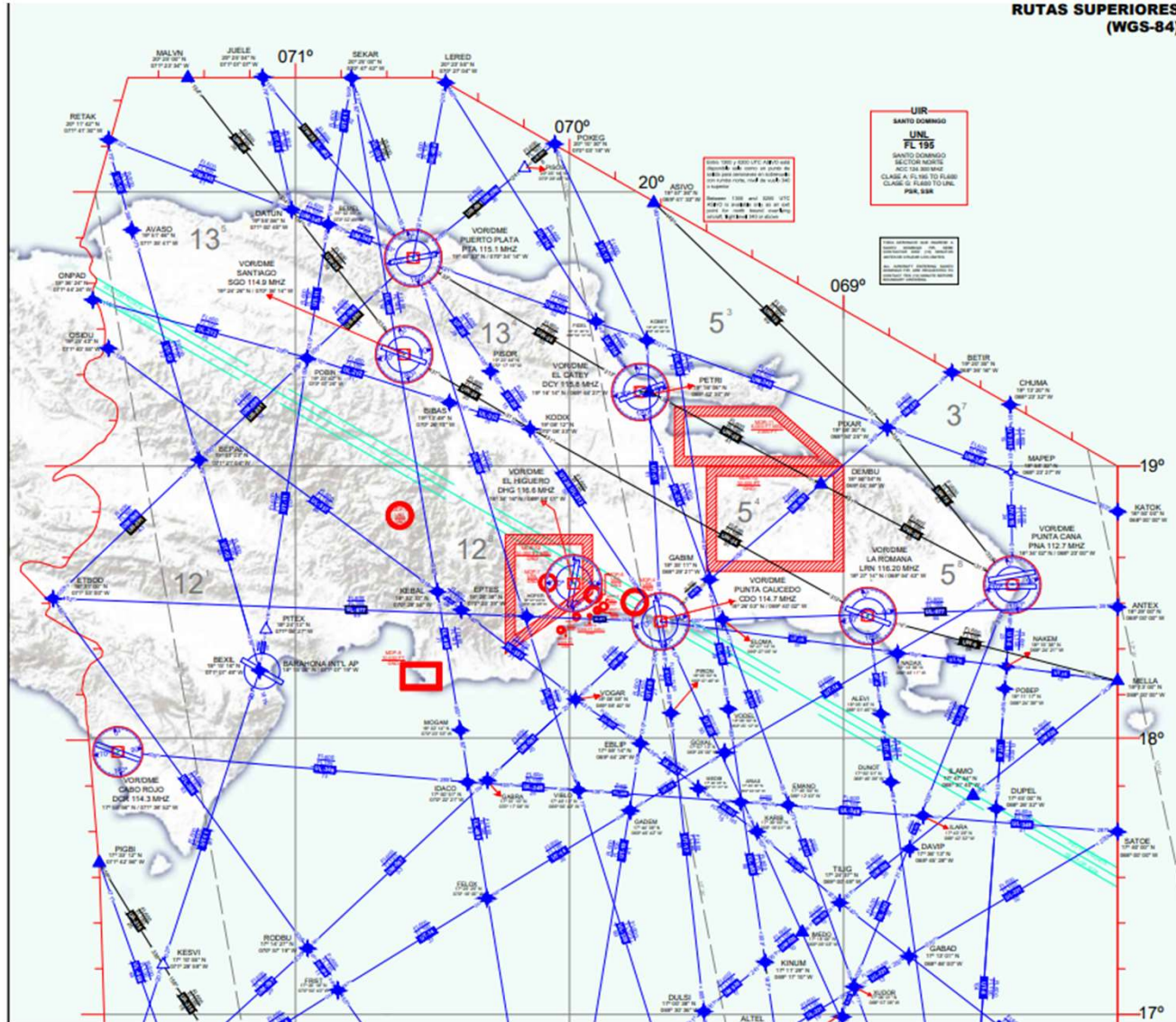




## CHALLENGES

- 1. IN ORDER TO HANDLE SAFELY AN INCREASED AMOUNT OF FLIGHTS IN THE SAME SIZE AIRSPACE AS DESCRIBED BEFORE .
- 2. TMI MIT 20 OR 25 DOES NOT LOOK THE BEST ONE.
- 3. IMPOSSING SLOTS MAYBE POSSIBLE BUT NOT PRACTICAL FOR THE STOCKHOLDERS AND PASSENGERS.
- 4. ATC STAFF NEED TO BE TRAINED PROPERLY FOR ADJUSTMENT TO THE NEW FEATURE WITH NEW TECHNOLOGY.

RUTAS SUPERIORES  
(WGS-84)







## RECOMMENDATIONS

- 1. START WORKING WITH ATM/PBN FOR AN AIRSPACE REDESIGN PROJECT.
- 2. THE POSSIBLE REDESIGNED AIRSPACE SHOULD INCLUDE TO DIVIDE VERTICALLY, FOR EXAMPLE FROM FLIGHT LEVEL 300 AND UP TO CREATE ANOTHER SECTOR.
- 3. CREATING ONE OR TWO MORE SECTORS VERTICALLY WILL TAKE PRESSURE OFF TO THE NORTHERN SECTOR.
- 4. A TRIAL PROGRAM CAN BE COORDINATED WITH NEIGHBORING FACILITIES AT ANY TIME.



THANKS VERY MUCH



•

• GOD BLESS YOU ALL

# CADENA Next Steps: Brainstorm Session

Joe Hof and Al Castillo

# CADENA Next Steps



Your ideas and input for the future of CADENA





# End of Day One

The meeting will resume tomorrow at 9:00 AM EST (1400 UTC)

# Thank you!



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# 14<sup>th</sup> CADENA Regional Implementation Group Meeting (Day Two)

Date: Tuesday, February 14, 2023

# Agenda February 14, 2023



<b>Tuesday February 14, 2023</b>	
<b>Time</b>	<b>Topic</b>
<b>09:00 – 09:15</b>	<b>Welcome and Agenda</b>
<b>09:15 – 09:45</b>	<b>SENEAM SDR Trial</b>
<b>09:45 – 10:15</b>	<b>Regional SDR Next Steps: TTCAA</b>
<b>10:15 – 10:45</b>	<b>Break</b>
<b>10:45 – 11:15</b>	<b>Any Other Items?</b>
<b>11:15 – 11:30</b>	<b>14<sup>th</sup> CADENA RIG Meeting Action Item Review</b>
<b>11:30 – 11:45</b>	<b>CADENA Closing Remarks</b>
<b>11:45 – 12:45</b>	<b>Lunch</b>

# CADENA Next Steps: Brainstorm Review



- Develop a method of coordinating TMMs via the CADENA OIS instead of issuing TMMs via NOTAM. Possibly a Traffic Management Log. Road Map to get there.
- Develop a process to systematically conduct ATFM performance reviews.
  - Did the ATFM initiative work as intended?
  - When to conduct ATFM performance reviews?
- Consider “outside the box” methods to resolve regional challenges.
- Involve stakeholders in the possibility of solving some regional terminal challenges through airline scheduling.
- Consider TMAs as part of airspace optimization (i.e., are there TMA designs causing chokepoints)
- Involve tourist industry representatives when developing solutions to terminal challenges in the region.
- Identify top agencies booking flight to/from MMUN to see how they can help mitigate terminal challenges at MMUN.
- Have CADENA adopt a continued improvement methodology.
- Invite representatives from the various ATM systems to brief on how their systems support FRA.
- **Include Albuquerque and Los Angeles ARTCCs in the CADENA process.**
- Increase data exchange between regional ANSPs and the FAA to improve demand information in the region.
- **Invite Turks and Caicos to participate in CADENA.**







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# SENEAM SDR Trial Overview

Memo Manzo

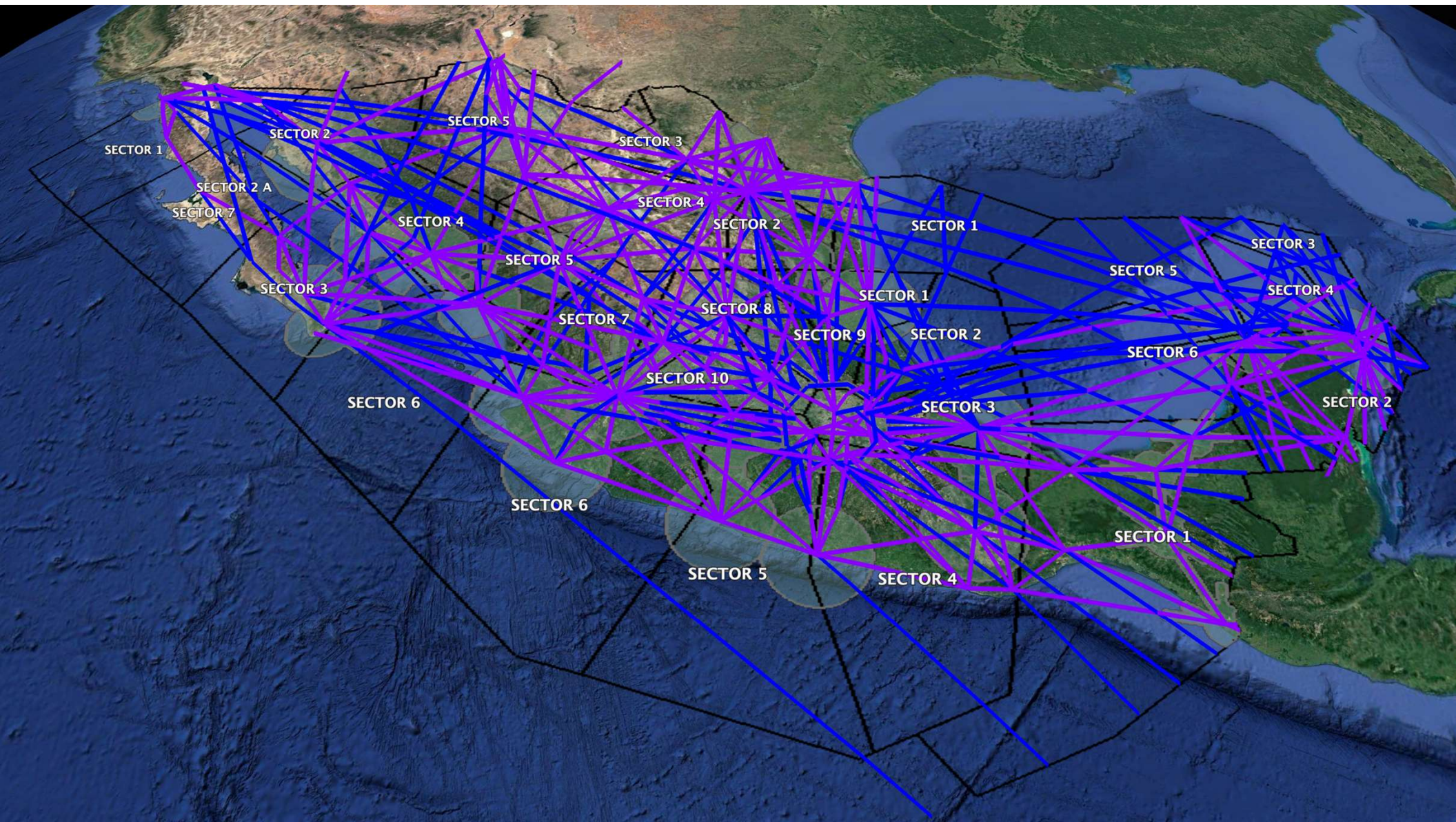
# STRATEGIC DIRECT ROUTING - CIIFRA

# SENEAM SDR TRIAL

AO/TF/2 - ATFM/TF/4 - CIIFRA/6 MIAMI, FL  
FEBRUARY 2023







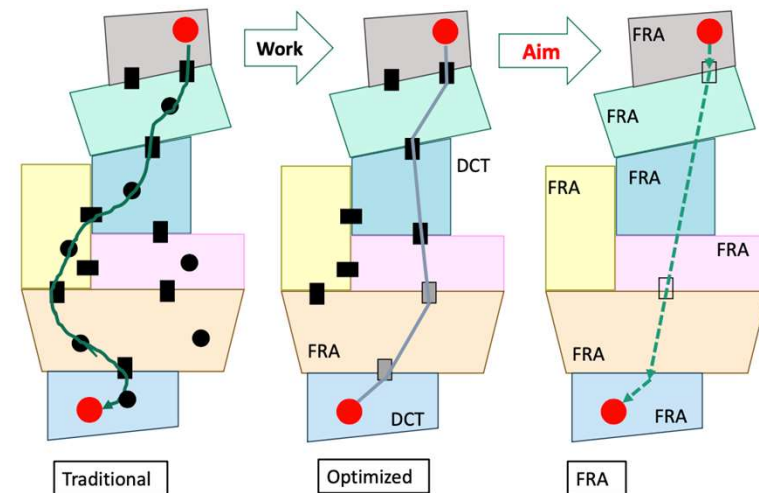
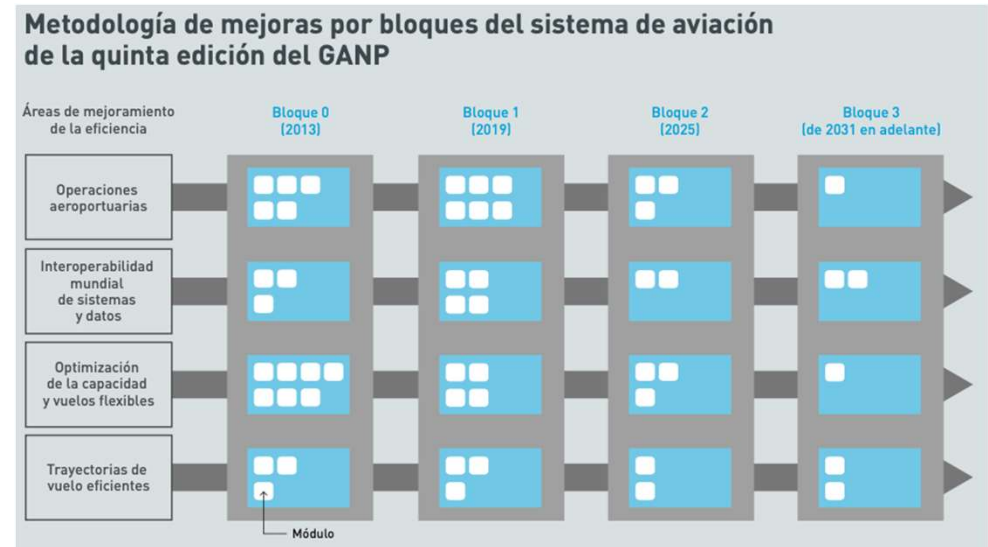


# GLOBAL AIR NAVIGATION PROGRAM

GANP/ASBU Elements: GOAL

FRTO-B0/1 (DCT routing) 2013

FRTO-B1/1 (FRA) 2019

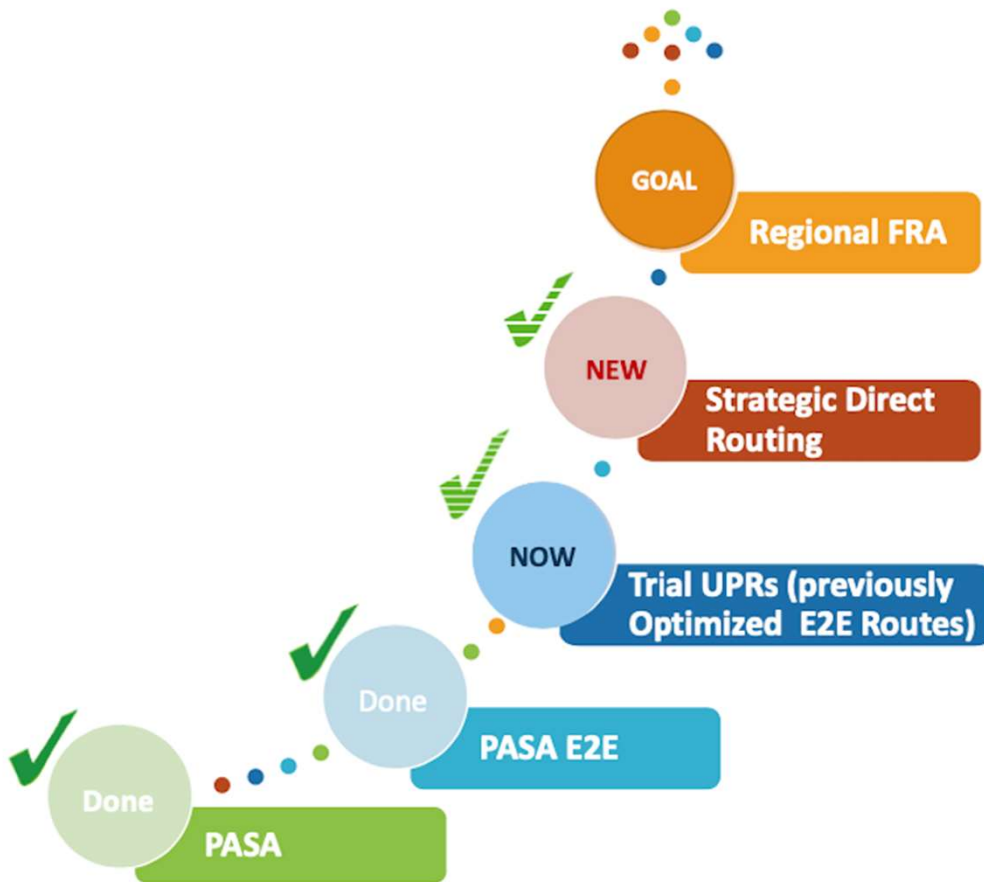


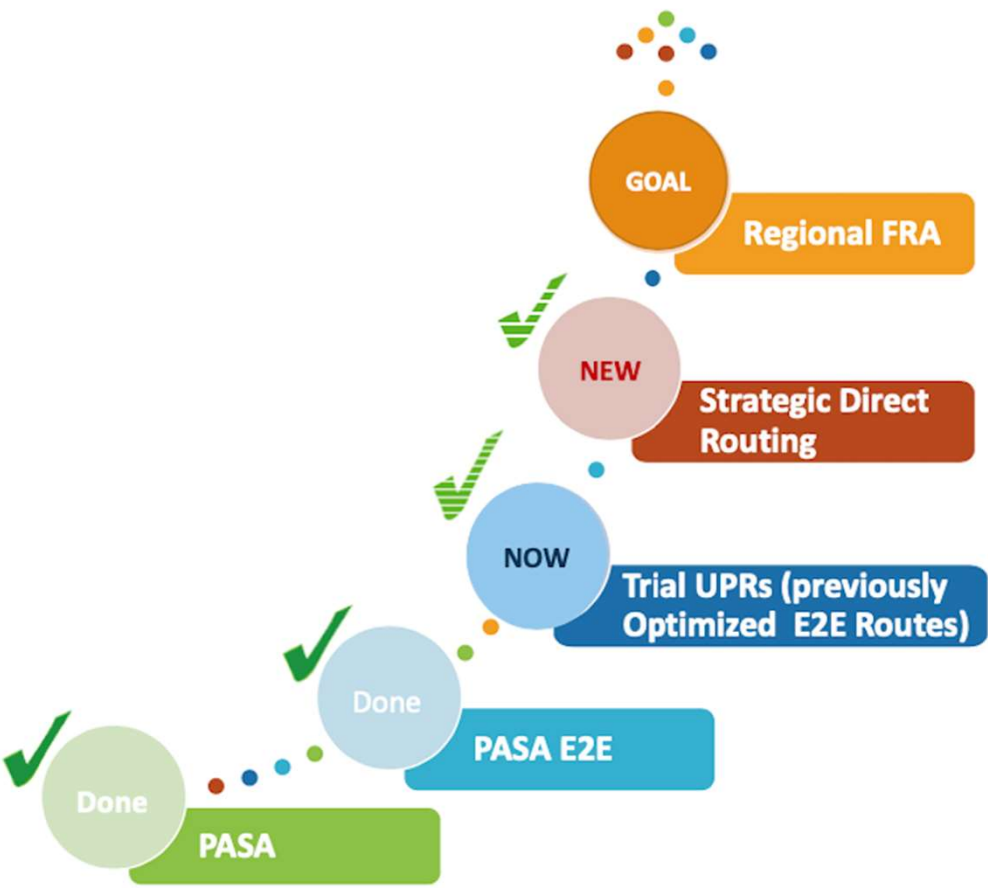
# GLOBAL AIR NAVIGATION PROGRAM

GANP/ASBU Elements:

FRTO-B0/1 (DCT routing)

FRTO-B1/1 (FRA)

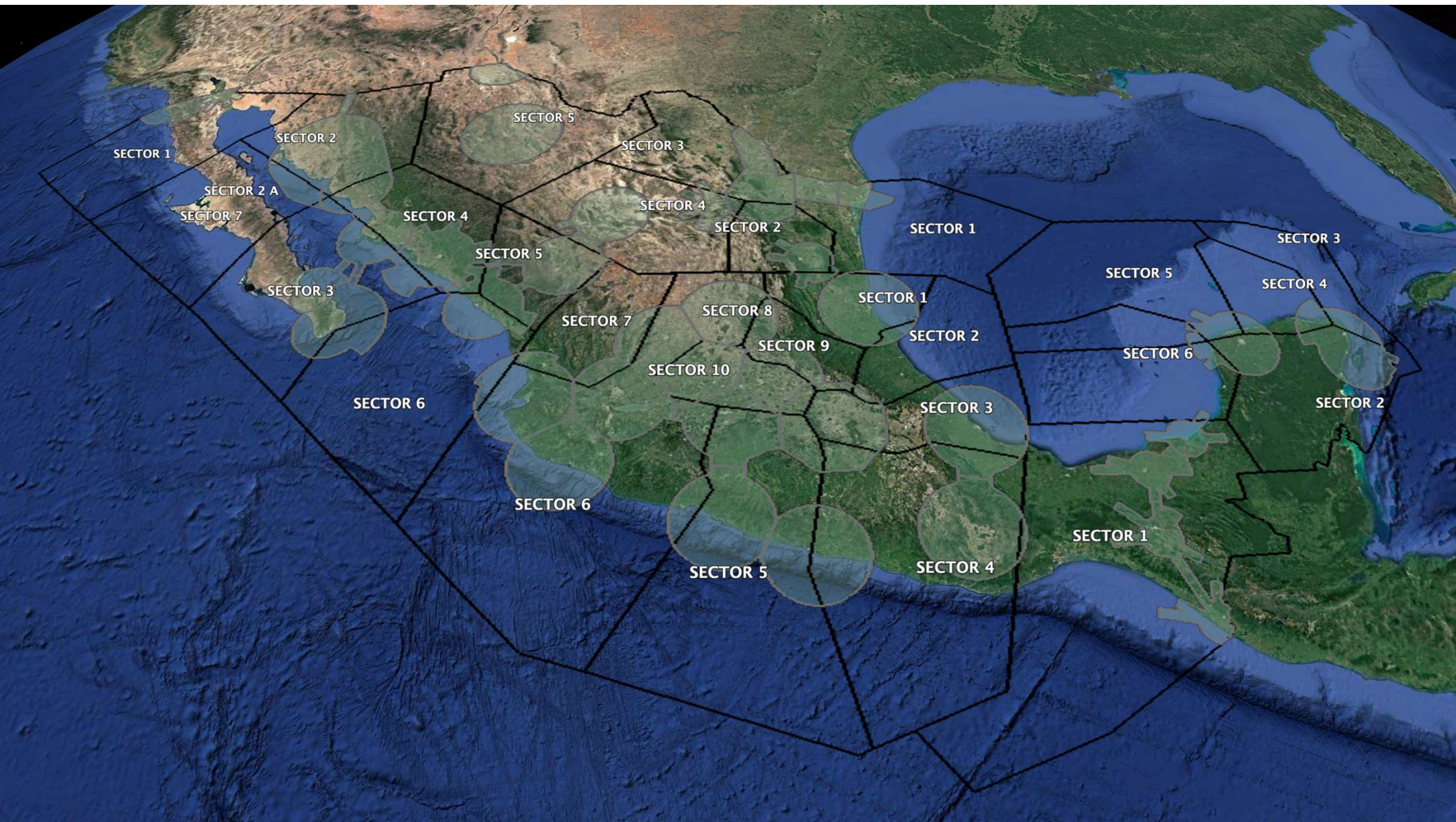




## GLOBAL AIR NAVIGATION PROGRAM







## OBJECTIVES:

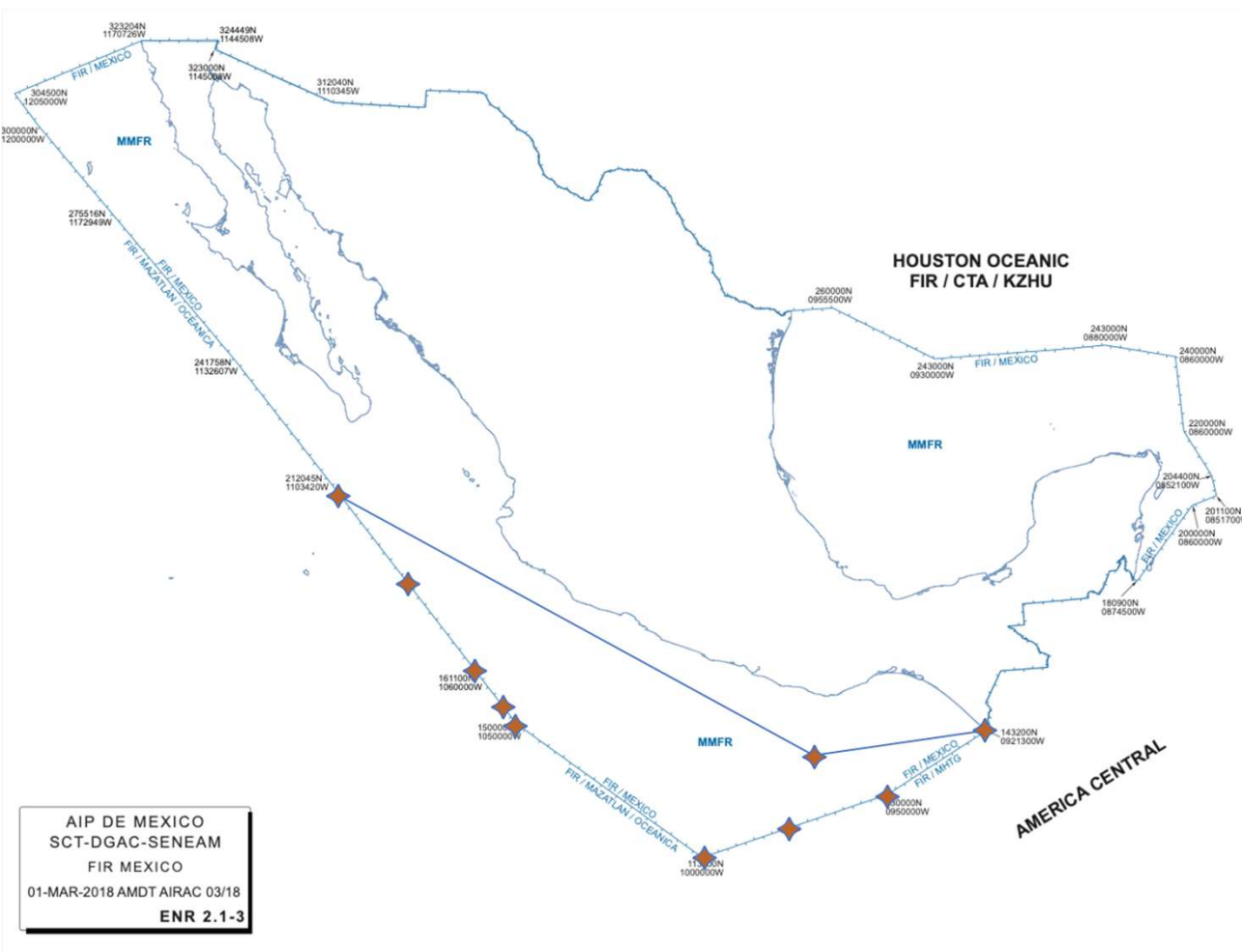
Verify the successful coordination of CPLs between ACCs, and with adjacent ANSPs. ✓

Analyze the functionality of the FPCP. ✓

Check the adequate ATC usage of the RER (reroute) function in case of Wx deviations or vectoring. ✓

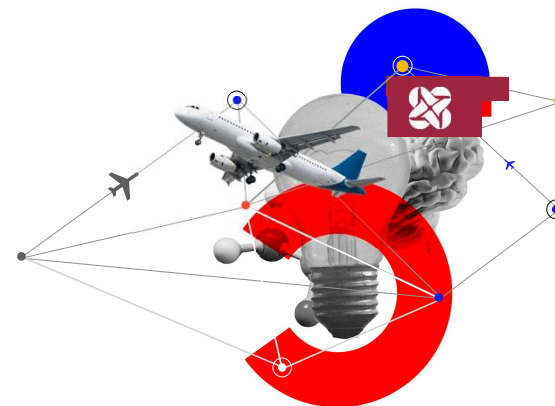






## SDR STRATEGIC DIRECT ROUTING

SDR Airspace only with surveillance and comms range.



TIME:  
0500Z - 1200Z



**AIR SPACE:**

At or above FL290, within the MÉXICO FIR, except on the portion within: 212045N 1103420W, 135242N 0964242W, 143200N 0921300W, 130000N 0950000W, 121357N 0973611W, 113000N 1000000W, 150000N 1050000W, 152008N 1051656W, 161100N 1060000W, 181326N 1074545W.

**RULES:**

The Strategic Direct Routing (SDR) is established in the MÉXICO FIR, as a Direct Route (DCT) inserted in the flight plans, using published fixes, waypoints and nav aids, with the purpose of planning more efficient routes. The FPL using SDR can be applied using the next procedures:

Table 2 of semicircular cruising IFR altitudes must be applied (AIP ENR 1.3-2).

Flight Plan must be filed using published fixes, waypoints or nav aids.

The distance between such waypoints, fixes and nav aids inserted in the flight plan will be no greater than 400 NM (or 60 minutes flight).

The flight plan will include a significant fix, waypoint or nav aid in the limits of the MÉXICO FIR.

Flight plans involving departures from airports within the MÉXICO FIR, must include the last point of the appropriate SID.

Flight plans involving arrivals to airports within the MÉXICO FIR, must include the first point of the appropriate STAR.

For airports with no published STAR, fixes, waypoints or nav aids to join the published routes must be included, at a distance of no less than 50NM from the destination airport.

**1+ HOUR  
IN MARCH**

**SDR STRATEGIC  
DIRECT ROUTING**





UNITED



American  
Airlines



**SDR STRATEGIC  
DIRECT ROUTING**

---

**PARTICIPATING AIRLINES  
ARE NOW 7**





**SDR STRATEGIC  
DIRECT ROUTING**

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**PARTICIPATING AIRLINES  
ARE NOW 7**



**AIR CANADA**



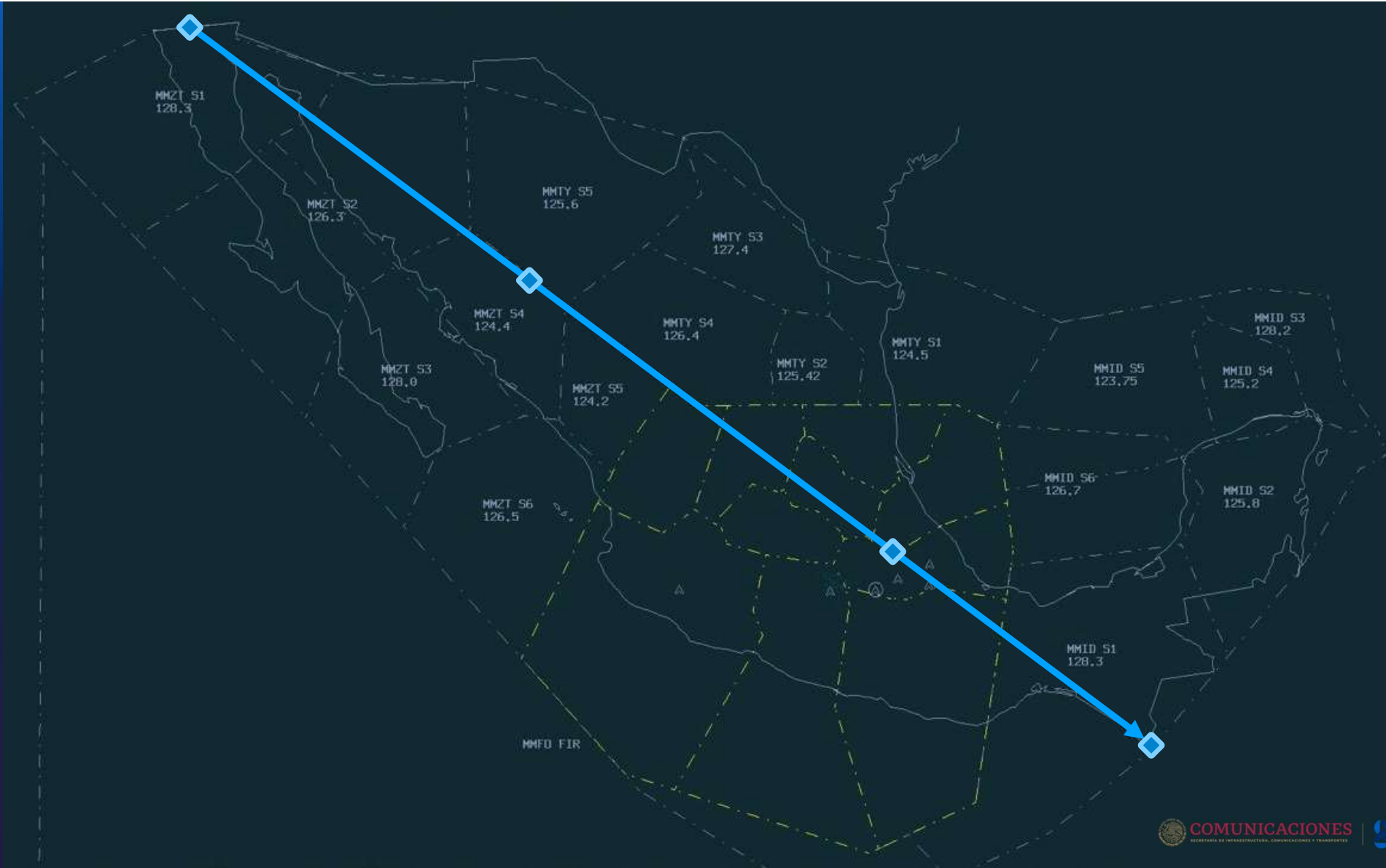
The JetBlue logo is displayed in white lowercase letters on a dark blue square background. The 'j' is lowercase, while 'etBlue' is in a mix of lowercase and uppercase. A registered trademark symbol (®) is located at the top right of the 'e'.

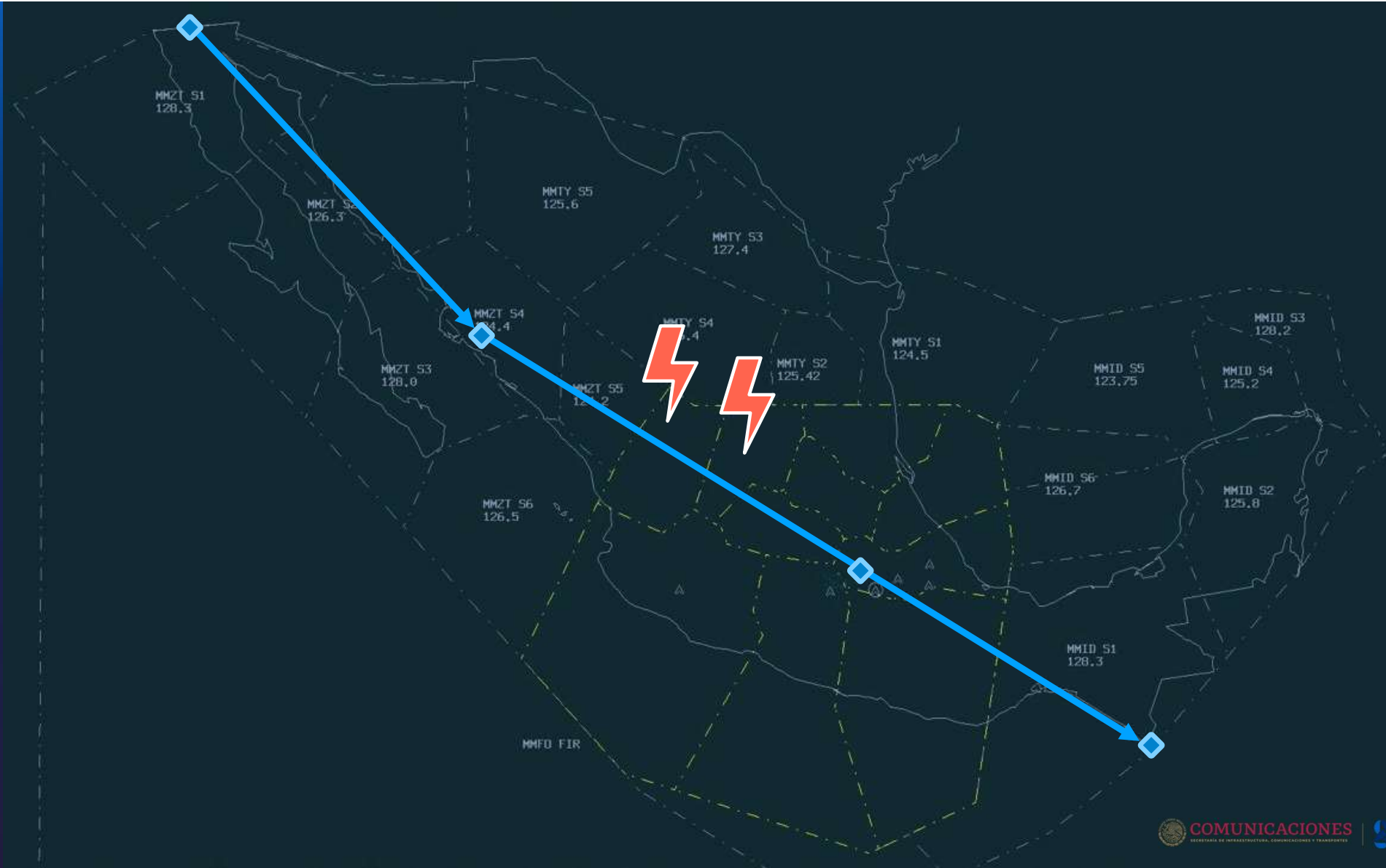
**SDR STRATEGIC  
DIRECT ROUTING**

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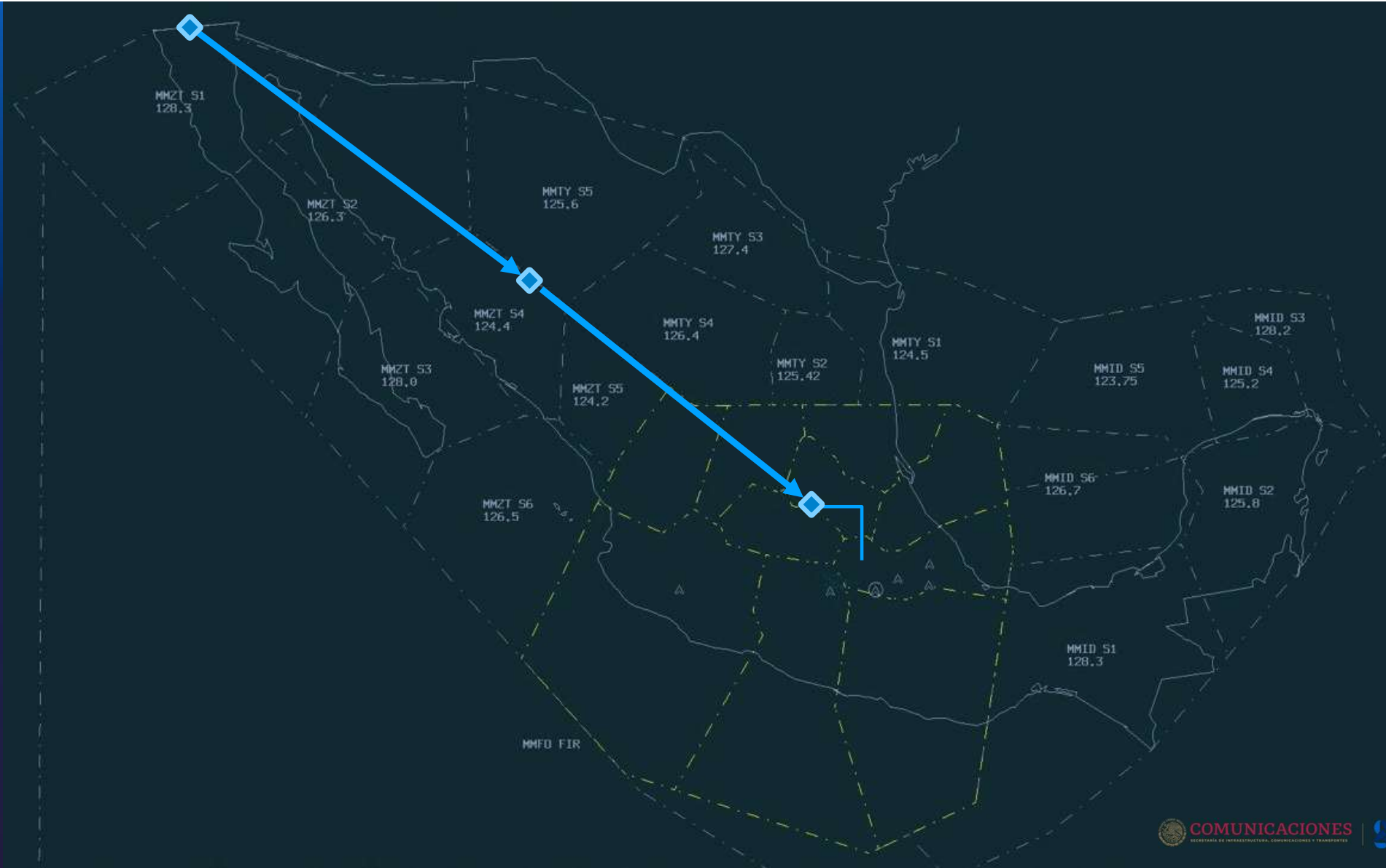
**AT ANY MOMENT  
WILL BE 8**



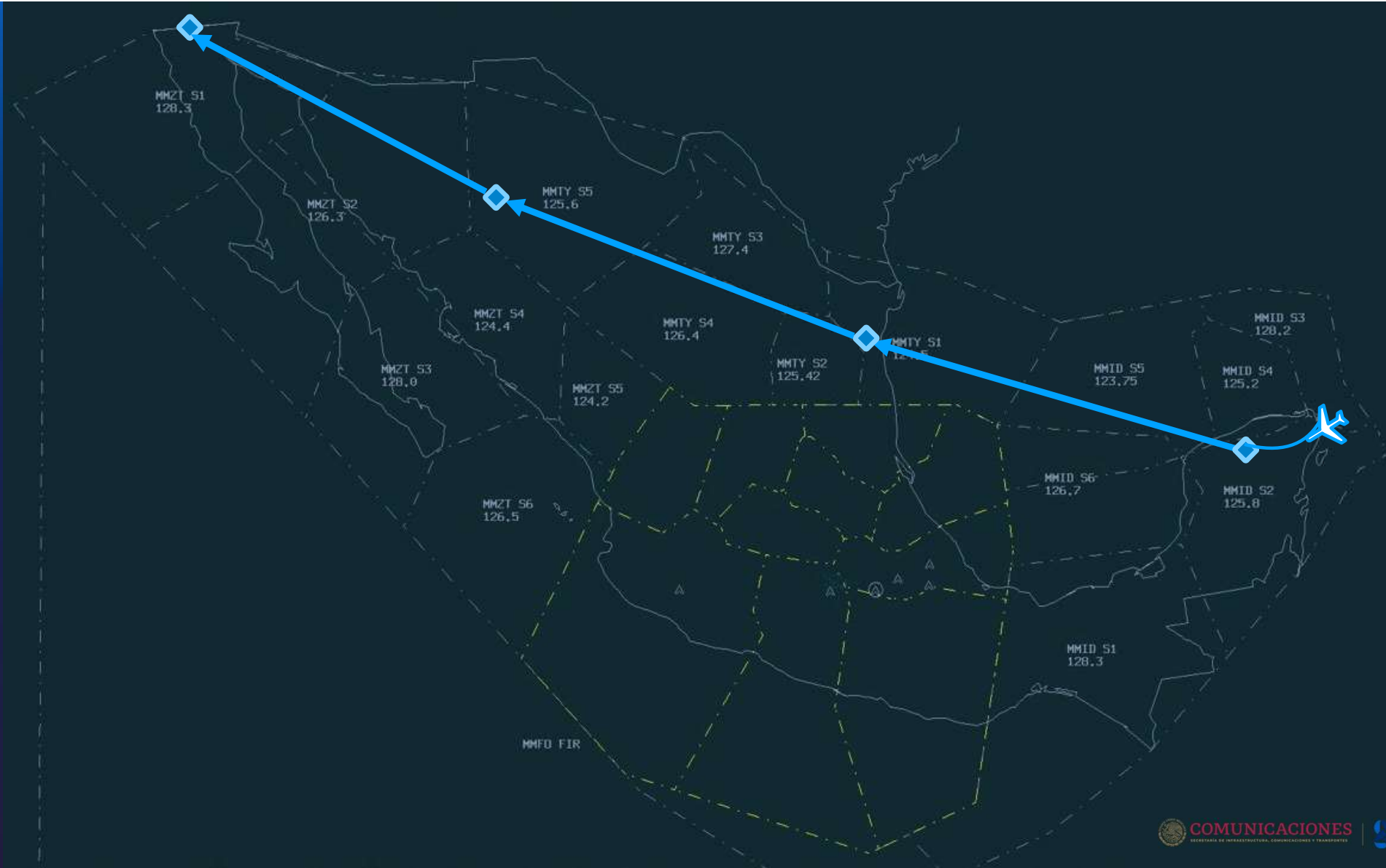




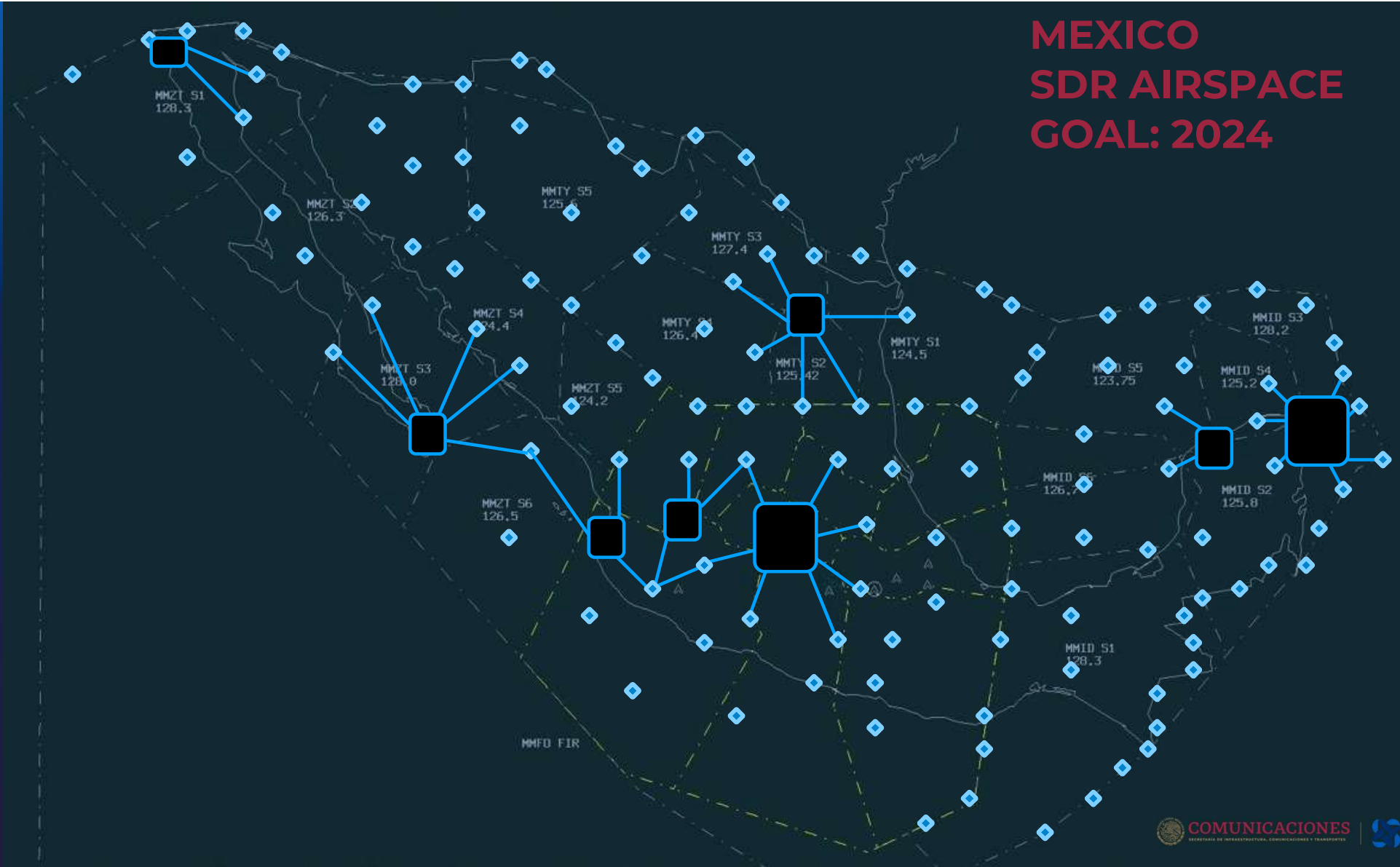








# MEXICO SDR AIRSPACE GOAL: 2024





# GRACIAS

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**JOSÉ GUILLERMO MANZO ESPADAS**

EMAIL: [manzowaze@gmail.com](mailto:manzowaze@gmail.com)

WHATSAPP: 52 999 5753450



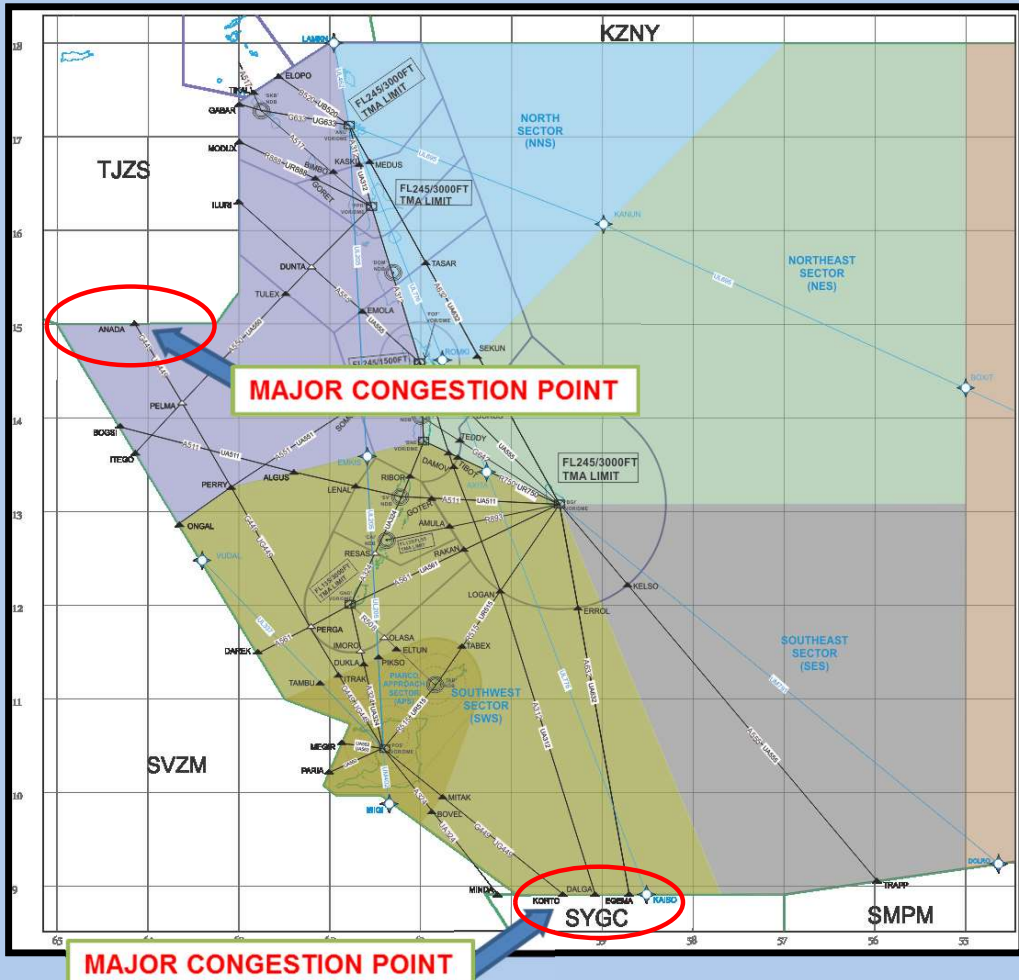
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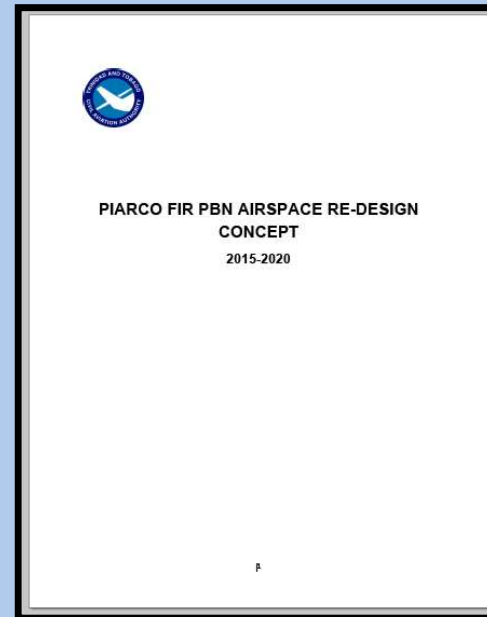
# TTCAA Update & Regional SDR Next Step?

Riaaz Mohammed

## PIARCO (TTZP) CONTINENTAL AIRSPACE BEFORE AUG 17 2017



- ATS ROUTES WERE NAVAID CENTRIC
- CONGESTION AT THE PIARCO/SYGC/TJZS FIR BOUNDARY AND AT VORs
- INEFFICIENT ATS ROUTING SYSTEM
- ENROUTE AND ARRIVAL/DEPARTURE PATHS ARE COINCIDENT
- LIMITED SIDs/STARs in ECAR TMAs



## UPPER LEVEL RNAV 5 ROUTES IMPLEMENTED IN THE PIARCO (TTZP) CONTINENTAL AIRSPACE

### Airspace optimization

**NORTH SOUTH BIDIIRECTIONAL RNAV 5 ROUTES IMPLEMENTED USING CDM PROCESS WITH NEW YORK, SAN JUAN, GUYANA, VENEZUELA, SURINAME and BRAZIL (2017-2020)**

**EAST WEST BIDIIRECTIONAL RNAV 5 ROUTES IMPLEMENTED USING CDM PROCESS WITH VENEZUELA (JAN 2023)**

**BETTER CUSTOMER SERVICE FOR OUR AIRLINES AND OTHER AIRSPACE USERS**

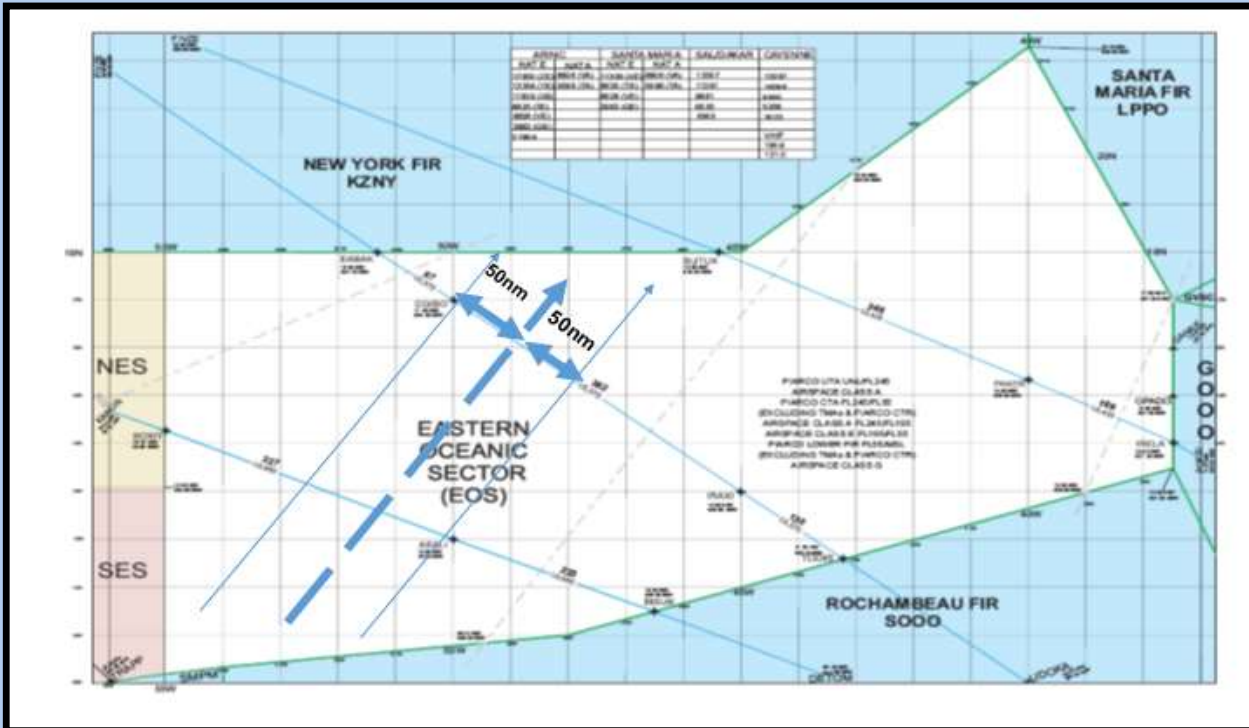






## PIARCO (TTZP) OCEANIC AIRSPACE

THE REDESIGN OF THE PIARCO OCEANIC AIRSPACE TO ACCOMMODATE FLIGHTS UTILIZING RNAV 10 SEPARATION STANDARD (50NM LATERAL SEPARATION)



RNAV 10 will enable a reduction from 100nm to 50nm **lateral separation**

**Longitudinal separation** shall be:

- Fifteen (15) minutes, or
- The application of Mach number technique based on time.

**BETTER CUSTOMER SERVICE  
FOR OUR AIRLINES AND  
OTHER AIRSPACE USERS**



**AIRSPACE OPTIMIZATION IN THE PIARCO FIR**

**GRACIAS POR SU ATENCIÓN  
THANK YOU FOR YOUR ATTENTION**

**ANY QUESTIONS/COMMENTS  
CUALQUIER PREGUNTA / COMENTARIOS**



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**Any Other Items?**



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# 14<sup>th</sup> CADENA RIG Meeting Action Item Review

Al Castillo and Joe Hof

# 14th CADENA RIG Meeting Action Item Review

- **ACTION ITEM:** [COMPLETE] Al Castillo will include the Cuban AIC/AIP publication concerning prior permission requests with the meeting minutes.
- **ACTION ITEM:** [COMPLETE] Al Castillo will notify ZHU that the March 8th ZHU GOMEX meeting conflicts with the NCF meeting and will try to coordinate a better date.
  - The ZHU GOMEX Meeting has been rescheduled for March 16th 1:00 PM (EST)
- **ACTION ITEM:** CADENA will complete the coordination and prepare the offload trial for traffic departing MMUN and destined KMIA, KFL, KMCO, 1600 UTC to 2300 UTC (Dates TBD).
- **ACTION ITEM:** CADENA leadership will research the best way to expand the work and role of the Virtual Support Team and present its findings to the RIG – target completion date September 30, 2023.
- **ACTION ITEM:** IATA will share the CIIFRA briefing and demonstrated benefits with the Regional Coordination Groups.
- **ACTION ITEM:** CADENA leadership will gather feedback on the twice-a-week CADENA Planning Web Conference through coordination with the RIG, consider conducting the web planning conferences three times per week (Monday, Wednesday, Friday) – target completion date November 30, 2023.
- **ACTION ITEM:** CADENA leadership will invite ZLA and ZAB to participate in CADENA.



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# CADENA 14<sup>th</sup> RIG Meeting: Closing Remarks

Javier Vanegas

Thank You!