

P/01 Rev. Agenda Item 2 Route Optimization Trials

For: ICAO NACC 2nd Airspace Optimization Meeting

By: CADENA Team

Date: November 18, 2021

PASA Route Optimization

Completed 90-Day Trials

KATL..SPJC..KATL: Jul 9, 2021-Oct 7, 2021		
Savings	90-Day	1-Year
Flight minutes:	515	2,089
Fuel (lb):	145,425	589,779
CO2 (kg):	208,445	845,360
Ops cost (\$):	94,693	384,033

KATL..SBGR..KATL: Jul 27 - Oct 25, 2021		
Savings	73-Day*	1-Year
Flight minutes:	235	1,175
Fuel (lb):	62,035	310,175
CO2 (kg):	88,918	444,590
Ops cost (\$):	41,925	209,625

* Note: Trial for 90 days and data available for 73 days.

TTPP..KMIA..TTPP: Aug 6 - Nov 3, 2021		
Savings	90-Day	1-Year
Flight minutes:	256	1,038
Fuel (lb):	46,780	189,719
CO2 (kg):	67,052	271,934
Ops cost (\$):	39,494	160,170

- Coordinated to extend the use of PASA optimized route for one year.
 - KATL-SPJC-KATL until October 7, 2022
 - KATL-SBGR-KATL until October 25, 2022
 - TTPP-KMIA-TTPP until November 4, 2022
- Publish trial completed PASA optimized route in AIP

Ongoing 90-Day Trial

KIAH..MMPR..KIAH	90-Day Trial	until Nov 30
Data duration:	Sep1 – Nov 16 (77 days)	
Saved minutes:	480 minutes	
Saved fuel:	45,206 lb	
Saved CO2:	64,796 kg	
Saved Ops cost:	\$ 62,709 (USD)	

PASA Route Optimization – Proposed 90-Day Trial



SAEZ..KMIA..SAEZ



KATL..SCEL..KATL



KATL..SAEZ..KATL



TTPP..KJFK..TTPP



KIAH..MMSD..KIAH

- FDX plans to participate in early 2022
- Airline volunteers for the 90-Day trial are welcome
- Will conduct trials given circumstances are positive
- Under consideration is the “opportunity analysis” of busy city pairs

Next Route Optimization - SAEZ..KMIA..SAEZ

Continue to follow the established processes

- Phase 1: Pilot route is selected
- Phase 2: Airspace capability readiness is checked
- Phase 3: PASA Optimized Route Validation Process
- Phase 4: PASA Optimized Route Approval Process
- Conduct the 90-day trial

Route Validation and Approval Process



Northbound: SAEZ – KMIA (ARG1302)

Flight	ETE	Burn (kg)
DIRECTS	8:16	53252
Current	8:18	53392
Savings	0:02	140

Directs: SAEZ BIVAM2A BIVAM UW8 PAR UL417 **PABON EJA KILER** UM779 ZEUSS VIICE1 KMIA

Current: SAEZ BIVAM2A BIVAM UW8 PAR UL417 PABON UB689 VVC UG444 EJA UM782 USVUS UM779 ZEUSS VIICE1 KMIA

Route Validation and Approval Process

Northbound: SAEZ – KMIA (ARG1302)

FIR	CURRENT ROUTE	REQUESTED ROUTE	APPROVAL
SAEF	SAEZ BIVAM2A BIVAM UW8 PAR	NO CHANGE	N/A
SACF	PAR UL417	NO CHANGE	N/A
SLLF	UL417	NO CHANGE	N/A
SBAZ	UL417	NO CHANGE	N/A
SKED	UL417 PABON EJA	PABON EJA KILER	YES/NO IF NO, OPTIONS
SKEC	EJA KILER	PABON EJA KILER	YES/NO IF NO, OPTIONS
MKJK	KILER UM779	KILER UM779 ZEUSS	YES APPROVED
MUFH	UM779 ZEUSS	KILER UM779 ZEUSS	YES/NO IF NO, OPTIONS
KZMA	ZEUSS VIICE1 KMIA	NO CHANGE	N/A

Route Validation and Approval Process



Southbound: KMIA – SAEZ (ARG1305)

Flight	ETE	Burn (kg)
DIRECTS	8:36	51691
Current	8:38	51822
Savings	0:02	131

Directs: KMIA GWAVA1 URSUS UP406 **BILSI DCT EMABU** UP525 SJE UB689 LET UP525 RCO UL417 LOKOX UM784 BOLET UL404 ISOPO UT672 MULTA UW24 SNT SNT6A SAEZ

Current: KMIA GWAVA1 URSUS UP406 BILSI UL795 LENAX UL417 NEFTU UP525 SJE UB689 LET UP525 RCO UL417 LOKOX UM784 BOLET UL404 ISOPO UT672 MULTA UW24 SNT SNT6A SAEZ

Route Validation and Approval Process

Southbound: KMIA – SAEZ (ARG1305)

FIR	CURRENT ROUTE	REQUESTED ROUTE	APPROVAL
KZMA	KMIA GWAVA1 URSUS	NO CHANGE	N/A
MUFH	URSUS UP406 BILSI DCT EMABU	BILSI EMABU	YES/NO IF NO, OPTIONS
MKJK	EMABU UP525	EMABU UP525	YES APPROVED
SKEC	UP525	NO CHANGE	N/A
SKED	UP525 SJE UB689 LET	NO CHANGE	N/A
SBAZ	LET UP525 RCO UL417	NO CHANGE	N/A
	UL417 LOKOX UM784 BOLET		
SLLF	UL404	NO CHANGE	N/A
SACF	UL404 ISOPO	NO CHANGE	N/A
	ISOPO UT672 MULTA UW24 SNT		
SAEF	SNT6A SAEZ	NO CHANGE	N/A

Next Steps

- Coordinate to obtain the approval of the trial routes
- Conduct the 90-day trial
- Gather data, calculate the benefits, and analyze data
- Publish the route in AIP



Question?

Thank you!

CANSO