

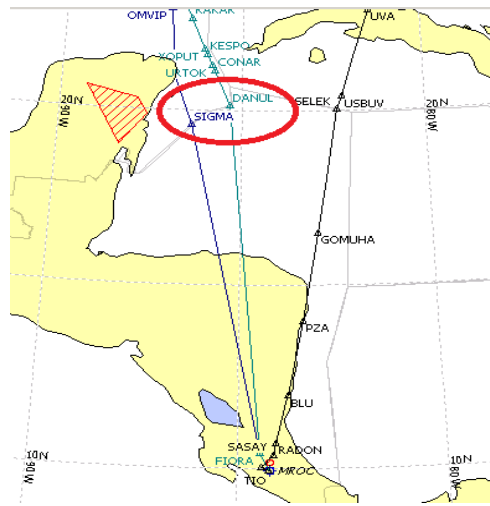
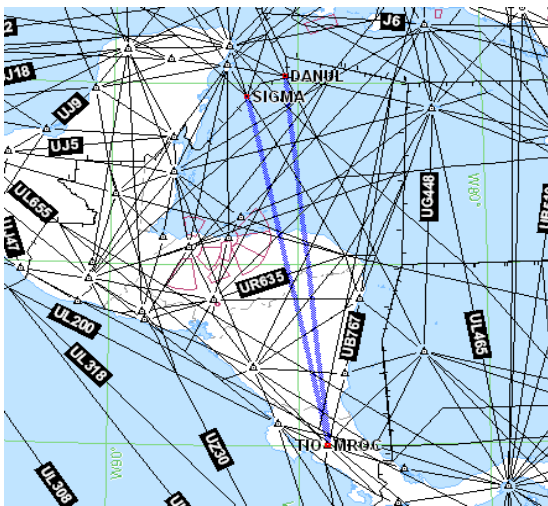
4-xx	F L O W S - CITY PAIRS					
	SAN JOSE (MROC) - CHICAGO (KORD)					
	OPTIMIZATION AIMS:					
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)
	X			X	X	
STATES CONCERNED			FIR CONCERNED		ICAO REGIONS	
COSTA RICA/NICARAGUA/HONDURAS/MEXICO			CENAMER/MERIDA			

ATS ROUTES	ROUTE to be DELETED	CURRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM	
				X				X			
	POINTS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG
				MROC	N09 59.6	W084 12.5		MROC	N09 59.6	W084 12.5	
				TIO	N09 59.0	W084 14.2		TIO	N09 59.0	W084 14.2	
				SIGMA	N19 37.0	W086 22.0		DANUL	N20 11.4	W085 20.5	
TOTAL DISTANCE		0		TOTAL DISTANCE		593NM		TOTAL DISTANCE		617NM	

R E C O R D S					
Proposed by	United Airlines (UAL)	Reviewed by:		Reviewed by	
<p>ADDITIONAL N-S CONNECTIVITY FROM MROC TO SIGMA/DANUL THEN TO CENTRAL US. ADDITIONAL PAYLOAD CAPABILITY. REDUCED FLIGHT DISTANCE. CONNECTIVITY IMPROVEMENT UZ593/UM659 FROM SOUTH AMERICA. KINGSTON/HAVANA OFFLOAD TO/FROM EASTERN US.</p>					

FLIGHTS PER MONTH										NOTES	
TYPE	A320	A340	B737		B738	B763	B772		E190	TOTAL	SEASONAL
AMOUNT					16						

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	
25NM	630	



Yr	To	Rt	Via	Typ	Reg	Cl	Altn	Dist	AFL	TripF	Time	F
2	KORD	Z1	DANUL PROPOSAL	38WE7	N7850911			2092	360	28047	4.530	
5	KORD	Z3	SIGMA PROPOSAL	38WE7	N7850911			2088	360	28074	4.527	
*1	KORD	Z2	NORMAL FL RTE	38WE7	N7850911			2113	360	28493	4.571	

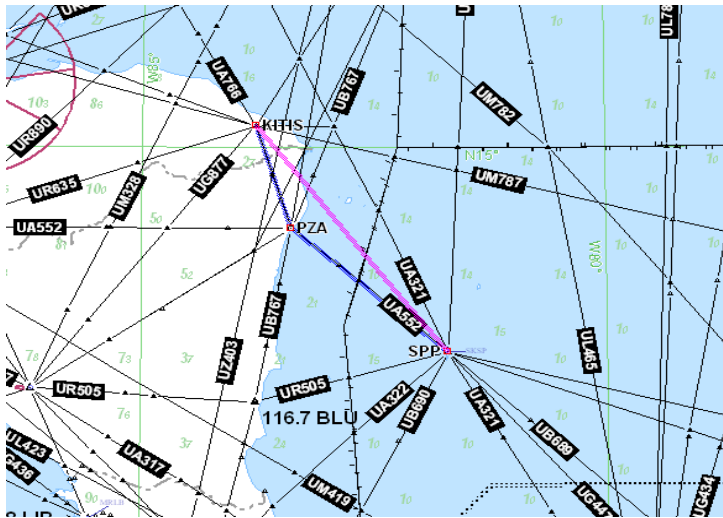
F L O W S - CITY PAIRS						
HOUSTON (KIAH) - PANAMA CITY (MPTO)/BOGOTA (SKBO)						
OPTIMIZATION AIMS:						
REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)	
X			X	X		
STATES CONCERNED			FIR CONCERNED		ICAO REGIONS	
HONDURAS/NICARAGUA/PANAMA			CENAMER			

ATS ROUTES	ROUTE to be DELETED	CURRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM		
		X		X	X							
KITIS UR899 PZA UA552 SPP	POINTS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE
	KITIS	N15 15.6	W083 46.7		KITIS	N15 15.6	W083 46.7					
	PZA	N14 02.7	W083 23.3		SPP	N12 34.9	W081 42.3					
	SPP	N12 35.0	W081 42.3									
	TOTAL DISTANCE		208NM	TOTAL DISTANCE		201NM	TOTAL DISTANCE					

R E C O R D S							
Proposed by	United Airlines (UAL)	Reviewed by:		Reviewed by		Reviewed by	
KITIS-SPP REALIGNMENT FOR EFFICIENCY							

FLIGHTS PER MONTH										NOTES
TYPE	A320	A340	B737	B738	B763	B772	E190	TOTAL		
AMOUNT				120						

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	
7NM	210	



Vr	To	Rt	Via	Typ	Reg	Cl	Altn	Dist	AFL	TripF	Time	F
1	SKBO	Z2	PROPOSAL	52RW	N17104	26	SKRG	1962	383	32124	4.260	
2	SKBO	Z1	CURRENT RTE	52RW	N17104	26	SKRG	1969	384	32273	4.274	

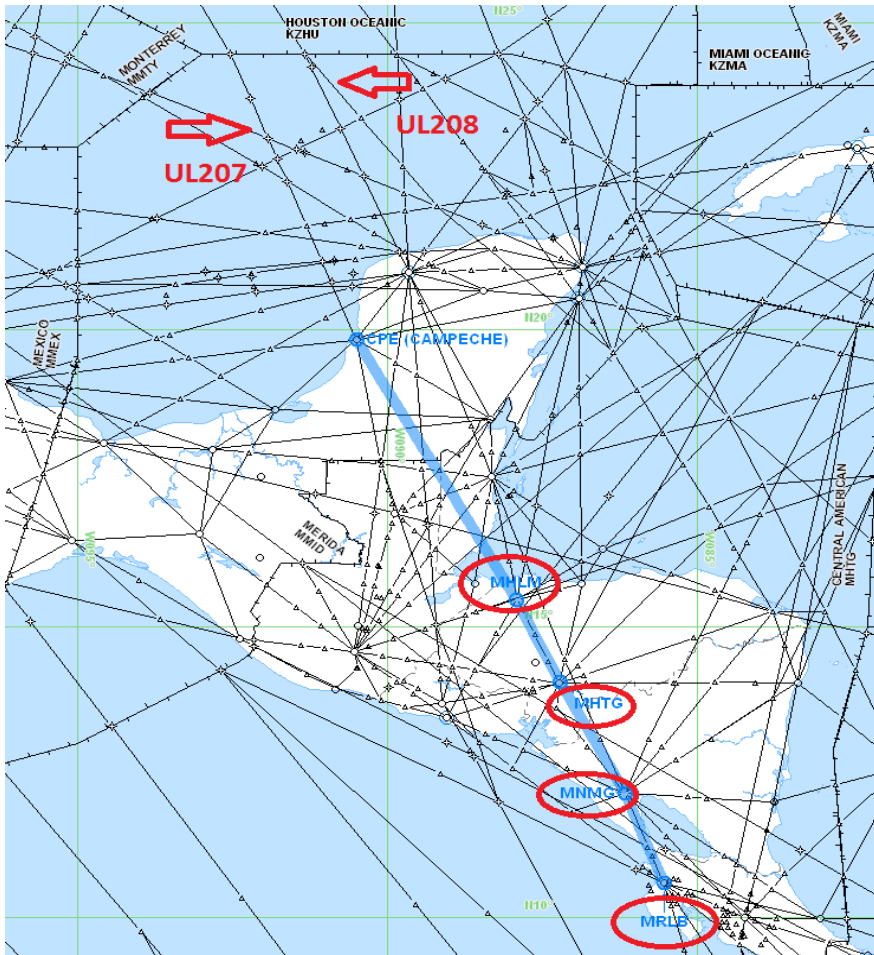
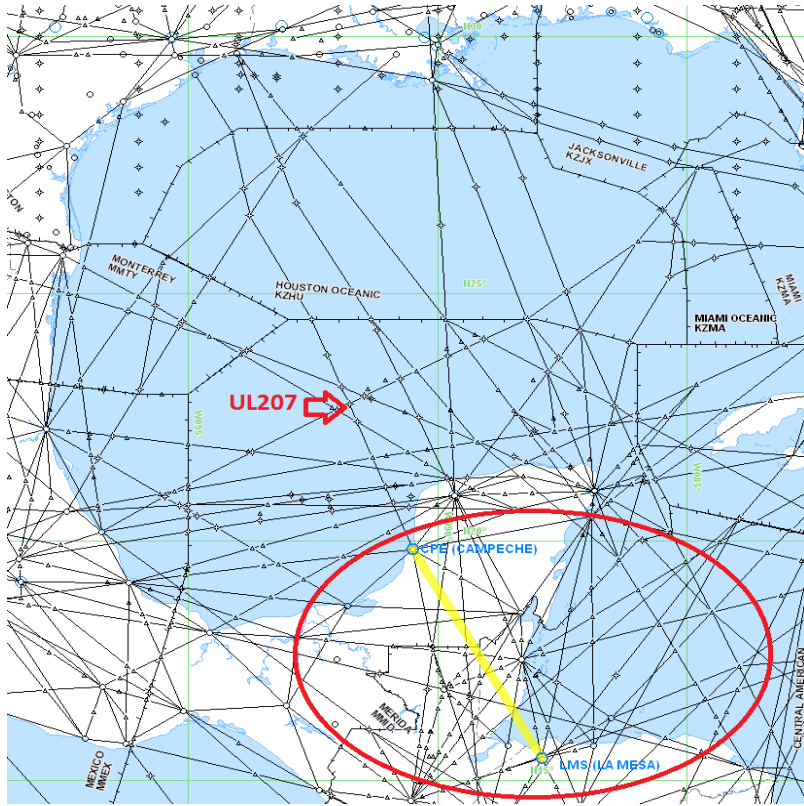
4-xx	F L O W S - CITY PAIRS					
	HOUSTON (KIAH) - MH**/MN**/MR**/SE**					
	OPTIMIZATION AIMS:					
	<small>REDUCE FLIGHT DISTANCE</small>	<small>ATC EFFICIENCY</small>	<small>HARMONIZ ATION</small>	<small>CONECTIVIT Y</small>	<small>FLOW IMPROVEMENT</small>	<small>OTHERS (SPECIFY)</small>
	X	X		X	X	
<small>STATES CONCERNED</small>			<small>FIR CONCERNED</small>		<small>ICAO REGIONS</small>	
MEXICO/HONDURAS/NICARAGUA/BELIZE			MERIDA/CENAMER			

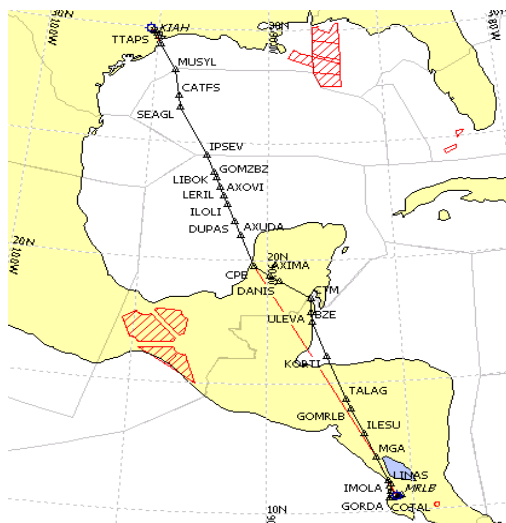
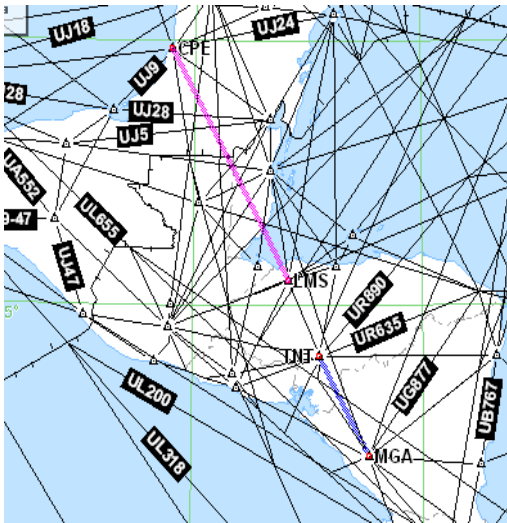
ATS ROUTES	<small>ROUTE to be DELETED</small>	<small>CURRENT ROUTE</small>	<small>NEW ROUTE</small>	<small>REALIGN</small>	<small>EXTEND</small>	<small>TRIM</small>	<small>NEW ROUTE</small>	<small>REALIGN</small>	<small>EXTEND</small>	<small>TRIM</small>		
	X			X			X					
TNT UA502 MGA/CPE-LMS	<small>POINTS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>
	<small>TNT</small>	N 14 01.7	W087 13.7		<small>TNT</small>	N 14 01.7	W087 13.7		<small>CPE</small>	N19 49.8	W090 30.2	
	<small>LMS</small>	N 13 36.8	W087 16.0		<small>MGA</small>	N 12 08.4	W086 10.5		<small>LMS</small>	N15 28.2	W087 54.5	
	<small>BERTA</small>	N 12 57.0	W086 46.4									
	<small>MGA</small>	N 12 08.4	W086 10.5									
TOTAL DISTANCE		134NM		TOTAL DISTANCE		129NM		TOTAL DISTANCE		301NM		

R E C O R D S							
<small>Proposed by</small>	United Airlines (UAL)	<small>Reviewed by:</small>		<small>Reviewed by</small>		<small>Reviewed by</small>	
<p style="color: red; font-size: 0.8em; margin: 0;">UL207 FLOW IMROVEMENT. UL208 OFFLOAD. TO ALLOW MORE EFFICIENT UL207 ACCESS FROM CENTRAL US TO VARIOUS ARIPOINTS SUCH AS MHLM/MHTG/MNMG/MRLB/MROC/SEQM</p>							

FLIGHTS PER MONTH										NOTES
<small>TYPE</small>	A320	A340	B737	B738	B763	B772	E190	TOTAL		
<small>AMOUNT</small>				350	60					

SAVINGS		NOTES
<small>DISTANCE (NM)</small>	26NM	<small>CO2 (KG)</small>
		410





Vr	To	Rt	Via	Typ	Reg	CI	Altn	Dist	AFL	TripF	Time
*4	MRLBZ1	PROPOSAL		39WE7	N61887	10		1333	350	18060	3.08
2	MRLBZ2	L208		39WE7	N61887	10		1335	350	18120	3.09
3	MRLBZ3	L207		39WE7	N61887	10		1359	350	18353	3.12

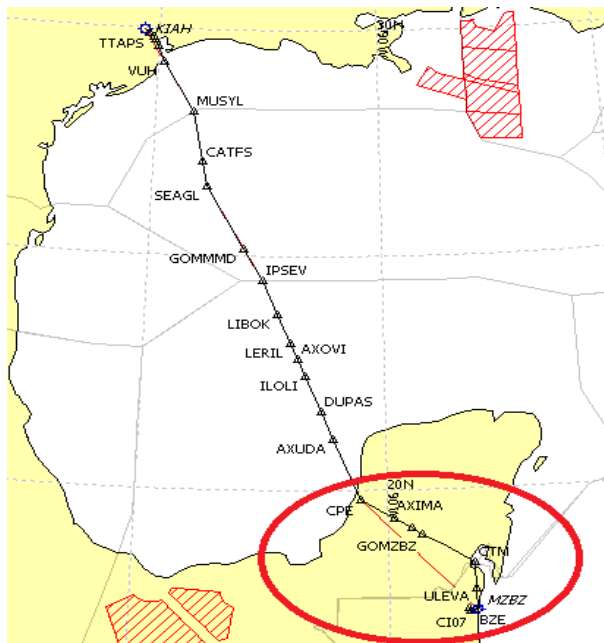
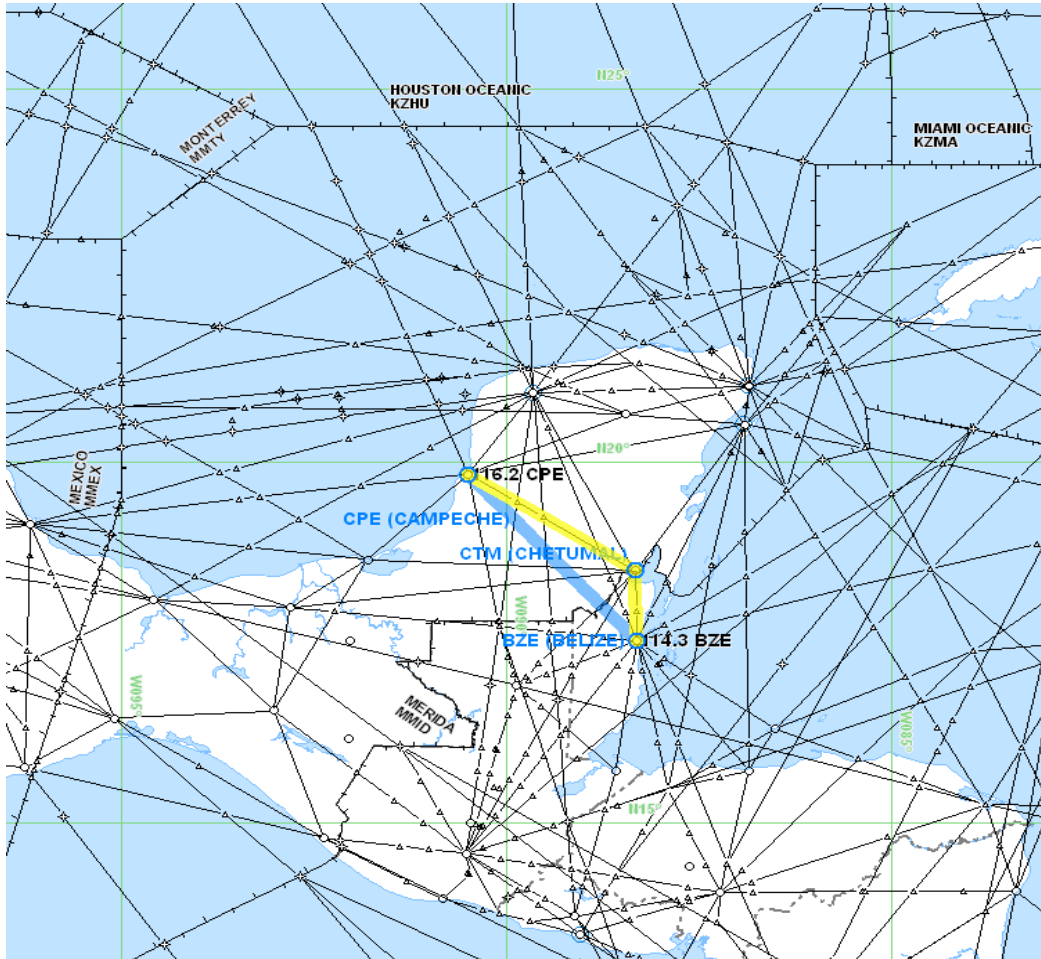
4-XX	F L O W S - CITY PAIRS					
	K***/C*** - MH**/MN**/MR**/MZ**/SE**					
	OPTIMIZATION AIMS:					
	<small>REDUCE FLIGHT DISTANCE</small>	<small>ATC EFFICIENCY</small>	<small>HARMONIZA TION</small>	<small>CONECTIVIT Y</small>	<small>FLOW IMPROVEMENT</small>	<small>OTHERS (SPECIFY)</small>
	X			X	X	
<small>STATES CONCERNED</small>			<small>FIR CONCERNED</small>		<small>ICAO REGIONS</small>	
MEXICO/BELIZE			MERIDA/CENAMER			

ATS ROUTES	ROUTE to be DELETED	CURRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM		
			X		X							
CPE UJ61 CTM UR899 BZE	<small>POINTS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>
	CPE	N19 49.8	W090 30.2		CPE	N19 49.8	W090 30.2					
	CTM	N 18 30.6	W 88 20.0		BZE	N17 32.4	W088 18.8					
	BZE	N17 32.4	W088 18.8									
TOTAL DISTANCE		205NM		TOTAL DISTANCE		185NM		TOTAL DISTANCE				

R E C O R D S							
Proposed by	United Airlines (UAL)	Reviewed by:		Reviewed by		Reviewed by	
<p style="color: red; margin: 0;">UL207 FLOW IMPROVEMENT. UL208 OFFLOAD. MID VOR OFFLOAD. TO ALLOW MORE EFFICIENT UL207 ACCESS FROM CENTRAL US TO VARIOUS AIRPORTS SUCH AS MHLM/MHTG/MNMG/MRLB/MROC/SE QM</p>							

FLIGHTS PER MONTH											NOTES
TYPE	A320	A340	B737		B738	B763	B772		E190	TOTAL	
AMOUNT					60						UNKNOWN

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	
17NM	250	



	Vr	To	Rt	Via	Typ	Reg	CI	Altn	Dist	AFL	TripF	Time
1	4	MZBZZ1	PROPSAL		39WE7	N61887	10		880	350	12192	2.08
2	*2	MZBZZ2	L207		39WE7	N61887	10		897	350	12368	2.10

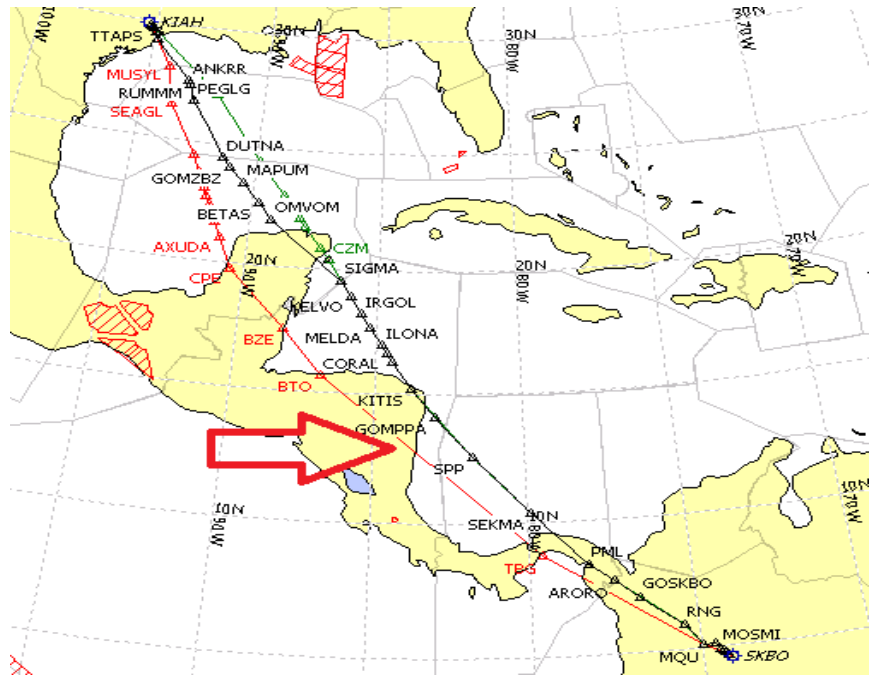
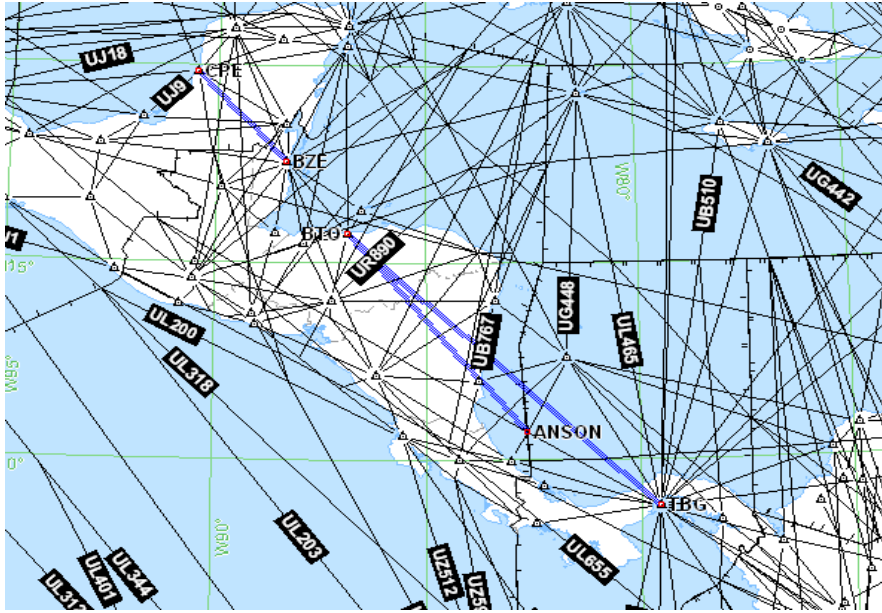
4-XX	F L O W S - CITY PAIRS									
	K***/C***-MT**/SK**/SB**/SA**									
	OPTIMIZATION AIMS:									
	<small>REDUCE FLIGHT DISTANCE</small>	<small>ATC EFFICIENCY</small>	<small>HARMONIZ ATION</small>	<small>CONECTIVIT Y</small>	<small>FLOW IMPROVEMENT</small>	<small>OTHERS (SPECIFY)</small>				
				X	X					
<small>STATES CONCERNED</small>					<small>FIR CONCERNED</small>			<small>ICAO REGIONS</small>		
MEXICO/BELIZE/PANAMA/COSTA RICA/NICARAGUA/HONDURAS					MERIDA/CENAMER/PANAMA					

ATS ROUTES	ROUTE to be DELETED		CURRENT ROUTE		NEW ROUTE		REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
						X					X		
	<small>POINTS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	
					BTO	N15 44.2	W086 51.9		BTO	N15 44.2	W086 51.9		
					ANSON	N10 42.4	W082 38.2		XXXXX	N11 52.4	W082 44.2		
									TBG	N08 47.3	W079 33.7		
	TOTAL DISTANCE		0		TOTAL DISTANCE			390NM		TOTAL DISTANCE		597NM	

R E C O R D S							
Proposed by	United Airlines (UAL)	Reviewed by:		Reviewed by		Reviewed by	
<p>BTO-ANSON OR BTO-TBG CONNECTIVITY. UL207 FLOW IMPROVEMENT IN CONJUNCTION WITH CPE-BZE. UL208/A766 ALTERNATE. WEATHER AVOIDANCE.</p>							

FLIGHTS PER MONTH										NOTES	
TYPE	A320	A340	B737		B738	B763	B772		E190	TOTAL	
AMOUNT											

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	



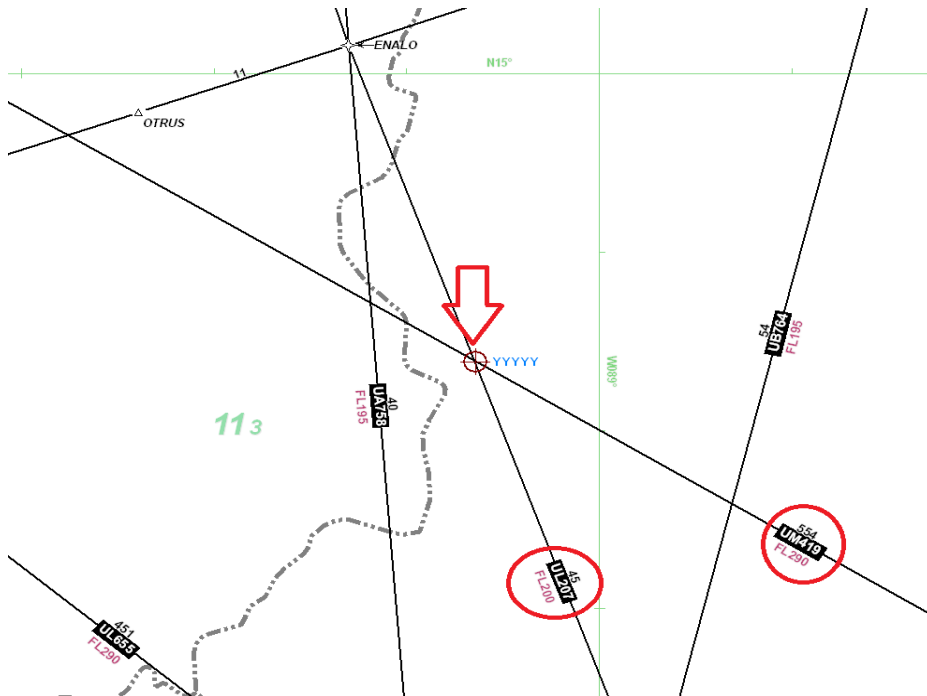
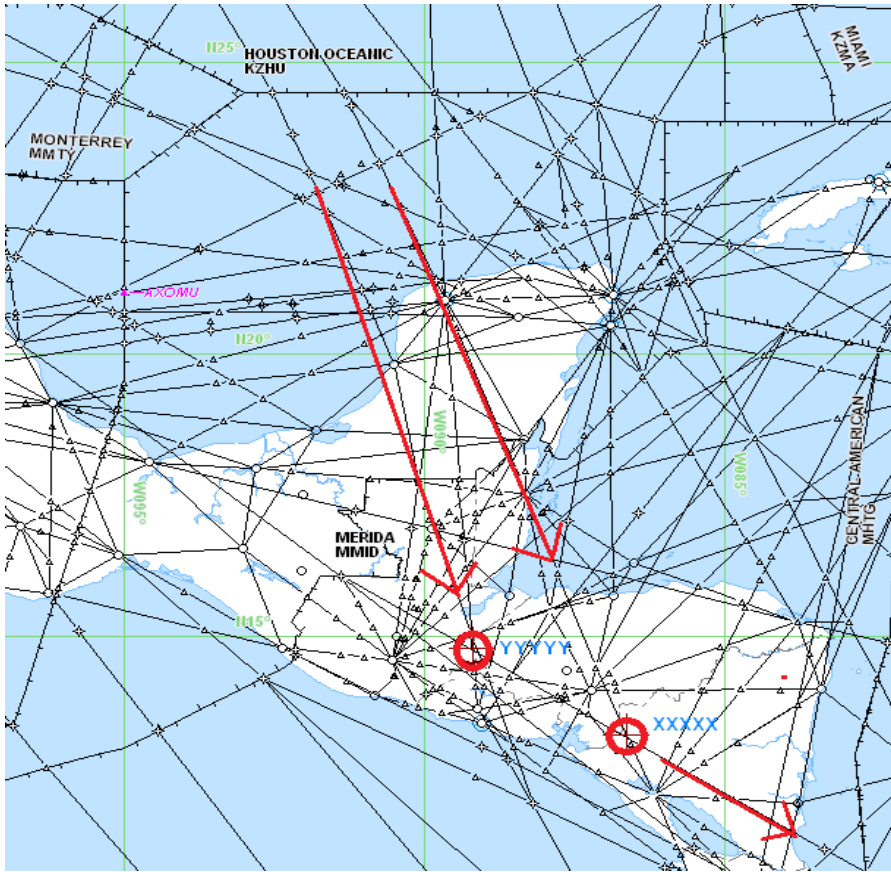
4-XX	F L O W S - CITY PAIRS									
	K***-SK**/SB**									
	OPTIMIZATION AIMS:									
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)				
				X	X					
STATES CONCERNED					FIR CONCERNED			ICAO REGIONS		
GUATEMALA/HONDURAS/NICARAGUA/COSTA RICA					CENAMER					

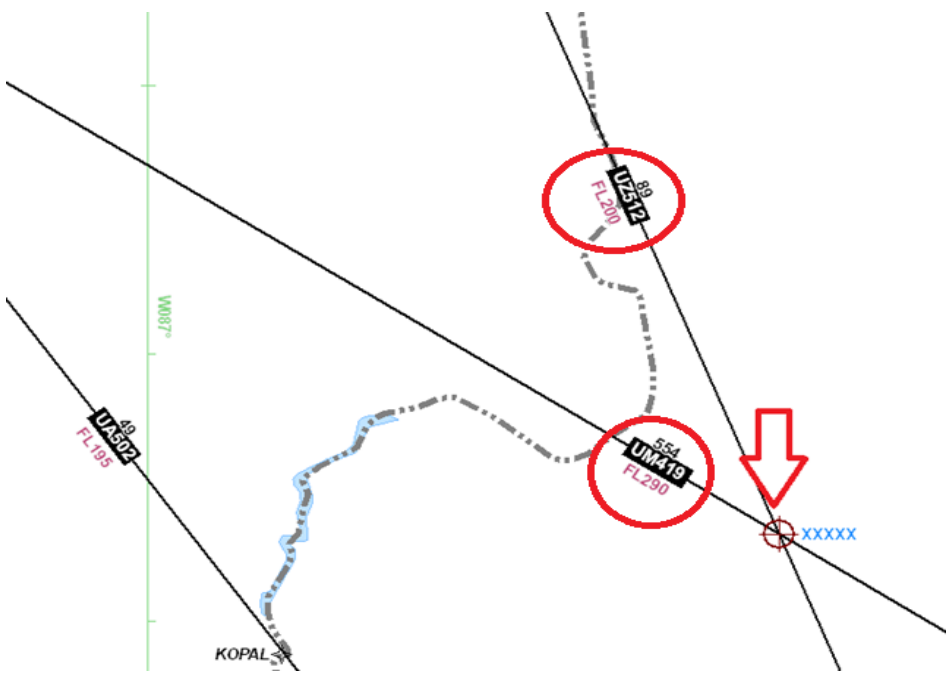
ATS ROUTES	ROUTE to be DELETED	CURRENT ROUTE		NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM	
		X			X							
ASOKU UM419 ANSON	POINTS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE
	ASOKU	N16 04.6	W091 22.9		ASOKU	N16 04.6	W091 22.9					
					YYYYY	N14 43.85	W089.6.4					
					XXXXX	N13 13.27	W086 37.69					
	ANSON	N10 42.4	W082 38.2		ANSON	N10 42.4	W082 38.2					
TOTAL DISTANCE		0		TOTAL DISTANCE				TOTAL DISTANCE				

R E C O R D S									
Proposed by	United Airlines (UAL)		Reviewed by:		Reviewed by		Reviewed by		
<p style="color: red; font-size: 0.9em;">UM419 HAS NIL CONNECTIONS/INTERSECTIONS WITHIN CENAMER. PROPOSE INTERSECTING WAYPOINTS WITH UL207 AND UZ512 FOR CONNECTIVITY. WEATHER AVOIDANCE</p>									

FLIGHTS PER MONTH											NOTES
TYPE	A320	A340	B737		B738	B763	B772		E190	TOTAL	
AMOUNT											

SAVINGS										NOTES
DISTANCE (NM)					CO2 (KG)					





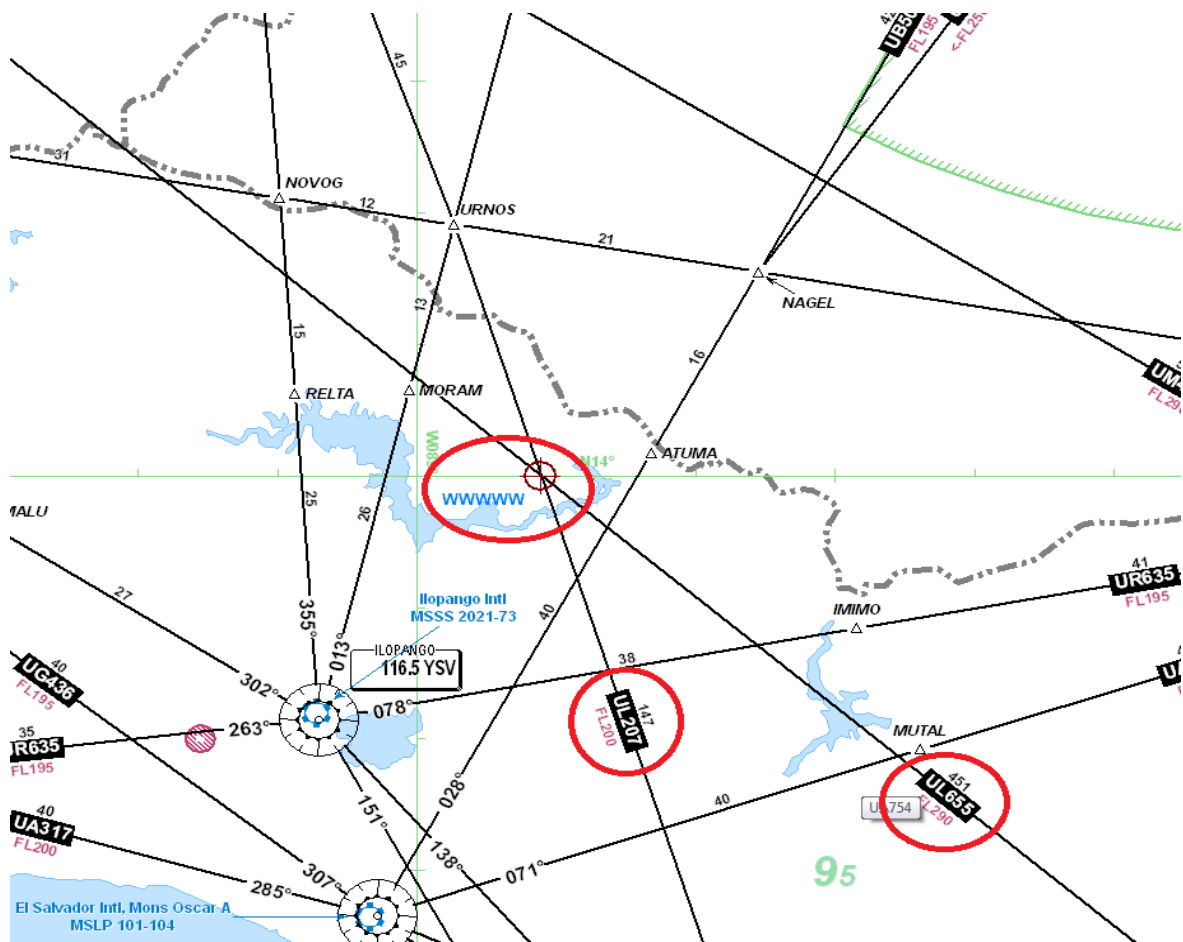
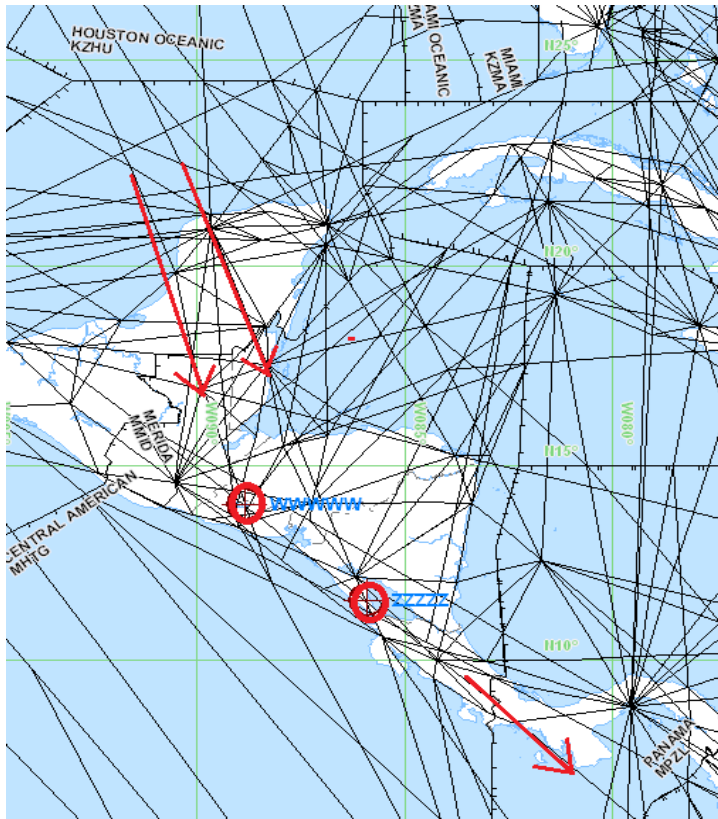
4-xx	F L O W S - CITY PAIRS					
	K***-SA**/SB**					
	OPTIMIZATION AIMS:					
	<small>REDUCE FLIGHT DISTANCE</small>	<small>ATC EFFICIENCY</small>	<small>HARMONIZ ATION</small>	<small>CONECTIVITY</small>	<small>FLOW IMPROVEMENT</small>	<small>OTHERS (SPECIFY)</small>
				X	X	
<small>STATES CONCERNED</small>			<small>FIR CONCERNED</small>		<small>ICAO REGIONS</small>	
GUATEMALA/EL SALVADOR/NICARAGUA/COSTA RICA						

ATS ROUTES	ROUTE to be DELETED		CURRENT ROUTE		NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
				X			X					
ASOKU UL655 EGODI	<small>POINTS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>	<small>PUNTOS</small>	<small>LAT</small>	<small>LONG</small>	<small>DISTANCE</small>
	ASOKU	N16 04.6	W091 22.9		ASOKU	N16 04.6	W091 22.9					
					WWWWW	N13 59.96	W088 51.11					
					ZZZZZ	N11 31.18	W085 55.24					
	EGODI	N08 51.7	W082 49.1		EGODI	N08 51.7	W082 49.1					
TOTAL DISTANCE			0	TOTAL DISTANCE				TOTAL DISTANCE				

R E C O R D S							
Proposed by	United Airlines (UAL)	Reviewed by:		Reviewed by		Reviewed by	
UL655 HAS NIL CONNETIONS/INTERSECTIONS WITHIN CENAMER. PROPOSE INTERSECTING WAYPOINTS WITH UL207 AND UZ512 FOR CONNECTIVITY AND WEATHER AVOIDANCE							

FLIGHTS PER MONTH										NOTES	
TYPE	A320	A340	B737		B738	B763	B772		E190	TOTAL	
AMOUNT											

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	



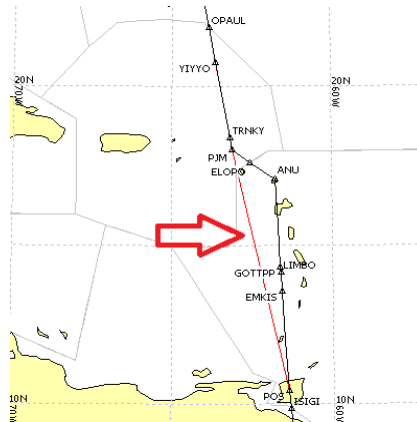
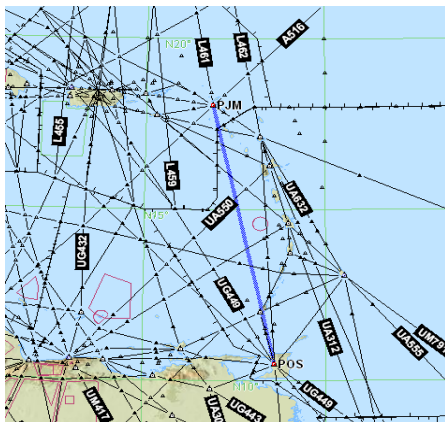
4-xx	F L O W S - CITY PAIRS					
	K***/C***-SB**/SA**					
	OPTIMIZATION AIMS:					
	<small>REDUCE FLIGHT DISTANCE</small>	<small>ATC EFFICIENCY</small>	<small>HARMONIZ ATION</small>	<small>CONNECTIVITY</small>	<small>FLOW IMPROVEMENT</small>	<small>OTHERS (SPECIFY)</small>
	X			X		
<small>STATES CONCERNED</small>			<small>FIR CONCERNED</small>		<small>ICAO REGIONS</small>	
TRINIDAD AND TOBAGO/UNITED STATES			PIARCO/SAN JUAN			

ATS ROUTES	ROUTE to be DELETED		CURRENT ROUTE		NEW ROUTE		REALIGN		EXTEND		TRIM	
						X						
POS-PJM	POINTS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE
					POS	N10 28.0	W061 23.5					
					PJM	N18 02.3	W063 07.1					
TOTAL DISTANCE				0	TOTAL DISTANCE				465	TOTAL DISTANCE		

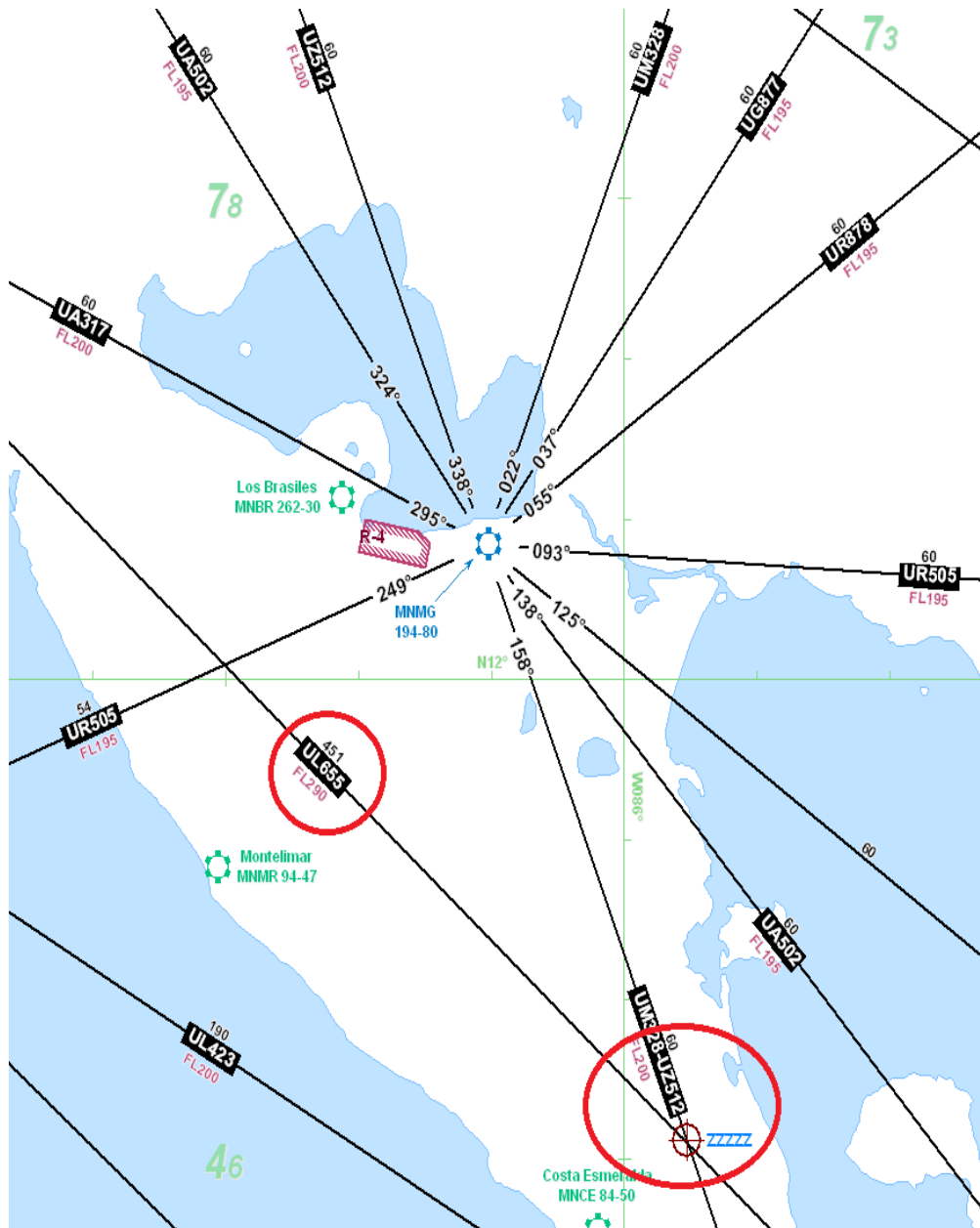
R E C O R D S								
Proposed by	United Airlines (UAL)		Reviewed by:		Reviewed by		Reviewed by	
<p style="color: red; margin: 0;">OPTIMIZED ROUTING VIA L461 TO POS FOR EFFICIENCY</p>								

FLIGHTS PER MONTH										NOTES	
TYPE	A320	A340	B737		B738	B763	B772		E190	TOTAL	
AMOUNT						30					

SAVINGS		NOTES
DISTANCE (NM)	27NM	CO2 (KG)
		1300



Vr	To	Rt	Via	Typ	Reg	CI	Altn	Dist	AFL	TripF	Time
3	SAEZZ1	PROPOSAL		72G	N7800129	SUMU4777	383	136671	10.13		
1	SAEZ04	O/W-CLS2 L461/	72G	N7800129	SUMU4804	385	137595	10.17			



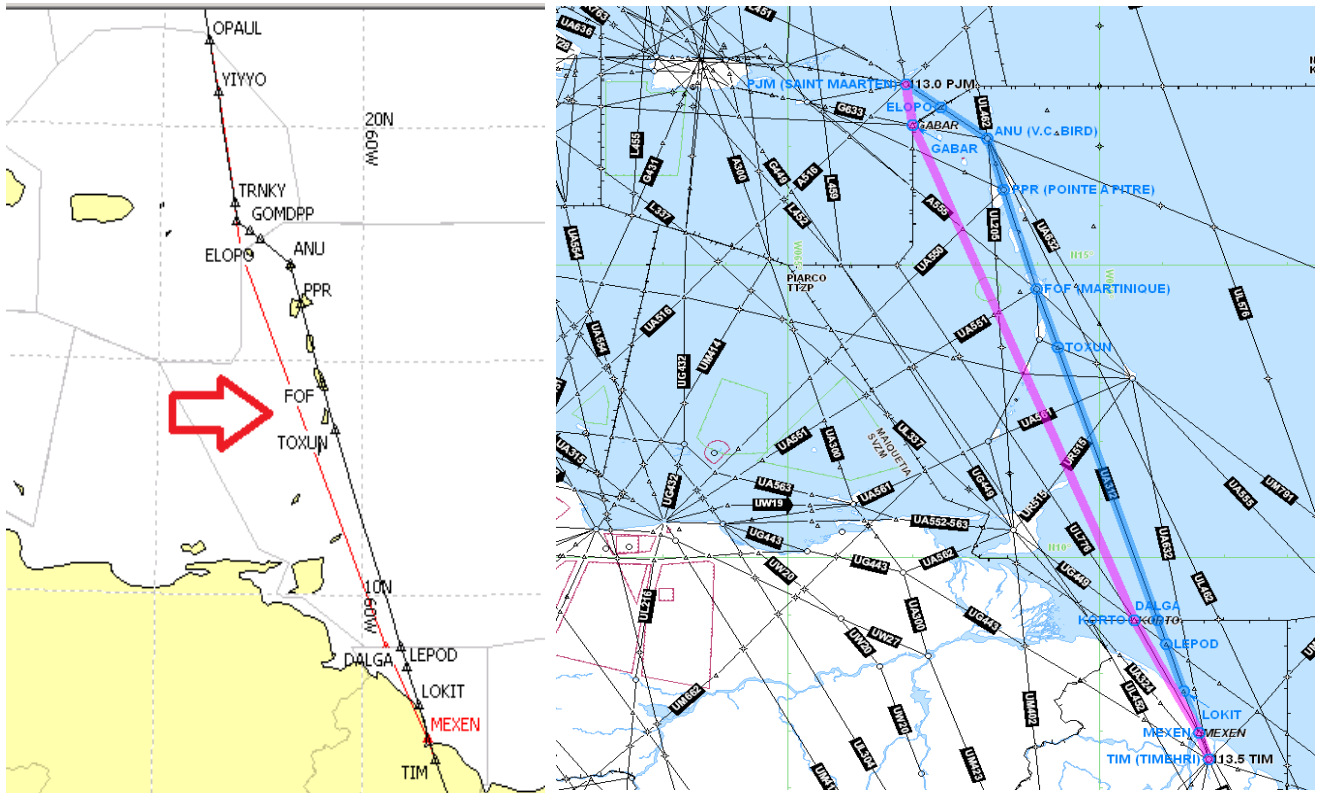
4-xx	F L O W S - CITY PAIRS											
	K***/C***-SB**											
	OPTIMIZATION AIMS:											
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZ ATION	CONECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)						
	X	X		X	X							
STATES CONCERNED						FIR CONCERNED				ICAO REGIONS		
GUYANA/TRINIDAD AND TOBAGO/UNITED STATES						GEORGETOWN/PIARCO/SAN JUAN						

ATS ROUTES	ROUTE to be DELETED		CURRENT ROUTE		NEW ROUTE		REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
				X		X						X	
NIDMA-MEXEN- KORTO/KORTO- GABAR-PJM	POINTS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE	
	NIDMA	N05 01.4	W057 24.0		NIDMA	N05 01.4	W057 24.0						
	KORTO	N08 55.1	W059 26.8		MEXEN	N06 58.1	W058 25.0						
					KORTO	N08 55.1	W059 26.8						
										KORTO	N08 55.1	W059 26.8	
										GABAR	N17 21.2	W063 00.0	
										PJM	N18 02.3	W063 07.1	
TOTAL DISTANCE				0	TOTAL DISTANCE				589	TOTAL DISTANCE			

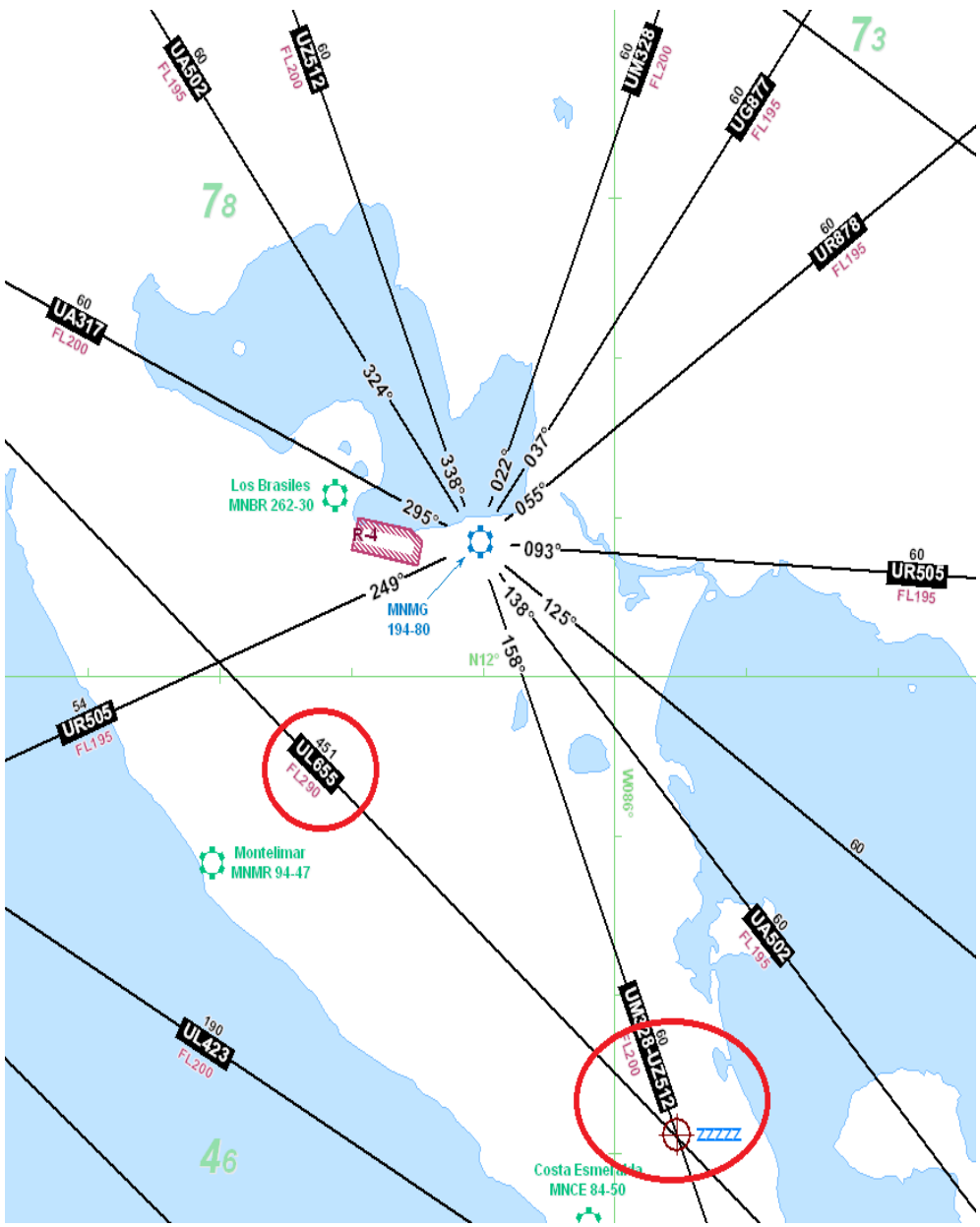
R E C O R D S							
Proposed by	United Airlines (UAL)	Reviewed by:		Reviewed by		Reviewed by	
<p style="color: red; font-size: 0.9em;">UA312/UL776 connectivity at wpt MEXEN (or equivalent) with airway re-alignment within SYGC FIR. Then a new route proposal from KORTO to GABAR within Piarco, which leads to better connectivity for L461 in San Juan and New York Oceanic.</p>							

FLIGHTS PER MONTH											NOTES
TYPE	A320	A340	B737		B738	B763	B772		E190	TOTAL	
AMOUNT							120				

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	
11NM	680	



	Vr	To	Rt	Via	Typ	Reg	Cl	Altn	Dist	AFL	TripF	Time
1	2	KEWR	ZZZ	PROPOSAL	72G	N37018	20	KJFK	4291	368	131160	9.34
2	13	KEWR	Z2	CURRENT RTE	72G	N37018	20	KJFK	4302	368	131640	9.36



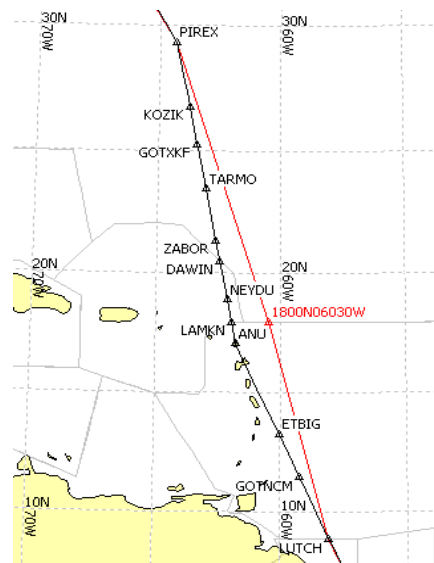
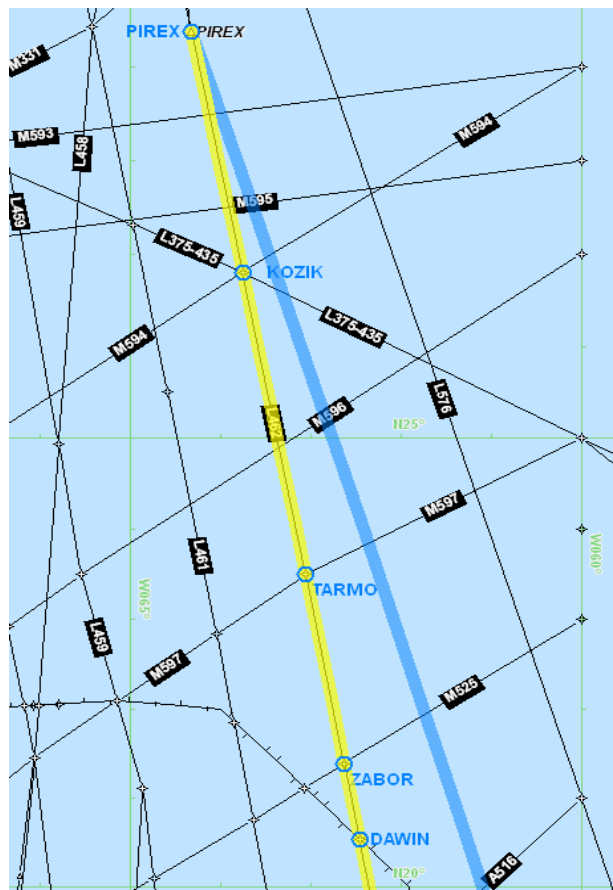
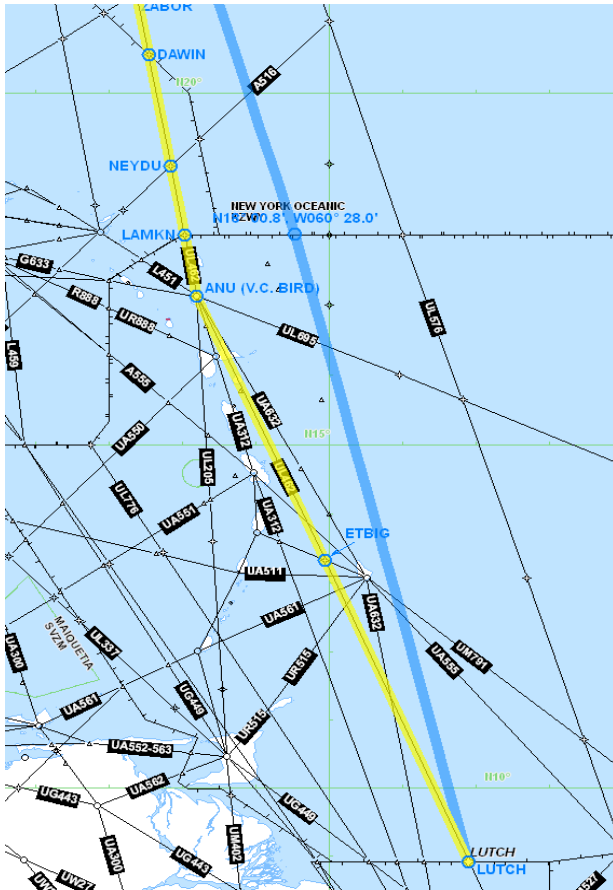
4-xx	F L O W S - CITY PAIRS					
	K***/C***-SB**					
	OPTIMIZATION AIMS:					
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZ ATION	CONECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)
	X	X		X	X	
STATES CONCERNED			FIR CONCERNED		ICAO REGIONS	
TRINIDAD AND TOBAGO			PIARCO/NEW YORK OCEANIC			

ATS ROUTES	ROUTE to be DELETED		CURRENT ROUTE		NEW ROUTE		REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM	
						X								
LUTCH-XXXXX-PIREX	POINTS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE	PUNTOS	LAT	LONG	DISTANCE		
					LUTCH	N08 55.3	W058 05.8							
					XXXXX	N18 00.0	W060 30.0							
					PIREX	N29 22.5	W064 19.3							
TOTAL DISTANCE				0	TOTAL DISTANCE				1276	TOTAL DISTANCE				

R E C O R D S								
Proposed by	United Airlines (UAL)		Reviewed by:		Reviewed by		Reviewed by	
<p>A second direct connection between Piarco and New York Oceanic where there is a gap between L462 and L576. ANU offload/San Juan bypass.</p>								

FLIGHTS PER MONTH											NOTES	
TYPE	A320	A340	B737		B738	B763	B772		E190		TOTAL	
AMOUNT							120					

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	
7NM	210	



Vr	To	Rt	Via	Typ	Reg	Cl	Altn	Dist	AFL	TripF	Time
*1	KEWR	Z1	PROPOSAL	72G	N3701820		KJFK	4284	328	135847	9.400
2	KEWR	Z2	CURRENT RTE	72G	N3701820		KJFK	4291	329	136000	9.416

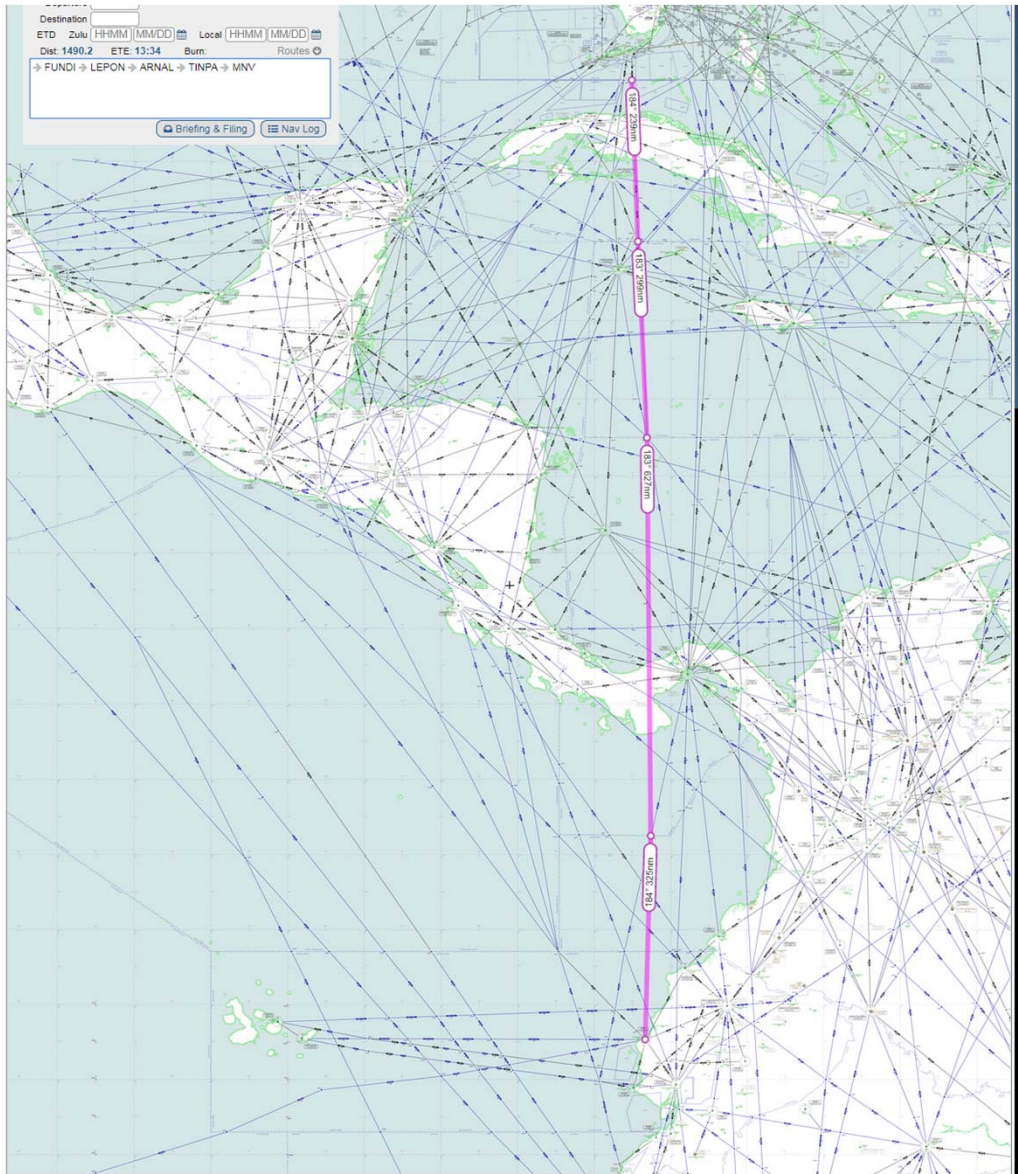
4-93	F L O W S - CITY PAIRS									
	NORTH AMERICA-SOUTH AMERICA									
	OPTIMIZATION AIMS:									
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)				
	X		X	X						
STATES CONCERNED					FIR CONCERNED			ICAO REGIONS		
CUBA/JAMAICA/PANAMA/COLOMBIA/ECUADOR					HABANA/KINGSTON/PANAMA/BOGOTA/GUAYAQUIL			CAR/SAM		

ATS ROUTES	ROUTE to be DELETED	CURRENT ROUTE			NEW ROUTE			REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM		
					UL465			X	X							
Realign and extend route UL465 from FUNDI until ITATA	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE				
					FUNDI	240000N	0810043W									
					LEPON	200000N	0805053W	239								
					ARNAL	150000N	0803651W	299								
					TINPA	043015N	0803052.80W	627								
					LIM FIR			184								
					MANTA (MNV)	005604.20S	0803943.20W	141								
TOTAL DISTANCE				0	TOTAL DISTANCE				952	TOTAL DISTANCE						

R E C O R D S							
Proposed by	JAMAICA		Reviewed by:	ATSRO8		Reviewed by	Reviewed by
<p>Ruta UZ465 publicada por Cuba de FUNDI a LEPON para entrar en vigencia en Octubre 2017. Jamaica propone extender la nueva ruta de LEPON hasta ITATA (LIM FIR BOGOTA-GUAYAQUIL)</p>			<p>Panamá acepta la propuesta se alinearía a LIM FIR existente TINPA o punto que lo reemplace si se modifica trayectoria de UM542. Ecuador indica que ITATA ya no existe y se replantea de TINPA a MANTA (MNV). Pendiente opinión de Colombia.</p>			<p>F Hermoza (22 enero del 2018), Cuba y Jamaica ya han publicado desde 2017 la UZ465, unidireccional rumbo sur entre FUNDI LEPON ARNAL</p>	

FLIGHTS PER MONTH										NOTES
TYPE	A320	A340	B737	B738	B763	B772	E190	TOTAL		36
AMOUNT										

SAVINGS										NOTES
DISTANCE (NM)					CO2 (KG)					



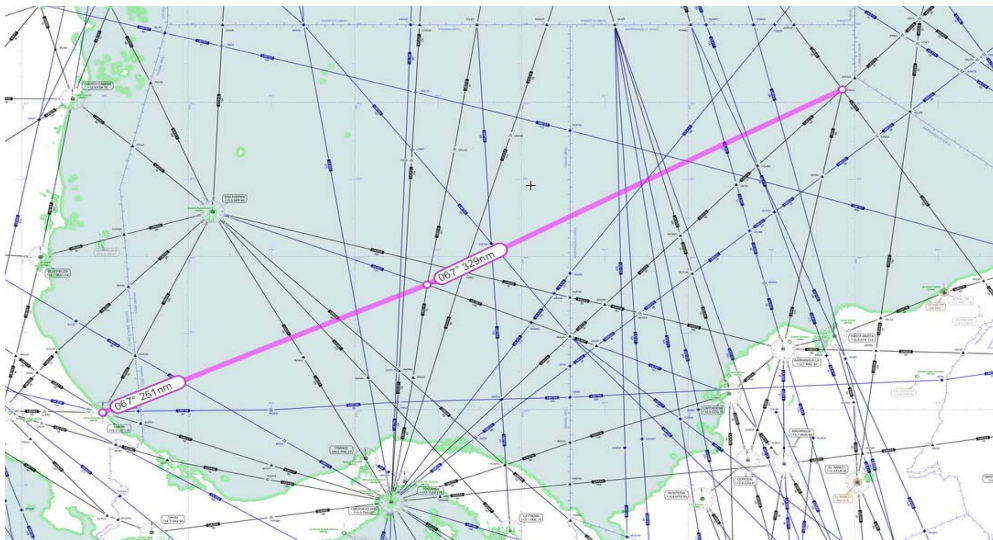
F L O W S - C I T Y P A I R S						
NORTH AMERICA-SOUTH AMERICA						
OPTIMIZATION AIMS:						
REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)	
X		X	X			
STATES CONCERNED				FIR CONCERNED		ICAO REGIONS
Panama / Colombia				Panama / Barranquilla		CAR/SAM

ATS ROUTES	ROUTE to be DELETED				CURRENT ROUTE				NEW ROUTE				REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM	
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE								
	LIO	09 57.79	083 01.63		LIO	09 57.79	083 01.63													
	TBG	08 47.25	079 33.72	217.2	DAGAS	11 38.07	079 07.98	250.6												
	ERIKO	14 10.02	074 09.02	452.5	ERIKO	14 10.02	074 09.02	328.8												
	TOTAL DISTANCE				669.7				TOTAL DISTANCE				579.4				TOTAL DISTANCE			

R E C O R D S								
Proposed by	KLM - Royal Dutch Airlines		Reviewed by:		Reviewed by		Reviewed by	

FLIGHTS PER MONTH											NOTES
TYPE	A320	A340	B737	B787	B738	B763	B772		E190	TOTAL	
AMOUNT				28							

SAVINGS		NOTES
DISTANCE (NM)	90	
CO2 (KG)		



Navigation in South America

American Airlines is not required to navigate via VOR, yet Airways in the region tend to converge and diverge at VORs creating 'choke points'.

Also, as new Airways are created, they are often lacking enough waypoints to navigate by, *particularly at intersections of other Airways* – which makes transiting from one Airway to another difficult.

American Airlines is requesting that some basic logic is adopted when making adjustments to the Airspace:-

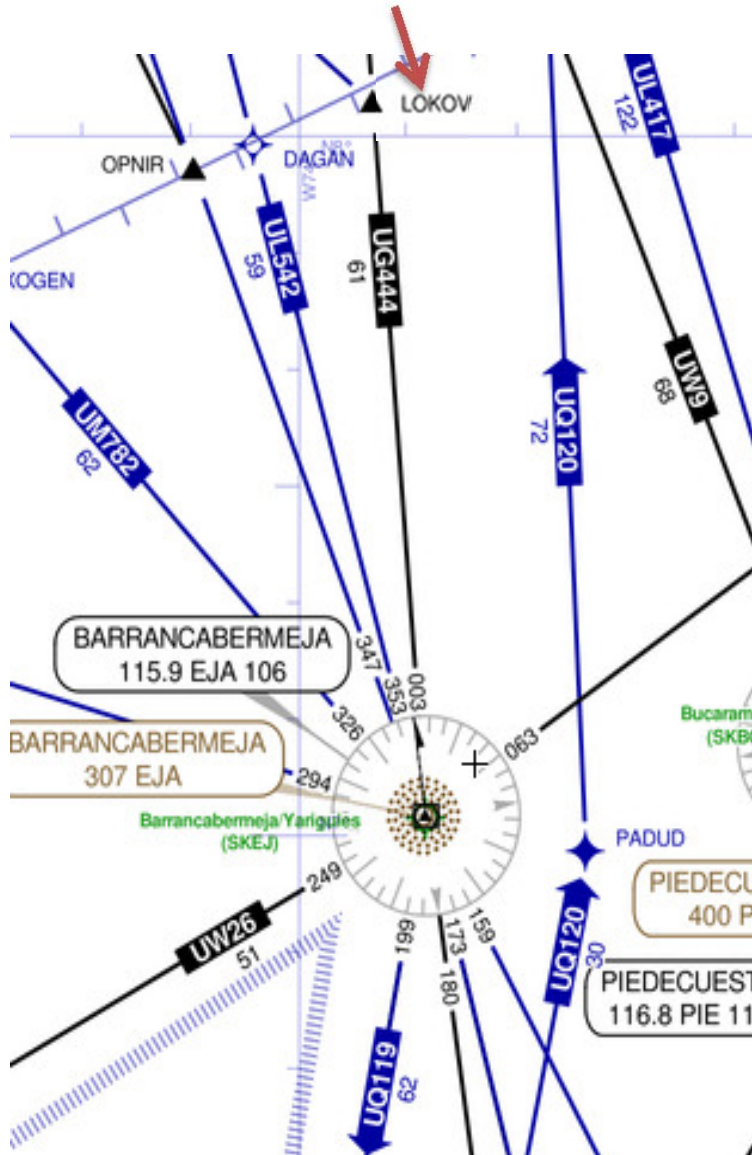
- Create Airways that bypass VORs that are known areas of congestion (provided that the new Airway provides relief from altitude caps/speed adjustments etc.)
- In the interim, identify which DCTS industry can immediately use (we don't need an Airway, but we do need to know what DIRECTS are acceptable)
- Always ensure that new Airways have regularly spaced Waypoints (no excessively long segments)
- Always create a Waypoint where Airways cross – Allows Flight Planners to transit from one Airway to another

See following pages for examples

Examples

SKED FIR – EJA VOR

- Multiple Airways converge here – create an Airway to the east bypassing it. Or perhaps allow DCTs to/from LOKOV

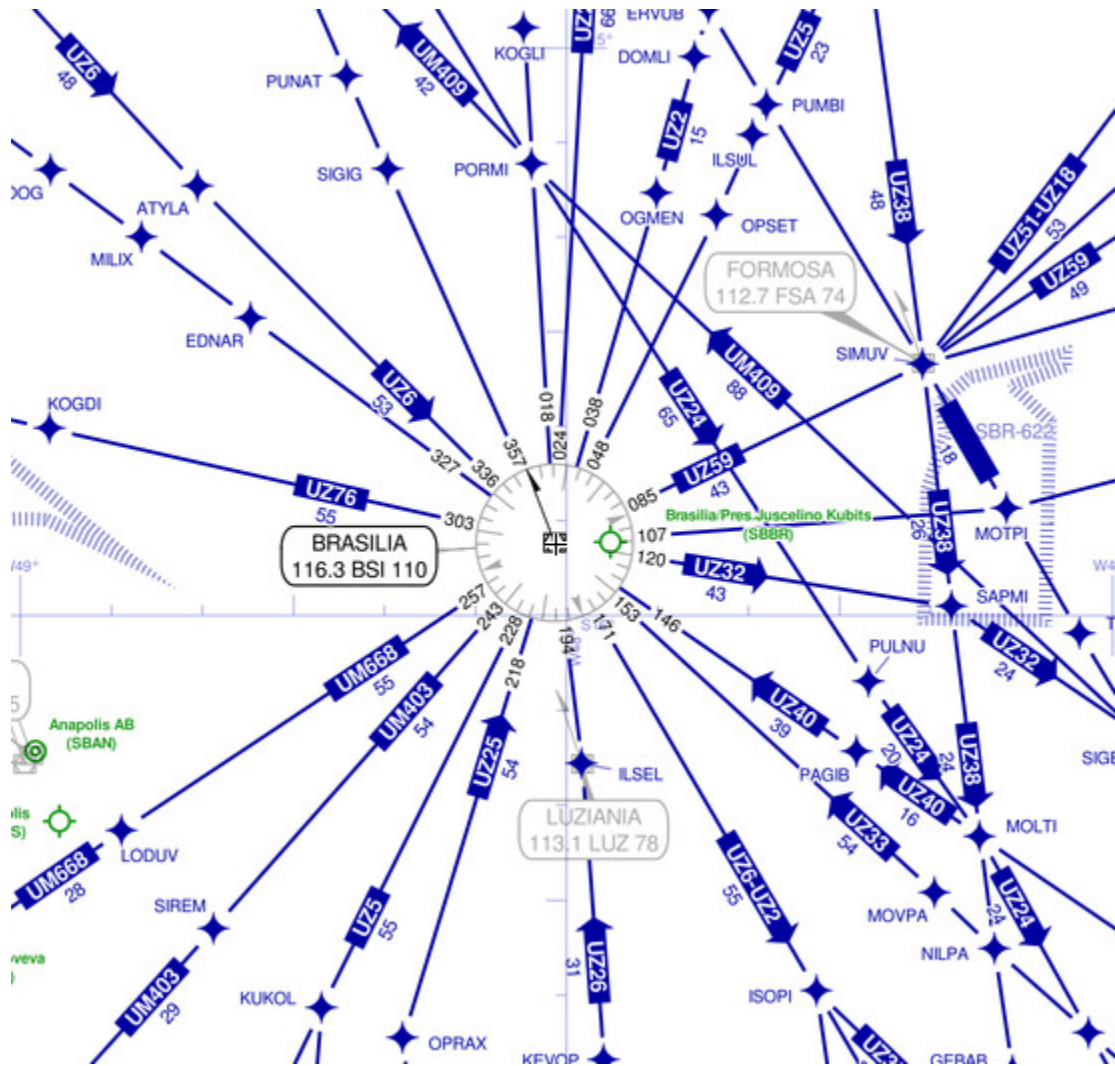


SBBS FIR – BSI VOR

Likewise, multiple Airways converge here – could it be bypassed?

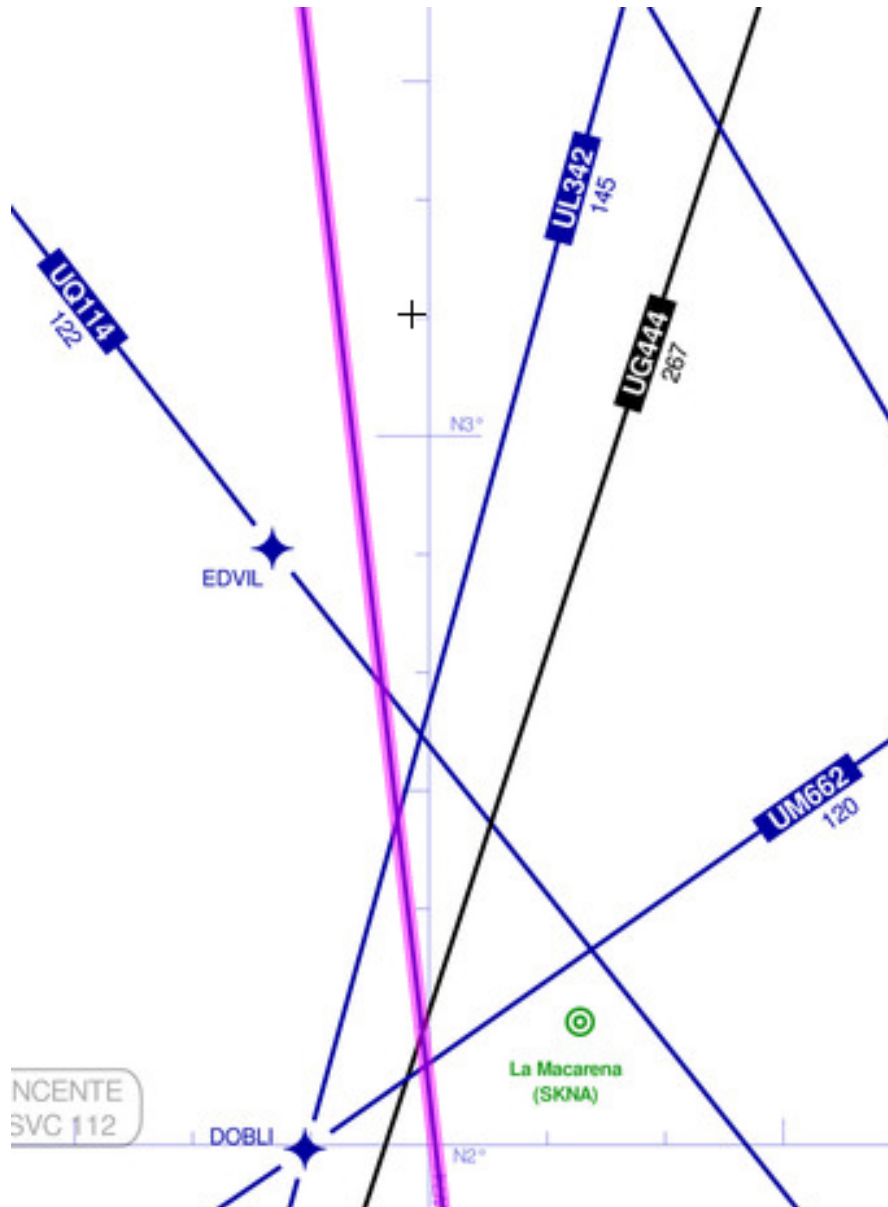
Perhaps we could agree some DCT's to avoid it?

Similar locations are TBG in MPZL and MNS in SVZM (there are many other examples)



SKED FIR

- UL300 BOG/ROLUS is a 359nm segment with no Waypoints to join UM549, UL342, UQ114, UQ110, UM662 or UL655
- Needs a Waypoint at each Airway Intersection



UT4	F L O W S - CITY PAIRS									
	NORTH AMERICA-SOUTH AMERICA									
	OPTIMIZATION AIMS:									
	<i>REDUCE FLIGHT DISTANCE</i>	<i>ATC EFFICIENCY</i>	<i>HARMONIZATION</i>	<i>CONECTIVITY</i>	<i>FLOW IMPROVEMENT</i>	<i>OTHERS (SPECIFY)</i>				
			X			FUEL SAVINGS				
	STATES CONCERNED					FIR CONCERNED			ICAO REGIONS	
MEXICO					MMZT			CAR		

ATS ROUTES	ROUTE to be DELETED	CURRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM			
		ATC uses the airway as "odd" preferential Northwest to Southeast, when it is published "odd" and "even" in AIP.		X									
Realign and extend route UL465 from FUNDI until ITATA	UT4												
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	
					PVR	204131N	1051422W	0					
					SILMA	210209N	1052933W	25					
					BEXOL	221100N	1062052W	84					
					VIBSA	230950N	1070534W	71					
					URSAT	251638N	1084446W	156					
					LMM	254057N	1090418W	30					
					VIKVV	260247N	1092711W	30					
					ANTEL	294757N	1133633W	315					
					SANFE	305354N	1145451W	94					
					TUMAP	314434N	1145451W	74					
					OASIS	321158N	1163111W	40					
				TUJ	323226N	1165710W	30						
TOTAL DISTANCE				0	TOTAL DISTANCE				949	TOTAL DISTANCE			

R E C O R D S							
Proposed by	Volaris Y4	Reviewed by:		Reviewed by		Reviewed by	
<p>If we can use UT4 from Southeast to Northwest, we will reduce important KPI about CO2 emissions and increase fuel savings.</p>							

FLIGHTS PER MONTH										NOTES	
TYPE	A320										Per Month
AMOUNT	1061										

SAVINGS										NOTES
DISTANCE (NM)					CO2 (KG)					Per Month
130,503					30,416					

UJ102	F L O W S - CITY PAIRS										
	NORTH AMERICA-SOUTH AMERICA										
	OPTIMIZATION AIMS:										
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIFY)					
	X			X		FUEL SAVINGS					
	STATES CONCERNED					FIR CONCERNED					ICAO REGIONS
MEXICO					MMEX					CAR	

ATS ROUTES	ROUTE to be DELETED	CURRENT ROUTE		NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM	
						X						
	UJ102											
Realign and extend route UL465 from FUNDI until ITATA	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
					PAZ	203602N	0972718W	0				
					PCA	200755N	0984104W	75				
					PTJ	193845N	0994753W	63				
	TOTAL DISTANCE		#REF!	TOTAL DISTANCE			138	TOTAL DISTANCE				

R E C O R D S										
Proposed by	Volaris Y4		Reviewed by:		Reviewed by		Reviewed by			
<p>If UJ102 could be extended from PCA to PTJ, we will reduce important KPI about CO2 emissions and increase fuel savings.</p>										

FLIGHTS PER MONTH											NOTES
TYPE	A320										Per Month
AMOUNT	285										

SAVINGS											NOTES
DISTANCE (NM)					CO2 (KG)					Per Month	
130,503					781						