

Points for Discussion

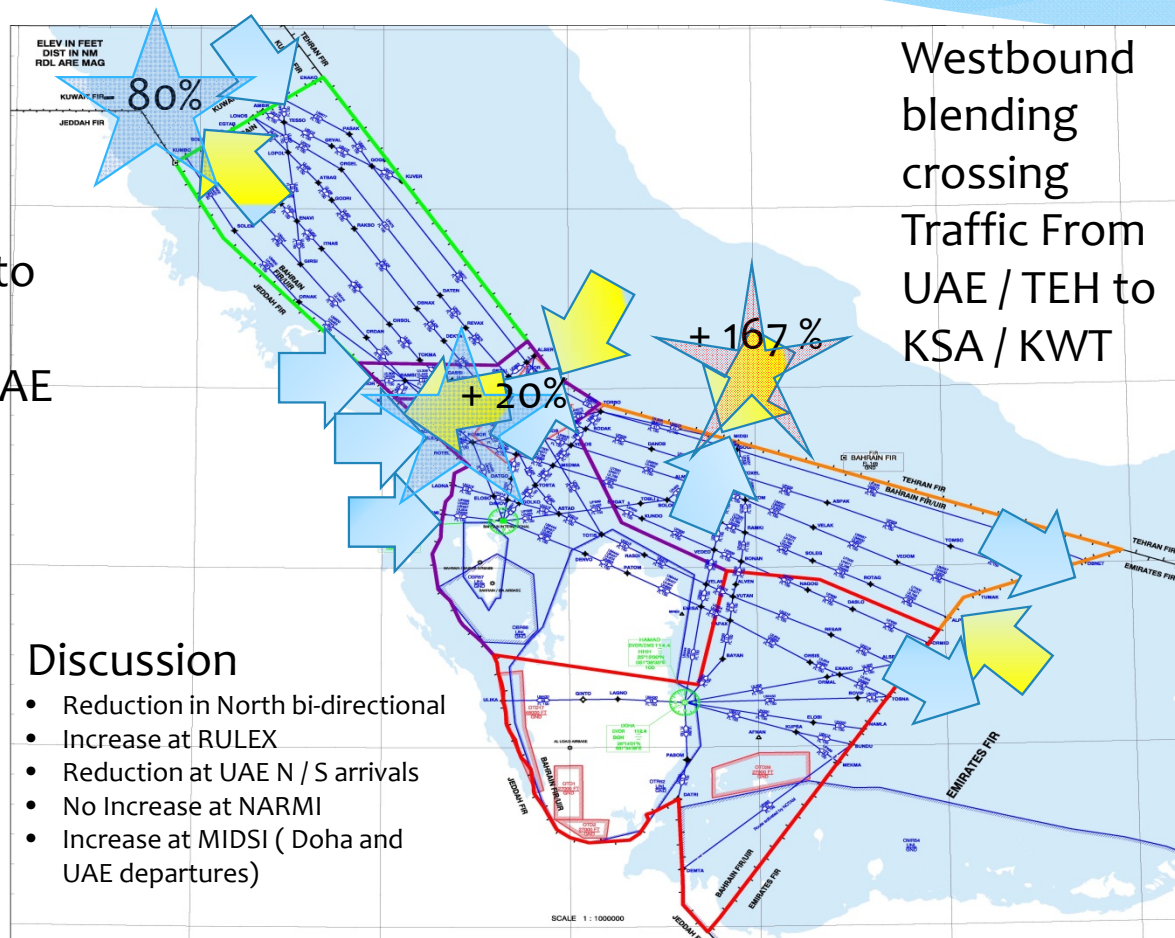
- **Normal Routings**
 - **Issues with Bidirectional points MIDSI and ALSER**
- **Initial Contingency**
 - New Tehran Routing
 - New Bahrain Routing
 - New UAE Routing
- **Problems created**
 - MIDSI Congestion / 4 bi directional Airways.
 - MIDSI Absorbing Doha, Dubai and Abu Dhabi departures previously routed via DAVUS o Kuwait- Baghdad
 - ORSAR Congestion
- Proposed Contingencies
- Routing Flexibility Discussion (moving forward)

Bahrain FIR

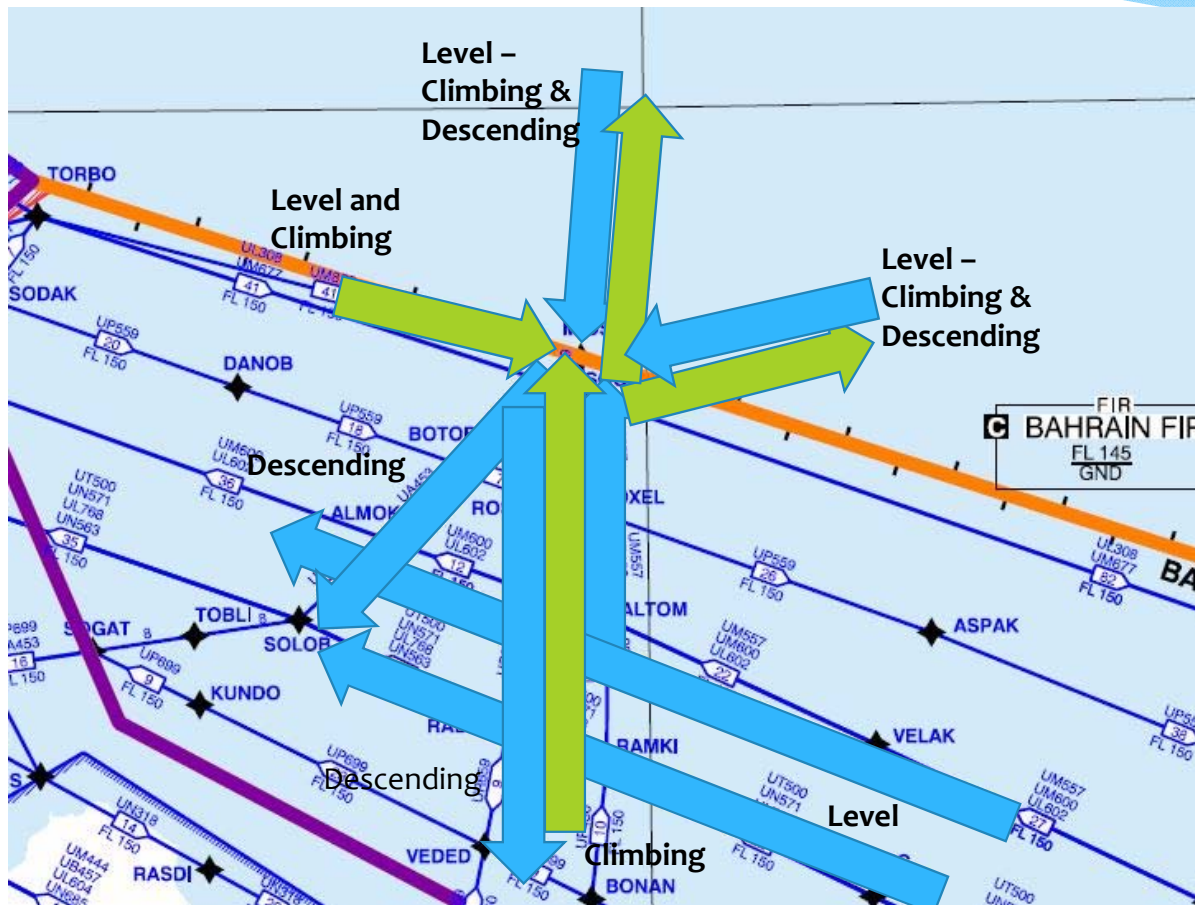
Normal Routings

Eastbound
blending
crossing
traffic from
KWT / KSA to
TEH / and 4
routes to UAE

Westbound
blending
crossing
Traffic From
UAE / TEH to
KSA / KWT



Focus on MIDSI (THE MIDSI MESS)

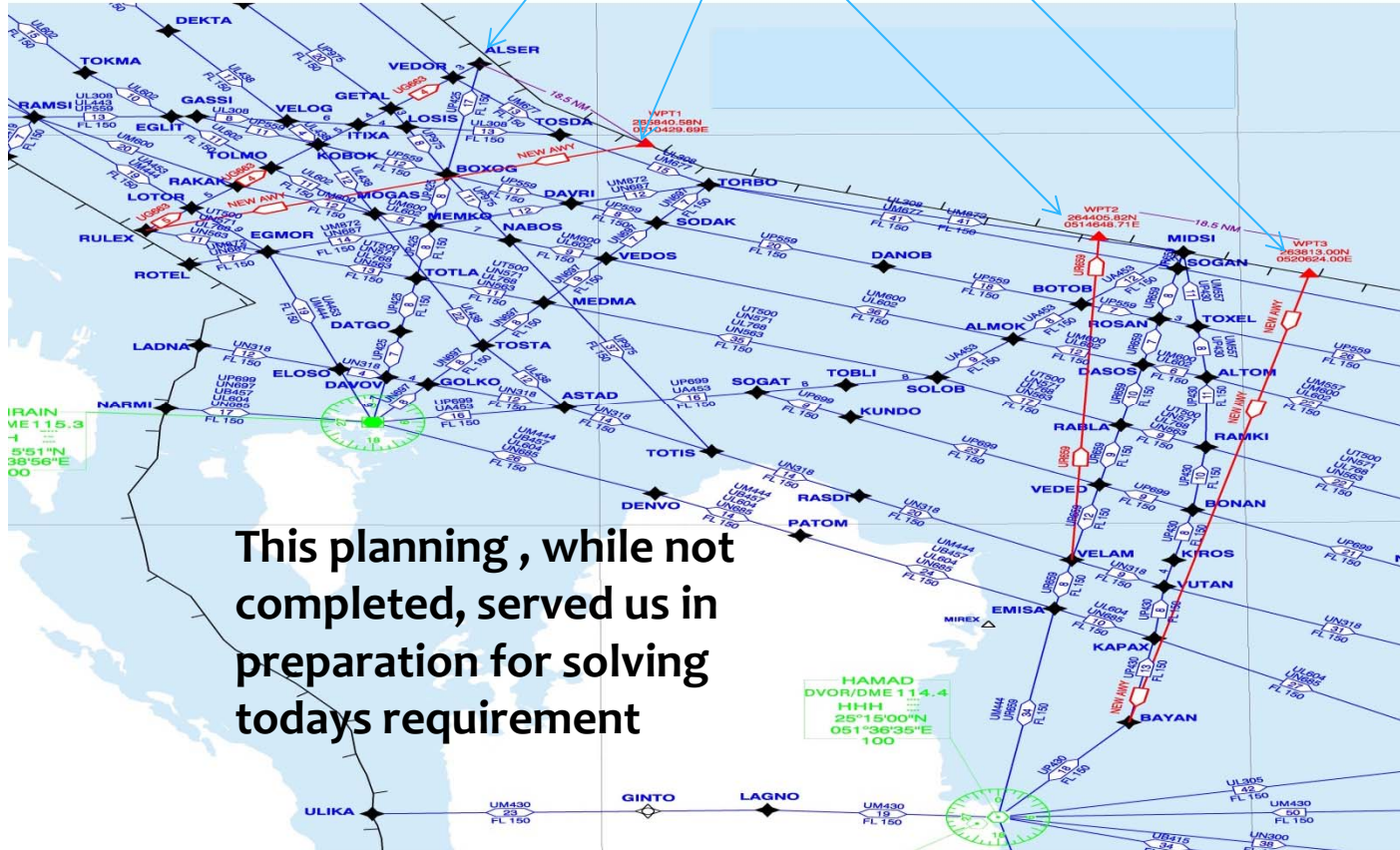


MIDSI has been under review due to the complexity of climbing /descending east and westbound traffic.

Additional traffic growth was not feasible without significant change.

BAH Proposal early 2014

New unidirectional routes



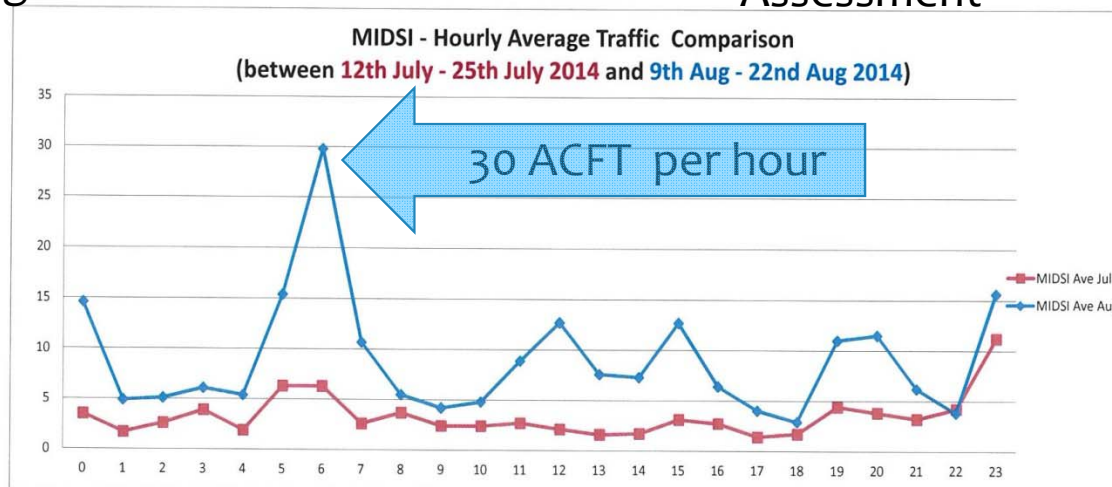
This planning, while not completed, served us in preparation for solving today's requirement

It was recognized, prior to the overflight avoidance issue that we currently face that increased traffic levels at MIDSI and ALSER required attention and resolution of bidirectional traffic issue.

MIDSI Traffic Data Before and After FIR Avoidance

Increase at MIDSI is significant considering bi directional fix with 90% of traffic climbing and descending

Current traffic levels fail RVSM Safety Assessment



Hours	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total Flights
MIDSI Ave Jul	3.5	1.7	2.6	3.9	1.9	6.3	6.3	2.6	3.7	2.4	2.4	2.7	2.1	1.6	1.7	3.1	2.7	1.4	1.7	4.4	3.8	3.2	4.2	11.2	1137
MIDSI Ave Aug	14.6	4.9	5.1	6.1	5.4	15.4	29.8	10.7	5.5	4.2	4.8	8.9	12.7	7.6	7.3	12.7	6.4	4	2.9	11	11.5	6.2	3.8	15.6	3041

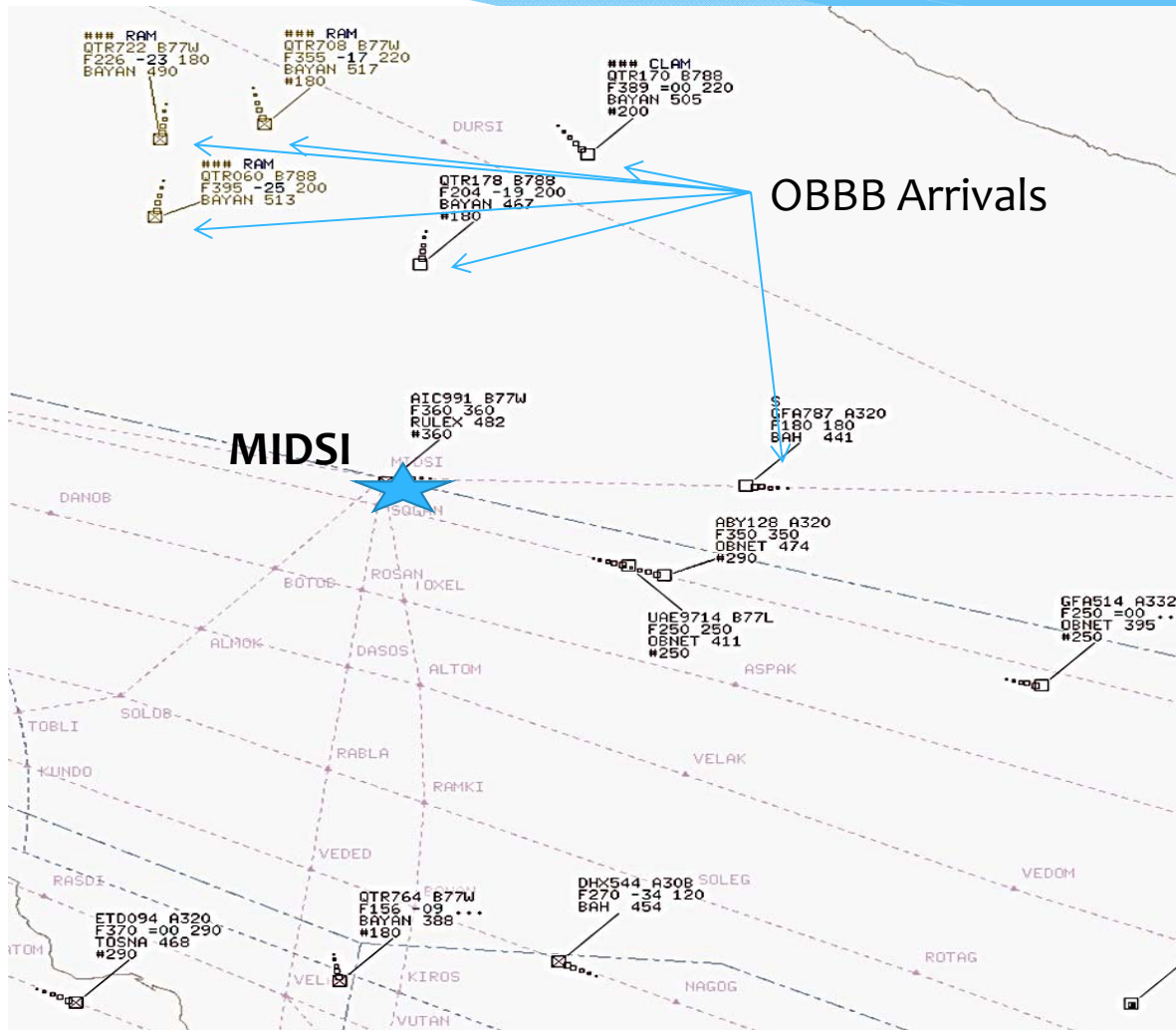
*No of Days considered =14

167% Increase

MIDSI Traffic Inbound

DOHA Arrival

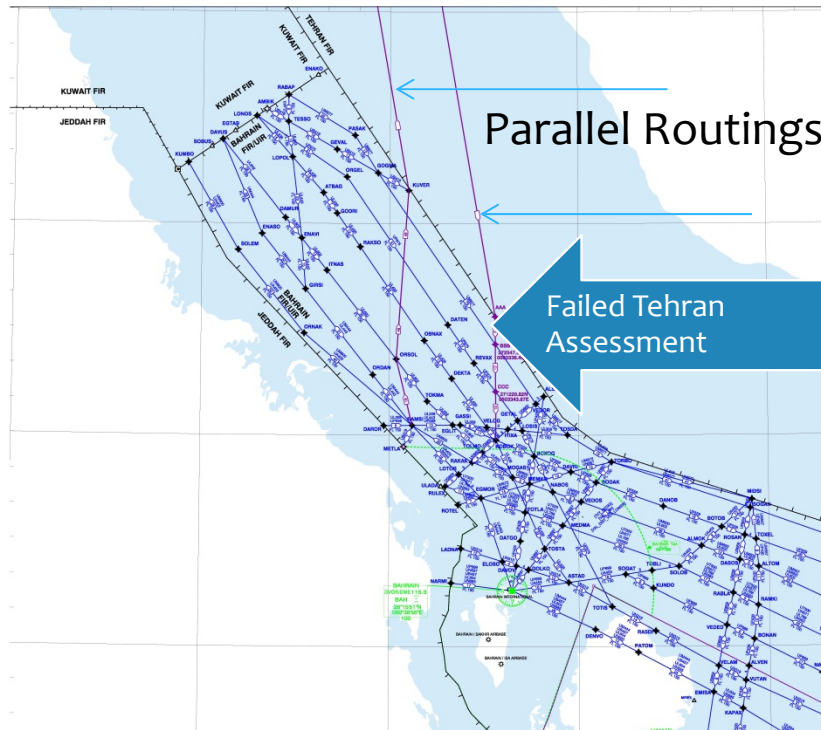
Traffic Volume difficult to manage



Working toward Building Contingencies

- * Bahrain and Tehran are not alone in being very specific task oriented and structured airspace.
- * All revisions must be planned to properly blend with existing traffic patterns while taking into consideration revised traffic requirements.
- * Procedures must be developed in conjunction with Safety Management best practices and requirements.
- * ATCO training requirements must be considered.

1st Contingency Drafts



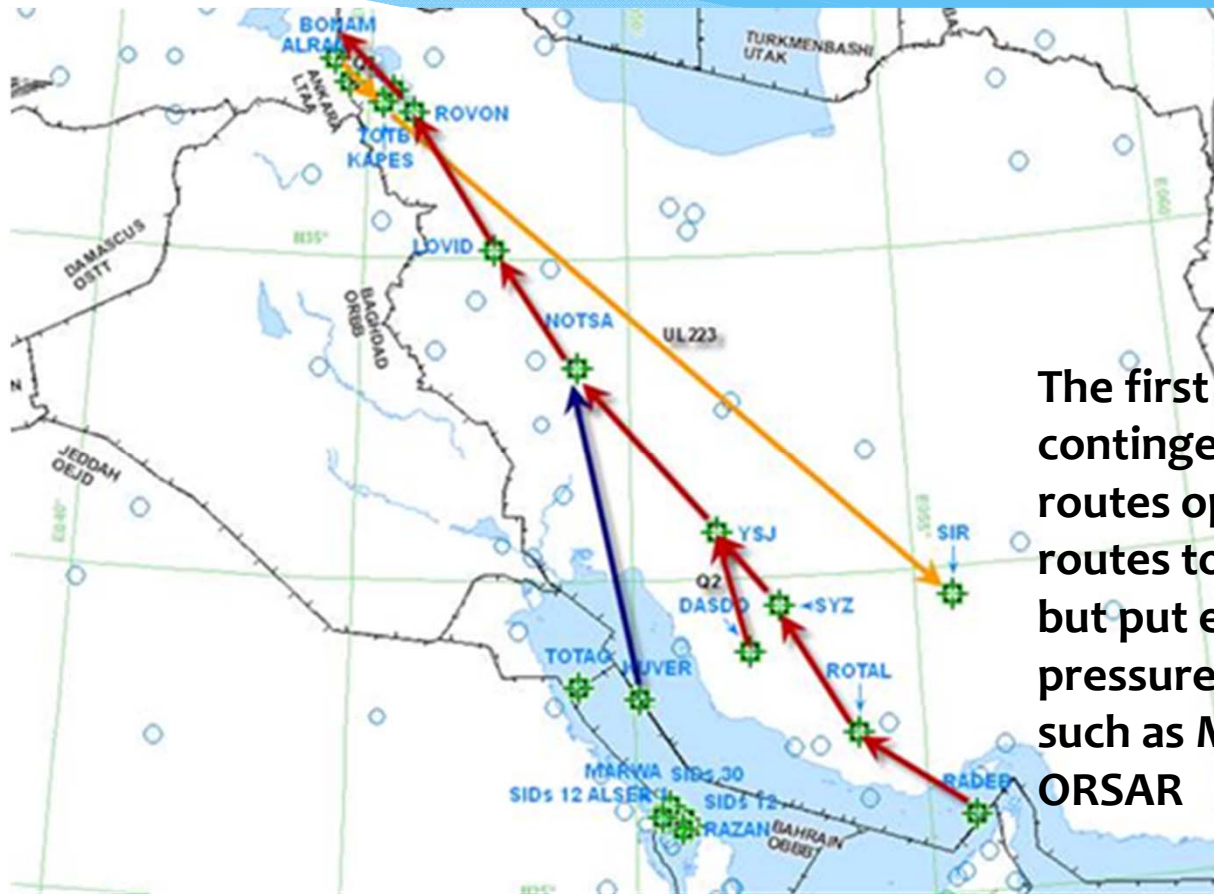
Attempted to maintain integrity of “NORMAL” operations including climb, descent and crossing areas

Received From Tehran with Contingency

19 Aug

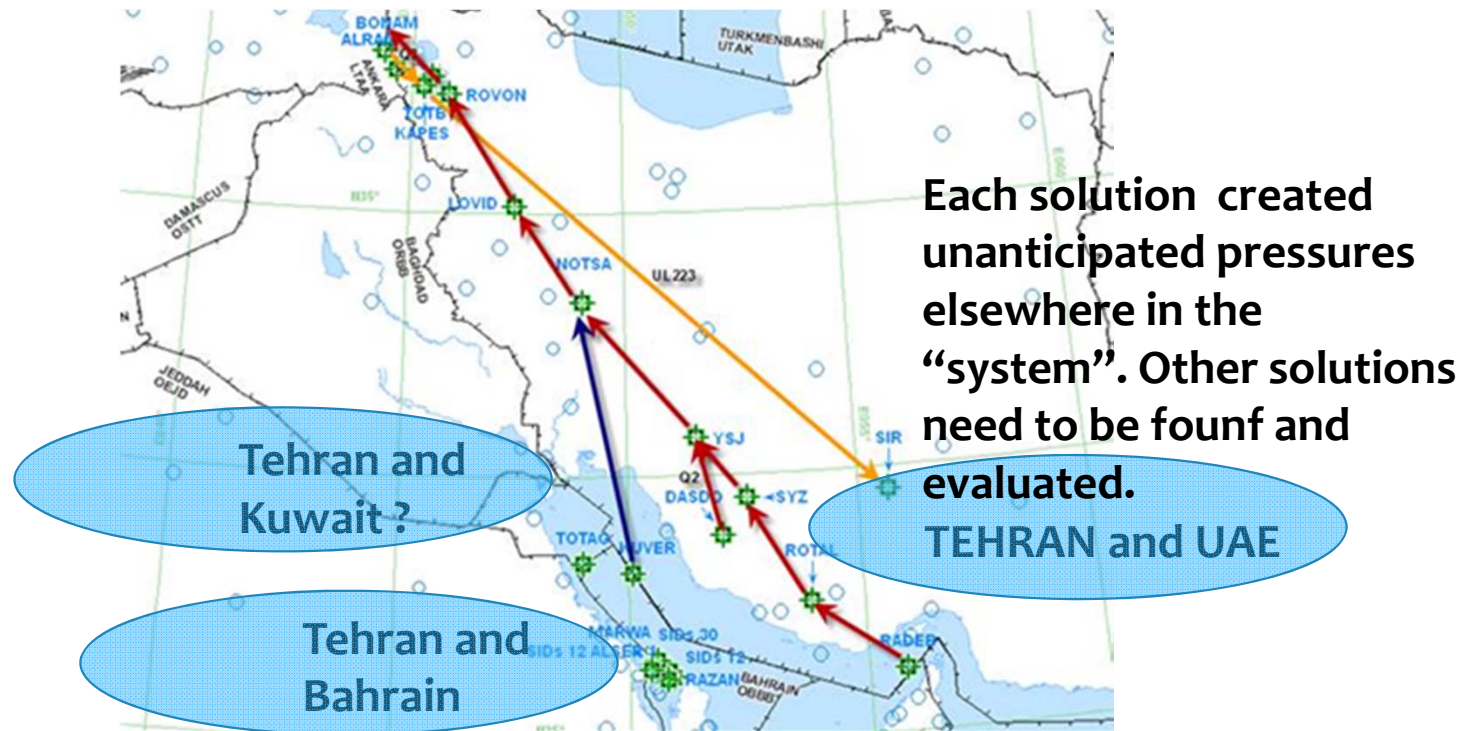


Concept: Joining Tehran Contingency Routes

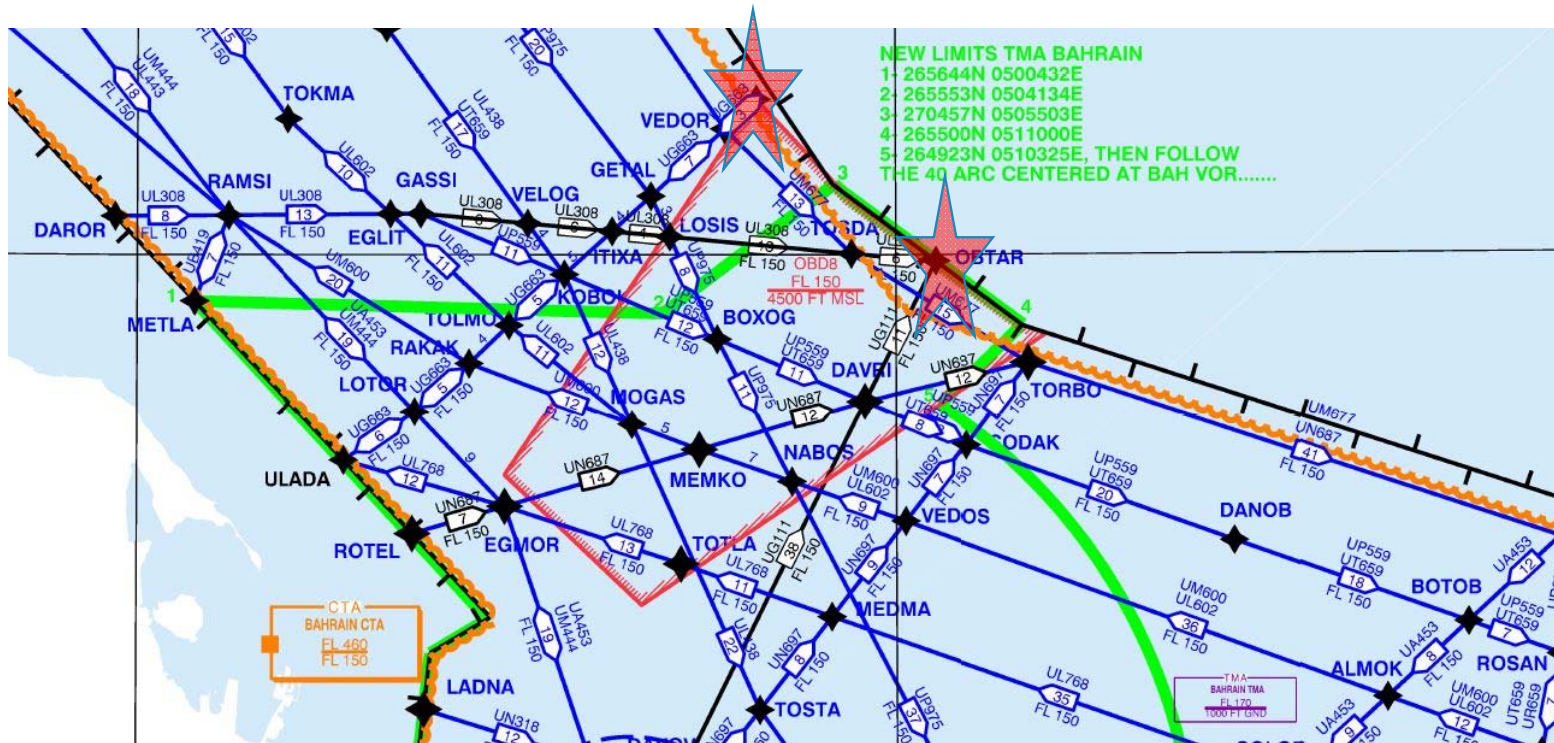


The first contingency routes opened routes to Europe but put excess pressure on points such as MIDSI and ORSAR

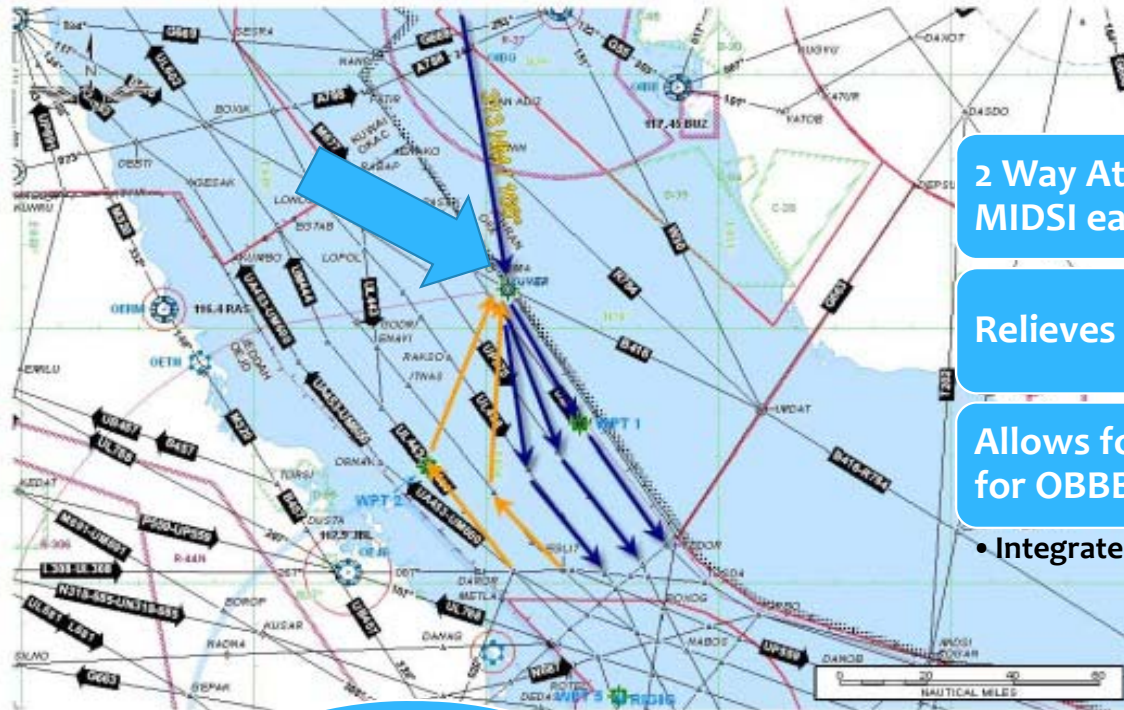
All initial proposals were Bilateral.
Real Solutions require Multilateral
solutions be built in conjunction.



Possible solutions split ALSER / OBTAR



2 Way Traffic At KUVER



2 Way At KUVER Relieves MIDS1 east and West

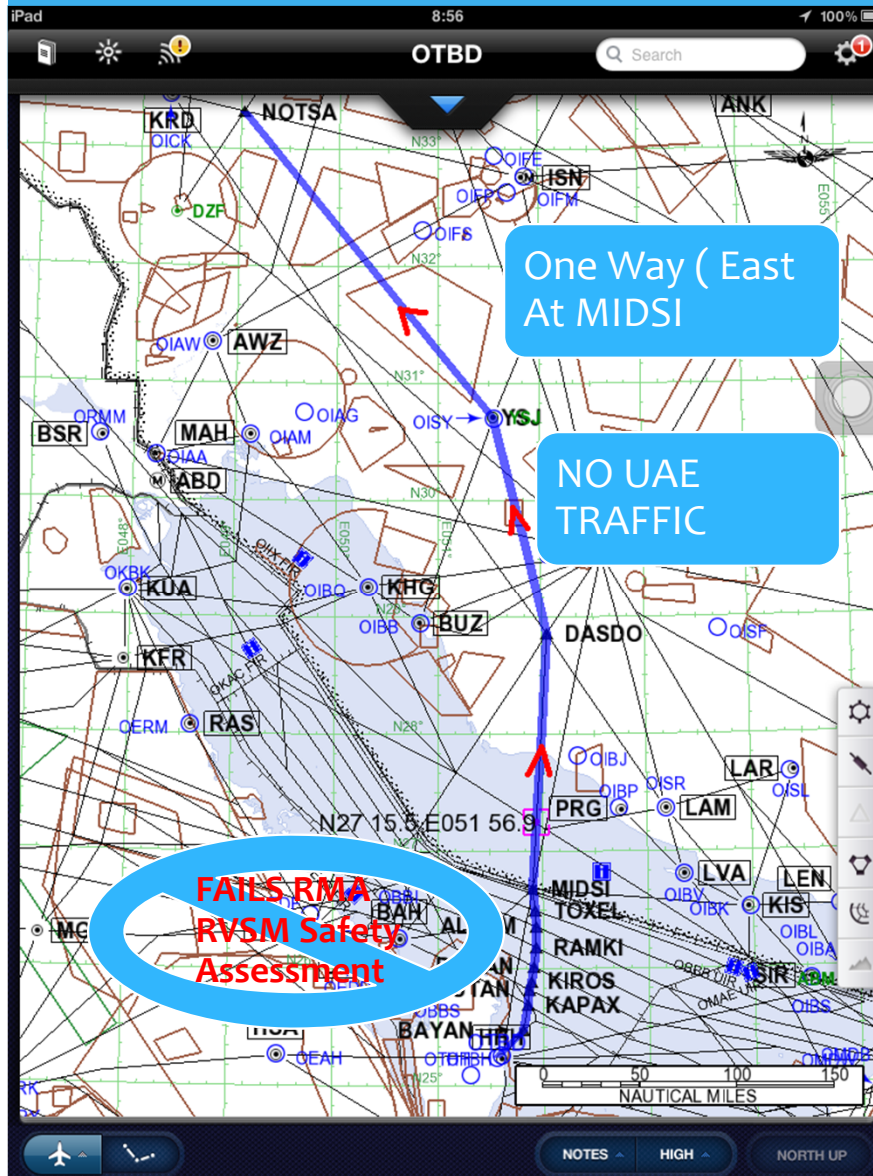
Relieves ORSAR

Allows for higher levels for OBBB FIR departures

- Integrated with UAE Flow

**FAILS RMA
RVSM Safety
Assessment**

Tehran Proposal 17 September

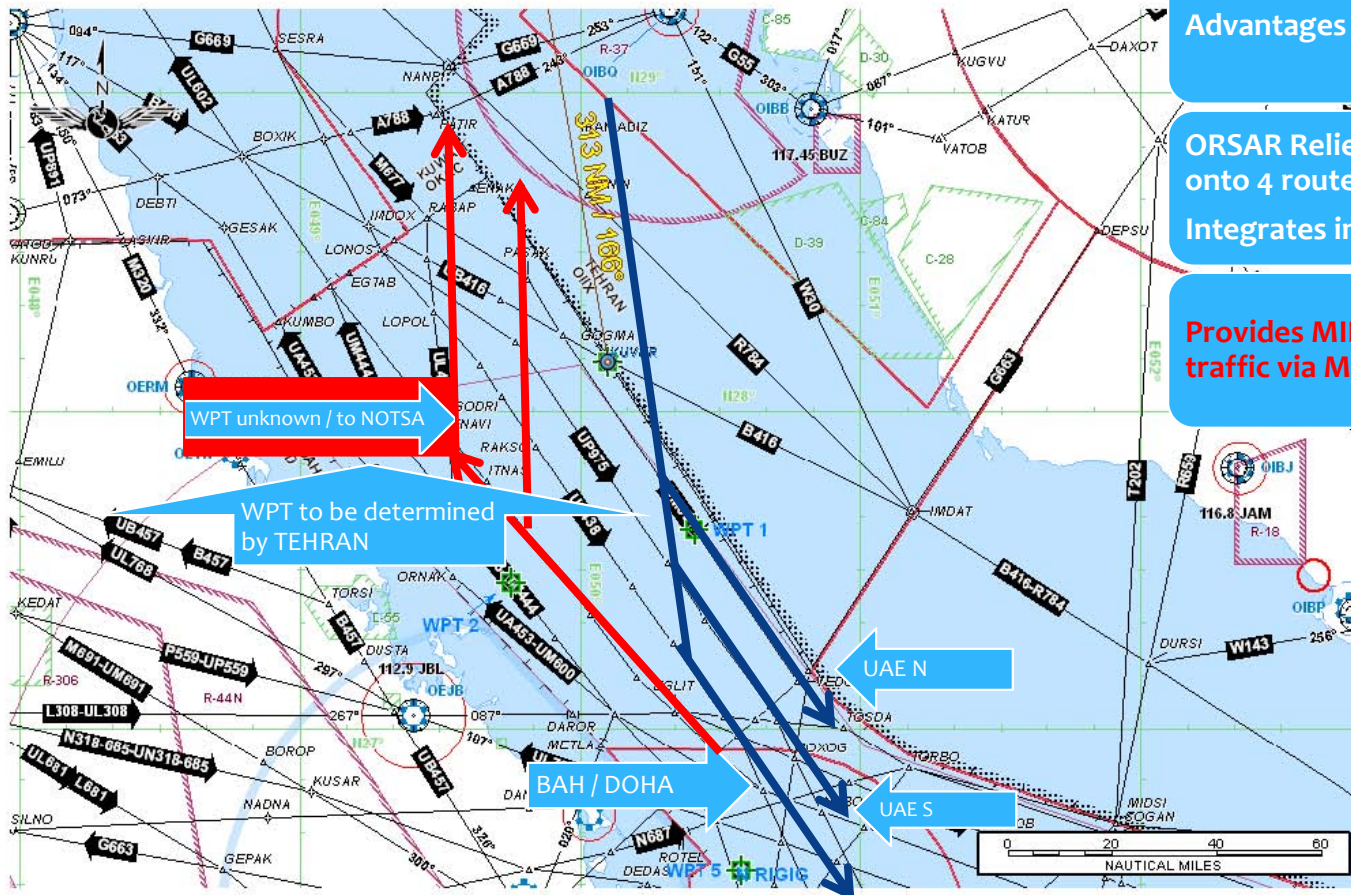


Building on Previous Agreements

Advantages

ORSAR Relief splitting UAE N and UAE S into 4 routes as normal
Integrates into proven routing structure

Provides MIDSI Relief, No westbound traffic via MIDSI



Where do we go from here ?

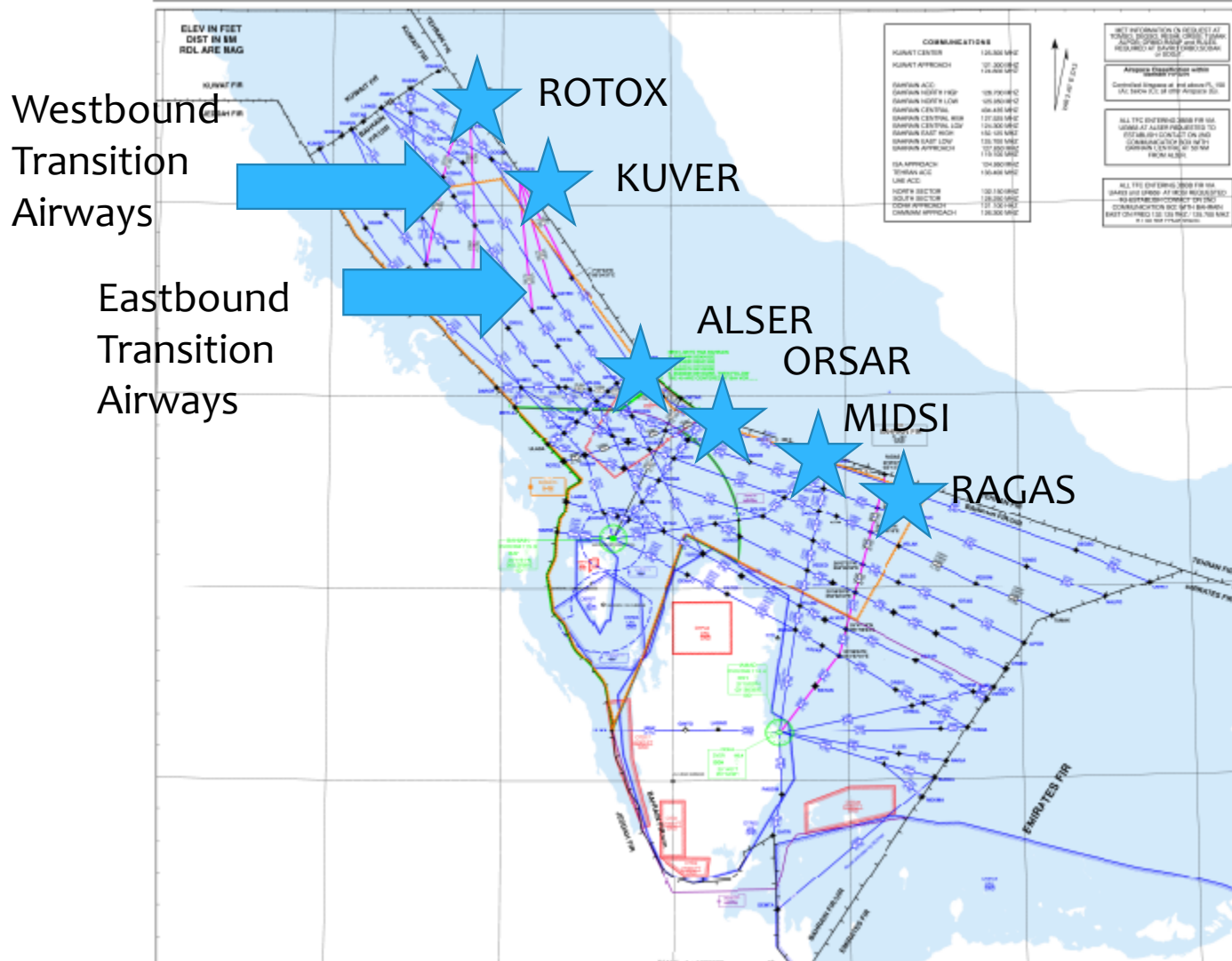
Tehran and Bahrain

Agreement reached !!!

- * Fixes near KUVER (KUVER – ROTOX) allow for East and Westbound flights.
 - * Available to open with minimum effort by NOTAM.
 - * Keeps “normal” traffic flows intact.
- * Fixes near ALSER (ALSER – ORSAR)
 - * Alleviate previous issue - climbing / descending head on.
- * Fixes near MIDSI (MIDSI – RAGAS)
 - * Alleviate previous issue - climbing / descending head on
 - * Cross managed in OB BB FIR for continued climb or descent to Doha, Bahrain and Dammam.
- * Other options should be open for continuous discussion

Solution Pending Implementation

16 October 2014



6 total FIR Boundary Fixes to balance traffic and provide balanced solutions

Need for Airline Input

- * All contingency routes should provide safe and efficient customer focus. Next slide shows Airline input received as we developed proposals.

QTR Assessment

Route	Flight time	Distance (nm)	Trip fuel (Kg)	Cost (USD)
MIDSI	05:47	2741	27495	54694
KUVER/TOTIS	05:45	2731	27177	54047
Difference	00:02	10	318	647

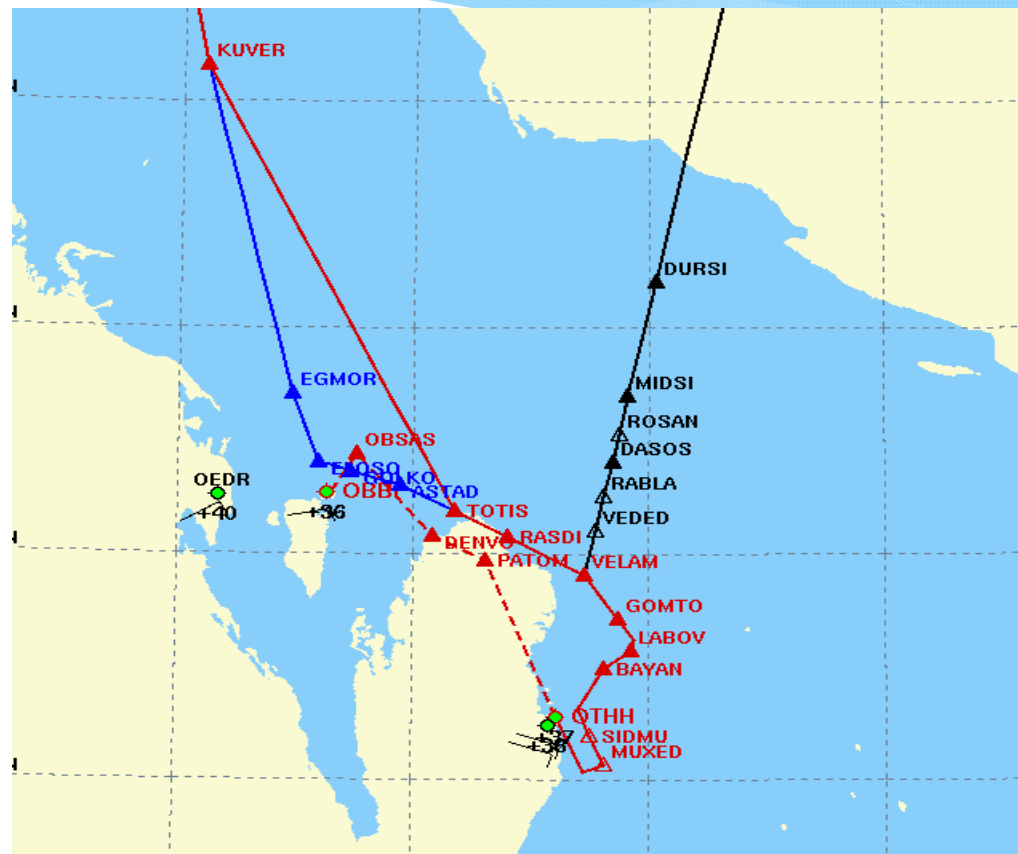


Inbound DOH

Red line is the route VIA KUVER-TOTIS-RASDI

Blue line is the route VIA KUVER-EGMOR

Flight DOHA – EKCH (Copenhagen) B787



Pre Planned Contingency routing ready to place in AIP

Standard Routing Supplement

ADD Section 15 (Temporary Contingency Routings)

- * 15.1 **TFC FROM OIIX (VIA UBBB or LTAA FIRs) TO OVERFLY THE NORTHERN OMAE FIR AND FOR DESTINATIONS (OMDB / OMDW / OMSJ / OMRK / OMDM / OMFJ).**
- * 15.1.1 KUVER -T677 - OBNET
- * 15.2 **TFC FROM OIIX (VIA UBBB or LTAA FIRs) TO OVERFLY THE SOUTHERN OMAE FIR AND FOR DESTINATIONS (OMAA / OMAL / OMAD / OMAM).**
- * 15.2.1 KUVER -T975 - TOTIS - N/UN318 – OVONA
- * 15.3 **TRAFFIC FROM OIIX FIR FOR DESTINATIONS (OBBI / OBBS / OBKH)**
- * 15.3.1 KUVER - T438 - KOBOK - OBSAS - RIGAG - BAH
- * 15.4 **TRAFFIC FROM OIIX FIR (VIA UBBB or LTAA FIRs) FOR DESTINATIONS (OTBD / OTHH / OTBH)**
- * 15.4.1 KUVER -T438 -ASTAD - N/UN318 - VELAM - Z/UZ225 – BAYAN
- * 15.4.2 KUVER - T659 - VELAM (ATC ASSIGNED ONLY)
* (KUVER T975 BOXOG UP559 ROSAN UP659)
- * 15.5 **TRAFFIC FROM OMAE FIR TO OIIX FIR**
- * 15.5.1 TUMAK -T602 - KUVER
- * 15.6 **TFC DEPARTING OBBS FOR OIIX FIR**
- * 15.6.1 BAH- T444 -KUVER (FOR TFC TO LTAA FIR)
- * 15.7 **TFC DEPARTING (OTBD / OTHH / OTBH) FOR OIIX FIR**
- * 15.7.1 PATOM – T444 KUVER (FOR TFC TO LTAA FIR)

Where do we go from here ?

- * Lessons learned.
- * Be prepared
- * Multilateral discussions
- * ANSP and Users involved
- * Consider Safety Management / RVSM
- * ATCO Training new procedures including reduced in-trail separation and sequencing.

Thank You for your time

Special thanks to:

- * **Tehran ACC**
- * **Kuwait ACC**
- * **KSA ACC**
- * **UAE ACC**
- * **IATA**
- * **ICAO**

**Whose joint efforts enabled us to achieve
success !**