



International Civil Aviation Organization

The Second Meeting of the Ad Hoc Afghanistan Contingency Group Meeting (AHACG/2)

Istanbul, Turkey, 17-19 November 2014

Agenda Item 3: Europe- Southeast/South Asia Contingency Planning (scenarios, procedures)

EUROPE-ASIA MAJOR TRAFFIC FLOW CONTINGENCY PLANNING

(Presented by the Islamic Republic of Iran)

SUMMARY

This paper presents the implementation plan of Islamic Republic of Iran (I. R. Iran) regarding scenario C (presented in the First Meeting of the Ad Hoc Afghanistan Contingency Group) for the establishment of a Europe – Asia Major Traffic Flow Contingency Planning arrangement.

1. INTRODUCTION

1.1 Working Paper 04 (WP04) of the First Meeting of the Ad Hoc Afghanistan Contingency Group Meeting (AHACG/1) provided information in on certain aspects of the transition from military to civilian control of Afghanistan’s airspace, and suggested considerations for sub-regional airspace contingency planning, should the Kabul Flight Information Region (FIR) become restricted, either in part of as a whole.

1.2 It was necessary for adjacent FIRs to support Kabul FIR during contingency situation. Tehran analyzed the capacity of the airspace regarding current and demand situation of traffic in Tehran FIR (especially at north, east and south east) to adopt Tehran FIR contingency schemes.

2. DISCUSSION

Iranian Airspace Routes (Scenario C from AHACG/1/WP04)

2.1 As mentioned in final report of the first meeting, Scenario C appears to be the most likely for traffic from South and Southeast Asian to European airspace and vice versa. According this proposal, the agreed route scheme/OTS within Tehran FIR was as follows:

- a) a high density Organized Track System (OTS, henceforth referred to as the ‘Royal Road’ OTS, after the ancient road between Persia and Anatolia, **Figure 1**) be established to accommodate the main northwest-southeast flow of air traffic, with either two or three near-parallel ATS routes using –
 - i. Flight Level Allocation Scheme (FLAS) for **westbound** flight levels FL300, FL340 and FL360);
 - ii. FLAS for **eastbound** flight levels FL310, FL350 and FL370;
 - iii. advisory (not mandatory) speed controls of Mach 0.79 - 0.81 for FL300/FL310, Mach 0.81 - 0.83 for FL340/FL350, and Mach 0.83 - 0.85 for FL360/FL370;

- iv. BOBCAT or alternative traffic metering system to provide slots seven minutes apart, with a requirement for entry timing of plus or minus one minute from the allocated entry slot time (this would set an approximate 55NM spacing);
 - v. Merging procedures for traffic departing Iranian airports so aircraft can join the OTS routes, preferably climbing to a level below the OTS FLAS, and then being vectored or delayed before safely merging (the sequence would need to be coordinated with the next State unless such traffic was accounted for in the traffic metering system);
 - vi. Mandatory carriage of ACAS (and possibly Automatic Dependent-Surveillance-Broadcast OUT (ADS-B OUT);
- b) FLAS for **westbound** traffic crossing the Royal Road OTS of FL320 (or FL280 and below, or FL380 or above);
 - c) FLAS for **eastbound** traffic crossing the Royal Road OTS of FL330 (or FL290 and below, or FL390 or above);
 - d) A two-way route system (the ‘Caucasus Corridor’) laterally segregated from the Royal Road OTS which is dedicated for traffic between the Caucasus/Russia and South or Southeast Asia (**Figure 2**); and
 - e) A two-way route system (the ‘Gulf Corridor’) laterally segregated from the Royal Road OTS which is dedicated for traffic between the Gulf and Europe (Iran has already promulgated a suitable route from BONAM on the Ankara FIR boundary to DARAX on the Emirates FIR boundary).

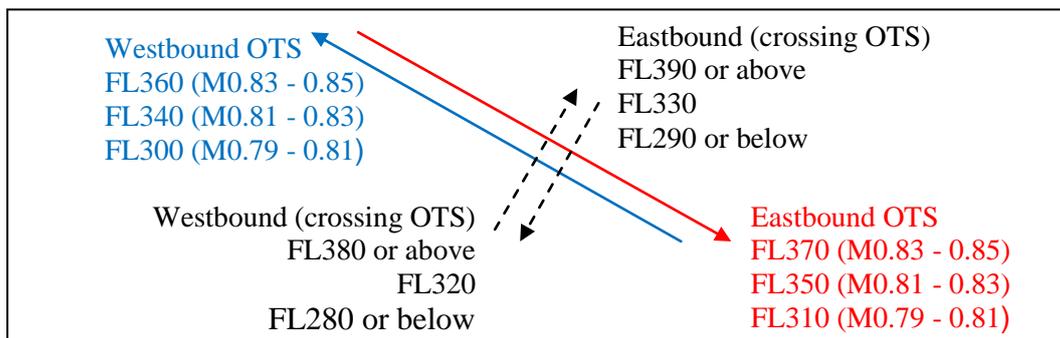


Figure 1: Possible High Density OTS FLAS

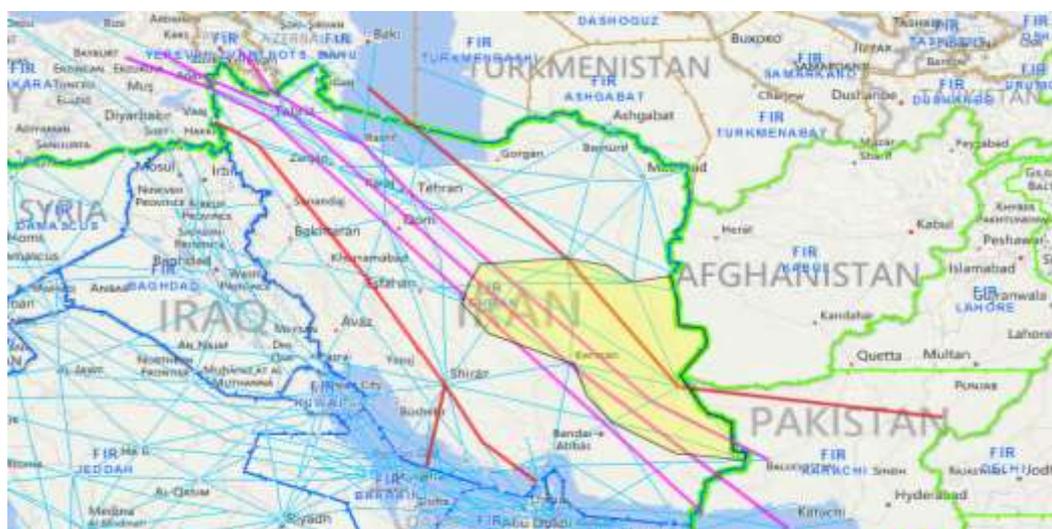


Figure 2: Royal Road OTS example using RNAV and flexible entry/exit waypoints

2.2 In **Figure 3**, the pink coloured routes are available now. The blue coloured routes are Tehran's optimal desire tracks, but were currently not available. Iran was negotiating with relevant units to establish the blue routes in the future. The possible routing bidirectional schemes were:

- a) from DERBO (Tehran/Karachi FIR) G452 ZDN UN319 ULDUS (Tehran/Baku FIR);
- b) From KEBUD (Tehran/Karachi FIR) L124/UL124 PEKES T215 ANK G208/UL125 RADAL R794 NSR UL333 RST B121 MAGRI (Tehran/Yerevan FIR). Note: Tehran is negotiating with relevant units to modify this scheme by using most direct route from KEBUD to MAGRI;
- c) from new FIR boundary between Tehran and Karachi (Track KER DCT TU) KER R654 YZD UT211 RUS R661 TBZ UL333 DASIS (Tehran/Ankara FIR);

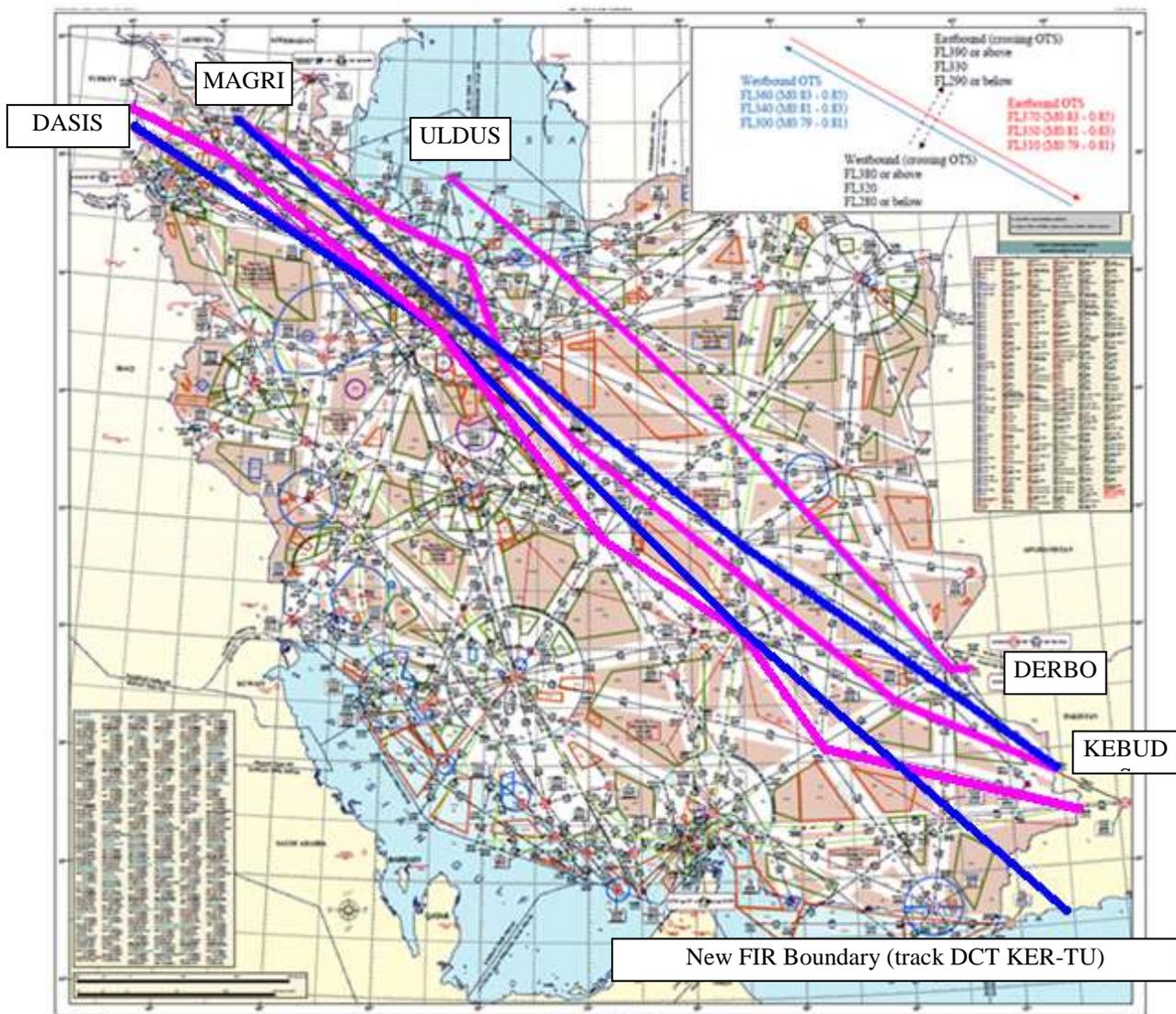


Figure 3: Potential Tehran FIR OTS Contingency Routes

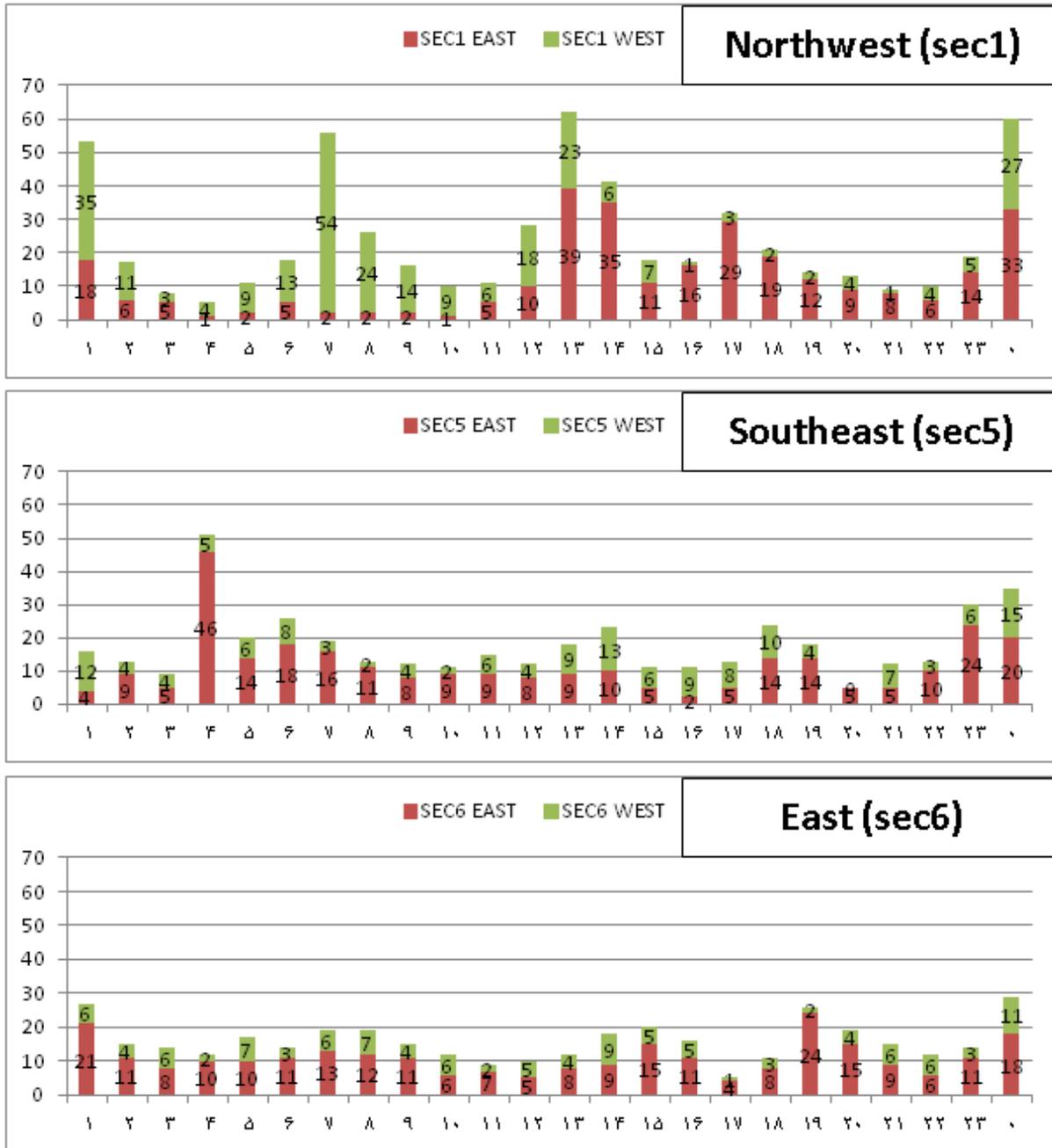
Iranian Airspace Flight Level Allocation Scheme (FLAS)

2.3 The following procedures for level and speed are acceptable to Tehran:

- a) FLAS for westbound traffic FL300, FL340 & FL360
- b) FLAS for eastbound traffic FL310, FL350 & FL370

Note: advisory (not mandatory) speed controls of Mach 0.79-0.81 for FL300/FL310, Mach 0.81-0.83 for FL340/FL350 and Mach 0.83-0.85 for FL360/FL370.

2.4 Tehran FIR Traffic Sample Data



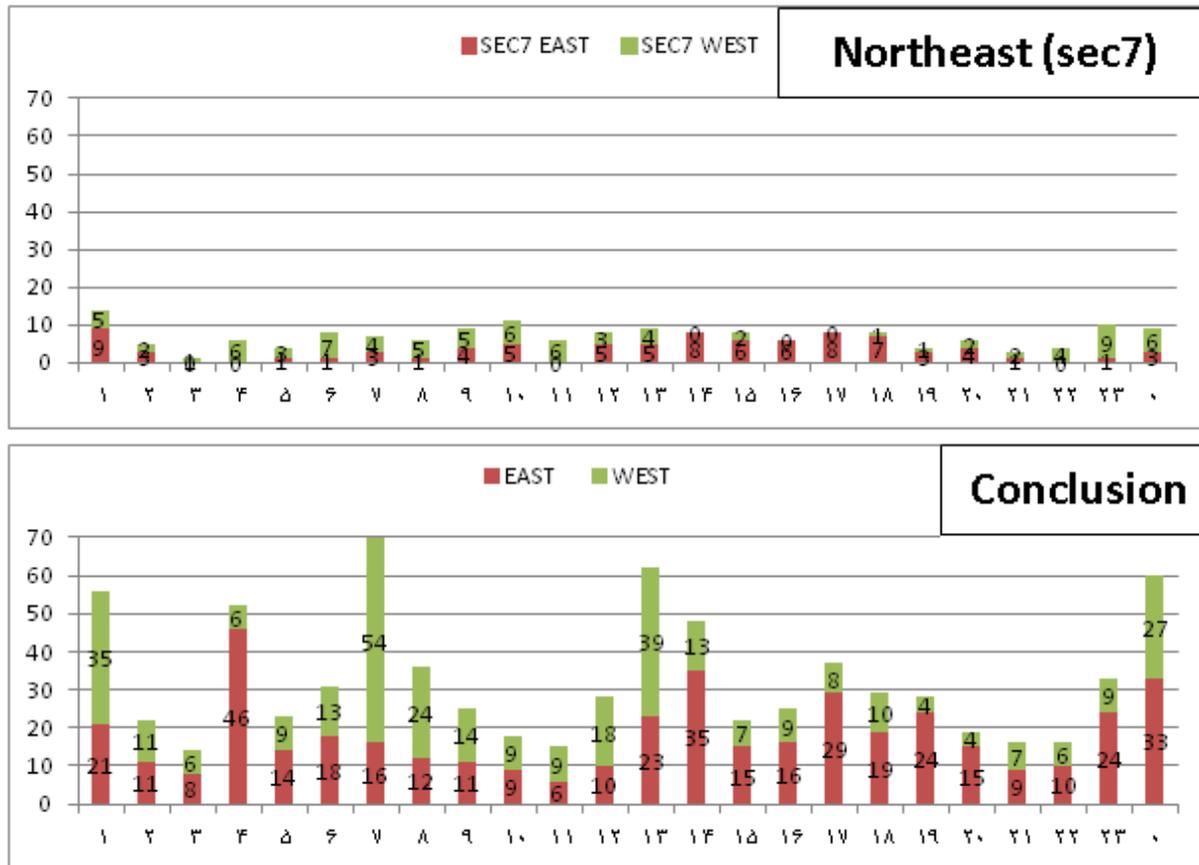


Figure 4: Tehran FIR Traffic Sample Data

2.4.1 Based on statistics and traffic analysis, the declared capacity of Tehran FIR is around **32 traffic per hour**.

2.4.2 For east bound traffic between 0500 UTC and 1200, Tehran has extra capacity to accept traffic from European airspace to south and southeast of Asia.

Note: the removal of current restrictions over Karachi FIR including level and separation restrictions is of paramount importance

2.4.3 For west bound traffic between 1500 UTC and 2200, Tehran has extra capacity to accept traffic from south and southeast of Asia to European airspace.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Consider revision to the current letter of agreement between Tehran & Karachi in the following aspect:
 - 1- Karachi is urged to accept traffic based on RNAV separation 50NM (currently we have to accommodate four converging ATS route over PG (44NM within Karachi FIR) based on 10 min separation which is sometime impossible);
 - 2- Remove level restrictions (flight level FL410 and above are not acceptable);
 - 3- Establish new FIR boundary point.
- b) Consider revision to the current letter of agreement between Tehran & Ankara to establish new FIR boundary.

- c) Encourage the deployment of BOBCAT or alternative traffic metering system to provide slots seven minutes apart, with a requirement for entry timing of plus or minus one minute from the allocated entry slot time in both sides (this would set an approximate 55NM spacing);
- d) Mandatory carriage of ACAS and possibly ADS-B OUT;
- e) Certain key components of Iranian ATM systems need improvement or renewal which calls for committed cooperation o countries possessing relevant technologies.
- f) Discuss any relevant matters as appropriate.

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