



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF THE FOURTH MEETING
OF THE MIDANPIRG
TRAFFIC FORECASTING SUB-GROUP**

TF SG/4

(Cairo, Egypt, 15-17 November 2011)

The views expressed in this Report should be taken as those of the MIDANPIRG TF Sub-Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report.

Approved by the Meeting
and published by authority of the Secretary General

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TF SG/4
History of the Meeting

PART I - HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Fourth Meeting of the MIDNAPIRG (TF SG/4) was held at the Meeting Room of the ICAO Middle East Regional Office in Cairo, Egypt, from 15 to 17 November 2011.

2. OPENING

2.1 The meeting was opened by Mr. Jehad Faqir, Deputy Regional Director, ICAO Middle East Office who welcomed all the participants to the MID Regional Office and to the Fourth Traffic Forecasting Sub-group Meeting (TF SG/4). He reminded the meeting that despite the Conclusion 12/74 of MIDANPIRG referring to the support of SG activities there are some MID States which are not according high priority to the Traffic Forecast activities. He briefly recalled the objectives of the Traffic Forecasting Sub-group; namely to develop forecasts for major traffic flows within the MID Region that also includes Peak Period analysis and other planning analyses to support regional air navigation planning and implementation processes. Mr. Faqir ended his opening remarks by wishing the meeting a successful deliberations and rewarding and productive outcome.

2.1 The Chairman of the Sub-group Mr. Saleem Mohamed Hassan, welcomed the participants and wished them successful meeting.

3. ATTENDANCE

3.1 The meeting was attended by a total of fifteen (15) participants from five (5) States (Bahrain, Egypt, Jordan, Saudi Arabia, and UAE). The list of participants is at **Attachment A** to the Report.

4. OFFICERS AND SECRETARIAT

4.1 The meeting was chaired by Mr. Saleem Hassan, Chief Air Traffic Management from Bahrain. Mr. Jehad Faqir, Deputy Regional Director served as Secretariat of the meeting assisted by Mr. Zubair Anwar, Associate Economist, ICAO Headquarters, Montreal.

5. LANGUAGE

5.1 Discussions were conducted in English and documentation was issued in English.

TF SG/4
History of the Meeting

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1:	Adoption of Provisional Agenda
Agenda Item 2:	Review of the Conclusions and Decisions made by MIDANPIRG/12 in connection with the TF SG
Agenda Item 3	ICAO activities in the field of traffic forecasting and economic planning
Agenda Item 4:	Review of updated Forecast
Agenda Item 5:	Peak-period analysis
Agenda Item 6:	Presentations by States
Agenda Item 7:	Future work programme
Agenda Item 8:	Any other business

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The MIDANPIRG records its actions in the form of Conclusions and Decisions with the following significance:

- a) **Conclusions** deal with matters that, according to the Group's terms of reference, merit directly the attention of States, or on which further action will be initiated by the Secretary in accordance with established procedures; and
- b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its Sub-Groups.

8. LIST OF CONCLUSIONS AND DECISIONS

DRAFT CONCLUSION 4/1: PROVISION OF STATISTICAL DATA

DRAFT CONCLUSION 4/2: TRAFFIC FORECAST AND PEAK PERIOD ANALYSIS WORKSHOP

DRAFT CONCLUSION 4/3: TRAFFIC FORECASTING AND PEAK PERIOD ANALYSIS REQUIREMENTS IN THE MID REGION

TF SG/4
Report on Agenda Item 1

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF PROVISIONAL AGENDA

1.1 The meeting reviewed and adopted the Provisional Agenda as at Paragraph 6 of the History of the Meeting.

TF SG/4
Report on Agenda Item 2

**REPORT ON AGENDA ITEM 2: REVIEW OF THE CONCLUSIONS AND DECISIONS MADE BY
MIDANPIRG/12 IN CONNECTION WITH THE TF SG**

2.1 The meeting was presented with the Conclusions adopted by MIDANPIRG/12 in connection with Traffic Forecasting activities in the Middle East Region as at **Appendix 2A** to the Report on Agenda Item 2. MIDANPIRG/12 Conclusion 12/74 dealt with the membership and the composition of the Sub-Group and the identification of the support which States are expected to extend to the forecasting activities in the region.

2.2 The meeting noted the information provided in the working paper and agreed to amend Conclusion 12/74 and use the amended one as the basis for the work programme of the Sub-Group.

FOLLOW-UP ON MIDANPIRG/12 AND DGCA-MID/1 MEETING CONCLUSIONS AND DECISIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
<p>CONC. 12/2: INCREASING THE EFFICIENCY OF THE MIDANPIRG SUBSIDIARY BODIES</p> <p>That, with a view to maintain the continuity in the activity of the MIDANPIRG subsidiary bodies and increase their efficiency:</p> <p>a) States be invited to nominate for each MIDANPIRG subsidiary body Experts/Specialists as Members of the body concerned to fully contribute to the work of this body; and</p> <p>b) the specialists nominated for membership in a MIDANPIRG subsidiary body, act as focal points within their Civil Aviation Administration for all issues and follow-up activities related to the Work Programme of that body.</p>	<p>Implementation of the Conclusion</p>	<p>ICAO States</p>	<p>State Letter Nomination of Experts/Specialist</p>	<p>January 2011</p>	
<p>CONC. 12/3: UPDATE OF THE MIDANPIRG PROCEDURAL HANDBOOK</p> <p>That, the ICAO MID Regional Office:</p> <p>a) proceed with the amendment of concerned pages of the MIDANPIRG Procedural Handbook to reflect the changes approved by MIDANPIRG/12; and</p> <p>b) publish the updated version of the Handbook on the ICAO MID website before 31 December 2010</p>	<p>Update the MIDANPIRG Procedural Handbook and post it on the web</p>	<p>ICAO</p>	<p>Fifth edition of the Procedural Handbook</p>	<p>January 2011</p>	
<p>CONC. 12/47: MID REGION PERFORMANCE METRICS</p> <p>That,</p> <p>a) the following MID Region Metrics be adopted for performance monitoring of the air navigation systems:</p>	<p>Monitor performance of ANS using the endorsed metrics</p>	<p>MIDANPIRG & subsidiary bodies</p>	<p>Develop performance targets</p>	<p>2011</p>	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
<p>MID Metric 1: Number of accidents per 1,000 000 departures; MID Metric 2: Percentage of certified international aerodromes; MID Metric 3: Number of Runway incursions and excursions per year; MID Metric 4: Number of States reporting necessary data to the MIDRMA on regular basis and in a timely manner; MID Metric 5: The overall collision risk in MID RVSM airspace; MID Metric 6: Percentage of air navigation deficiencies priority "U" eliminated; MID Metric 7: Percentage of instrument Runway ends with RNP/RNAV approach procedure; and MID Metric 8: Percentage of en-route PBN routes implemented in accordance with the regional PBN plan.</p> <p>b) the MIDANPIRG subsidiary bodies monitor the Metrics related to their work programmes; develop associated performance targets and provide feed-back to MIDANPIRG.</p>					
<p>CONC. 12/48: DATA COLLECTION FOR MID REGION PERFORMANCE METRICS</p> <p>That, States be invited to:</p> <p>a) incorporate the agreed MID Region Performance Metrics into their National performance monitoring process;</p> <p>b) collect and process relevant data necessary for performance monitoring of the air navigation systems to support the regional Metrics adopted by MIDANPIRG; and</p> <p>c) submit this data to the ICAO MID Regional Office on a regular basis.</p>	<p>Implement the Conclusion</p>	<p>ICAO States</p>	<p>State Letter</p> <p>Include metrics into national performance monitoring</p> <p>Submit data to ICAO</p>	<p>January 2011</p>	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
<p>CONC. 12/74: UPDATED TRAFFIC FORECASTING REQUIREMENTS IN THE MID REGION</p> <p>That,</p> <p>a) the ICAO MID Regional Office coordinate with other international and regional organizations; including IATA, the possibility of establishing a MID database to support regional traffic forecasting activities;</p> <p>b) MID States continue their support to the Traffic Forecasting Sub-Group by ensuring that their respective nominees to the membership of the Sub-Group include, as much as possible, forecasting experts, air traffic management experts and, when required, financial analysts to carry out business case and cost/benefit analysis; and</p> <p>c) MID States continue to avail required FIR and other data to the Traffic Forecasting Sub-Group in the format agreed by the Sub-Group to facilitate the development of forecasts and other air navigation planning and implementation parameters.</p>	<p>Update information to be provided by States</p>	<p>TF SG ICAO States</p>	<p>State Letter Meeting of the SG Traffic data</p>	<p>May 2011</p>	<p>On going SL: ME 3/56.11.1-10/439 Dated: 19 Dec.2010</p>

TF SG/4
Report on Agenda Item 3

REPORT ON AGENDA ITEM 3: ICAO ACTIVITIES IN THE FIELD OF TRAFFIC FORECASTING AND ECONOMIC PLANNING

3.1 The meeting noted the contents of the current ICAO statistics programme which includes the Statistics of **commercial air carriers**, quarterly reports of traffic for international airports, annual collection of the financial data relating to **air navigation services** (revenues, expenses and net capital investments), and the activities carried out by the Economic Analyses and Policy (EAP) Section which is responsible for the management of the Statistics Programme, as well as for studying the needs of users and capabilities of providers to assist the Council in adjusting this programme as required by changing circumstances. This function involves the timely collection, processing, analysis, estimation, and dissemination of civil aviation data relating to commercial air carriers, airports and air navigation services, civil aircraft on register and aircraft accident rates.

3.2 The meeting acknowledged the importance of active participation of MID States in ICAO Integrated Statistical Database (ISDB) system. The ISDB database implemented by ICAO is used to collect process and disseminate all the aviation statistics submitted by Contracting States. The new database is web-enabled; ICAO Contracting States and regional organizations are able to access the data therein via the internet, through a standard browser.

3.3 The meeting reviewed the summary of recommendations of the Tenth Session of the Statistics Division as at **Appendix 3A** to the Report on Agenda Item 3. The Recommendations and Conclusions are contained in the report of the Tenth Session of the Statistics Division (2009) (Doc 9932) which is available on the ICAO-NET (www.icao.int/icaonet). These Recommendations were dispatched to Member States under cover of States Letter SD 13/1-10/60 from 30 September 2010. The meeting urged MID States to take immediate action on the Recommendations.

3.4 The meeting took note of the STA/10 Recommendations [i.e. 1/1, 2/1 c), 2/3, 3/1 a), 4/1, 8/1, 9/1, 10/1, 11/2], as well as the Conclusions that pertain to new editions of the ICAO Air Transport Reporting Forms which will become effective 1 January 2012. The revised reporting forms, reporting instructions (including the implementation process with respect to reporting) and Conclusions were disseminated under cover of a State Letter SD 13/1-11/66 dated 19 August 2011. The list of the new and revised forms and associated STA/10 Recommendations are at **Appendix 3B** to the Report on Agenda Item 3. Based on the above mentioned Recommendations, the meeting agreed to the following Draft Conclusion:

Why	Lack of provision of statistical data by MID States
What	Provision of statistical data using the new amended forms
Who	MID States
When	TF SG/5

TF SG/4
Report on Agenda Item 3

DRAFT CONCLUSION 4/1: PROVISION OF STATISTICAL DATA

That, States be urged to provide required airlines, airports and air navigation service providers statistical data to ICAO using the new revised forms as at Appendix 3B to the Report on Agenda Item 3.

ASSISTANCE TO CONTRACTING STATES

3.5 The meeting recognized that many States need manpower training and short-term expert assistance for the organization and development of their aviation statistics forecast and peak period analysis, and to have a better understanding of the ICAO statistical data new reporting forms. Some States have raised concern about the submission of the financial data related to airlines, airports and air navigation services mainly forms EF, J and K. Accordingly, the meeting urged MID States to take advantage of ICAO offer for training in compliance with Appendix B of the Resolution A37-20 which was reiterated during STA/10 divisional meeting, and agreed to the following Draft Conclusion:

Why	Need to provide States with a better understanding of the ICAO statistical data reporting forms and process to develop Traffic Forecasts and Peak Period analysis
What	Traffic Forecasts and Peak Period Analysis Seminar
Who	ICAO in coordination with MID States
When	2012

DRAFT CONCLUSION 4/2: TRAFFIC FORECAST AND PEAK PERIOD ANALYSIS WORKSHOP

That, with a view to provide States with a better understanding of the ICAO Statistical data reporting forms and process of development of Traffic Forecasts and Peak Period analysis:

- a) *MID Traffic Forecast and Peak Period Analysis workshop be organized in 2012; and*
- b) *MID States are encouraged to host and participate actively in the workshop.*

**IMMEDIATE ACTION ON SPECIFIC STA/10
RECOMMENDATIONS**

RECOMMENDATION 1/2

The Division recommends that:

States should be reminded that under the current definitions, international traffic includes data for cabotage services and that these data should be reported whenever data for international traffic is requested for the relevant Air Transport Reporting Forms, in particular in Forms A — *Traffic, commercial air carriers*, B — *On-flight Origin and Destination (OFOD)* and C — *Traffic by Flight Stage (TFS)*.

Action by States — Review of definitions of domestic and cabotage air services

States are reminded that cabotage services data should be reported whenever data for international traffic is requested. In this regard, Recommendation 1/3 related to the adoption of a classification for statistical purposes should be noted.

RECOMMENDATION 1/3

The Division recommends that:

The proposed classification (as shown in the Appendix to the report on Agenda Item 1) of civil aviation activities be adopted for statistical purposes.

Action by States — Review of the Classification and Definitions Used for Civil Aviation activities

It is noteworthy that the proposed classification is applicable with immediate effect.

RECOMMENDATION 2/1 A) AND B)

The Division recommends that:

With regard to the On-flight Origin and Destination (OFOD) data collection, Air Transport Reporting Form B, ICAO should:

- a) remove all publication restrictions in the selection of the city-pairs for this data collection; and
- b) publish all data submitted six months after the end of the quarterly reporting period concerned.

Action by States — Review of on-flight origin and destination (OFOD) publication rules and data

It is noteworthy that the release of publication restrictions is applicable with immediate effect.

RECOMMENDATION 2/2

The Division recommends that:

- a) for statistical purposes ICAO should use the definition of low-cost carriers (LCCs) as shown in the *Manual on the Regulation of International Air Transport* (Doc 9626);
- b) ICAO should annually update the list of LCCs based on the feedback from Member States; and
- c) ICAO should show both the IATA and the ICAO codes associated with each LCC.

Action by States — Definition and identification of low-cost carriers (LCCs)

Low-cost carriers (LCCs) list (preliminary compilation established by the Secretariat) is posted on the STA/10 website at <http://www.icao.int/STA10/Documentation.htm>. States are requested to report on the appropriateness of the categorization of those carriers and provide other categorizations that are not listed to facilitate the updating of the list before it is posted on the ICAO Secure site.

RECOMMENDATION 3/1 B)

The Division recommends that:

- b) ICAO should implement a new quarterly survey to obtain basic financial parameters of major air carriers in their regions to be collected through the ICAO Regional offices.

Action by States — Quick monitoring system (QMS) of commercial air carrier financial data

ICAO Regional Offices will dispatch a new quarterly survey pertaining to basic financial parameters to be collected from major air carriers in their region (Attachment B refers).

RECOMMENDATION 12/1

The Division recommends that:

- a) Member States should name one or more focal contact points for aviation statistics within their national civil aviation administration; and
- b) the list of focal contact points should be made available through the ICAO secure website.

**Action by States — Review of the Current Reporting Status Commercial Air Carriers
and Review of the Current Reporting Status: Airports and Air
Navigation Service Providers**

States are requested to name one or more focal contact points for aviation statistics within national civil aviation administrations. The list of focal contact points will be made available through the ICAO secure website.

TF SG/4
Appendix 3B to the Report on Agenda Item 3

**LIST OF NEW AND REVISED FORMS AND
ASSOCIATED STA/10 RECOMMENDATIONS**

REVISED AND NEW FORMS	STA/10 RECOMMENDATIONS
Form A — Traffic — Commercial Air Carriers	R-1/1, R-1/3 and R-2/3
Form B — On-Flight Origin and Destination	R-2/1 c)
Form D — Fleet and Personnel — Commercial Air Carriers	R-1/3
Form EF — Financial Data — Commercial Air Carriers	R-3/1 a) and R-3/2
Form H — Civil Aircraft on Register	R-8/1 a) 1) and 2)
Forms I and I-S — Airport Traffic	R-4/1
Forms J — Airport Financial Data	Conclusions-5&6/1
Form K — Air Navigation Services Financial Data	Conclusions-5&6/1
Form M (New) — Fuel Consumption Data	R-10/1 and R-1/3
Form N (New) — Aviation Personnel Licensing and Training	R-9/1

TF SG/4
Report on Agenda Item 4

REPORT ON AGENDA ITEM 4: REVIEW OF UPDATED FORECAST

4.1 For the purposes of the updated forecasts, the ICAO Statistical Route Group regional classification was used. According to this definition, the MID Region is comprised of Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen. The forecasts excluding military, general aviation and freighters aircraft.

4.2 The meeting was presented with a set of updated forecasts prepared by ICAO Secretariat for international passenger and aircraft movement traffic to, from and within the MID Region up to the year 2030. According to these forecasts, the passenger traffic to, from and within the Middle East Region on the five major route groups concerned for the period 2010-2030 is expected to increase at an average annual rate of 9.1 per cent. The Middle East-Africa Route Group is expected to experience the highest average annual growth rate of 10.4 per cent per annum, followed by Intra Middle East, Asia/Pacific-Middle East, North America-Middle East and Europe-Middle East Route Groups with growth rates of 10.3 per cent, 9.2 per cent, 8.8 per cent and 7.3 per cent respectively for the period concerned. The total aircraft movements to/from and within the Middle East Region are estimated to increase at an average annual growth rate of 8.7 per cent over the same period.

4.3 The meeting adopted the updated forecasts as at **Appendix 4A** to the Report on Agenda Item 4, for presentation to MIDANPIRG/13.

4.4 The meeting noted that the forecasted fast pace of growth will pose challenges for States, air navigation service providers and airports in the region.

4.5 The meeting also discussed the importance of the availability of complete and reliable traffic data for the development of Traffic Forecasts and re-iterated its request to States in the region to provide ICAO with the data as required by its Statistics program; in addition to the requests needed for specific analyses from selected Flight Information Regions (FIRs) to establish peak-period and other parameters required for planning and implementation purposes.

4.6 In connection with the above the ICAO MID Regional Office sent a State Letter ME 3/56.11.1-10/439 on 19 December 2010 requesting States to provide traffic data for the period January-December 2010 using the form at **Appendix 4B** to the Report on Agenda Item 4; followed by a Fax Reminder F.ME 11/202 on 4 August 2011.

4.7 The meeting noted that a number of States (Bahrain, Egypt and Saudi Arabia) have put all efforts to provide the requested data in a timely manner to meet the deadline for the development of the forecasts and Peak Period analysis; however many States did not supply the required information. Accordingly, the meeting agreed to the following Draft Conclusion:

TF SG/4
Report on Agenda Item 4

**DRAFT CONCLUSION 4/3: TRAFFIC FORECASTING AND PEAK PERIOD
ANALYSIS REQUIREMENTS IN THE MID
REGION**

That, considering the on-going requirements for developments of Traffic Forecasts and Peak Period analysis in the MID Region; MID States be urged to:

- a) provide required traffic data in order to facilitate the timely and efficient development of Traffic Forecasts and Peak Period analysis;*
- b) continue their support to the Traffic Forecasting Sub-Group by ensuring that their respective nominees to the membership of the Sub-Group include, as much as possible, forecasting experts, air traffic management experts and, when required, financial analysts to carry out business case and cost/benefit analysis; and*
- c) States not providing the required data to ICAO, in accordance with the requirements of Traffic Forecasting, be included in the MIDANPIRG List of air navigation deficiencies.*

TF SG/4
Appendix 4A to the Report on Agenda Item 4

**AIRCRAFT MOVEMENT FORECASTS
FOR THE MIDDLE EAST REGION
2010 - 2030**

Prepared by the Secretariat for
TF SG/4

1. INTRODUCTION

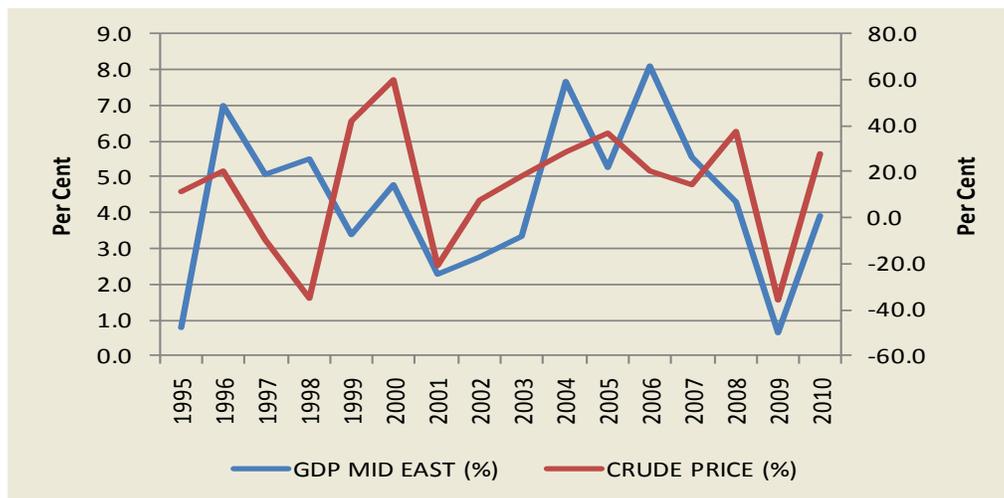
1.1 The MIDANPIRG Traffic Forecasting Sub-Group (TFSG) superseded, in 2004, the Middle East Traffic Forecasting Group (MID TFG) which was set up in 1998 with the objective of developing traffic forecasts and other planning parameters in support of the planning of air navigation services in the MID region. The TFSG has, so far, held three meetings in September 2004, in May 2006 and in April 2009.

1.2 This report provides forecasts prepared by the ICAO Secretariat for discussion by the TFSG/4 meeting in Cairo, 15-17 November 2011.

2. ECONOMIC TRENDS AND PROSPECTS FOR THE MIDDLE EAST REGION

2.1. The Middle East economy is largely driven by oil production and exports and as a result the region's economic growth is highly dependent on changes oil prices as illustrated in **Figure 1**.

FIGURE 1
Changes in Middle East GDP and Crude Oil Prices
(per cent)



2.2 The recent hike in oil prices, particularly in 2008 helped the economy of the region grow at faster rates through increased investment particularly in construction projects, higher trade volumes and tourism activity. The global economic crisis of 2009 had affected the economic growth of the region and as a result the region's GDP grew only about 0.6 per cent. This crisis had also led to shortages in labour and construction material. The combination of the increase in consumption, dominated by imported goods, and higher world commodity prices led to higher inflation, however, this trend was short lived and in 2010 the inflation rate in the region came down from 13 per cent in 2008 to about 5 percent in 2010. It is

expected that the long term inflation rate will be between 4 to 5 per cent. The Middle East economy recovered from the previous year's economic crisis and posted a 4 per cent GDP growth in 2010. In the long run the Middle East economy is expected to maintain a higher than world average growth through to the end of the forecast period. The GDP for the region is expected to increase at an average annual rate of 4.1 per cent for the 2010-2030 periods.

3. GEOGRAPHICAL SCOPE AND HISTORICAL DATA

3.1 Geographical Scope

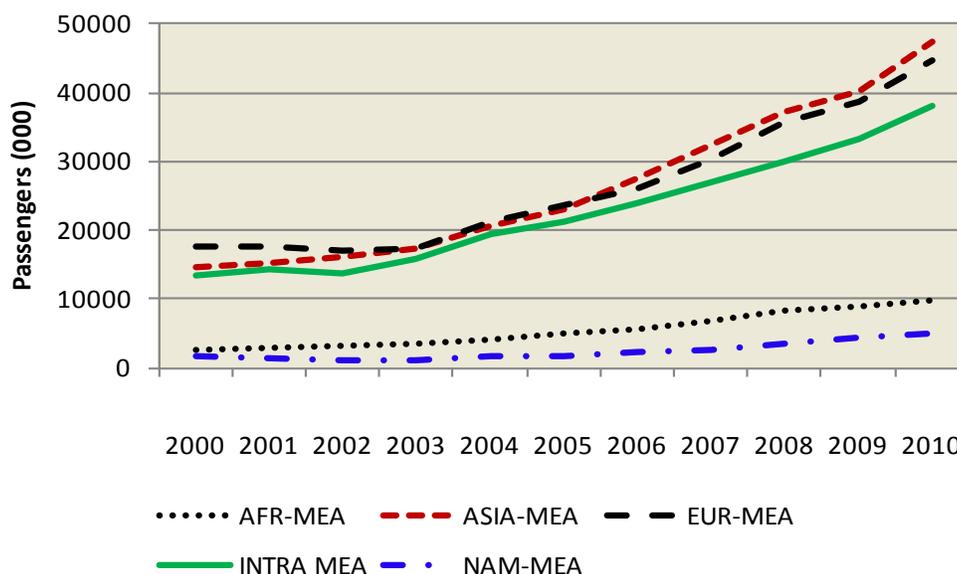
3.1.1 In order to facilitate the group's work and the forecasting process, the following major route groups to; from and within the Middle East Region have been identified. It is to be noted that according to the conclusion 3/1 of TF SG/3, Egypt has been included in the Middle East Region:

- Between Middle East - Europe
- Between Middle East - Africa
- Between Middle East - Asia/Pacific
- Between Middle East - North America
- Intra Middle East

3.2 Historical Passengers Traffic on Major Identified Route Groups

3.2.1 According to the historic air traffic trends on the identified five major route groups to, from and within the Middle East region the passenger traffic increased from 50 million in 2000 to about 145 million passengers in 2010 at an average annual growth rate of 11.2 per cent. The annual passengers carried and growth rates for each of the route groups concerned are illustrated in **Figure 2**.

FIGURE 2
Traffic by Major Route Group – 2000 -2010
(thousand passengers)



3.2.2 All route groups grew at an average annual rate ranging from 9.8 per cent to 14.1 per cent.

3.2.3 In 2010, the Middle East-Asia/Pacific route group had the highest share in passenger traffic (32.7 per cent), followed by Middle East-Europe (31 per cent) and Intra Middle East (26 per cent). The combined Middle East-Africa and Middle East-North America route groups share was about 10.2 per cent.

3.3 Historical Average Aircraft Seating Capacity on Major Identified Route Groups

3.3.1 During the 2000-2010 period, the average aircraft seating capacity decreased significantly on the Middle East –North America, while a moderate decrease took place on Intra Middle East and Middle East-Asia Pacific route groups. This average has fluctuated in the range of 204-207 seats per aircraft for the Middle East Africa and the Middle East-Europe route groups. The historical trends of the average aircraft seating capacity by route group are provided in **Table 1** below.

TABLE 1
Average aircraft seating capacity by route group

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFR-MEA	198	204	206	201	196	202	214	208	205	205	204
ASIA-MEA	243	247	242	242	238	233	234	239	230	230	232
EUR-MEA	194	195	198	201	202	202	208	209	208	208	207
INTRA MEA	177	178	183	185	187	188	186	186	179	176	173
NAM-MEA	307	300	305	300	290	290	289	291	290	291	295

3.4 Historical Load Factor on Major Identified Route Groups

3.4.1 All route groups experienced increases in the Load Factors during the period 2000 to 2010. The highest load factors are those achieved on the Middle East-North America and Middle East-Asia route groups followed by load factors on the Middle East – Europe route group. Load factors on the Middle East-Africa and Intra-Middle East route groups are the lowest.

3.4.2 The historical trends in load factors for the route groups concerned are presented in **Table 2** below.

TABLE 2

LOAD FACTORS FOR THE YEARS 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFR-MEA	59.6	62.4	65.1	66.4	70.0	71.3	69.1	71.3	72.5	69.4	71.1
ASIA-MEA	70.4	71.2	74.2	71.3	73.6	75.8	78.8	81.2	79.1	76.8	79.0
EUR-MEA	69.0	67.2	70.0	69.0	71.5	73.0	71.3	75.7	78.7	76.2	78.4
INTRA MEA	61.5	63.4	62.7	65.4	67.7	68.3	67.6	66.3	68.7	65.9	67.5
NAM-MEA	72.2	73.3	76.0	76.2	79.1	82.2	81.1	80.8	80.6	81.2	81.5

4. METHODOLOGY

4.1 The demand for air travel is primarily determined by economic developments, notably the growth of world and regional income levels as measured by the aggregate economic activities (GDP), demographic trends, and the cost of air travel measured by airline yields (gross passenger revenue per passenger kilometre flown). It is also assumed that the political and general economic climate are conducive to growth, however, no specific assumptions are made about possible political and economic scenarios beyond those implicit in the basic GDP growth rates forecast. World energy demand, supply, and prices are important to both economic progress and to the cost of air travel. It is assumed that during the forecast period there will be no major disruptions in the availability of fuel.

4.2 Econometric models were developed wherever possible to understand the cause and effect relationship between traffic and other causal factors. It was recognized, however, that even where models were developed, the forecasts should incorporate a significant element of judgement.

4.3 In route groups where consistent data were not available, forecasts were developed based on general assessments of traffic trends, economic and other relevant factors.

4.4 Forecasts of aircraft movements in a particular route-group can be derived from forecasts of passengers and assumptions about future trends in load factors and average aircraft seating capacity. The link between these variables is given by:

$$\text{Aircraft movements} = \frac{\text{passenger numbers}}{(\text{passenger/seats}) \cdot (\text{seats/aircraft})}$$

$$\text{passenger numbers} \\ = \frac{\text{passenger numbers}}{(\text{load factor}) \cdot (\text{aircraft seating capacity})}$$

4.5 The relationship between changes in the same variables can therefore be deduced:

$$Y = X1 - X2 - X3$$

Where:

- Y = change in aircraft movements (%)
- X1 = change in passenger numbers (%)
- X2 = change in load factor (%)
- X3 = change in average aircraft seats (%)

4.6 Judgements would be necessary about whether gradual improvements in load factors could be expected from marketing initiatives and yield programs. Assumptions were made about future trends in average aircraft seating capacity based on expectations about the types of aircraft that might be introduced to the route over the forecast period. Historical trends as well as data concerning aircraft orders were also factored into the development of future trends.

4.7 Having established the aircraft movement growth rates for each of the route-groups concerned, in the manner described above, aircraft movements forecasts for the year 2030 were estimated. These forecasts were developed for each of the major route groups concerned using the 2010 OAG (Official Airline Guide) data as the base year.

5. PASSENGER TRAFFIC FORECASTS

5.1 Based on the methodology described above, passenger traffic forecasts were developed for the major route groups concerned. The traffic to, from and within the Middle East region on the five major route groups concerned for the period 2010-2030 is expected to increase at an average annual rate of 9.1 per cent. The Middle East-Africa route group is expected to experience the highest average annual growth rate of 10.4 per cent per annum, followed by Intra Middle East, Asia/Pacific-Middle East, North America-Middle East and Europe-Middle East route groups with growth rates of 10.3 per cent, 9.2 per cent, 8.8 per cent and 7.3 per cent respectively for the period concerned as illustrated in **Table 3**.

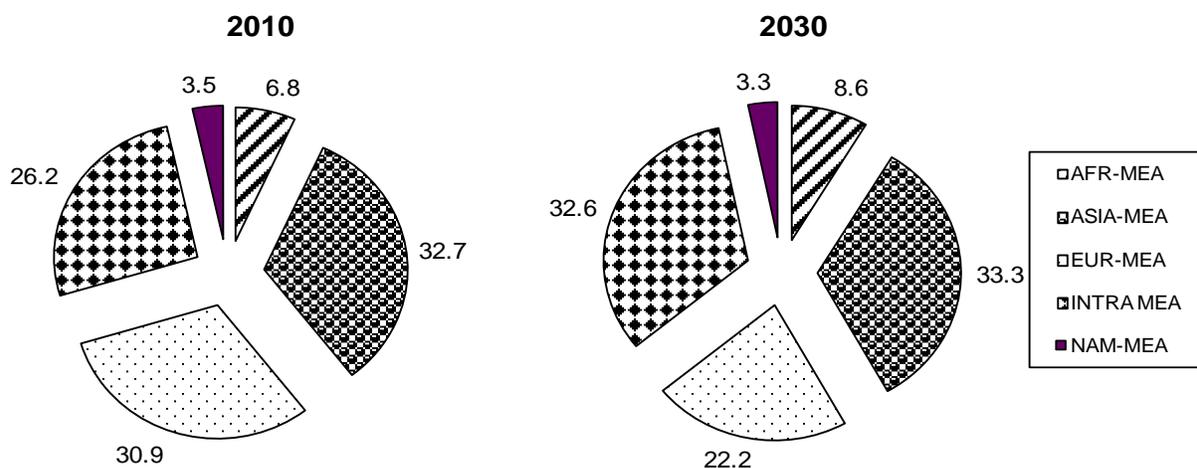
TABLE 3

**PASSENGER FORECAST TO THE YEAR 2030
(thousand passengers)**

	ACTUAL		FORTECAST		AVERAGE ANNUAL GROWTH (per cent)	
	2000	2010	2030	2000-2010	2010-2030	
	AFR-MEA	2622	9837	71161	14.1	10.4
ASIA-MEA	14696	47362	275350	12.4	9.2	
EUR-MEA	17627	44774	183240	9.8	7.3	
INTRA MEA	13468	37959	269666	10.9	10.3	
NAM-MEA	1620	5005	27039	11.9	8.8	
TOTAL	50033	144937	826456	11.2	9.1	

5.2 These forecasts result in a change in the shares of the various route groups in terms of passenger traffic as depicted in **Figure 3**.

FIGURE 3
Shares of selected route groups in passenger traffic



6. FORECASTS OF AIRCRAFT MOVEMENTS

6.1 In order to develop aircraft movements forecasts for the major route groups assumptions were made regarding the evolution of the average aircraft seating capacity and load factors. These assumptions are depicted in **Table 4**.

TABLE 4

ASSUMPTIONS ON THE EVOLUTION OF THE AVERAGE AIRCRAFT SEATING CAPACITY AND LOAD FACTOR OVER THE 2010-2030 PERIOD

	AVERAGE SEATS					LOAD FACTORS		
	2000	2010	2030			2000	2010	2030
AFR-MEA	198	204	217	AFR-MEA	59.6	71.1	75.0	
ASIA-MEA	243	232	250	ASIA-MEA	70.4	79.0	81.0	
EUR-MEA	194	207	237	EUR-MEA	69.0	78.4	80.0	
INTRA MEA	177	173	170	INTRA MEA	61.5	67.5	75.0	
NAM-MEA	307	295	310	NAM-MEA	72.2	81.5	81.0	

6.2 Using the methodology described above, movement forecasts for the major route groups for the 2010-2030 period are depicted in **Table 5**.

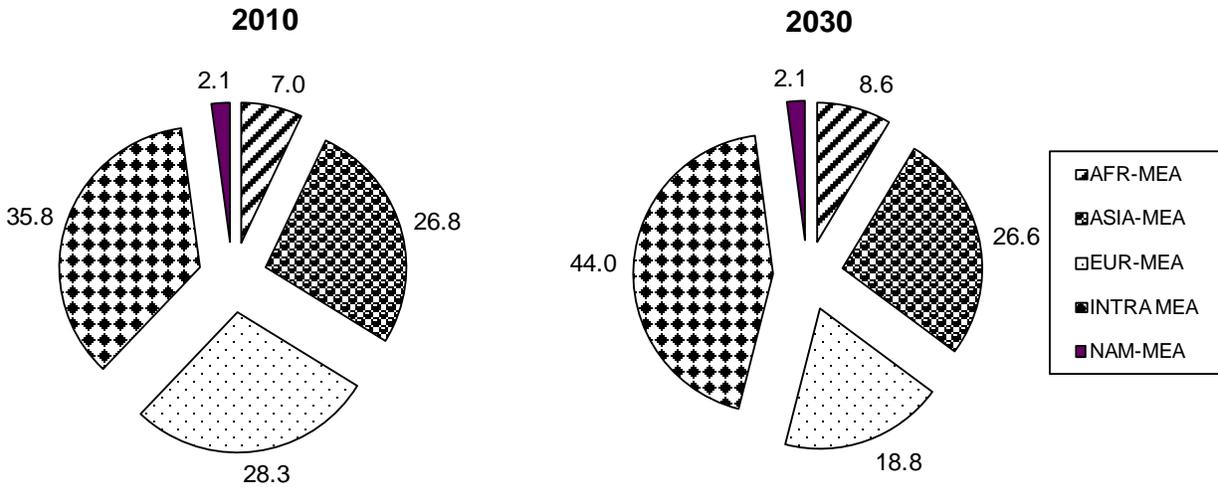
TABLE 5

AIRCRAFT MOVEMENTS FORECAST TO THE YEAR 2030

	Actual	Forecast	Average Annual Growth	
			2010	2030
			2010-2030 (per cent)	
AFR-MEA	68588	446722	9.8	
ASIA-MEA	261359	1384191	8.7	
EUR-MEA	276285	977855	6.5	
INTRA MEA	349324	2287506	9.9	
NAM-MEA	20843	107917	8.6	
TOTAL	976399	5204191	8.7	

6.3 The total aircraft movements to/from and within the Middle East region are estimated to increase from some 976400 in 2010 to slightly above 5204000 in 2030 at an average annual growth rate of 8.7 per cent. The movements' shares for the years 2010 and 2030 are depicted in **Figure 4**.

FIGURE 4
Shares of selected route groups in aircraft movements



APPENDIX B

**BETWEEN MIDDLE EAST AND ASIA /PACIFIC
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Mumbai - Dubai	7231	39788	8.9
2	Kabul - Dubai	5926	31431	8.7
3	Karachi - Dubai	5815	22502	7.0
4	Dubai - Delhi	5779	53788	11.8
5	Sharjah - Kochi	3667	36658	12.2
6	Hyderabad - Dubai	3666	19444	8.7
7	Dubai - Chennai	3650	25930	10.3
8	Dubai - Bangkok	3644	15479	7.5
9	Dubai - Colombo	3181	14827	8.0
10	Mumbai - Bahrain	3031	8844	5.5
11	Dubai - Dhaka	3007	20230	10.0
12	Muscat- Mumbai	2920	24848	11.3
13	Singapore(Changi) - Dubai	2884	8101	5.3
14	Kuala Lumpur - Dubai	2771	14697	8.7
15	Dubai - Bengaluru	2770	18635	10.0
16	Dubai - Beijing(Capital)	2673	26249	12.1
17	Kozhikode - Dubai	2617	13880	8.7
18	Thiruvananthapuram - Sharjah	2588	13726	8.7
19	Doha - Colombo	2252	15150	10.0
20	Kochi - Dubai	2251	18478	11.1
21	Hong Kong - Dubai	2189	14461	9.9
22	Riyadh - Mumbai	2189	12268	9.0
23	Sharjah - Kozhikode	2186	12251	9.0
24	Kathmandu - Doha	2184	11584	8.7
25	Delhi - Abu Dhabi	2036	22246	12.7
	Total above	83107	515496	9.6
	All other	178252	868695	8.2
	TOTAL	261359	1384191	8.7

**BETWEEN MIDDLE EAST AND EUROPE
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	London(Heathrow) - Dubai	7327	25818	6.5
2	Tel Aviv - Paris(Charles De Gaulle)	3967	14243	6.6
3	Tel Aviv - Moscow(Domodedovo)	3731	13147	6.5
4	Tel Aviv - Rome(Fiumicino)	3511	10640	5.7
5	Istanbul - Dubai	3168	19104	9.4
6	Istanbul - Cairo	3056	19115	9.6
7	London(Heathrow) - Abu Dhabi	2920	7748	5.0
8	London(Heathrow) - Doha	2914	14897	8.5
9	Zurich - Tel Aviv	2663	5197	3.4
10	Tel Aviv - London(Heathrow)	2592	4247	2.5
11	Tel Aviv - Istanbul	2551	5590	4.0
12	Paris(Charles De Gaulle) - Beirut	2538	4584	3.0
13	Tehran - Istanbul	2447	8622	6.5
14	London(Heathrow) - Cairo	2419	9717	7.2
15	Istanbul - Amman	2416	13540	9.0
16	Tel Aviv - Madrid	2411	12325	8.5
17	Paris(Charles De Gaulle) - Dubai	2345	9961	7.5
18	Istanbul - Beirut	2315	8958	7.0
19	Frankfurt - Dubai	2312	8147	6.5
20	London(Heathrow) - Bahrain	2312	6619	5.4
21	London(Gatwick) - Dubai	2292	14077	9.5
22	Rome(Fiumicino) - Cairo	2275	8016	6.5
23	Dubai - Amsterdam	2228	13684	9.5
24	Tel Aviv - Kiev	2202	7759	6.5
25	Zurich - Dubai	2190	10991	8.4
	Total above	71102	276745	7.0
	All other	205183	701110	6.3
	TOTAL	276285	977855	6.5

**INTRA MIDDLE EAST (INTERNATIONAL)
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Kuwait - Dubai	12872	107583	11.2
2	Dubai - Doha(Intl)	12461	91791	10.5
3	Doha - Bahrain	11880	79923	10.0
4	Dubai - Bahrain	10103	66743	9.9
5	Kuwait - Bahrain	7971	49857	9.6
6	Jeddah - Cairo	7611	42655	9.0
7	Muscat - Dubai	7287	48140	9.9
8	Bahrain - Abu Dhabi	7010	29777	7.5
9	Doha(Intl) - Abu Dhabi	6595	43568	9.9
10	Damman - Bahrain	6414	42372	9.9
11	Muscat - Abu Dhabi	6382	42161	9.9
12	Tehran - Dubai	5794	31301	8.8
13	Dubai - Beirut	4999	25555	8.5
14	Beirut - Amman	4972	36625	10.5
15	Kuwait - Beirut	4804	38731	11.0
16	Kuwait - Doha	4687	34526	10.5
17	Kuwait - Cairo	4517	20667	7.9
18	Cairo - Amman	4363	29352	10.0
19	Muscat - Bahrain	4318	22074	8.5
20	Dubai - Amman	4175	39560	11.9
21	Riyadh - Cairo	3817	25216	9.9
22	Muscat - Doha	3739	34184	11.7
23	Riyadh - Dubai	3701	27262	10.5
24	Kuwait - Abu Dhabi	3405	25082	10.5
25	Jeddah - Dubai	3361	22204	9.9
	Total above	157238	1056908	10.0
	All other	192086	1230598	9.7
	TOTAL	349324	2287506	9.9

**BETWEEN MIDDLE EAST AND AFRICA
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Khartoum - Cairo	4164	47982	13.0
2	Tripoli - Cairo	2500	16218	9.8
3	Nairobi - Dubai	2249	9553	7.5
4	Dubai - Addis Ababa	2236	21569	12.0
5	Johannesburg - Dubai	2192	11001	8.4
6	Khartoum - Dubai	1954	18849	12.0
7	Lagos - Dubai	1616	10108	9.6
8	Tripoli - Dubai	1589	6750	7.5
9	Khartoum - Doha	1505	5303	6.5
10	Khartoum - Jeddah	1465	10792	10.5
11	Casablanca - Cairo	1197	5683	8.1
12	Tunis - Dubai	1049	6805	9.8
13	Mauritius - Dubai	944	6124	9.8
14	Cairo - Algiers	934	9849	12.5
15	Khartoum - Bahrain	928	9277	12.2
16	Sanaa - Addis Ababa	844	6217	10.5
17	Tripoli - Amman	833	4258	8.5
18	Jeddah - Casablanca	820	3483	7.5
19	Riyadh - Khartoum	804	4187	8.6
20	Tunis - Cairo	790	2784	6.5
21	Sharjah - Khartoum	776	5034	9.8
22	Nairobi - Doha	772	3404	7.7
23	Cairo - Benghazi	754	2657	6.5
24	Jeddah - Asmara	745	2174	5.5
25	Dubai - Dar Es Salaam	734	5214	10.3
	Total above	34394	235274	10.1
	All other	34194	211448	9.5
	TOTAL	68588	446722	9.8

**BETWEEN MIDDLE EAST AND NORTH AMERICA
 TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Tel Aviv - Newark/New York	2063	4105	3.5
2	Tel Aviv - New York(Kennedy)	1926	5727	5.6
3	New York(Kennedy) - Dubai	1460	14337	12.1
4	New York(Kennedy) - Cairo	1340	10421	10.8
5	Los Angeles - Dubai	854	5245	9.5
6	Houston - Dubai	852	5233	9.5
7	New York(Kennedy) - Amman	847	5202	9.5
8	Toronto - Tel Aviv	809	4213	8.6
9	Chicago(O'Hare) - Abu Dhabi	730	4483	9.5
10	Dubai - Atlanta	730	3801	8.6
11	Houston - Doha	730	3801	8.6
12	New York(Kennedy) - Abu Dhabi	730	3801	8.6
13	New York(Kennedy) - Doha	730	3801	8.6
14	San Francisco - Dubai	730	3801	8.6
15	Washington(Dulles) - Doha	730	3801	8.6
16	Washington(Dulles) - Kuwait	730	3801	8.6
17	Tel Aviv-Philadelphia	726	3780	8.6
18	Washington(Dulles) - Dubai	718	3739	8.6
19	Tel Aviv - Atlanta	563	2932	8.6
20	Chicago(O'Hare) - Amman	542	2670	8.3
21	Tel Aviv - Los Angeles	402	1173	5.5
22	New York(Kennedy) - Kuwait	314	1215	7.0
23	Toronto - Dubai	314	1635	8.6
24	Toronto - Abu Dhabi	312	1625	8.6
25	New York(Kennedy) - Jeddah	245	591	4.5
	Total above	20127	104933	8.6
	All other	716	2984	7.4
	TOTAL	20843	107917	8.6

TF SG/4
Appendix 4B to the Report on Agenda Item 4

DATA ON AIRCRAFT MOVEMENTS ACROSS FIRS

Field	Field Type
Call Sign and Flight Number	Text
Aircraft Registration (If available)	Text
Aircraft Type Designator	Text
Departure Aerodrome (ICAO location indicator)	Text
Destination Aerodrome (ICAO Location Indicator)	Text
Entry Point	Text
Entry Date/Time	Date/Time
Entry Flight Level (if available)	Text
Exit Point	Text
Exit Date/Time	Date/Time
Exit Flight Level (if available)	Text
ATS Route(s) (if available)	Text
Flight Classification (Inbound / Outbound /Over-flight /Within FIR)	Text
Flight Type (Scheduled/Non-scheduled/Military/Government/Business/ General Aviation)	Text
Flight Nature (Passenger/Cargo)	Text

TF SG/4
Report on Agenda Item 5

REPORT ON AGENDA ITEM 5: PEAK-PERIOD ANALYSIS

5.1 Under this Agenda Item the meeting was presented with the results of Peak Periods analyses prepared by the Secretariat on daily, hourly and monthly peaks on flights operated in the respective States' FIR areas namely: Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, Syria and United Arab Emirates. It should be noted that FIR data on which the Peak analyses was based upon, was obtained from MID Regional Monitoring Agency (MID RMA) since the data used by MID RMA for the development of the agency annual safety report is similar to FIR data used for the development of Peak Period analysis report but is limited to sample data of one month.

5.2 The meeting was presented with the Peak Periods prepared by ICAO Secretariat as at **Appendix 5A** to the Report on Agenda Item 5, for two Member States namely: Egypt and Saudi Arabia, containing the largest FIR areas in the Region which was intended to provide a better perspective from the planning point of view. The following items were included in the Peak Period Analyses:

Monthly Traffic**Daily traffic analysis:**

- Daily profile of traffic by control centre
- Maximum, minimum and average daily traffic
- Daily traffic ranking

Hourly traffic analysis:

- Hourly traffic (whole period)
- Traffic profile by specified hour

Annual Traffic Analysis

- Aircraft movements by aircraft type
- Aircraft movements by point of entry
- Aircraft movements by point of exit

Traffic Density Analysis

- Traffic density for a given time interval

5.3 Furthermore, a detailed power point presentation, titled FIR PEAKS, was also made to the meeting, highlighting all the peaks from the data obtained from the MID RMA. The presentation provided a better understanding of the individual States' planning requirements for their own FIR area.

5.4 The meeting agreed that MID states provide traffic data for year 2010 (January to December) at least 6 months before the next TF SG/5 meeting, to allow enough time for ICAO to develop the Peak Period analysis and other traffic statistics.

TF SG/4
Appendix 5A to the Report on Agenda Item 5

PEAK- PERIOD ANALYSIS FOR EGYPT (CAIRO FIR)

FIR traffic data provided was analyzed thoroughly in order to determine the main peak- period parameters using a computer application developed by the Secretariat. The analysis covered data for the month of June 2009 on the following items:

- 1. MONTHLY TRAFFIC**
- 2. DAILY TRAFFIC ANALYSIS:**
 - 2.1 Daily profile of traffic by control centre
 - 2.2 Maximum, minimum and average daily traffic
 - 2.3 Daily traffic ranking
- 3. HOURLY TRAFFIC ANALYSIS:**
 - 3.1 Hourly traffic (whole period)
 - 3.2 Traffic profile by specified hour
- 4. ANNUAL TRAFFIC ANALYSIS:**
 - 4.1 Aircraft movements by aircraft type
 - 4.2 Aircraft movements by point of entry
 - 4.3 Aircraft movements by point of exit
- 5. TRAFFIC DENSITY ANALYSIS:**
 - 5.1 Traffic density for a given time interval

The following sections provide the detailed results for Egypt (Cairo FIR).

1. MONTHLY TRAFFIC

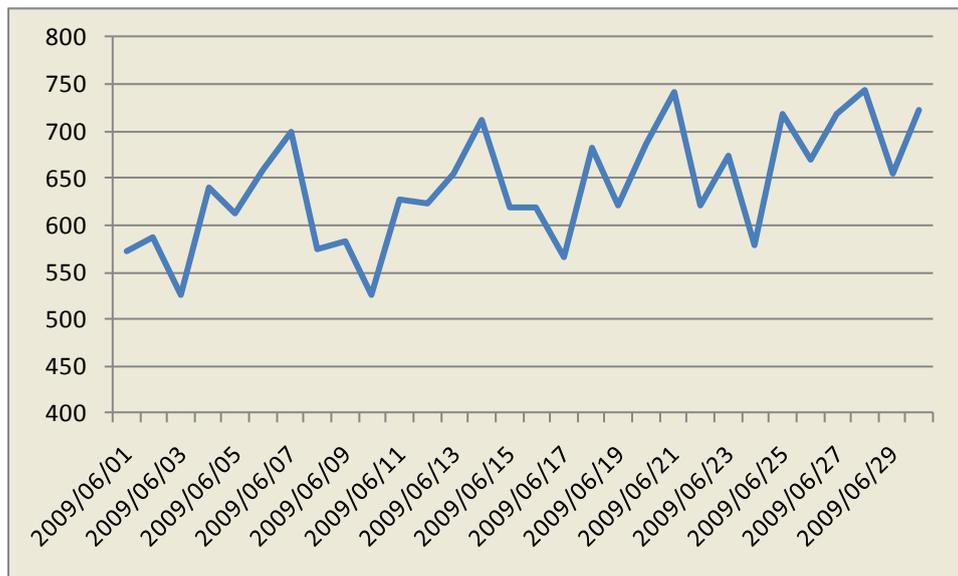
1.1. The table below illustrates the monthly traffic for Cairo FIR for the year 2009:

Cairo FIR	
2009	
Month	Movements
June	19229

2. DAILY TRAFFIC ANALYSIS

2.1 Daily profile of traffic for Cairo FIR

2.1.1 The following figure shows the daily traffic profile for the Cairo FIR and helps in the identification of daily pattern in the traffic for the month of June.



2.2 Maximum, minimum and average daily traffic

2.2.1 Beyond, the graphical display, the maximum, the minimum and the average daily traffic were produced for the FIR concerned.

Maximum daily traffic: 744
 Average daily traffic: 641
 Standard deviation 61

2.3 Daily traffic ranking

2.3.1 The daily traffic was ranked by number of flights. This helps identify the busiest day and the least busy day for the given period. For illustration purposes, the first 20 days of Cairo FIR are displayed in the table below.

Cairo FIR		
2009		
Rank	Date	Movements
1	2009/06/28	744
2	2009/06/21	742
3	2009/06/30	723
4	2009/06/25	719
5	2009/06/27	719
6	2009/06/14	711
7	2009/06/07	700
8	2009/06/20	686
9	2009/06/18	682
10	2009/06/23	674
11	2009/06/26	670
12	2009/06/06	659
13	2009/06/29	654
14	2009/06/13	654
15	2009/06/04	640
16	2009/06/11	627
17	2009/06/12	623
18	2009/06/22	621
19	2009/06/19	620
20	2009/06/16	619

3. HOURLY TRAFFIC ANALYSIS

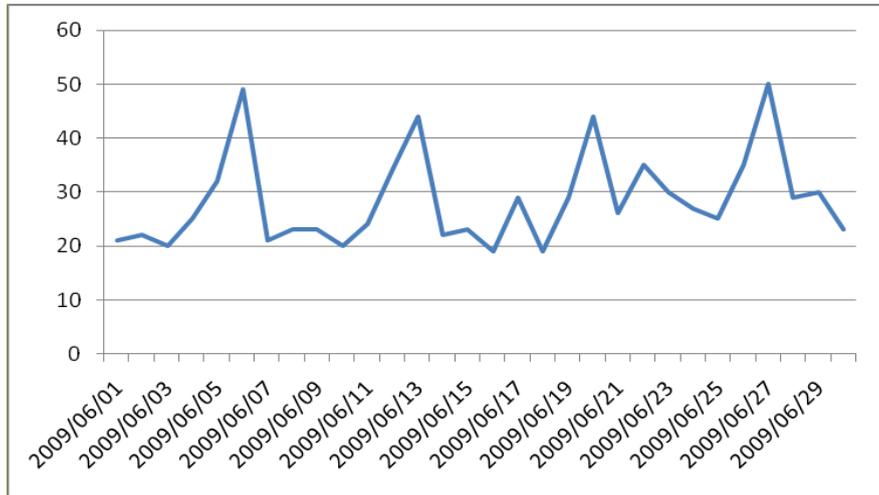
3.1 Hourly Traffic (June 2009)

3.1.1 The program calculates the traffic by hour for the whole period and provides a sorted list of traffic by hour. The following table shows the top 10 hours in terms of traffic for the given period.

Cairo FIR			
2009			
Rank	Date	Hour	Movements
1	2009/06/27	23	50
2	2009/06/06	23	49
3	2009/06/12	17	49
4	2009/06/25	14	49
5	2009/06/28	0	47
6	2009/06/18	14	46
7	2009/06/24	15	46
8	2009/06/28	9	46
9	2009/06/04	15	45
10	2009/06/07	10	45

3.2 Traffic profile by specified hour

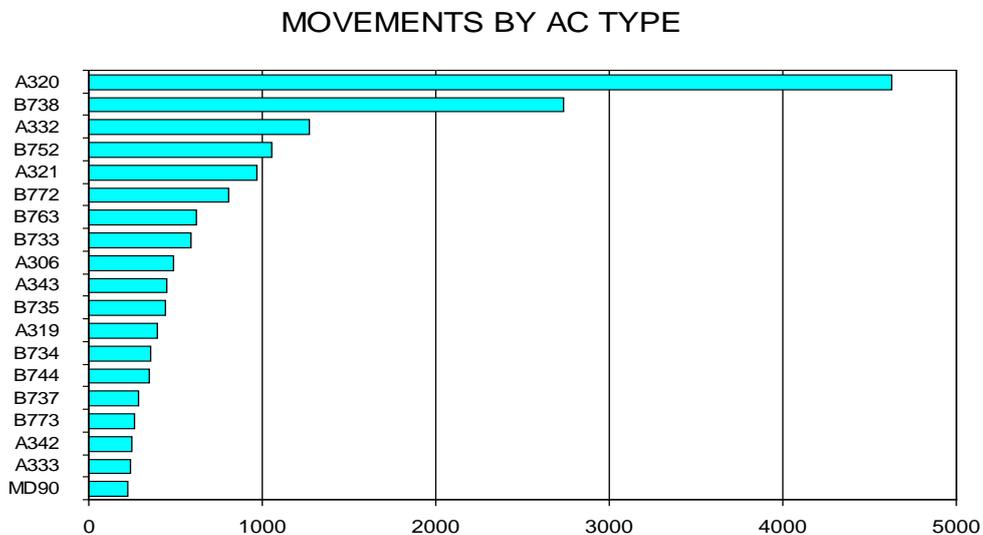
3.2.1 Traffic profile charts by generic hour and by FIR were also produced for the month of June 2009. The following figure illustrates traffic profile for Cairo FIR at 23:00 hour:



4. MONTHLY TRAFFIC ANALYSIS

4.1 Aircraft movements by aircraft type

4.1.1 Using the one month FIR traffic data, it was possible to analyze for the Cairo FIR the traffic by aircraft type. The following chart illustrates the aircraft movements traffic by aircraft type.



4.2 Aircraft movements by point of entry

4.2.1 FIR traffic was aggregated by point of entry (to the FIR) and sorted by traffic volume (aircraft movements). The table below shows the top 10 points of entry for Cairo FIR in June 2009.

Cairo FIR		
June 2009		
Rank	Entry Point	Movements
1	HECA	4092
2	KUMBI	1712
3	KITOT	1610
4	HEGN	1267
5	HESH	1255
6	PASAM	1153
7	SALUN	1057
8	PAXIS	924
9	RASDA	876
10	LOSUL	806

4.3 Aircraft movements by point of exit

4.3.1 FIR traffic was aggregated by point of exit (from the FIR) and sorted by traffic volume (aircraft movements). The table below shows the top 10 exit points for Cairo FIR in June 2009.

Cairo FIR		
June 2009		
Rank	Exit Point	Movements
1	HECA	3997
2	SILKA	1715
3	TANSA	1657
4	RASDA	1631
5	HESH	1248
6	METRU	1230
7	HEGN	1195
8	DEDLI	1012
9	HEAX	653
10	METSA	641

5. TRAFFIC DENSITY ANALYSES

5.1 Traffic density for a given time interval

5.1.1 The following table lists all the flights for the peak day occurring on the 28th of June 2009. It includes all flights that have entered and exited the Cairo FIR during that day or remained in the FIR for the whole period.

TF SG/4-REPORT
APPENDIX 5A

5A-6

DATE	ACFT REG	ACFT C/S	ICAO ACFT TYPE	DEP ADM	DEST ADM	ENTRY POINT	ENTRY LEVEL	Entry Time	EXIT POINT	EXIT LEVEL	Exit Time
28/06/2009	SUGCD	MSR834	A320	HHAS	HECA	ALEBA	300	5:03 AM	HECA	0	6:07 AM
28/06/2009	FONOU	REU975A	B77W	FMEE	LFPG	ATMUL	380	12:06 AM	DITAR	380	12:46 AM
28/06/2009	ETALZ	ETH710	B752	HAAB	LIRF	ATMUL	360	12:27 AM	DITAR	360	12:59 AM
28/06/2009	ETAMF	ETH716	B763	HAAB	LIRF	ATMUL	380	12:45 AM	DITAR	380	1:21 AM
28/06/2009	FORUN	REU772	B772	FMEE	LFPG	ATMUL	300	12:47 AM	DITAR	300	1:21 AM
28/06/2009	FHLOV	CRL903	B744	FMEE	LFPO	ATMUL	380	12:48 AM	DITAR	380	1:21 AM
28/06/2009	3BNBI	MAU42	A343	FIMP	EGLL	ATMUL	340	1:15 AM	DITAR	340	1:41 AM
28/06/2009	3BNBE	MAU34	A343	FIMP	LFPG	ATMUL	340	1:31 AM	DITAR	340	1:59 AM
28/06/2009	FGSQP	AFR679A	B773	FMEE	LFPO	ATMUL	300	3:55 AM	DITAR	300	4:30 AM
28/06/2009	FHKIS	CRL911	B744	FMEE	LFPO	ATMUL	340	1:29 PM	DITAR	340	1:59 PM
28/06/2009	FGISD	AFR963	B744	FIMP	LFPG	ATMUL	340	1:35 PM	DITAR	340	2:02 PM
28/06/2009	N371BC	N371BC	B738	HAAB	HLLT	ATMUL	380	3:01 PM	DITAR	380	3:39 PM
28/06/2009	FOSYD	REU975	B773	FMEE	LFPG	ATMUL	340	10:35 PM	DITAR	340	11:09 PM
28/06/2009	ETALP	ETH500	B763	HAAB	LIRF	ATMUL	360	11:45 PM	DITAR	360	12:18 AM
28/06/2009	ZSJD	ZSJD	C650	HKJK	LLBG	DEDLI	300	12:32 PM	NALSO	310	1:55 PM
28/06/2009	4XEAJ	ELY084	B763	VTBS	LLBG	DEDLI	300	6:27 PM	NALSO	310	7:10 PM
28/06/2009	3BNAY	MAU57	A343	EGLL	FIMP	DITAR	310	1:38 AM	ATMUL	310	2:10 AM
28/06/2009	ETAMU	ETH711	B752	LIRF	HAAB	DITAR	310	2:25 AM	ATMUL	310	2:55 AM
28/06/2009	ETALP	ETH501	B763	LIRF	HAAB	DITAR	390	1:17 PM	ATMUL	390	1:49 PM
28/06/2009	5YKQY	KQA113	B763	LFPG	HKJK	DITAR	310	1:31 PM	ATMUL	310	2:49 PM
28/06/2009	3BNBE	MAU45	A343	LFPG	FIMP	DITAR	350	6:54 PM	ATMUL	350	7:27 PM
28/06/2009	3BNBI	MAU53	A343	EGLL	FIMP	DITAR	390	8:57 PM	ATMUL	390	9:27 PM
28/06/2009	FONOU	REU974	B77W	LFPG	FMEE	DITAR	350	9:46 PM	ATMUL	350	10:14 PM
28/06/2009	FHSEA	CRL870	B744	LFPO	FMMI	DITAR	310	10:24 PM	ATMUL	310	10:55 PM
28/06/2009	DABUF	CFG264	B763	EDDF	HKMO	DITAR	310	10:30 PM	ATMUL	310	10:55 PM
28/06/2009	FGSQR	AFR680	B773	LFPO	FMEE	DITAR	350	10:45 PM	ATMUL	350	11:39 PM
28/06/2009	FHSEX	CRL952	B744	LFPO	FIMP	DITAR	350	11:01 PM	ATMUL	350	11:39 PM
28/06/2009	N371BC	N371BC	B738	HLGD	OEJN	DITAR	350	8:38 PM	DEDLI	350	9:57 PM
28/06/2009	SUGCB	MSR880	A320	DNKN	HECA	DITAR	350	2:35 AM	HECA	0	4:03 AM
28/06/2009	SUGCR	MSR882	B738	DGAA	HECA	DITAR	330	4:49 AM	HECA	0	5:57 AM
28/06/2009	SUGCN	MSR876	B738	DNMM	HECA	DITAR	350	2:05 PM	HECA	0	3:33 PM
28/06/2009	A6ERR	UAE782	A343	DNMM	OMDB	DITAR	310	12:20 AM	IMRAD	350	2:10 AM
28/06/2009	A6EBU	UAE784	B773	DNMM	OMDB	DITAR	330	5:26 PM	IMRAD	390	6:54 PM
28/06/2009	A7AGD	QTR593	A346	DNMM	OTBD	DITAR	390	5:45 PM	IMRAD	350	7:41 PM
28/06/2009	A6ERP	UAE788	A343	DGAA	OMDB	DITAR	350	11:18 PM	IMRAD	310	12:49 AM
28/06/2009	HZDMO	SMY3042	B733	OEJN	HEAT	GIBAL	340	3:44 PM	HEAT	0	4:33 PM
28/06/2009	TSIND	LAA253	A320	OEJN	HLLT	GIBAL	340	1:28 AM	LOSUL	340	2:49 AM
28/06/2009	EIDOF	DAH4603	B763	OEJN	DAAG	GIBAL	320	1:45 AM	LOSUL	320	3:15 AM
28/06/2009	HZAKF	SVA7568	B772	OEJN	EGSS	GIBAL	300	3:56 AM	METRU	300	5:23 AM
28/06/2009	HZAKQ	SVA379	B772	OEJN	GMMN	GIBAL	320	11:00 AM	METRU	320	12:37 PM
28/06/2009	HZAKI	SVA115	B772	OEJN	EGLL	GIBAL	320	11:05 AM	METRU	320	12:39 PM
28/06/2009	HZAKH	SVA113	B772	OEJN	EGLL	GIBAL	380	11:57 PM	METRU	380	1:10 AM
28/06/2009	HZDMO	SMY3043	B733	HEAT	OEJN	HEAT	310	4:59 PM	DEDLI	310	5:45 PM
28/06/2009	9KCAC	JZR529	A320	HEAT	OKBK	HEAT	310	11:53 PM	IMRAD	310	12:24 AM
28/06/2009	SUGBA	MSR645	A320	HEAX	OEJN	HEAX	330	1:30 AM	DEDLI	330	2:48 AM
28/06/2009	SUGBA	MSR655	A320	HEAX	OEJN	HEAX	330	8:14 AM	DEDLI	330	9:46 AM
28/06/2009	VPCXW	KNE726	A320	HEAX	OEJN	HEAX	370	1:24 PM	DEDLI	370	2:52 PM
28/06/2009	HZNMA	SMY3037	B733	HEAX	OEJN	HEAX	350	5:20 PM	DEDLI	350	6:37 PM
28/06/2009	SUGDK	MSR457	E170	HEAX	HLLB	HEAX	320	11:59 AM	LOSUL	320	12:46 PM
28/06/2009	TSINE	LAA209	A320	HEAX	HLLB	HEAX	300	5:10 PM	LOSUL	300	5:47 PM
28/06/2009	5ADMH	BRQ139	B738	HEAX	HLLB	HEAX	320	7:51 PM	LOSUL	320	8:42 PM
28/06/2009	9KCAE	JZR527A	A320	HEAX	OKBK	HEAX	390	12:14 AM	SILKA	390	1:17 AM
28/06/2009	A9CBAV	BAB415	A320	HEAX	OBBI	HEAX	370	12:18 AM	SILKA	370	1:21 AM
28/06/2009	HZBBK	SMY1037	B733	HEAX	OERK	HEAX	350	7:45 AM	SILKA	350	9:25 AM
28/06/2009	A6ABP	ABY602	A320	HEAX	OMSJ	HEAX	370	8:26 AM	SILKA	370	9:43 AM
28/06/2009	VPCXY	KNE730	A320	HEAX	OERK	HEAX	390	12:49 PM	SILKA	390	2:14 PM
28/06/2009	9KCAI	JZR523	A320	HEAX	OKBK	HEAX	330	1:16 PM	SILKA	330	2:25 PM
28/06/2009	SUGBA	MSR679	A320	HEAX	OEMA	HEAX	310	3:23 PM	SILKA	310	4:32 PM
28/06/2009	A6ABI	ABY606	A320	HEAX	OMSJ	HEAX	350	3:48 PM	SILKA	350	4:49 PM
28/06/2009	A7ADD	QTR513	A320	HEAX	OTBD	HEAX	370	5:48 PM	SILKA	370	7:07 PM
28/06/2009	HZAPY	SVA332	MD90	HEAX	OEJN	HEAX	330	6:48 PM	SILKA	330	8:00 PM
28/06/2009	A6FDB	FDB178	B738	HEAX	OMDB	HEAX	370	8:00 PM	SILKA	370	9:10 PM
28/06/2009	9KCAB	JZR521	A320	HEAX	OKBK	HEAX	350	8:20 PM	SILKA	350	9:21 PM
28/06/2009	SUGBD	MSR918	A320	HEAX	OMDB	HEAX	330	9:07 PM	SILKA	330	10:02 PM
28/06/2009	A6ABP	ABY608	A320	HEAX	OMSJ	HEAX	330	10:06 PM	SILKA	330	10:48 PM
28/06/2009	9KCAE	JZR527	A320	HEAX	OKBK	HEAX	310	11:33 PM	SILKA	310	12:48 AM
28/06/2009	DAILM	DLH677	A319	HEAX	EDDF	HEAX	360	12:10 AM	TANSA	360	1:25 AM
28/06/2009	SXBLC	OAL328	B733	HEAX	LGAV	HEAX	340	12:52 AM	TANSA	340	1:30 AM
28/06/2009	N451NS	N451NS	GLF4	HEAX	LFMN	HEAX	300	12:19 PM	TANSA	300	1:00 PM
28/06/2009	PHBQL	KLM554	B772	HECA	EHAM	HECA	360	1:14 AM	ANTAR	360	1:50 AM
28/06/2009	DAIKD	DLH585	A333	HECA	EDDF	HECA	340	2:42 AM	ANTAR	340	3:28 AM

PEAK- PERIOD ANALYSIS FOR SAUDI ARABIA (JEDDAH FIR)

FIR traffic data provided was analyzed thoroughly in order to determine the main peak- period parameters using a computer application developed by the Secretariat. The analysis covered data for the month of June 2009 on the following items:

- 1. MONTHLY TRAFFIC**
- 2. DAILY TRAFFIC ANALYSIS:**
 - 2.1 Daily profile of traffic by control centre
 - 2.2 Maximum, minimum and average daily traffic
 - 2.3 Daily traffic ranking
- 3. HOURLY TRAFFIC ANALYSIS:**
 - 3.1 Hourly traffic (whole period)
 - 3.2 Traffic profile by specified hour
- 4. ANNUAL TRAFFIC ANALYSIS:**
 - 4.1 Aircraft movements by aircraft type
 - 4.2 Aircraft movements by point of entry
 - 4.3 Aircraft movements by point of exit
- 5. TRAFFIC DENSITY ANALYSIS:**
 - 5.1 Traffic density for a given time interval

The following sections provide the detailed results for the Saudi Arabia (Jeddah FIR).

1. MONTHLY TRAFFIC

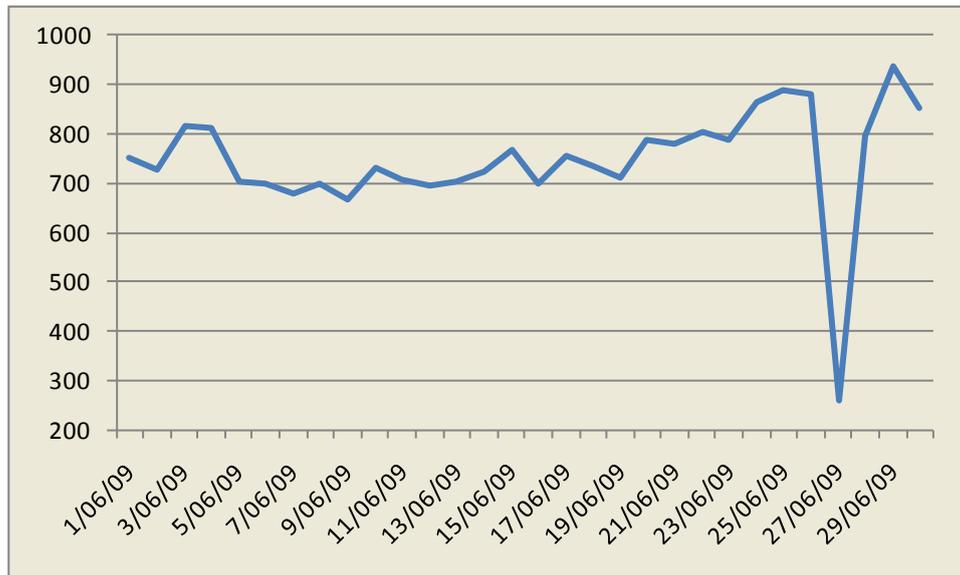
1.1 The table below illustrates the monthly traffic for Jeddah FIR for the year 2009:

Jeddah FIR	
2009	
Month	Movements
June	22 422

2. DAILY TRAFFIC ANALYSIS

2.1 Daily profile of traffic by control centre

2.1.1 The following figure shows the daily traffic profile for the Jeddah FIR and helps in the identification of daily pattern in the traffic for the month of June.



2.2 Maximum, minimum and average daily traffic

2.2.1 Beyond, the graphical display, the maximum, the minimum and the average daily traffic were produced for the Jeddah FIR.

Maximum daily traffic:	935
Average daily traffic:	747
Standard deviation	115

2.3 Daily traffic ranking

2.3.1 The daily traffic was ranked by number of flights. This helps identify the busiest day and the least busy day for the given period. For illustration purposes, the first 20 days of Jeddah FIR are displayed in the table below.

Jeddah FIR		
2009		
Rank	Date	Movements
1	29/06/09	935
2	25/06/09	887
3	26/06/09	881
4	24/06/09	866
5	30/06/09	853
6	3/06/09	818
7	4/06/09	812
8	22/06/09	802
9	28/06/09	794
10	20/06/09	789
11	23/06/09	786
12	21/06/09	781
13	15/06/09	766
14	17/06/09	754
15	1/06/09	750
16	18/06/09	736
17	10/06/09	730
18	2/06/09	729
19	14/06/09	724
20	19/06/09	712

3. HOURLY TRAFFIC ANALYSIS

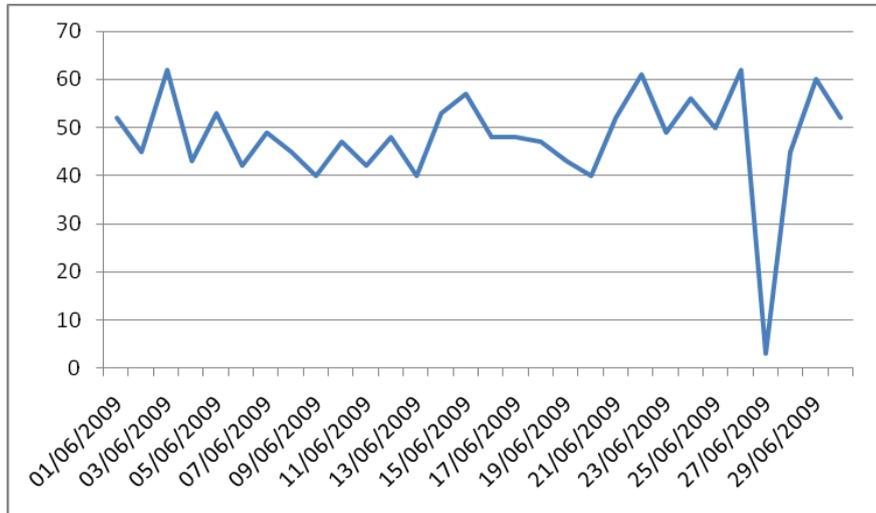
3.1 Hourly Traffic (June 2009)

3.1.1 The program calculates the traffic by hour for the whole period and provides a sorted list of traffic by hour. The following table shows the top 10 hours in terms of traffic for the given period.

Jeddah FIR			
2009			
Rank	Date	Hour	Movements
1	3/06/09	14	62
2	26/06/09	14	62
3	22/06/09	14	61
4	26/06/09	13	60
5	29/06/09	14	60
6	24/06/09	11	59
7	26/06/09	18	59
8	15/06/09	14	57
9	27/06/09	6	57
10	4/06/09	13	56

3.2 Traffic profile by specified hour

3.2.1 Traffic profile charts by generic hour and by the FIR were also produced for the month of June 2009. The following figure illustrates traffic profile for Jeddah FIR at 14:00 hours:

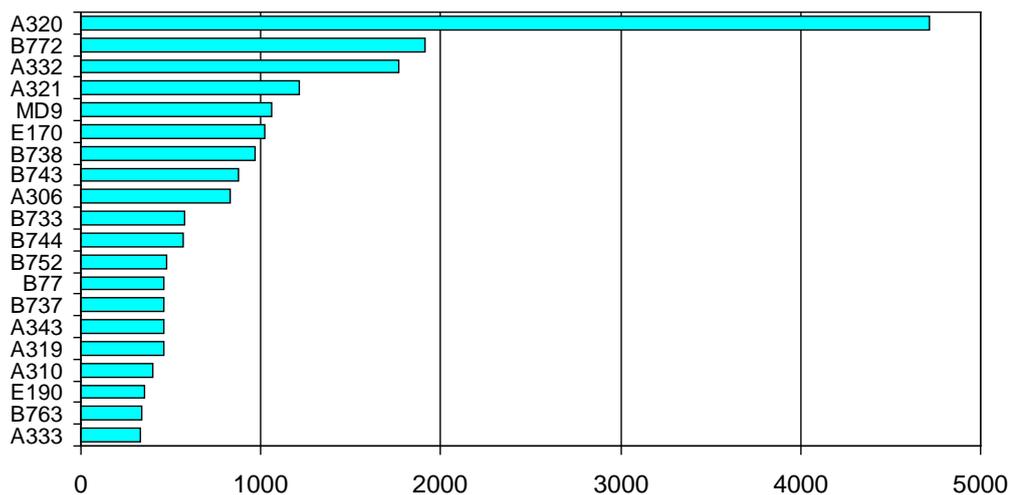


4. MONTHLY TRAFFIC ANALYSIS

4.1 Aircraft movements by aircraft type

4.1.1 Using the one month FIR traffic data, it was possible to analyze for the Jeddah FIR the traffic by aircraft type. The following chart illustrates the aircraft movements traffic by aircraft type.

MOVEMENTS BY AC TYPE



4.2 Aircraft movements by point of entry

4.2.1 FIR traffic was aggregated by point of entry (to the FIR) and sorted by traffic volume (aircraft movements). The table below shows the top 10 points of entry for Jeddah FIR in June 2009.

Jeddah FIR		
June 2009		
Rank	Entry Point	Movements
1	OEJN	3802
2	RASLI	3270
3	OERK	2162
4	COPPI	2113
5	SILKA	1542
6	BOPAN	1510
7	OVER KIA	1472
8	NIDAP	853
9	DASPA	802
10	PARAM	496

4.3 Aircraft movements by point of exit

4.3.1 FIR traffic was aggregated by point of exit (from the FIR) and sorted by traffic volume (aircraft movements). The table below shows the top 10 exit points for Jeddah FIR in June 2009.

Jeddah FIR		
June 2009		
Rank	Exit Point	Movements
1	OEJN	3252
2	OERK	3162
3	OTILA	2857
4	SOROR	1513
5	OVER KIA	1390
6	KITOT	1176
7	PUSLA	1164
8	PASAM	1139
9	TAGSO	1051
10	ULOVO	1039

5. TRAFFIC DENSITY ANALYSES

5.1 Traffic density for a given time interval

5.1.1 The following table lists all the flights for the peak day occurring on the 29th of June 2009. It includes all flights that have entered and exited the Jeddah FIR during that day or remained in the FIR for the whole period.

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APPENDIX 5A

DATE	ACFT REG	ACFT C/S	ACFT TYPE	DEP ADM	DEST ADM	ENTRY POINT	ENTRY LEVEL	Entry Time	EXIT POINT	EXIT LEVEL	Exit Time
29/06/09	9KPAA	E135	9KPAA	OJAM	OKBK	PARAM	FL390	2:31 PM	SOROR	FL390	3:21 PM
29/06/09	9KPAA	E135	9KPAA	OKBK	OJAM	NIDAP	FL380	6:42 PM	PARAM	FL380	7:32 PM
29/06/09	A6ARK	E190	A6ARK	OMAL	GMME	BOPAN	FL340	12:35 PM	PASAM	FL360	1:35 PM
29/06/09	A6DLM	A320	A6DLM	HESH	OBBI	SILKA	FL370	7:02 PM	PUSLA	FL370	8:22 PM
29/06/09	A6NLA	E135	A6NLA	HESH	OMAD	SILKA	FL410	8:06 PM	PUSLA	FL410	9:26 PM
29/06/09	A6PJE	E135	A6PJE	HESH	OMAD	SILKA	FL350	7:20 PM	PUSLA	FL350	8:40 PM
29/06/09	A6UAE	B744	A6UAE	LEMG	OMAA	RASLI	FL390	10:36 AM	ULOVO	FL410	11:26 AM
29/06/09	A6UAE	B744	A6UAE	OMAL	LEMG	COPPI	FL360	10:36 AM	OTLA	FL360	11:31 AM
29/06/09	A6UGH	E135	A6UGH	OBBI	LSZH	COPPI	FL400	11:24 AM	OTLA	FL400	12:19 PM
29/06/09	TSINA	A320	AAW420	HLLT	OEJN	DASPA	FL370	9:43 AM	OEJN		10:30 AM
29/06/09	TSINA	A320	AAW421	OEJN	HLLT	OEJN	0	12:25 PM	GIBAL	FL340	1:05 PM
29/06/09	A6ABD	A320	ABY145	OMSJ	OEJN	OVER KIA	FL340	9:36 AM	OEJN	0	10:36 AM
29/06/09	A6ABD	A320	ABY146	OEJN	OMSJ	OEJN	0	12:32 PM	OVER KIA	FL350	1:32 PM
29/06/09	A6ABO	A320	ABY310	OSDI	OMSJ	RASLI	FL370	5:10 PM	ULOVO	FL370	6:00 PM
29/06/09		A320	ABY315	OMSJ	OSDI	COPPI	FL320	4:36 AM	OTLA	FL320	5:31 AM
29/06/09	A6ABO	A320	ABY316	OSDI	OMSJ	RASLI	FL370	7:46 AM	ULOVO	FL370	8:36 AM
29/06/09	A6ABO	A320	ABY319	OMSJ	OSDI	COPPI	FL340	2:03 PM	OTLA	FL340	2:58 PM
29/06/09	A6ABQ	A320	ABY323	OMSJ	OSAP	COPPI	FL340	6:54 AM	OTLA	FL340	7:49 AM
29/06/09	A6ABQ	A320	ABY324	OSAP	OMSJ	RASLI	FL370	10:34 AM	ULOVO	FL370	11:24 AM
29/06/09	A6ABH	A320	ABY331	OMSJ	OJAI	BOPAN	FL340	2:33 PM	PARAM	FL340	3:28 PM
29/06/09	A6ABH	A320	ABY332	OJAI	OMSJ	PARAM	FL370	5:02 PM	TAGSO	FL370	5:52 PM
29/06/09		A320	ABY337	OMSJ	OJAI	COPPI	FL340	6:56 AM	PARAM	0	7:51 AM
29/06/09		A320	ABY385	OMSJ	OLBA	COPPI	FL340	5:59 AM	OTLA	FL340	6:54 AM
29/06/09		A320	ABY386	OLBA	OMSJ	RASLI	0	9:22 AM	TAGSO	FL370	10:12 AM
29/06/09		A320	ABY601	OMSJ	HEAX	BOPAN	FL340	5:40 AM	KITOT	FL320	6:35 AM
29/06/09	A6ABJ	A320	ABY602	HEAX	OMSJ	SILKA	FL370	10:01 AM	PUSLA	FL370	11:21 AM
29/06/09	A6ABA	A320	ABY605	OMSJ	HEAX	BOPAN	FL340	12:33 PM	KITOT	FL360	1:28 PM
29/06/09	A6ABA	A320	ABY606	HEAX	OMSJ	SILKA	FL390	4:25 PM	PUSLA	FL390	5:45 PM
29/06/09	A6ABP	A320	ABY607	OMSJ	HEAX	BOPAN	FL340	7:12 PM	KITOT	FL340	8:07 PM
29/06/09	A6ABP	A320	ABY608	HEAX	OMSJ	SILKA	FL350	11:29 PM	PUSLA	FL350	12:49 AM
29/06/09		A320	ABY615	OMSJ	HEAT	BOPAN	FL320	10:31 PM	IMRAD	FL320	11:46 PM
29/06/09		A320	ABY616	HEAT	OMSJ	IMRAD	FL370	2:01 AM	PUSLA	FL370	3:11 AM
29/06/09	A6ABI	A320	ABY661	OMSJ	HSSS	OVER KIA	FL340	7:00 PM	DUNGU	FL340	8:15 PM
29/06/09	A6ABI	A320	ABY662	HSSS	OMSJ	NABTA	FL390	11:50 PM	OVER KIA	FL390	1:00 AM
29/06/09		A320	ABY735	OMSJ	HKJK	PURDA	FL320	8:06 AM	ATBOT	FL320	8:46 AM
29/06/09		A320	ABY736	HKJK	OMSJ	ATBOT	FL330	3:35 PM	PURDA	FL330	4:15 PM
29/06/09	FGZCM	A332	AFR191	VOBL	LFPG	COPPI	FL340	12:16 AM	OTLA	FL340	1:11 AM
29/06/09	FGSQF	B77W	AFR257	WSSS	LFPG	COPPI	FL340	10:53 PM	OTLA	FL340	11:48 PM
29/06/09	FGRXG	A319	AFR509	OERK	LFPG	OERK	FL380	10:49 PM	OTLA	FL380	12:04 AM
29/06/09	FGRXN	A319	AFR517	OEJN	LFPG	OEJN	0	9:31 PM	PASAM	FL380	10:26 PM
29/06/09	FGRXN	A319	AFR520	LFPG	OEJN	DASPA	FL370	5:24 PM	OEJN	0	6:11 PM
29/06/09	FGRXG	A319	AFR534	LFPG	OERK	RASLI	FL390	4:31 PM	OERK	FL390	5:46 PM
29/06/09	VTAIL	B772	AIC800	OEJN	VABB	OEJN	0	10:26 AM	OVER KIA	FL370	11:26 AM
29/06/09		B772	AIC801	VABB	OEJN	KIPOM	FL360	6:48 AM	OEJN	0	8:08 AM
29/06/09		A320	AIC901	VOCL	OERK	KIPOM	FL360	6:17 AM	OERK	FL360	7:02 AM
29/06/09	VTESE	A320	AIC902	OERK	VOCL	OERK	FL350	8:39 AM	LOTOS	FL350	9:24 AM
29/06/09	VTEJL	A310	AIC962	OEJN	VOCL	OEJN	0	8:54 PM	DIRAS	FL330	10:04 PM
29/06/09	VTEJL	A310	AIC963	VOCL	OEJN	DIRAS	FL340	4:45 PM	OEJN	0	5:40 PM
29/06/09	4RADF	A343	ALK266	OERK	VCBI	OERK	FL330	8:25 PM	LOTOS	FL350	9:10 PM
29/06/09		B763	AUA840A	OMDB	LOWW	COPPI	FL340	11:08 PM	OTLA	FL340	12:03 AM
29/06/09	OELBR	A320	AUA895	LOWW	OERK	RASLI	FL370	3:17 PM	OERK	FL370	4:32 PM
29/06/09	OELBR	A320	AUA895	OERK	OEJN	OERK	FL380	3:17 PM	OEJN	0	4:32 PM
29/06/09	OELBR	A320	AUA896	OEJN	OERK	OEJN	0	8:58 PM	OERK	FL370	10:08 PM
29/06/09	OELBR	A320	AUA896	OERK	LOWW	OERK	FL360	8:58 PM	OTLA	FL360	10:13 PM
29/06/09	A9CBAZ	A320	BAB414	OBBI	HEAX	BOPAN	0	9:15 PM	KITOT	FL360	10:10 PM
29/06/09	A9CBAV	A320	BAB415	HEAX	OBBI	SILKA	FL390	1:14 AM	PUSLA	0	2:34 AM
29/06/09	A9CBAX	A319	BAB426	OBBI	OJAI	BOPAN	FL380	11:30 AM	PARAM	FL380	12:25 PM
29/06/09	A9CBAX	A319	BAB427	OJAI	OBBI	PARAM	FL390	12:12 PM	TAGSO	FL390	1:02 PM
29/06/09	A9CBAW	A319	BAB432	OBBI	OLBA	COPPI	FL380	9:18 AM	OTLA	FL380	10:13 AM
29/06/09	A9CBAW	A319	BAB433	OLBA	OBBI	RASLI	FL390	12:56 PM	TAGSO	FL390	1:46 PM
29/06/09	A9CBAW	A320	BAB464	OBBI	OSDI	COPPI	FL360	9:30 AM	OTLA	FL360	10:25 AM
29/06/09	A9CBAV	A320	BAB465	OSDI	OBBI	RASLI	FL370	12:43 PM	TAGSO	FL370	1:33 PM
29/06/09	A9CBAW	A319	BAB604	OMDB	HSSS	OVER KIA	FL380	9:58 PM	DUNGU	FL380	11:13 PM
29/06/09	A9CHAK	B74S	BAH2	OBBI	LFMN	COPPI	FL380	8:59 PM	OTLA	FL380	9:54 PM
29/06/09	A9CBA	B722	BAH3	OBBI	EGLL	COPPI	FL300	8:50 AM	OTLA	FL300	9:45 AM
29/06/09	A9CBAH	GLF4	BAH4	LFMN	OBBI	RASLI	FL410	4:48 PM	TAGSO	FL410	5:38 PM
29/06/09		B744	BAW12	WSSS	EGLL	COPPI	FL360	10:30 PM	OTLA	FL360	11:25 PM
29/06/09	GCIVO	B744	BAW124	OBBI	EGLL	COPPI	FL360	11:40 PM	OTLA	FL360	12:35 AM
29/06/09	GBNWW	B763	BAW132	OEJN	EGLL	OEJN	0	6:44 AM	PASAM	FL360	7:39 AM
29/06/09		B772	BAW16	WSSS	EGLL	COPPI	FL360	10:56 PM	OTLA	FL380	11:51 PM
29/06/09		B772	BAW198	VABB	EGLL	COPPI	FL380	10:09 AM	OTLA	FL380	11:04 AM

TF SG/4
Report on Agenda Item 6

REPORT ON AGENDA ITEM 6: PRESENTATIONS BY STATES

6.1 The meeting noted with appreciation the presentations covering Peak Periods and Traffic Forecasts delivered by Bahrain and UAE and thanked both States for their continuous support and commitment to forecasting activities.

6.2 Bahrain presentation provided an overview of Bahrain airport existing capacity and facilities, passengers and aircraft movements forecast for the period 2011-2020 which is expected to increase at an annual average growth rate of 9 percent/year (higher estimate) and 4 percent (most likely estimate); while cargo forecast is expected to increase by an average annual growth rate of 5 per cent percent/year (higher estimate) and 4 percent (most likely estimate). On the other hand, FIR movements for 2011-2020 are expected to have a healthy growth with an average growth of 13 percent/year (higher estimate) and 11 percent (Most Likely estimate). An illustration of peak analysis of the most congested airways in Bahrain FIR (A791 and UL 768) during the peak months of July, August, November and December 2010 was provided and showed high increase on average peak hour demand movements.

6.3 UAE presentation provided an overview of Dubai Airport Peak Period analysis and forecast along with the methodology used to develop the Airport Peak Period forecast. Steady growth at annual rate of 6.6% is expected over the next 10 years, fueled by Dubai Economy and Emirates/flydubai expansion. The presentation described the challenges faced in Dubai airport in light of healthy growth of passenger traffic that need to be protected by better utilizing and re-designing the ATS route structure within Emirates FIR .

6.4 The meeting was of view that States need to put more efforts to supply FIR traffic data in order to facilitate the timely and efficient development of Traffic Forecast and analysis of Peak Periods.

TF SG/4
Report on Agenda Item 7

REPORT ON AGENDA ITEM 7: FUTURE WORK PROGRAMME OF THE SUB-GROUP

7.1 The meeting in accordance with the MIDANPIRG Procedural Handbook agreed to hold the TF SG/5 meeting after MIDANPIRG/13 meeting (15-19 April 2012), and after coordination between the Secretariat and the Chairperson of the TF SG. The venue would be tentatively Cairo. However, MID Region States are encouraged to host the TF SG/5 meeting.

7.2 The meeting recalled that in accordance with ICAO business plan and the requirements for performance monitoring, the **Sub-Group** has to develop a follow-up action plan on the results of the meeting. Accordingly, the meeting developed the action plan as at **Appendix 7A** to the Report on Agenda Item 7.

7.3 With regards to the tentative Work Programme and Provisional Agenda of the **Sub-Group** it was agreed to include, as basic elements, a forecast of aircraft movements to, from, within and across the MID Region and Peak Period analyses for the FIRs.

7.4 The meeting adopted the Provisional Agenda for the TF SG/5 Meeting as at **Appendix 7B** to the Report on Agenda Item 7.

TF SG/4
Appendix 7A to the Report on Agenda Item 7

TF SG/4 FOLLOW-UP ACTION PLAN

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
<p>DRAFT CONC. 4/1: PROVISION OF STATISTICAL DATA</p> <p>That, States be urged to provide required airlines, airports and air navigation service providers statistical data to ICAO using the new revised forms as at Appendix 3B to the Report on Agenda Item 3.</p>	<p>Provision of statistical data</p>	<p>States</p>	<p>Statistical data</p>	<p>Dec. 2012</p>	
<p>DRAFT CONC. 4/2: TRAFFIC FORECAST AND PEAK PERIOD ANALYSIS WORKSHOP</p> <p>That, with a view to provide States with a better understanding of the ICAO Statistical data reporting forms and process of development of Traffic Forecasts and Peak Period analysis:</p> <p>a) MID Traffic Forecast and Peak Period Analysis workshop be organized in 2012; and</p> <p>b) MID States are encouraged to host and participate actively in the workshop.</p>	<p>Secretariat to coordinate with States</p>	<p>ICAO & States</p>	<p>TF Workshop to be hosted by one of MID States</p>	<p>Dec. 2012</p>	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
<p>DRAFT CONC. 4/3: TRAFFIC FORECASTING AND PEAK PERIOD ANALYSIS REQUIREMENTS IN THE MID REGION</p> <p>That, States be urged to provide required airlines, airports and air navigation service providers statistical data to ICAO using the new revised forms as at Appendix 3B to the Report on Agenda Item 3.</p> <p>a) provide required traffic data in order to facilitate the timely and efficient development of Traffic Forecasts and Peak Period analysis ;</p> <p>b) continue their support to the Traffic Forecasting Sub-Group by ensuring that their respective nominees to the membership of the Sub-Group include, as much as possible, forecasting experts, air traffic management experts and, when required, financial analysts to carry out business case and cost/benefit analysis; and</p> <p>c) States not providing the required data to ICAO, in accordance with the requirements of Traffic Forecasting, be included in the MIDANPIRG List of air navigation deficiencies.</p>	<p>Updated information to be provided by States</p> <p>Secretariat to coordinate with States</p>	<p>States</p> <p>States & ICAO</p>	<p>Sub-Group (Data format agreed)</p> <p>State Letter</p>	<p>Aug. 2012</p>	

TF SG/4
Appendix 7B to the Report on Agenda Item 7

FIFTH MEETING OF THE TRAFFIC FORECASTING SUB-GROUP

(TF SG/5)

PROVISIONAL AGENDA

- Agenda Item 1:** Adoption of the Provisional Agenda
- Agenda Item 2:** Follow-up action on Reports of both the MIDANPIRG/13 and MSG meetings related to TF SG.
- Agenda Item 3:** Review of updated Forecast
- Agenda Item 4:** Peak-period analysis
- Agenda Item 5:** Presentations by States
- Agenda Item 6:** Future work programme of the Sub-group
- Agenda Item 7:** Any other business

TF SG/4
Report on Agenda Item 8

REPORT ON AGENDA ITEM 8: ANY OTHER BUSINESS

8.1 Nothing has been discussed under this Agenda Item.

TF SG/4
Attachment A to the Report

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