

#### INTERNATIONAL CIVIL AVIATION ORGANIZATION

### REPORT OF THE FIRST MEETING OF MID CNS/ATM HUMAN RESOURCES PLANNING AND TRAINING TASK FORCE

**CNS/ATM HR P&T TF/1** 

(Cairo, 26 -27 September 2005)

The views expressed in this Report should be taken as those of the MIDANPIRG CNS/ATM Human Resources Planning and Training Task Force and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be included in the Report of the MIDANPIRG.

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

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontier or boundaries.

### **TABLE OF CONTENTS**

|         | Page                                  |
|---------|---------------------------------------|
| PART I  | - HISTORY OF THE MEETING              |
| 1.      | Place and Duration                    |
| 2.      | Opening1                              |
| 3.      | Attendance1                           |
| 4.      | Officers and Secretariat1             |
| 5.      | Language1                             |
| 6.      | Agenda1                               |
| 7.      | Conclusion and Decisions – Definition |
| 8.      | List of Conclusions and Decisions2    |
| PART I  | I - REPORT ON AGENDA ITEMS            |
|         | Report on Agenda Item 1               |
|         | Report on Agenda Item 2               |
|         | Report on Agenda Item 3               |
|         | Report on Agenda Item 4               |
|         | Report on Agenda Item 5 5-1           |
|         | Report on Agenda Item 6               |
|         | Report on Agenda Item 7               |
| Attachi | ment A                                |
|         | List of Participants                  |

### CNS/ATM HR P&T TF/1 History of the Meeting

#### PART I - HISTORY OF THE MEETING

#### 1. PLACE AND DURATION

1.1 The First Meeting of the Middle East CNS/ATM Human Resources Planning and Training Task Force (CNS/ATM HR P&T TF/1) was held in ICAO Middle East Regional Office, Cairo, 26 - 27 September 2005.

#### 2. OPENING

- 2.1 In his opening remarks, Mr. M.E.B. Zarroug Regional Officer/Air Transport welcomed the participants on behalf of MID Regional Director.
- 2.2 Mr. Zarroug gave an overview of the objectives and role of the Task force namely he recalled that MIDANPIRG/7-8-9 meetings, in endorsing the establishment, as a matter of priority, of the CNS/ATM Human Resources Planning and Training Task Force, recognized the importance of development of a detailed statement of the CNS/ATM training requirements for the MID Region for incorporation in the MID regional CNS/ATM Plan.

#### 3. ATTENDANCE

3.1 The meeting was attended by a total of 28 participants, which included experts from 6 States and 2 Organizations. The list of participants is at **Attachment A** to the report.

#### 4. OFFICERS AND SECRETARIAT

4.1 Mr. Nikolaos Antypas, ICAO Middle East Regional Officer, Safety Oversight acted as the Secretary of the Meeting, assisted by the following ICAO MID Regional Officers:

Mr. Traore Regional Officer, Communication, Navigation and Surveillance Mrs. N Abdel Hady Regional Officer, Aerodrome and Ground Aids.

#### 5. LANGUAGE

5.1 The discussions were conducted in English. Documentation was issued in English.

#### 6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1 - Adoption of Provisional Agenda and Election of Chairperson

Agenda Item 2 - Follow-up of MIDANPIRG Decisions and Conclusions addressing the CNS/ATM HR planning and training field

Agenda Item 3 - Review the outcome of the Special Implementation Project (SIP) for the assessment of training facilities, activities and requirements in the MID Region

### CNS/ATM HR P&T TF/1 History of the Meeting

Agenda Item 4- Developments of a proposed comprehensive CNS/ATM HR Planning and training programme for the MID Region

Agenda Item 5- Identification of the training demand and human resources requirements associated with the implementation of the CNS/ATM systems in the MID Region

Agenda Item 6- Future Work Programme

Agenda Item 7- 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 DECISION 1/1: ORGANIZATION OF A SEMINAR/WORKSHOP ON TRAINING PROGRAMMES IN THE MID REGION

DRAFT CONCLUSION 1/2: IDENTIFICATION OF TYPES OF TRAINING NEEDED WITHIN THE MID REGION

DRAFT CONCLUSION 1/3: PARTICIPATION TO MIDANPIRG TRAINING ACTIVITIES

DRAFT CONCLUSION 1/4: ENDORSEMENT OF MID REGION TRAINING PLANNING PROCESS

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PART II: REPORT ON AGENDA ITEMS

## REPORT ON AGENDA ITEM 1: ADOPTION OF PROVISIONAL AGENDA AND ELECTION OF CHAIRPERSON AND VICE CHAIRPERSON

- 1.1 The meeting reviewed the Provisional Agenda. The Secretariat suggested that Items 4 and 5 be switched to better reflect the needs of the Task Force. The suggestion was accepted and a revised agenda was adopted as at Para 6 of the History of the Meeting.
- 1.2 As per the MIDANPIRG Procedural Handbook in Part IV (Rules of Procedure for the Conduct of Meetings of the Contributory Bodies of MIDANPIRG) under paragraph 6 (Officers and Secretariat of sub-groups of the MIDANPIRG) of Egypt proposed Mr. Mohamed Zainal from Bahrain to be the Chairperson of the meeting. The proposal was seconded by Saudi Arabia, and Mr. Zainal was unanimously elected.

REPORT ON AGENDA ITEM 2: FOLLOW-UP OF MIDANPIRG DECISIONS AD CONCLUSIONS
ADDRESSING THE CNS/ATM HR PLANNING AND TRAINING FIELD

2.1 Under this agenda item, the meeting was apprised of the outcome of Conclusions and Decisions emanating from MIDANPIRG meetings 6, 7, 8 and 9 addressing CNS/ATM human resources planning and training, and the follow-up actions taken by the Secretariat and States. The relevant list of Conclusions and Decisions and a summary of action(s) are contained at **Appendix 2A** to the report on Agenda Item 2.

# CNS/ATM HR P&T TF/1 Appendix 2A to the Report on Agenda Item 2

# FOLLOW-UP ON MIDANPIRG MEETINGS CONCLUSIONS AND DECISIONS RELEVANT TO CNS/ATM HR PLANNING & TRAINING

| MIDANPIRG<br>Meeting | CONC./DEC. | TITLE   | FOLLOW-UP    | REMARKS |
|----------------------|------------|---|--------------|---------|
| 6                    | Dec. 6/25  | Development of Regional CNS/ATM Training Requirements  That, a CNS/ATM Training Task Force should be established and tasked to develop a detailed statement of the CNS/ATM training requirements for the MID Region, for incorporation in the regional CNS/ATM plan.  | Action taken |         |
| 7                    | Dec. 7/37  | Establishment of The CNS/ATM Human Resource Planning and Training Task Force  That, the CNS/ATM Human Resources Planning and Training Task Force be established as a matter of priority for the MID Region with the Terms of Reference and Work Programme as presented at Appendix 6C to the report on Agenda Item 6. The composition will be decided at the first meeting of the task force, which will report to the MIDANPIRG.   | Action taken |         |
| 8                    | Con. 8/39  | MID Region States Support for the CNS/ATM Human Resources Planning and Training Task Force  That, MID region States in addition to that listed in the CNS/ATM Human Resources Planning and Training Task Force composition, having experience in the fields of human resources planning and training, specially those having training schools/colleges, should:  a) provide the ICAO MID Regional Office with adequate information on their CNS/ATM training programmes; and  b) support the Task Force by participating effectively in its meetings. | Ongoing      |         |

| MIDANPIRG<br>Meeting | CONC./DEC. | TITLE  | FOLLOW-UP                | REMARKS |
|----------------------|------------|--|--------------------------|---------|
| 9                    | Con. 9/44  | Convening of the CNS/ATM HR P&T Task Force   |                          |         |
|                      |            | That,  |                          |         |
|                      |            | a) MID States are urged to attend the CNS/ATM Human Resources     Planning and Training Task Force meetings;                                     | Action taken and Ongoing |         |
|                      |            | b) the CNS/ATM HR P&T TF takes into consideration the outcome of the SIP carried in the MID Region during the period November/December 2004; and |                          |         |
|                      |            | c) the Terms Of Reference and Work Programme of the Task Force are revised as at Appendix 5Q to the Report on Agenda Item 5.                     |                          |         |

# REPORT ON AGENDA ITEM 3: REVIEW THE OUTCOME OF THE SPECIAL IMPLEMENTATION PROJECT (SIP) FOR THE ASSESSMENT OF TRAINING FACILITIES, ACTIVITIES AND REQUIREMENTS IN THE MID REGION

- 3.1 The meeting was apprised of the outcome of the Special Implementation Project (SIP) carried out in the MID Region. The objective of the SIP was to gather information on human resources planning and training facilities and programmes with a view to have a broader perspective on regional training activities and capacity so as to respond to regional/global requirements for the harmonization and streamlining of training programmes in accordance with the strategic objectives of ICAO, and in particular, the CNS/ATM Implementation Plan.
- 3.2 The meeting took note of the outcome of the SIP which is summarized as follows:
  - a) The urgent need for the harmonization of training programmes in the region is recognized.
  - b) States are conscious of their responsibilities regarding training requirements. However, with a view to meet the future challenges in the air navigation fields, the need for specially tailored courses and advanced courses was highlighted. The need for advanced training to trainers was also recognized.
  - c) Some States/Training institutions informally indicated that they would like to join the TRAINAIR programme. However, as they were not founding members of TRAINAIR, the charges for joining the programme at this stage, are in their view, exaggerated and not affordable.
  - d) Some training institutions have indicated that they were not aware of activities being carried out by the Regional Office and would like to participate fully in the MID regional planning mechanism (MIDANPIRG). It was agreed that for future activities in the region a specific request be made for States to include participants from their training institutions in their respective delegations.
  - e) Only two training institutions have been certified to ISO 9001/2000 specifications. The need for the provision of courses in quality management systems has also been recognized.
  - f) Some States/service providers have obtained ISO 9001/2000 certification for the Air Navigation Services (Area Control Centre, AIS, Communications and Automation Sections), the Flight Safety Services and the Administration. This unique experience in the Middle East Region should be further exploited and States may wish to inspire from it.
  - g) States/training institutions have been requested to put emphasis on the implementation of ICAO Language Proficiency Requirements, which will become mandatory on 2008.
  - h) There is a need to organize a workshop under the aegis of ICAO in the Middle East Region with the participation of all training institutions and concerned States with a view to harmonize training programmes and share experiences so as to cope with the new challenges facing the Region.

- i) There is a requirement to include a link to all training institutions available in the MID Region in the ICAO Middle East office website.
- 3.3 The meeting also noted with appreciation that many Authorities of Civil Aviation had founded the training courses to ensure that the safety standards were maintained in accordance with the ICAO requirements. In this regard, some MID States can benefit from the training facilities that are already certified ISO-9001/2000.
- 3.4 Regarding the TRAINAIR programme, the meeting was of a view that ICAO should reconsider the related charges to allow the non founding member States to join the programme.
- 3.5 The meeting was informed that a link to "Aviation Training Directory of ICAO" <a href="https://www.icao.int/td">www.icao.int/td</a> including training institutions available in the MID Region is now available from the ICAO Middle East office website.
- 3.6 Based on the above, the meeting was of the view that the information gathered from the SIP should lead the MID Region to harmonize and streamline the training programmes taught in diverse training institutions and centres taking into account the strategic objectives of ICAO CNS/ATM Implementation Plan. Therefore, the meeting formulated the following Draft Conclusion:

# DRAFT CONCLUSION 1/1: ORGANIZATION OF A SEMINAR/WORKSHOP ON TRAINING PROGRAMMES IN THE MID REGION

That, a seminar/workshop be organized under the aegis of ICAO with the participation of all training institutions and concerned States with a view to harmonize training programmes and to cope with the new challenges, the Middle East Region is facing.

3.7 ICAO is requested to organize the Seminar/Workshop on Training Programmes in the MID Region before the next meeting of the HR P&T Task Force.

## REPORT ON AGENDA ITEM 4: DEVELOPMENTS OF A PROPOSED COMPREHENSIVE CNS/ATM HR PLANNING AND TRAINING PROGRAMME FOR THE MID REGION

- 4.1 The meeting recalled that the Limited Middle East (COM/MET/RAC) Regional Air Navigation Meeting (Cairo, 7-17 January 1996) recommended that ICAO develop a human resource development and training component for all Regional Air Navigation Plans with the assistance of the regional planning and implementation groups as required, and that the Air Navigation Commission (ANC) established a task to address this issue.
- 4.2 The meeting was apprised of the objective of ANC Task No. PEL 9601 that was to develop a model for human resource planning and training for use at the regional level and to develop supporting guidance material. The ANC task will analyze the changes to civil aviation job profiles as a result of new systems and the consequential human resource planning and training requirements; and assess whether all or portions of the output of the regional human resource and training planning process should be incorporated into the Regional Air Navigation Plans (ANPs).
- 4.3 The meeting was informed that one of the primary outputs of the ANC task will be a *Human Resource Planning Manual.*

#### ICAO Manual on Human Resources Planning

- 4.4 The aim of this manual is to enhance individual States' capabilities in this area. The manual addresses tactical and strategic human resource planning, as well as a procedure for converting human resource plans into long-range training plans and short-range instructional schedules.
- 4.5 The meeting was informed that a draft of the manual was completed this year. An outline of the draft manual was presented.
- 4.6 To ensure that the manual fully meets States' and/or air navigation service providers' needs and is sufficiently user-friendly, "beta-testing" of the manual was required. The beta-testing was done directly with States and air navigation service providers during two Regional Human Resource Planning Seminars conducted in the South American (SAM) Region and the Eastern and Southern African Region in 2004.
- 4.7 The meeting noted the information on Beta-testing of the *Human Resource Planning Manual* that was completed during 2004 and that the specific steps and procedures that form the basis of a regional planning process were also reviewed during the beta tests. The meeting was informed that some work is required to improve the readability of the document.
- 4.8 A list of available ICAO guidance material on CNS/ATM Human Resources planning and training was provided to the meeting.
- 4.9 The meeting was presented with information related to the experience of other regions (Asia/Pacific and CAR/SAM Regions) in dealing with CNS/ATM human resources planning and training.
- 4.10 In this regard it was noted that, in 1999, APANPIRG had developed a strategy for CNS/ATM training and human resources development in the Asia/Pacific Region. Pending availability of the outputs of the ICAO Human Resource Planning and Training Needs Study Group, the subject was considered by APANPIRG/15 and 16.

4.11 The CAR/SAM Region - GREPECAS also established a Human Resources Training Subgroup in 2000, but due to personnel limitations the Subgroup was not activated. GREPECAS/12 considered that it was important to continue assigning high priority to the regional planning and development of human resources and training, and to raise funds to support the management and operation of the Subgroup. A Task Force was created to determine the appropriateness of the human resources and training subgroup and support fund-raising efforts including a possible Regional Technical Co-operation Project aimed at the operation of the HRT/SG.

#### CNS/ATM Regional Planning Process

- 4.12 The meeting recalled Chapter 10 Volume I of the Global CNS/ATM Plan on human resources and training needs and Chapter 12 of the second edition of CNS/ATM Implementation Plan for the Middle East Region (April, 2003) on human resources development and training needs.
- 4.13 To ensure that States have the skilled human resources required to implement Regional Air Navigation Plans, it is considered essential that the majority of the training needed is available, accessible and affordable within all ICAO regions. ICAO embarked on an initiative to integrate strategic training planning into the regional air navigation planning process as a part of ANC Task No. PEL-9601. The objective is to ensure that the human resource development capabilities within ICAO Regions are compatible with the plans to implement facilities and services.
- 4.14 To accurately plan for training capabilities needed within a region, a quantitative approach should be used in which an aggregate of the States' training needs is considered. Thus, the effectiveness of a regional training plan will depend upon the accuracy to which individual States within a region can project their human resource needs. In this respect, the *Human Resource Planning Manual* (paragraph 4.4 refers) will play a key role in regional training planning. It will be equally important to obtain consistent and appropriate data from States within the region regarding their training capabilities and capacities.
- 4.15 The meeting was informed that as a part of ANC Task PEL-9601, ICAO developed the basis for a regional training planning process. The Organization will be working with the planning and implementation regional groups (PIRGs) to refine the process to ensure that it fully meets the needs of States within each region. At present the process discussed consists of four basic steps, as follows:
  - Step 1: In the first step, the types of training needed within a region would be identified based on commitments made by States to implement facilities and services specified in their regional air navigation plans. An appropriate PIRG contributory body, such as the MIDANPIRG Human Resources Planning and Training Task Force, would identify training needs based on the regional air navigation plan. This information would then be communicated to each State within the region using a standard format.
  - Step 2: In the next step, each State would identify the number of personnel needing specific types of training, using a questionnaire developed by ICAO. The training needs identified in the first step are reflective of the overall training needed within the region. Therefore, each State would need to identify its own training needs based on their national plans to implement existing and future CNS/ATM systems. States would also identify planning factors that would affect a regional training plan, such as training capabilities that already exist within a State in specific areas.

- Step 3: States would then forward their completed questionnaires to the ICAO MID regional office. The regional offices would compile the information provided by States and prepare a summary of the results. In the third step of the process, the Task Force would determine the need to establish "regional training" in specialized areas in which it would be difficult for individual States to justify the cost on a national basis.
- **Step 4**: In the forth step, a State-to-State consultative process would be used by MIDANPIRG to formulate a plan for the development of regional training capabilities within specific civil aviation training centres.
- 4.16 The inventory of training needs shown in **Appendix 4A** to the report on Agenda Item 4 is intended to illustrate the level of detail suggested to communicate the major types of training required to implement MID Regional Air Navigation Plan (Step 1 refers). The meeting noted that the major types of training needed to implement existing and future air navigation facilities and services are classified as follows:
  - a) Foundation Training. This type of training is required when the target population does not possess the underlying knowledge and/or skills needed to enter joboriented training.
  - b) *Initial Training*. Initial training is the first job specific training that personnel receive to qualify for a specific aviation job within a category of jobs.
  - c) Transition Training. This type of training is required to prepare an existing staff member to perform another job within a given category of jobs.
  - d) Conversion Training. This type of training is required for a qualified staff member in a specific job to obtain the skills required to use new procedures and/or technologies such as ICAO CNS/ATM systems.
  - e) Refresher Training. Regular refresher training is provided to ensure that personnel maintain a skill and knowledge level needed to perform their jobs safely and in compliance with all established performance standards. Refresher and conversion training are sometimes combined to introduce new procedures and/or technologies.
- 4.17 Noting that training needs may be adapted/adjusted in future in accordance with highly dynamic development needs in the civil aviation environment, the meeting refined the inventory of training needs for the MID region in principle and formulated the following Draft Conclusion:

# DRAFT CONCLUSION 1/2: IDENTIFICATION OF TYPES OF TRAINING NEEDED WITHIN THE MID REGION

That, Types of training needed within MID region are identified and agreed as contained in **Appendix 4A** to the report on Agenda Item 4.

4.18 The meeting reviewed a model of Projected Training Demand Questionnaire that is contained at **Appendix 4B** to the report on Agenda Item 4. The aim of the questionnaire would be gathering information from States concerning the projected number of trainees in specific types of training based on CNS/ATM Implementation Plan for the Middle East Region and National Plans for CNS/ATM Elements Implementation Timelines.

4.19 After receiving answers to the Questionnaire, The Task Force will compile this information into a report that would reflect the aggregate training needs of States within the MID region and be presented to next MIDANPIRG meeting.

4.20 Regional training planning is considered essential to meet the human resource development needs. The steps outlined in the regional training process and attached forms could form the basis for regional training planning in the MID Region. Establishment of such a process within the MID Region could also be a mean to distribute the opportunity for more training centres within the region to provide regional training in specialized civil aviation areas. Therefore the meeting formulated the following Draft Conclusion:

#### DRAFT CONCLUSION 1/3: PARTICIPATION TO MIDANPIRG TRAINING ACTIVITIES

That, MID States involve their civil aviation training and human resources planning Professionals/Institutes/Establishments in the activities of MIDANPIRG related to training and human resources planning.

- 4.21 The MIDANPIRG could then consider the demand for regional training capabilities and agree to the establishment of regional courses within specific civil aviation training centres.
- 4.22 Results of the deliberations would constitute a MID Regional Training Plan. A potential format for a Regional Training Plan is at **Appendix 4C** to the report on Agenda Item 4.
- 4.23 IATA provided information on their training capabilities in CNS/ATM Field, detailed information will be presented to the next Task Force meeting.
- 4.24 The steps outlined in the regional training process and attached forms could be considered as a potential framework and a format for integrating the regional human resource planning and regional air navigation planning.
- 4.25 Accordingly, the meeting formulated the following Draft Conclusion:

#### DRAFT CONCLUSION 1/4: ENDORSEMENT OF MID REGION TRAINING PLANNING PROCESS

That,

- a) MID Region Training planning process as indicated in Paragraph 4.15 of the report on Agenda Item 4 be endorsed.
- b) Questionnaire as model contained in **Appendix 4B** to the report on Agenda Item 4 be circulated to MID States.
- c) Report on Information gathered be prepared by next Task Force meeting and a proposal for a MID Region Training Plan be reviewed by next Task Force meeting for presenting to the next MIDANPIRG meeting.

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# CNS/ATM HR P&T TF/1 Appendix 4A to the Report on Agenda Item 4

| ID Number | ICAO<br>Category | Job Category and<br>Type of Training                             |
|-----------|------------------|--|
| 1         | 2                | 3  |
| 1         | 020              | AIS Officer<br>(Headquarters)                                    |
| 1.01      |                  | Foundation Training  |
| 1.02      |                  | Initial Training   |
| 1.03      |                  | Refresher Training   |
| 1.04      |                  | Computer<br>Fundamentals   |
| 1.05      |                  | Conversion Training:<br>AIS Automation                           |
| 1.06      |                  | Conversion Training:<br>Automated AIP                            |
| 2         | 020              | Aeronautical<br>Cartographer                                     |
| 2.01      |                  | Foundation Training  |
| 2.02      |                  | Initial Training   |
| 2.03      |                  | Transition Training  |
| 2.04      |                  | Refresher Training   |
| 2.05      |                  | Computer<br>Fundamentals   |
| 2.06      |                  | Conversion Training Automation Training                          |
| 3         | 020              | Electronic<br>Processing , AIS Data                              |
| 3.01      |                  | Initial Training   |
| 3.02      |                  | Refresher Training   |
| 3.03      |                  | Transition Training  |
|           |                  | Conversion Training<br>Computer Database<br>Applications for AIS |
| 3.04      |                  | Conversion Training AIS Automation                               |
| 3.05      |                  | Conversion Training:<br>ATN Applications                         |
| 4         | 020              | International NOTAM<br>Officer                                   |
| 4.01      |                  | Foundation Training  |
| 4.02      |                  | Initial Training   |
| 4.03      |                  | Transition Training  |
| 4.04      |                  | Refresher Training   |
| 4.05      |                  | Computer<br>Fundamentals   |
| 4.06      |                  | Conversion Training:<br>ATN Applications                         |
| 5         | 020              | AIS Officer -<br>Aerodrome Units                                 |
| 5.01      |                  | Initial Training   |
| E 02      |                  | Transition Training  |
| 5.02      |                  |  |
| 5.03      |                  | Refresher Training   |

| ID Maria la con | 1040             | 1-1-0-4                                       |
|-----------------|------------------|---|
| ID Number       | ICAO<br>Category | Job Category and                              |
|                 | Category         | Type of Training                              |
|                 |                  |   |
|                 |                  |   |
| 1               | 2                | 3   |
| 5.05            |                  | Conversion Training:<br>ATN Applications      |
| 5.06            |                  | Conversion Training:                          |
| 0.00            |                  | AIS Automation                                |
| 6               | 030              | Meteorological                                |
|                 |                  | Assistant (WMO Class IV)                      |
| 6.01            |                  | Foundation Training                           |
| 6.02            |                  | Initial Training                              |
| 6.03            |                  | Refresher Training                            |
| 6.04            |                  | Computer                                      |
|                 |                  | Fundamentals                                  |
| 6.05            |                  | Conversion Training:<br>ATN Applications      |
| 7               | 030              | Meteorological                                |
|                 |                  | Assistant/Briefing                            |
|                 |                  | Office (WMO Class III)                        |
| 7.01            |                  | Initial Training                              |
| 7.02<br>7.03    |                  | Refresher Training                            |
| 7.03            |                  | Computer<br>Fundamentals                      |
| 7.04            |                  | Conversion Training:                          |
|                 |                  | ATN Applications                              |
| 8               | 030              | Meteorological Officer                        |
|                 |                  | - Forecaster (WMO<br>Class II)                |
| 8.01            |                  | Initial Training                              |
| 8.02            |                  | Refresher Training                            |
| 8.03            |                  | Computer                                      |
|                 |                  | Fundamentals                                  |
| 8.04            |                  | Conversion Training:<br>ATN Applications      |
| 9               | 050              | Air Traffic Control                           |
|                 |                  | Assistant                                     |
| 9.01            |                  | Foundation Training                           |
| 9.02            |                  | Initial Training                              |
| 9.03            |                  | Refresher Training                            |
| 9.04            |                  | Conversion Training:<br>Data Link and Message |
|                 |                  | Formatting                                    |
| 10              | 050              | Aerodrome Controller                          |
| 10.01           |                  | Foundation Training                           |
| 10.02           |                  | Initial Training                              |
| 10.03           |                  | Transition Training                           |
| 10.04           |                  | Refresher Training                            |
| 10.05           |                  | Conversion Training:                          |
|                 |                  | Data Link and Message Formatting              |
| 11              | 050              | Approach Controller -                         |
|                 |                  | Non-Radar                                     |
| 11.01           |                  | Foundation Training                           |
| 11.02           |                  | Initial Training                              |
| 11.03           |                  | Transition Training                           |
| 11.04           |                  | Refresher Training                            |
| 11.05           |                  | Conversion Training:                          |

|           |          | Data Link and Message<br>Formatting           |
|-----------|----------|---|
| 11.06     |          | Conversion Training                           |
|           |          | GNSS Approach                                 |
|           |          | Procedures                                    |
| ID Number |          | Job Category and                              |
|           | Category | Type of Training                              |
|           |          |   |
|           |          |   |
| 1         | 2        | 3   |
| 12        | 050      | Approach Controller -<br>Radar                |
| 12.01     |          | Foundation Training                           |
| 12.02     |          | Initial Training                              |
| 12.03     |          | Transition Training                           |
| 12.04     |          | Refresher Training                            |
| 12.05     |          | Conversion Training:                          |
|           |          | Data Link and Message<br>Formatting           |
| 12 06     |          |   |
| 12.06     |          | Conversion Training GNSS Approach             |
|           |          | Procedures                                    |
| 12.07     |          | Conversion training -                         |
|           |          | ADS Surveillance and                          |
|           |          | Separation Procedures                         |
| 12.08     |          | Conversion Training:                          |
| 12.09     |          | Automation Procedures                         |
|           |          | Conversion Training:<br>RNP Procedures        |
| 13        | 050      | Area Controller -                             |
| 13.01     |          | Radar Foundation Training                     |
| 13.01     |          | Initial Training                              |
| 13.02     |          | Transition Training                           |
| 13.04     |          | Refresher Training                            |
| 13.04     |          | Conversion Training                           |
| 13.03     |          | Data Link and Message                         |
| 12.06     |          | Formatting Conversion Training:               |
| 13.06     |          | GNSS Enroute                                  |
| 13.07     |          | Conversion Training GNSS Approach             |
|           |          | Procedures                                    |
| 13.08     |          | Conversion training -                         |
|           |          | ADS Surveillance and                          |
|           |          | Separation Procedures                         |
| 13.09     |          | Conversion Training<br>Automation Procedures  |
| 13.10     |          | Conversion Training:<br>RNP Procedures        |
| 14        | 050      | Area Controller - Non-<br>Radar               |
| 14.01     |          | Initial Training                              |
| 14.02     |          | Transition Training                           |
| 14.03     |          | Refresher Training                            |
| 14.04     |          | Conversion Training:<br>Data Link and Message |
|           |          | Formatting                                    |
| 14.05     |          | Conversion Training:<br>GNSS Enroute          |
| 14.06     |          | Conversion Training                           |
|           |          | GNSS Approach                                 |
|           |          | Procedures                                    |

|           |          | <u> </u>                                    |
|-----------|----------|---|
|           |          |   |
|           |          |   |
| 14.08     |          | Conversion Training:                        |
|           | 10.10    | Automation Procedures                       |
| ID Number |          | Job Category and                            |
|           | Category | Type of Training                            |
|           |          |   |
|           |          |   |
| 1         | 2        | 3   |
| 14.09     |          | Conversion Training: Separation Procedures  |
| 14.10     |          | Conversion Training:                        |
|           |          | RNP Procedures                              |
| 15        | 050      | Airspace Planning                           |
| 15.01     |          | Transition Training                         |
| 15.02     |          | Conversion Training:<br>Automation Training |
| 15.03     |          | Conversion Training:                        |
| 13.03     |          | RNP Airspace                                |
| 15.04     |          | Conversion Training:                        |
|           |          | GNSS  |
| 15.05     |          | Conversion Training:<br>RNAV                |
| 16        | 050      | Search and Rescue                           |
| 10.01     |          | Coordinator                                 |
| 16.01     |          | Foundation Training                         |
| 16.02     |          | Initial Training                            |
| 16.03     |          | Transition Training                         |
| 16.04     |          | Refresher Training                          |
| 16.05     |          | Conversion Training:<br>AMSS, GNSS and ADS  |
| 17        | 050      | Air Traffic Control                         |
|           |          | Automation                                  |
| 17.01     |          | Foundation Training                         |
| 17.02     |          | Initial Training                            |
| 17.03     |          | Transition Training                         |
| 17.04     |          | Refresher Training                          |
| 17.05     |          | Conversion Training:<br>Data Communications |
| 17.06     |          | Conversion Training:                        |
| 17.07     |          | LAN/WAN Conversion Training:                |
| 17.07     |          | ATM Automation and                          |
|           |          | Algorithm Development                       |
| 17.08     |          | Conversion Training:                        |
|           |          | Software Design,                            |
|           |          | Development and<br>Testing                  |
| 18        | 050      | Air Traffic Control Supervisor              |
| 18.01     |          | Transition Training                         |
| 18.02     |          | Refresher Training                          |
| 18.03     |          | Conversion Training:                        |
| 10.03     |          | Data Link and Message                       |
|           |          | Formatting                                  |
| 18.04     |          | Conversion Training:                        |
|           |          | GNSS Enroute                                |
| 18.05     |          | Procedures Conversion Training              |
| 10.00     |          | Conversion Training GNSS Approach           |
|           |          | Procedures                                  |
|           | <u>!</u> |   |

### 4A-3

| 40.00     | I        | Communication Ameliainan  |
|-----------|----------|---|
| 18.06     |          | Conversion training:<br>ADS Surveillance and<br>Separation Procedures     |
| 18.07     |          | Conversion Training Automation Procedures                                 |
| ID Number | ICAO     | Job Category and  |
|           | Category | Type of Training  |
| 1         | 2        | 3   |
| 18.08     |          | Conversion Training:<br>RNAV and RNP<br>Procedures                        |
| 19        | 050      | Senior Manager  |
| 19.01     |          | Transition Training   |
| 19.02     |          | Conversion Training:<br>Operational Planning<br>for CNS/ATM Systems       |
| 20        | 050      | Facility Management and Planning  |
| 20.01     |          | Initial Training  |
| 20.02     |          | Transition Training   |
| 20.03     |          | Technical Planning for<br>CNS/ATM System                                  |
| 21        | 050      | Data processing and<br>Display  |
| 21.01     |          | Initial Training  |
| 21.02     |          | Conversion Training:<br>Software Design,<br>Development and<br>Testing    |
| 21.03     |          | Conversion Training:<br>Automated Flight Strips                           |
| 21.04     |          | Conversion Training:<br>ADS Processing                                    |
| 21.05     |          | Conversion Training:<br>Data Communications<br>(LAN/WAN)                  |
| 21.06     |          | Conversion Training:<br>Data Link<br>Communications                       |
| 22        | 050      | Human/Computer Interface  |
| 22.01     |          | Initial Training  |
| 22.02     |          | Conversion Training:<br>Human Factors and<br>Automation Design            |
| 22.03     |          | Conversion Training:<br>Software Design,<br>Development and<br>Evaluation |
| 23        | 100      | Airport Maintenance -<br>Electrical                                       |
| 23.01     |          | Foundation Training   |
| 23.02     |          | General Maintenance   |
| 23.03     |          | Airport Lighting  |
| 23.04     |          | Power Generation  |
| 24        | 100      | Airport Maintenance -<br>Mechanical                                       |
| 24.01     |          | Foundation Training   |
| 24.02     |          | General Maintenance   |
| 24.03     |          | Airconditioning   |

|           |          | <del>,</del>                             |
|-----------|----------|--|
|           |          |  |
| 25.01     |          | Maintenance and<br>Repair                |
| 25.02     |          | Testing                                  |
| ID Number | ICAO     | Job Category and                         |
|           | Category | Type of Training                         |
|           |          |  |
|           |          |  |
| 1         | 2        | 3  |
| 26        | 100      | Material Procurement                     |
|           |          | & Stock Control                          |
| 26.01     |          | Foundation Training                      |
| 26.02     |          | Initial Training                         |
| 26.03     |          | Computer Database<br>Applications        |
| 26.04     |          | Computer Messaging                       |
| 27        | 110      | Airport Fire Fighter -                   |
|           |          | Basic                                    |
| 27.01     |          | Foundation training                      |
| 27.02     |          | Initial Training                         |
| 27.03     | 440      | Refresher Training                       |
| 28        | 110      | Airport Fire Officer -<br>Junior         |
| 28.01     |          | Initial Training                         |
| 28.02     |          | Transition Training                      |
| 28.03     |          | Refresher Training                       |
| 28.04     |          | Conversion Training:                     |
| 00.05     |          | Application of GNSS                      |
| 28.05     | 110      | Computer Messaging                       |
| 29        | 110      | Airport Fire Officer -<br>Senior         |
| 29.01     |          | Transition training                      |
| 29.02     |          | Refresher Training                       |
| 29.03     |          | Conversion Training:                     |
| 29.04     |          | Application of GNSS Conversion Training: |
| 29.04     |          | Computer Messaging                       |
| 30        | 120      | Airport Management -                     |
|           |          | Administration                           |
| 30.01     |          | Initial Training                         |
| 30.02     |          | Commercial<br>Management                 |
| 30.03     |          | Computer Applications                    |
| 30.04     |          | Conversion Training:                     |
|           |          | Computer Messaging                       |
| 31        | 120      | Airport Management -<br>Technical        |
| 31.01     |          | Initial Training                         |
| 31.02     |          | Airport Safety                           |
| 31.02     |          | Airport Operations and                   |
|           |          | Inspection                               |
| 31.04     |          | Airport Noise Control                    |
| 31.05     |          | Airport Emergency<br>Planning            |
| 32        | 160      | Communications                           |
|           |          | Maintenance - HF/VHF                     |
| 32.01     |          | Foundation training                      |
| 32.02     |          | VHF Equipment<br>Specific Training       |
|           |          | Specific Training                        |

### 4A-4

| 32.03     |           | HF Equipment Specific                           |
|-----------|-----------|---|
| 00.04     |           | Training  |
| 32.04     |           | Note: The following<br>rows should indicate     |
|           |           | the specific equipment                          |
| ID Number | ICAO      | training requirements                           |
| id Number | Category  | Job Category and<br>Type of Training            |
|           | - anogory | Type of Training                                |
|           |           |   |
| 1         | 2         | 3   |
| 33        | 160       | Communications                                  |
|           | 100       | Maintenance - Fixed<br>Links                    |
| 33.01     |           | Foundation training                             |
| 33.02     |           | Equipment Specific                              |
|           |           | Training (UHF, HF, VHF, microwave/V-Sat)        |
| 33.03     |           | Note: The following<br>rows should indicate     |
|           |           | the specific equipment                          |
|           |           | training requirements                           |
| 34        | 160       | Communications Maintenance -                    |
|           |           | AFTN/CIDIN Centre                               |
| 34.01     |           | Foundation training                             |
| 34.02     |           | Computer<br>Fundamentals                        |
| 34.03     |           | Computer and                                    |
| 0 1.00    |           | Switching Technology                            |
| 34.04     |           | Data Communications                             |
| 34.05     |           | Note: The following<br>rows should indicate     |
|           |           | the specific equipment                          |
| -         |           | training requirements                           |
| 35        | 160       | Navigation Aids<br>Maintenance -                |
|           |           | NDB/VOR/ILS/DME                                 |
| 35.01     |           | Foundation training                             |
| 35.02     |           | Equipment Specific                              |
| 35 03     |           | Training  Note: The following                   |
| 00.00     |           | rows should indicate                            |
|           |           | the specific equipment<br>training requirements |
| 35.04     |           | Conversion Training:                            |
|           |           | Equipment Specific                              |
|           |           | Training (GNSS, LAAS) and WAAS)                 |
| 35.05     |           | Note: The following                             |
|           |           | rows should indicate                            |
|           |           | the specific equipment<br>training requirements |
| 36        | 160       | CNS Planner/                                    |
| 00.04     |           | Installation Manager                            |
| 36.01     |           | Planning and<br>Installation Initial            |
| 20.00     |           | Training  |
| 36.02     |           | Conversion Training for<br>CNS/ATM Systems      |
| 37        | 160       | Surveillance<br>Maintenance                     |
| 37.01     |           | Foundation training                             |
| 01.01     |           | i oundation training                            |

|                    | 1        |  |
|--------------------|----------|--|
|                    |          |  |
| 37.03              |          | Note: The following  |
|                    |          | rows should indicate   |
|                    |          | the specific equipment   |
|                    |          | training requirements  |
| ID Number          |          | Job Category and   |
|                    | Category | Type of Training   |
|                    |          |  |
|                    |          |  |
|                    |          |  |
| 1                  | 2        | 3  |
| 37.04              |          | Conversion Training:   |
|                    |          | Equipment Specific   |
| 27.05              |          | Training (ADS)   |
| 37.05              |          | Note: The following  |
|                    |          | rows should indicate<br>the specific equipment   |
|                    |          | training requirements  |
| 20                 | 400      | <u> </u>   |
| 38                 | 160      | Com/NavAids/   |
|                    |          | Surveillance- Support<br>Spare Stock Control   |
| 20.01              |          |  |
| 38.01              | 1        | Foundation training  |
| 38.02              |          | Computer Database<br>Applications  |
| 38.03              | 1        |  |
|                    | 460      | CNS Maintenance  |
| 39                 | 160      | CNS - Maintenance  |
| 20.04              |          | Supervisor   |
| 39.01              |          | Transition training  |
| 39.02              |          | OJT Instructor Training  |
| 40                 | 170      | Communication  |
|                    |          | Operations -   |
|                    |          | Aeronautical Station   |
|                    |          | Operator (Mobile)  |
| 40.01              |          | Foundation training  |
| 40.02              |          | Initial Training   |
| 41                 | 170      | Communication  |
|                    |          | Operations - Fixed   |
|                    |          | Service Operator   |
| 41.01              |          | Foundation training  |
| 41.02              | 1        | Note: The following  |
|                    |          | rows should indicate   |
|                    |          | the specific equipment   |
|                    |          | training requirements  |
| 41.03              |          | Conversion Training:   |
|                    |          | Computer   |
|                    |          | Fundamentals   |
| 41.04              |          | Conversion Training:   |
| 44.05              | 1        | ATN Applications   |
| 41.05              |          | Computer Applications:   |
|                    | 1        | Data Communications  |
|                    |          | and Computer   |
|                    |          | and Computer<br>Messaging  |
| 41.06              |          | Messaging  |
| 41.06              |          | Messaging Conversion Training:   |
| 41.06              |          | Messaging Conversion Training: Equipment Specific  |
|                    |          | Messaging<br>Conversion Training:<br>Equipment Specific<br>Training (ATN)  |
| 41.06<br>41.07     |          | Messaging Conversion Training: Equipment Specific  |
|                    |          | Messaging Conversion Training: Equipment Specific Training (ATN) Note: The following   |
|                    |          | Messaging Conversion Training: Equipment Specific Training (ATN) Note: The following rows should indicate  |
|                    | 170      | Messaging Conversion Training: Equipment Specific Training (ATN) Note: The following rows should indicate the specific equipment   |
| 41.07              | 170      | Messaging Conversion Training: Equipment Specific Training (ATN) Note: The following rows should indicate the specific equipment training requirements                                       |
| 41.07              | 170      | Messaging Conversion Training: Equipment Specific Training (ATN) Note: The following rows should indicate the specific equipment training requirements Communication                         |
| 41.07              | 170      | Messaging Conversion Training: Equipment Specific Training (ATN) Note: The following rows should indicate the specific equipment training requirements Communication Operations -            |
| 41.07<br><b>42</b> | 170      | Messaging Conversion Training: Equipment Specific Training (ATN) Note: The following rows should indicate the specific equipment training requirements Communication Operations - Supervisor |

|             |          | Computer<br>Fundamentals                       |
|-------------|----------|--|
| 42.03       |          | Conversion Training:                           |
| ID Number   | ICAO     | ATN Applications                               |
| ib Nulliber | Category | Job Category and Type of Training              |
|             |          | Type or Training                               |
|             |          |  |
| 1           | 2        | 3  |
| 42.04       |          | Computer Applications: Data Communications     |
|             |          | and Computer                                   |
| 10.05       |          | Messaging                                      |
| 42.05       |          | Conversion Training:<br>Equipment Specific     |
|             |          | Training (ATN)                                 |
| 42.06       |          | Note: The following                            |
|             |          | rows should indicate<br>the specific equipment |
|             |          | training requirements                          |
|             |          | Conversion Training:                           |
|             |          | See Description of New<br>Jobs                 |
| 43          | 170      | Communication                                  |
|             |          | Operations -<br>Management                     |
| 43.01       |          | Transition Training                            |
| 43.02       |          | Conversion Training:                           |
|             |          | Computer                                       |
| 43.03       |          | Fundamentals Conversion Training:              |
| 43.03       |          | ATN Applications                               |
| 43.04       |          | Computer Applications:                         |
|             |          | Data Communications<br>and Computer            |
|             |          | Messaging                                      |
| 43.05       |          | Conversion Training:                           |
|             |          | Equipment Specific<br>Training (ATN)           |
| 43.06       |          | Note: The following                            |
|             |          | rows should indicate<br>the specific equipment |
|             |          | training requirements                          |
| 43.07       |          | Conversion Training:                           |
|             |          | See Description of New<br>Jobs                 |
| 44          | 170      | ATN Technician                                 |
|             |          | (AFTN/ATN Gateway,                             |
|             |          | IS and ES) Initial Training                    |
|             |          | Pre-requisite training:                        |
|             |          |  |
|             |          | Computer Workstation<br>Maintenance            |
|             |          | iviaiiileiialice                               |
|             |          | Installation and                               |
|             |          | troubleshooting of                             |
|             |          | Ethernet type LANS                             |
| 45          | 170      | Computer Messaging  ATN Network                |
|             |          | Administrator                                  |
|             |          | Initial Training                               |
|             |          | Pre-requisite training:                        |
| <u> </u>    |          | Operating and                                  |

| ID Number |          | Job Category and   |
|-----------|----------|--|
|           | Category | Type of Training   |
| 1         | 2        | 3  |
|           |          | LAN planning and<br>administration                           |
|           |          | Managing User  |
|           |          | Accounts and<br>Electronic Mai                               |
| 46        | 170      | ATN Systems<br>Engineer                                      |
|           |          | Initial Training   |
|           |          | Pre-requisite training:                                      |
|           |          | Planning/ Configuring<br>Computer Workstation<br>Environment |
|           |          | Planning and<br>Implementation of a<br>LAN                   |
|           |          | Planning and Implementation of a WAN                         |
|           |          | Planning and<br>Implementation of a<br>Router/gateway system |

### CNS/ATM HR P-T TF/1

Appendix 4B to the Report on Agenda Item 4

|        |          | Projected Traini                          | ng Demand        | (Numb  | er of Tra | ainees) |        |        |
|--------|----------|---|------------------|--------|-----------|---------|--------|--------|
| ID     | ICAO     | Job Category and Type of                  | Planning Factors | Year 1 | Year 2    | Year 3  | Year 4 | Year 5 |
| Number | Category | Training                                  | _                |        |           |         |        |        |
| 11     | 2        | 3   | 4                | 5      | 6         | 7       | 8      | 9      |
| 1      | 020      | AIS Officer (Headquarters)                |                  |        |           |         |        |        |
| 1.01   |          | Foundation Training                       |                  |        |           |         |        |        |
| 1.02   |          | Initial Training                          |                  |        |           |         |        |        |
| 1.03   |          | Refresher Training                        |                  |        |           |         |        |        |
| 1.04   |          | Computer Fundamentals                     |                  |        |           |         |        |        |
| 1.05   |          | Conversion Training: AIS<br>Automation    |                  |        |           |         |        |        |
| 1.06   |          | Conversion Training:<br>Automated AIP     |                  |        |           |         |        |        |
| 2      | 020      | Aeronautical Cartographer                 |                  |        |           |         |        |        |
| 2.01   |          | Foundation Training                       |                  |        |           |         |        |        |
| 2.02   |          | Initial Training                          |                  |        |           |         |        |        |
| 2.03   |          | Transition Training                       |                  |        |           |         |        |        |
| 2.04   |          | Refresher Training                        |                  |        |           |         |        |        |
| 2.05   |          | Computer Fundamentals                     |                  |        |           |         |        |        |
| 2.06   |          | Conversion Training:                      |                  |        |           |         |        |        |
| 2.00   |          | Automation Training                       |                  |        |           |         |        |        |
| 3      | 020      | Electronic Processing, AIS                |                  |        |           |         |        |        |
|        |          | Data                                      |                  |        |           |         |        |        |
| 3.01   |          | Initial Training                          |                  |        |           |         |        |        |
| 3.02   |          | Refresher Training                        |                  |        |           |         |        |        |
| 3.03   |          | Transition Training                       |                  |        |           |         |        |        |
|        |          | Conversion Training:                      |                  |        |           |         |        |        |
|        |          | Computer Database<br>Applications for AIS |                  |        |           |         |        |        |
|        |          | Conversion Training: AIS                  |                  |        |           |         |        |        |
| 3.04   |          | Automation                                |                  |        |           |         |        |        |
| 0.05   |          | Conversion Training: ATN                  |                  |        |           |         |        |        |
| 3.05   |          | Application                               |                  |        |           |         |        |        |
| 4      | 020      | International NOTAM                       |                  |        |           |         |        |        |
|        | 020      | Officer                                   |                  |        |           |         |        |        |
| 4.01   |          | Foundation Training                       |                  |        |           |         |        |        |
| 4.02   |          | Initial Training                          |                  |        |           |         |        |        |
| 4.03   |          | Transition Training                       |                  |        |           |         |        |        |
| 4.04   |          | Refresher Training                        |                  |        |           |         |        |        |
| 4.05   |          | Computer Fundamentals                     |                  |        |           |         |        |        |
| 4.06   |          | Conversion Training: ATN<br>Applications  |                  |        |           |         |        |        |

|                |              |  |   | Pro  | jected Traii | ning Deman | d for New J | obs  |
|----------------|--------------|--|---|------|--------------|------------|-------------|------|
| Category<br>ID | ICAO<br>Code | Job Category<br>and Type of<br>Training  | Planning Factors  | 2000 | 2001         | 2002       | 2003        | 2005 |
| 1              | 2            | 3  | 4   | 5    | 6            | 7          | 8           | 9    |
| 44             | 170          | ATN Technician<br>(AFTN/ATN<br>Gateway, IS and ES)   | Target population: Aeronautical Communication Installation/Maintenance Personnel; Navigation Aids/Radar Maintenance Personnel; and Aeronautical Communications Systems Supervisor/ Manager  |      |              |            |             |      |
|                |              | Initial Training   |   |      |              |            |             |      |
|                |              | Pre-requisite training:  |   |      |              |            |             |      |
|                |              | Computer<br>Workstation<br>Maintenance   |   |      |              |            |             |      |
|                |              | Installation and<br>troubleshooting of<br>Ethernet type LANS                                 |   |      |              |            |             |      |
|                |              | Computer Messaging   |   |      |              |            |             |      |
| 45             | 170          | ATN Network<br>Administrator   | Target Population: Aeronautical Communication Systems Supervisor/Manager (AFTN/CIDIN); Senior Communication Systems Maintenance Personnel; and Senior Communication Operations Personnel who have an electronic technology background |      |              |            |             |      |
|                |              | Initial Training   |   |      |              |            |             |      |
|                |              | Pre-requisite training:  |   |      |              |            |             |      |
|                |              | Operating and Configuring Computer Workstations, Operating Systems and LANS LAN planning and |   |      |              |            |             |      |
|                |              | administration   |   |      |              |            |             |      |

|                |              |  |  | Pro  | jected Train | ning Deman | d for New J | obs  |
|----------------|--------------|--|--|------|--------------|------------|-------------|------|
| Category<br>ID | ICAO<br>Code | Job Category<br>and Type of<br>Training          | Planning Factors   | 2000 | 2001         | 2002       | 2003        | 2005 |
| 1              | 2            | 3  | 4  | 5    | 6            | 7          | 8           | 9    |
|                |              | Managing User<br>Accounts and<br>Electronic Mail |  |      |              |            |             |      |
| 46             | 170          | ATN Systems<br>Engineer                          | Target Population: Aeronautical Communication Systems Engineer (AFTN/CIDIN); or Communications Systems Engineer (with networking experience) |      |              |            |             |      |
|                |              | Initial Training                                 |  |      |              |            |             |      |
|                |              | Pre-requisite                                    |  |      |              |            |             |      |
|                |              | training:  |  |      |              |            |             |      |
|                |              | Planning/  |  |      |              |            |             |      |
|                |              | Configuring                                      |  |      |              |            |             |      |
|                |              | Computer   |  |      |              |            |             |      |
|                |              | Workstation                                      |  |      |              |            |             |      |
|                |              | Environment                                      |  |      |              |            |             |      |
|                |              | Planning and                                     |  |      |              |            |             |      |
|                |              | Implementation                                   |  |      |              |            |             |      |
|                |              | of a LAN   |  |      |              |            |             |      |
|                |              | Planning and                                     |  |      |              |            |             |      |
|                |              | Implementation                                   |  |      |              |            |             |      |
|                |              | of a WAN   |  |      |              |            |             |      |
|                |              | Planning and                                     |  |      |              |            |             |      |
|                |              | Implementation                                   |  |      |              |            |             |      |
|                |              | of a   |  |      |              |            |             |      |
|                |              | Router/gateway                                   |  |      |              |            |             |      |
|                |              | system   |  |      |              | ĺ          |             |      |

# CNS/ATM HR P-T TF/1 Appendix 4C to the Report on Agenda Item 4

|              |                  | APPEND  | IX C San            | pleTra      | ining Plan               |                 |                |             |
|--------------|------------------|---|---------------------|-------------|--------------------------|-----------------|----------------|-------------|
| ID<br>Number | ICAO<br>Category | Job Category<br>and Type of<br>Training                           | Planning<br>Factors | Year 1      | Year 2                   | Year 3          | Year 4         | Year 5      |
| 1            | 2                | 3   | 4                   | 5           | 6                        | 7               | 8              | 9           |
| 1            | 020              | AIS Officer<br>(Headquarters)                                     |                     |             |                          |                 |                |             |
| 1.           | .01              | Foundation Training   |                     | State/Train | ning Centre; State/      | Training Centre | e; State/Train | ing Centre  |
| 1.           | .02              | Initial Training  |                     | State/Train | ning Centre; State/      | Training Centre | e; State/Trair | ing Centre  |
| 1.           | .03              | Refresher Training  |                     |             |                          | Fraining Centre | 9              |             |
| 1.           | .04              | Computer<br>Fundamentals  |                     |             | State/Training<br>Centre | State           | /Training Ce   | ntre        |
| 1.           | .05              | Conversion Training:<br>AIS Automation                            |                     |             |                          |                 | State/Trair    | ning Centre |
| 1.           | .06              | Conversion Training:<br>Automated AIP                             |                     |             |                          | State           | /Training Ce   | ntre        |
| 2            | 020              | Aeronautical<br>Cartographer                                      |                     |             |                          |                 |                |             |
| 2.           | .01              | Foundation Training   |                     |             |                          |                 |                |             |
| 2.           | .02              | Initial Training  |                     |             |                          |                 |                |             |
| 2.           | .03              | Transition Training   |                     |             |                          |                 |                |             |
| 2.           | .04              | Refresher Training  |                     |             |                          |                 |                |             |
| 2.           | .05              | Computer<br>Fundamentals  |                     |             |                          |                 |                |             |
| 2.           | .06              | Conversion Training:<br>Automation Training                       |                     |             |                          |                 |                |             |
| 3            | 020              | Electronic<br>Processing , AIS Data                               |                     |             |                          |                 |                |             |
| 3.           | .01              | Initial Training  |                     |             |                          |                 |                |             |
| 3.           | .02              | Refresher Training  |                     |             |                          |                 |                |             |
| 3.           | .03              | Transition Training   |                     |             |                          |                 |                |             |
|              |                  | Conversion Training:<br>Computer Database<br>Applications for AIS |                     |             |                          |                 |                |             |
| 3.           | .04              | Conversion Training:<br>AIS Automation                            |                     |             |                          |                 |                |             |
| 3.           | 05               | Conversion Training:<br>ATN Application                           |                     |             |                          |                 |                |             |

|                |              |  |  | Proj | ected Trair | ing Deman | d for New | Jobs |
|----------------|--------------|--|--|------|-------------|-----------|-----------|------|
| Category<br>ID | ICAO<br>Code | Job Category<br>and Type of<br>Training  | Planning Factors   | 2000 | 2001        | 2002      | 2003      | 2005 |
| 1              | 2            | 3  | 4  | 5    | 6           | 7         | 8         | 9    |
| 44             | 170          | ATN Technician<br>(AFTN/ATN<br>Gateway, IS and ES)   | Communications<br>Systems Supervisor/<br>Manager   |      |             |           |           |      |
|                |              | Initial Training   |  |      |             |           |           |      |
|                |              | Pre-requisite training:  |  |      |             |           |           |      |
|                |              | Computer<br>Workstation<br>Maintentnance   |  |      |             |           |           |      |
|                |              | Installation and<br>troubleshooting of<br>Ethernet type LANS                                 |  |      |             |           |           |      |
|                |              | Computer Messaging   |  |      |             |           |           |      |
| 45             | 170          | ATN Network<br>Administrator   | Target Population: Aeronautical Communication Systems Supervisor/Manager (AFTN/CIDIN); Senior Communication Systems Maintenance Personnel; and Senior Communication Operations Perrsonnel who have an electronic technology background |      |             |           |           |      |
|                |              | Initial Training   |  |      |             |           |           |      |
|                |              | Pre-requiste training:   |  |      |             |           |           |      |
|                |              | Operating and Configuring Computer Workstations, Operating Systems and LANS LAN planning and |  |      |             |           |           |      |
|                |              | administration   |  |      |             |           |           |      |

|                |              |   |  | Pro  | octed Train | ning Deman | nd for New | lohe |
|----------------|--------------|---|--|------|-------------|------------|------------|------|
| Category<br>ID | ICAO<br>Code | Job Category<br>and Type of<br>Training           | Planning Factors   | 2000 | 2001        | 2002       | 2003       | 2005 |
| 1              | 2            | 3   | 4  | 5    | 6           | 7          | 8          | 9    |
|                |              | Managing User<br>Accounts and<br>Elecontonic Mail |  |      |             |            |            |      |
| 46             | 170          | ATN Systems<br>Engineer                           | Target Population: Aeronautical Communication Systems Engineer (AFTN/CIDIN); or Communications Systems Engineer (with networking experience) |      |             |            |            |      |
|                |              | Initial Training                                  |  |      |             |            |            |      |
|                |              | Pre-requiste                                      |  |      |             |            |            |      |
|                |              | training:   |  |      |             |            |            |      |
|                |              | Planning/<br>Configuring                          |  |      |             |            |            |      |
|                |              | Computer  |  |      |             |            |            |      |
|                |              | Workstation                                       |  |      |             |            |            |      |
|                |              | Environment                                       |  |      |             |            |            |      |
|                |              | Planning and                                      |  |      |             |            |            |      |
|                |              | Implementation                                    |  |      |             |            |            |      |
|                |              | of a LAN  |  |      |             |            |            |      |
|                |              | Planning and                                      |  |      |             |            |            |      |
|                |              | Implementation                                    |  |      |             |            |            |      |
|                |              | of a WAN  |  |      |             |            |            |      |
|                |              | Planning and                                      |  |      |             |            |            |      |
|                |              | Implementation of a                               |  |      |             |            |            |      |
|                |              | Router/gateway                                    |  |      |             |            |            |      |
|                |              | system  |  |      |             |            |            |      |
| 1              |              | 5,500111  |  |      |             |            |            |      |

REPORT ON AGENDA ITEM 5: IDENTIFICATION OF THE TRAINING DEMAND AND HUMAN RESOURCES REQUIREMENTS ASSOCIATED WITH THE IMPLEMENTATION OF THE CNS/ATM SYSTEMS IN THE MID REGION

5.1 After considering Agenda Item 4, the meeting decided to defer Agenda Item 5 to the next meeting of the task force. It was the meeting's view that, by then, the States will have replied to the questionnaire that was addressed in Agenda item 4 and will be in a better position to identify properly the demand for facilities/capabilities and human resources requirements associated with the implementation of the CNS/ATM systems in the Region in accordance with the MID CNS/ATM Plan.

#### REPORT ON AGENDA ITEM 6: FUTURE WORK PROGRAMME

- 6.1 The meeting agreed that the second meeting of the Task Force should be held after the seminar/workshop that was agreed under Agenda Item 3. It was agreed that the date of the meeting be scheduled for the second half of 2006 before MIDANPIRG/10 and the venue would be Cairo unless a State is interested in hosting it.
- In order to assist attendees/experts concerned to start their advance preparations the meeting developed a provisional agenda for its next meeting, the provisional agenda is at **Appendix 6A** to this report on Agenda Item 6.

### CNS/ATM HR P&T TF/1 Appendix 6A to the Report on Agenda Item 6

# PROVISIONAL AGENDA FOR THE SECOND MEETING OF THE CNS/ATM HUMAN RESOURCES PLANNING AND TRAINING TF/2 (CNS/ATM HR P&T TF/2)

Agenda Item 1: Adoption of Provisional Agenda

Agenda Item 2: Review the outcome of the Seminar/workshop with a view to harmonize

training programmes and to cope with the new challenges facing the MID

region

Agenda Item 3: Review and prepare a report on the out come of the Questionnaire on

projected number of trainees in specific types of training within the MID

region.

Agenda Item 4: Identification of the training demand and human resources requirements

associated with the implementation of the CNS/ATM systems in the MID

Region

Agenda Item 5: Developments of a proposed comprehensive CNS/ATM HR Planning and

training programme for the MID Region

Agenda Item 6: Future Work Programme

Agenda Item 7: Any other business

#### REPORT ON AGENDA ITEM 7: ANY OTHER BUSINESS

#### Review and update the Terms of Reference of the Task Force.

7.1 The meeting reviewed and agreed to the revised Terms of Reference and Work Programme of the Task Force without amendment.

### Focal Points in the Air Navigation Training field

- 7.2 The meeting was informed that the MID Regional Office had requested States to nominate their respective Focal Points in the field of Air Navigation Training and noted that replies were received from nine States as detailed at **Appendix 7A** to the report on Agenda Item 7.
- 7.3 The meeting requested States that have not yet provided their nominations, to do so in order to enable the Regional Office to effectively co-ordinate efforts aimed at optimising the capacity of training institutions and re-focusing the content of training programmes as basic elements for creating the appropriate infrastructure and human base required for the enhancement of aviation safety in the MID Region.

# CNS/ATM HR P&T TF/1 Appendix 7A to the Report on Agenda Item 7

### MID REGION STATES AIR NAVIGATION TRAINING FOCAL POINTS

| STATE/NAME/TITLE   | Address   | TEL. NO.                                       | FAX NO.          | E-MAIL              |
|--|---|--|------------------|---------------------|
| AFGHANISTAN  |   |  |                  |                     |
| BAHRAIN  |   |  |                  |                     |
| Mr. Mohamed Zainal<br>Head of Standards, Licensing and<br>Developments<br>Civil Aviation Affairs | P.O.Box 586 – Manama<br>BAHRAIN   | (973) 19 321 028<br>Mobile: (973) 396<br>76707 | (973) 19 321 992 | mzainal@caa.gov.bh  |
| Mr. Essam Ismail El Alawi<br>Chief, HRD<br>Civil Aviation Affairs                                | P.O. Box 586<br>KINGDOM OF<br>BAHRAIN   | (973) 17 321 032                               | (973) 17 330 123 | ealalawi@caa.gov.bh |
| EGYPT  Mr. Saeed Abo-Gazalah  Outlying Airports ATC Training  Manager                            | National Air Navigation<br>Services Company<br>Cairo International<br>Airport Road<br>Cargo Village Road<br>Cairo – EGYPT | 202) 265 7935<br>Mobile: (2) 010 601<br>3726   | (202) 418 2963   | Mem_saeed@yahoo.com |
| IRAQ   |   |  |                  |                     |

### 7A-2

| STATE/NAME/TITLE  | Address   | TEL. NO.       | FAX NO.         | E-MAIL                     |
|---|---|----------------|-----------------|----------------------------|
|   |   |                |                 |                            |
| IRAN  |   |                |                 |                            |
| Mr. Hasan Ali Shahbazilar   |   |                |                 |                            |
| Deputy Administrator of CAO for Aeronautical and International Affairs                              | Civil Aviation Organization in Iran   | + 9821 6036341 | + 9821 6036340  | shahbazilar@cao.ir         |
| ISRAEL  |   |                |                 |                            |
|   |   |                |                 |                            |
| JORDAN  |   |                |                 |                            |
| Dr. Taisir Taji<br>Dean Queen Noor Civil Aviation College<br>(QNCATC)                               |   |                |                 |                            |
| Mr. Mustafa Keilani<br>Acting Director ATS training at QNCATC                                       |   |                |                 |                            |
| Kuwait  |   |                |                 |                            |
| Mr. Yaqoub M. Al Darweesh   |   |                |                 |                            |
| Chief of Tower and in Charge of Air<br>Navigation Training<br>Directorate General of Civil Aviation | Directorate General of Civil<br>Aviation<br>Kuwait International Airport<br>P.O.Box 17 – Safat, |                | +00965 471 3504 | nav1@kuwait.airport.com.kw |

7A**-**3

| STATE/NAME/TITLE   | Address  | TEL. NO.                        | FAX No.             | E-MAIL                    |
|--|--|---------------------------------|---------------------|---------------------------|
|  | 13001 – Safat – Kuwait   |                                 |                     |                           |
| LEBANON  |  |                                 |                     |                           |
| Mr. Khaled Chamieh   |  |                                 |                     |                           |
| Chief of Air Navigation Department<br>Lebanese Directorate General of Civil<br>Aviation  | Directorate General of Civil<br>Aviation<br>Beirut International Airport   | 961 1 628178                    | 961 1 629023        | dgca@beirutairport.gov.lb |
| OMAN   |  |                                 |                     |                           |
| Mr. Ali Humaid Al Adawi<br>Director of Air navigation Services   |  | +00968 519699                   | +00968 519630       | alialadawi@dgcam.gov.om   |
| Mr. Rashad Aziz Al Abdulsalaam<br>Chief Training ATC   |  | +00968 519186                   | +00968 519516       | raziz@dgcam.gov.om        |
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| QATAR  |  |                                 |                     |                           |
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### 7A-4

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| SYRIA  |         |                  |                |                           |
| UNITED ARAB EMIRATES   |         |                  |                |                           |
|  |         |                  |                |                           |
| YEMEN  Mr. Mohammed Ali Alkohlani                                    |         | 00967 1 345244   | 00967 1 345864 | Cami_training@hotmail.com |

<sup>\*</sup> MID States that are not MIDANPIRG Provider States.

### CNS/ATM HR P&T TF/1 Attachment A to the Report

# FIRST MEETING OF THE CNS/ATM HUMAN RESOURCES PLANNING AND TRAINING TASK FORCE (CNS/ATM HR P&T TF/1)

(Cairo, 26 – 27 September 2005)

### **LIST OF PARTICIPANTS**

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