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Guidelines for Refresher Training for Air Traffic Controllers

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Guidelines for Refresher Training for Air Traffic Controllers

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Abstract
This document is intended to assist States and Air Navigation Service Providers (ANSPs) in the preparation and provision of a refresher training course for air traffic controllers. It provides guidelines in relation to the structure and content of the training course. Checklists of 'should do' and 'suggested' items to be covered in refresher training are included.

Formal discussions were held with five States, regarding their approach to and planning for pre-licensing refresher training. Informal discussions were held with other States.

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Target audience Duration Simulation Site/unit specific

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EXECUTIVE SUMMARY

This document is intended to provide assistance to States and Air Navigation Service Providers (ANSPs) in the preparation and provision of a refresher training course for air traffic controllers.

It consists of guidelines in relation to the structure and content of the training course. Checklists of ‘should do’ and ‘suggested’ items to be covered in refresher training are included.

As part of the preparation of this document, formal discussions were held with five States - Germany (DFS), The Netherlands, Norway, Ireland (IAA) and Switzerland (Skyguide) - regarding their approach to and planning for pre-licensing refresher training. Informal discussions were held with many other States. The views of all the States consulted were taken into account.

The Annex contains a CD-ROM on controller training in the handling of unusual/emergency situations (see EATMP, 2003a).

A Bibliography, the Abbreviations and Acronyms used in this document and their full designations, and the names of those who contributed to this publication are also provided.
1. INTRODUCTION

1.1 Background

The ‘European Manual of Personnel Licensing – Air Traffic Controllers’ (see EATMP, 2000), developed within the European Air Traffic Management Programme (EATMP), is the European Civil Aviation Conference (ECAC) implementation of those parts of the ‘ICAO Annex 1: Personnel Licensing’ (ICAO, 1991) which relate to the licensing of air traffic controllers and refers primarily to the Air Traffic Services (ATS) element of the overall Air Traffic Management (ATM) scenario.

EUROCONTROL is the nominated agency responsible for the development of a harmonised licensing policy for air traffic controllers within the ECAC States.

The date specified in the Convergence and Implementation Programme (CIP) by which all ECAC States have agreed to implement the European Air Traffic Control (ATC) licensing requirements is November 2003.

In addition to the development of common licensing standards, the EATM Programme requires the development of guidelines for the training of ATS staff in ECAC Member States. This document provides guidelines for the provision of refresher training for all air traffic controllers in all ECAC States.

The provision of such training will not only contribute to developing and maintaining controllers’ skills and improving the air traffic services provided, but will also facilitate the introduction of the licensing scheme by helping controllers to overcome any apprehensions they may have regarding the undergoing of competency assessment.

1.2 Purpose

As a result of licensing requirements, ECAC Member States / ANSPs will have to make refresher training available for their air traffic controllers. The purpose of this document is to provide guidelines on the provision and content of such training, thereby facilitating States/ANSPs in meeting ESARR 5 (SRC, 2002) requirements for licensing and competency assessment.

ESARR 5 sets out the general safety requirements for all ATM services’ personnel responsible for safety-related tasks within the provision of ATM services across the ECAC area and the specific safety requirements for air traffic controllers.
1.3 Scope

Refresher training is not meant to be just another training course. Qualified controllers will have obviously received training appropriate to a Rating and/or Endorsement prior to licensing. Refresher training is intended to ensure that knowledge and skills are maintained and updated on a regular basis. ESARR 5 specifies that this training must be done periodically. Refresher training can be of short duration, well focused and task specific. It should cover both practical skills and theoretical knowledge.

This document provides guidelines for States/ANSPs to follow, while recognising that the final decision on the structure and content of the course, together with the format of the competency assessment, rests with States/ANSPs and their regulatory authorities.
2. ORGANISATION OF THE TRAINING

2.1 Generic or Rating Specific Course

Controllers who hold only a single rating should receive refresher training specific to that rating. Controllers who hold ratings in a number of sectors in the same unit could be facilitated either by one course per sector or by one appropriately designed course to cover all relevant sectors.

In the case of multi-rated controllers, e.g. Aerodrome Control Instrument (ADI), Approach Control Surveillance (APS) and Area Control Surveillance (ACS), refresher training specific to the rating and/or endorsement is recommended. However, a generic course to cover a number of ratings, e.g. APS and ACS, could be designed and provided to such controllers. Discretion on this matter is left to individual States and would be subject to the approval of their national regulatory authority.

2.2 Location of Training

Refresher training may be carried out at either a national training academy or a local training unit, whichever is the more practical and cost-effective.

2.3 Target Audience

Refresher training should be made available periodically for all controllers, ideally, on an annual basis. It should be objective-based, aimed at familiarising the controller with any changes in procedures and practices which may have occurred in the preceding period, and should relate directly to the task involved. It should enable the controllers to undergo licensing assessment without fear.

2.4 Frequency of Training

It is recommended that controllers should receive refresher training in the twelve-month period prior to undertaking their first licence competency assessment, and, in the initial years of the licensing scheme, ideally annually or at least every other year.

The requirement for the initial course is based both on the need to assuage controllers’ understandable fears in the early stages of a licensing scheme and also to improve standards. As the licensing scheme becomes established and controllers become more familiar with the scheme a refresher course every other year should suffice.

It will be a matter between individual Member States / ANSPs and their regulatory authorities to decide on the frequency of training.
2.5 Duration of Training

A balance needs to be struck between the requirement for refresher training on the one hand and resource demands, both human and financial on the other, particularly in the light of the ongoing controller shortages in Europe and the prevailing economic environment.

Training, which ideally should be site/rating specific, should include both theoretical training and, where possible, a small number of simulation exercises. In a well-focused programme one day should suffice. However, if unusual/emergency situations training is included, a minimum of a day and a half is considered necessary.

It will be a matter between individual Member States / ANSPs and their regulatory authorities to decide on the duration of training.

2.6 Unusual/Emergency Situations Training

Many controllers in these days of improved equipment, both in the air and on the ground, go through lengthy periods without ever having to handle any traffic situation which presents anything out of the ordinary.

While this trend of increased safety for the flying public is most welcome, it does point out the need for the controller to be kept in practice in dealing with any situation that may arise, so that when something unusual occurs safety is not impaired.

Consequently, the requirement to provide all controllers with unusual/emergency situations training periodically, ideally annually, is clear.

If controllers receive such training as part of routine continuation training, it need not be included in refresher training. In cases where such training is not provided it is recommended that it be included in refresher training.

EUROCONTROL Institute of Air Navigation Services (IANS), Luxembourg, has developed both a CD-ROM and a Web site with sixteen scenarios covering the most common unusual/emergency situations in an interactive mode. The Web site can be accessed at http://www.ians.lu, while the CD-ROM (see EATMP, 2003a), as an annex to this document, is available upon request (see page ii of this document for contact details).

2.7 Competency Assessment

The structure and conduct of the competency assessment, whether carried out in the live environment or on a simulator, or by means of continuous assessment, will be a matter for decision between individual Member States / ANSPs and their regulatory authorities.
3. TRAINING CONTENT

3.1 Theoretical Training

The objective of the refresher course is to ensure that the controller has a fully up-to-date knowledge of all need-to-know topics in relation to day-to-day operations.

Examination database

Where possible, States/ANSPs should build an examination database (or at least a comprehensive written list) of all need-to-know questions for each rating (charts may be included) covering both general and rating specific questions. EUROCONTROL IANS, Luxembourg, has such a database, which is available to States/ANSPs.

These questions must be kept up-to-date to ensure the currency of controllers’ knowledge.

Controllers should at all times have access to the database (or written list) – on a read-only basis – together with all necessary documentation.

The questions, which may amount to several hundred in total, and may be drawn up or approved by each national regulatory authority, should be of the need-to-know variety. The questions should cover all essential areas of operations, including, *inter alia*, relevant ICAO documentation, Aeronautical Information Publication (AIP) and national/unit-specific manuals.

3.2 Human Factors

Team Resource Management

Team Resource Management (TRM) is becoming increasingly relevant in the provision of air traffic services. While time is very limited during refresher training, a module on this topic would not be out of place.

It should be noted that since the inclusion by ICAO in Annex 1 of human factors in the syllabus for the licensing of controllers, many controllers will have received training in some of the topics covered by TRM, e.g. communications, teamwork, human error, etc.

3.3 Simulation

Controllers should be briefed beforehand on what is required of them in the simulation exercises.
The number of exercises that can be run during the limited time available will be small. One Member State runs three exercises during refresher training based on the following topics:

1. Standards:
   - e.g. standard procedures; spacings, etc.

2. Efficiency check and safety:
   - e.g. separations.

3. Unusual/Emergency situations:
   - e.g. prior briefing clearly stating the objectives;
   - use of ASSIST checklist from the ‘Guidelines for Controller Training in the Handling of Unusual/Emergency Situations’ (see EATMP, 2003b)
4. CHECKLIST

The following two levels of checklist are outlined:

- the ‘should do’ items list: covers the essential items to be covered;
- the ‘suggested’ items list: covers items that could be included.

4.1 ‘Should Do’ Items

- Significant topics from relevant ICAO Annexes/Docs, AIP, national and unit specific manuals
- Standard phraseology
- Standard operating procedures
- Vectoring techniques/sequencing (ACS, APS only)
- Speed control (ACS, APS only)
- Coordination
- Letters of Agreement (LOAs)
- Factors affecting aircraft performance
- Flow control
- Items that have changed since the controller last received a training course
- Handling of unusual/emergency situations. ASSIST poster content (if not covered in routine continuation training)
- ATC clearances and instructions
- Readbacks
- Meteorological phenomena, e.g. windshear

4.2 ‘Suggested’ Items

Due to time constraints, items under this heading are of necessity limited:

- TRM;
- situation awareness;
• leadership;
• stress management;
• coordination;
• teamwork;
• checking of display set-up/use of functionalities;
• European Manual of Personnel Licensing – Air Traffic Controllers (see EATMP, 2000);
• ESARR 5: ATM Services’ Personnel (see SRC, 2002).
ANNEX

This annex contains the CD-ROM on controller training in the handling of unusual/emergency situations (see EATMP, 2003a), available upon request (see page ii of this document for contact details).
REFERENCES


ABBREVIATIONS AND ACRONYMS

For the purposes of this document the following abbreviations and acronyms shall apply:

- ACS: Area Control Surveillance
- ADI: Aerodrome Control Instrument
- AIP: Aeronautical Information Publication
- ANSP: Air Navigation Service Provider
- APS: Approach Control Surveillance
- ATC: Air Traffic Control
- ATM: Air Traffic Management
- ATS: Air Traffic Services
- CBT: Computer-based Training
- CIP: Convergence and Implementation Programme (EATCHIP/EATM(P))
- DFS: Deutsche Flugsicherung GmbH (Germany)
- EATCHIP: European Air Traffic Control Harmonisation and Integration Programme (now EATM(P))
- EATM(P): European Air Traffic Management (Programme) (formerly EATCHIP)
- ECAC: European Civil Aviation Conference
- ESARR: EUROCONTROL Safety Regulatory Requirements (SRC)
- ET: Executive Task (EATCHIP)
- EUROCONTROL: European Organisation for the Safety of Air Navigation
- GUI: Guidelines (EATCHIP/EATM(P))
- HRS: Human Resources Programme (EATM(P))
- HRT: Human Resources Team (EATCHIP/EATM(P))
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<td>LVNL</td>
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