**EUROPEAN ORGANISATION
FOR THE SAFETY OF AIR NAVIGATION**

EUROCONTROL

**ESARR ADVISORY MATERIAL/GUIDANCE DOCUMENT
(EAM/GUI)**

EAM 5 / GUI 1

EXPLANATORY MATERIAL ON ESARR 5 REQUIREMENTS FOR AIR TRAFFIC CONTROL OFFICERS

PART A

SAFETY REGULATION COMMISSION

F.2   DOCUMENT CHARACTERISTICS

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Abstract :		
This guidance material has been prepared by the Safety Regulation Commission to provide guidance for ATM safety regulators and support the implementation of ESARR 5. The main purpose of this document is to provide guidance about the provisions established in ESARR 5 and more specifically in its Section 5 'Safety Requirements', sub sections 5.1 and 5.2 addressing air traffic controllers. Each requirement is illustrated by giving explanatory material that includes a rationale, the most significant implications mainly for Regulator but also sometimes for Provider, and information about further development. This is one element of a series of guidance documents to be developed by SRC to support the implementation of ESARR 5.		
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F.3   DOCUMENT APPROVAL

The following table identifies all management authorities who have approved this document.

AUTHORITY	NAME AND SIGNATURE*	DATE
Quality Control (SRU)	*signed by Daniel Hartin* (Daniel HARTIN)	05-Mar-04
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* In order to reduce the size of files, all documents placed on the SRC Website do not contain signatures. However, please note that all management authorities have signed the master copies held by the SRU. Requests for copies of master documents should be e-mailed to: sru@eurocontrol.int.

F.4   DOCUMENT CHANGE RECORD

The following table records the complete history of this document.

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0.02	11-Feb-03	Formatting previous version of the document.	All
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1.0	05-Mar-04	Document formally issued.	All

F.5   CONTENTS

F.6   EXECUTIVE SUMMARY

This guidance material has been prepared by the Safety Regulation Commission to provide guidance for ATM Safety Regulators and to support the implementation of ESARR 5.

Within their national legislative arrangements, ATM safety regulators shall have in place ESARR 5 related safety regulatory functions, resources and procedures in order to enforce and verify compliance with ESARR 5.

The main purpose of this document is to provide clarifications on the provisions established in ESARR 5, and more specifically in Section 5 'Safety Requirements', sub sections 5.1 and 5.2 addressing air traffic controllers. Guidance material for engineering and technical personnel undertaking safety related tasks will be developed later. Each requirement is illustrated by giving explanatory material that includes a rationale, the most significant implications mainly for Regulator but also for Provider, and when applicable, information about further development.

This documents forms part of a series of guidance documents being developed by SRC in order to support the implementation of ESARR 5.

Part A of the document deals with explanatory notes for ESARR 5 requirements in Section 5, sub-section 5.1 and 5.2.

Part B of the document introduces the rating requirements for those ratings listed in ESARR 5. In order to facilitate the reading of the document Part B has been kept separately for those interested in having guidance on how to determine for each rating the necessary training requirements based on tasks analysis.

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1.   INTRODUCTION

A standardised approach to the formatting of EUROCONTROL Safety Regulatory Requirements is used to reference and to clarify the status of information contained in the document.

The requirement template used for ESARR 5, Edition 2.0 includes a number of sections. Some include provisions considered as mandatory and other provisions which are of an advisory nature;

❑   The mandatory provisions are currently captured in sections 3, 5, 6 and 7 of the current ESARRs template; and

❑   Related advisory material is currently captured in sections 1, 2, 4 and 8 of the current ESARRs template.

Note:- Work is on going to modify the ESARRs template and better separate the mandatory provisions from related advisory material.

Section 5 '*Safety Requirements'* provide a statement of precise actions which are considered necessary to achieve the safety objectives stated in Section 4. Section 5 section includes only mandatory requirements (expressed using the word "shall"), including those relating to implementation.

The main purpose of this document is to illustrate and clarify the provisions of Section 5 *'Safety Requirements',* sections 5.1 and 5.2 addressing air traffic controllers established by ESARR 5 and to facilitate its interpretation.

In addition, similar clarifications are being also provided for all other sections in ESARR 5, except for section 5.3 Requirements for engineering and technical personnel undertaking operational safety related tasks, to facilitate its rationale, understanding and uniform implementation across States.

After a brief overview of each section of ESARR 5, each section and safety requirement is illustrated by providing explanatory material that includes a rationale, the most significant implications for both Regulator and Provider, and information about further development, whenever applicable.

ESARR3 within Requirements for Safety Achievements, Competency requirement, requires Air Traffic Service (ATS) providers to ensure that staff are adequately trained, motivated and competent for the job they are required to do, in addition to being properly licensed if so required. 'Licensed' in this section of ESARR 5 means an ATC licence or certificate of competence.

The Designated Authority will have to identify who or what legal entity is considered to be the ATS provider. It may be the State, a commercial or non-commercial State-owned monopoly, a mixture of State-owned and independent commercial providers or just independent commercial providers. Where requirements are placed on the provider, it will be necessary for the provider to identify, in its State or corporate structure, those personnel responsible for ensuring that the requirements are met.

2. SECTION 5 – SAFETY REQUIREMENTS

2.1 Overview

Requirements within section 5 of ESARR 5 are grouped as follows:

❑ Section 5.1 – General requirements

❑ Section 5.2 – Requirements for Air Traffic Controllers

♦ Section 5.2.1 – Requirements to be applied by the Designated Authority

♦ Section 5.2.2 – Requirements to be applied by the Provider of Air Traffic Services

♦ Section 5.2.3 – Requirements to be applied by the Individual Personnel

❑ Section 5.3 – Requirements for Engineering and Technical Personnel undertaking operational safety related tasks

Requirements laid down within Section 5.3 'Requirements for Engineering and Technical Personnel undertaking operational safety related tasks' are subject of a future EAM document.

2.2 Section 5.1 – General Requirements

This section has three requirements addressing the Designated Authority, the Air Traffic Services provider and the person responsible for tasks in the of air traffic services or supporting the provisions of air traffic services.

2.2.1 Requirement 5.1.1

Content

This requirement states that:

"A designated authority shall ensure, through the application of appropriate regulatory principles and processes, that organisations and personnel responsible for tasks in the provision of air traffic services or supporting the provision of air traffic services, which are considered to be related to the safety of air traffic, are competent to carry out those tasks. The designated authority shall assist the ATM service provider in identifying those tasks which, in providing or supporting the provision of air traffic services, are considered to be safety related".

Rationale and Implications

It is the responsibility of the Designated Authority to ensure through the application of regulatory principles and process that organisations and their personnel responsible for tasks in the provision of ATS or supporting the provision of ATS are competent to carry out those tasks.

The key element is that not only air traffic controllers are subject of the general requirements, but also the other categories of ATM personnel responsible for tasks in the provision of ATS or supporting the provision of ATS have to be competent to perform their tasks.

ATS providers assisted by the Designated Authority shall identify those tasks, which to providing or supporting the provision of ATS are considered to be safety related. This has to be documented by the ATS provider in order to have a solid base to propose those categories of personnel competence schemes to ensure their competence within the tasks performed.

2.2.2 Requirement 5.1.2

Content

This requirement states that:

"An air traffic services provider at an ATS unit shall ensure, as part of its overall safety responsibilities, that all ATM services' personnel responsible for tasks in the provision of air traffic services or supporting the provision of air traffic services, which are considered to be related to the safety of air traffic, are competent to carry out those tasks and satisfy applicable medical fitness requirements".

Rationale and Implications

ATS units of a ATS provider shall ensure through the implementation of procedures and processes that all ATM personnel, not only air traffic controllers, responsible for tasks in the provisions of ATS or supporting the ATS being identified safety related are competent and satisfy applicable medical fitness requirements.

The ATS providers have to document the processes put in place to demonstrate to the Designated Authority that ATM personnel responsible for tasks in the provision of ATS or supporting ATS identified having safety related tasks to the safety of air traffic are competent. All procedures and processes put in place by the ATS provider are subject to audit by the Designated Authority.

2.2.3 Requirement 5.1.3

Content

This requirement states that:

"A person responsible for tasks in the provision of air traffic services, or supporting the provision of air traffic services, which are considered to be related to the safety of air traffic, shall:

a) not carry out such tasks unless he /she has been declared to be competent and has been duly authorised to do so;

b)   *be subject to, or initiate1, appropriate measures to ensure ongoing competence;*

c)   *meet medical requirements, if any appropriate, to the task."*

Rationale and Implications

It is the responsibility of the Designated Authority to ensure through the application of regulatory principles and process that organisations and their personnel responsible for tasks in the provision of ATS or supporting the provision of ATS are competent to carry out those tasks.

2.3   Section 5.2 – Requirements for Air Traffic Control Officers

General

Section 5.2 has divided the requirements in three parts:

❑   Section 5.2.1 – Requirements to be applied by the Designated Authority

❑   Section 5.2.2 – Requirements to be applied by the Air traffic Service Providers

❑   Section 5.2.3 – Requirements to be applied by the Individual Personnel

For the purpose of this guidance material only the requirements to be applied by the ATS provider and individual personnel will be detailed, requirements to be applied by the Designated Authority will be covered within EAM 5 / GUI 2 'ESARR 5 and related safety oversight issues'.

Section 5.2.2 sets out the minimum safety requirements that an ATS provider must comply with to meet his safety obligations under ESARR 3. It also requires the ATS provider to keep the Designated Authority informed on matters directly relating to controllers' capacity to provide a safe air traffic control service and of their medical status.

It identifies the ATS provider's responsibilities at ATC units where the provider is responsible for the provision of air traffic services. The requirements have been grouped to show the provider's responsibilities in respect of specific ATM personnel and additional general requirements.

The provider is responsible for meeting requirements relating to:

a)   air traffic controllers who are providing air traffic control services at that ATC unit, and

b)   student air traffic controllers and trainee air traffic controllers who are undertaking unit training at that unit.

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1 The term "initiate" refers to the actions taken by the individual to ensure that he/she meets the medical requirements. For Air Traffic Controllers see requirements laid down in 5.2.3.1. e), f) and g)

Requirements relating to the ATS providers' responsibilities for air traffic controllers include:

a)   ensuring that controllers hold valid ratings, endorsements and unit endorsements appropriate to the ATC service to be provided;

b)   a scheme to ensure that controllers:

    i.   are competent to provide the air traffic control services notified in their licence/certificate of competence;

    ii.   spend sufficient time providing the air traffic control services in (i) above to maintain their competence, referred to in the requirements as 'ongoing experience'.

c)   processes to ensure that:

    i.   the Designated Authority is advised when a controller's competence is in doubt or he is definitely no longer judged competent to provide the ATC service associated with a valid rating;

    ii.   controllers comply with any conditions set by the Designated Authority;

    iii.   the unit's arrangements are conducive to controllers' complying with those conditions.

d)   ensuring that controllers who are also on the job training instructors (OJTIs):

    i.   hold a valid rating appropriate to the air traffic control service in which they will be conducting OJT;

    ii.   hold an OJTI licence or certificate of competence endorsement;

    iii.   are competent to instruct student/trainee air traffic controllers.

e)   ensuring in respect of air traffic controllers and student air traffic controllers that:

    i.   they hold a medical certificate of the appropriate class;

    ii.   the Designated Authority is advised when they have been assessed medically unfit to provide an ATC service.

    iii.   they do not provide an air traffic service while under the influence of psychoactive substances.

Requirements relating to the ATS provider's responsibilities for student/trainee air traffic controllers include:

a)   ensuring that:

    i.   they hold a current student or air traffic controller licence or certificate of competence authorising them to provide the ATC service in which they will be undertaking OJT; and

    ii.   the Transitional and Pre-OJT unit training adequately prepares them for OJT.

b)   the unit has a unit training plan that is approved by the Designated Authority.

2.3.1 Section 5.2.2 – Requirements to be Applied by the Provider of Air Traffic Services

2.3.1.1 Requirement 5.2.2.1

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

❑ *an air traffic controller providing an air traffic control service:*

    a) *holds valid rating(s), rating endorsement(s) and unit endorsement(s) appropriate to the ATC service being provided;*

    b) *holds a valid medical certificate of the appropriate class;*

    c) *is competent to provide the ATC services notified in his/her air traffic controller licence or certificate of competence;*

Ratings (Requirement 5.2.2.1 a)

ICAO defines a rating as '*an authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence*'.

The ratings notified in ESARR 5 have different names to those contained in ICAO Annex 1, Personnel Licensing, 4.4.1 Air traffic controller ratings, but are in general equivalent to them. The air traffic control procedures associated with the air traffic control services provided under the ICAO ratings are described in Doc 4444 PANS ATM.

The ratings notified in ESARR 5 were developed following a review of the air traffic control services identified in ICAO DOC 4444 PANS ATM and the ATC ratings that controllers were required to hold to provide these services. The ATC services provided throughout the member states of the European Civil Aviation Conference were also considered, together with technical advances that have changed the way in which controllers provide those services.

The review found that most of the ATC services identified by ICAO were still relevant, that is, aerodrome control and approach and area control with or without the use of surveillance equipment. It also concluded that the ratings did not identify additional specific services that have resulted from technical advances and evolving operational techniques.

A task analysis was conducted for each ATC rating discipline, including the use of equipment and of specific services identified as being associated with that rating. These additional services and uses of equipment are identified in the task analysis as rating endorsements but, as ESARR 5 does not identify specific rating endorsements, they may be considered to be an integral part of the rating task analysis.

The structure of the rating task analysis is as follows (see Appendix 1). Within each rating discipline a number of Key Roles are identified. These represent the first stage of the analysis where the controller's tasks within the ratings are broken down into the principal components. For example, a key role common to all ratings is to 'Correlate information useful for the safe and efficient conduct of flights'. The key roles are then broken down into Topics that identify groupings of activities within the Key Role. In the example above there are two Topics, one dealing with meteorological information and the other with aeronautical information. Each Topic is then divided into Sub-topics which represent controllers' tasks, in the case of Aeronautical information to 'collect, to collate and to disseminate the information'.

An analysis of the tasks within each Sub-Topic produces a series of statements called Performance Objectives which describe the actions, behaviours or outcomes that the controller should be able to demonstrate.

Each Performance Objective is qualified by a Statement of Conditions. Conditions describe the context in which the Performance Objectives apply, which means in its simplest form 'can the controller act with equal ability by day or night, and in good or poor weather conditions?'

Finally the Requirements contain details of the Essential Knowledge, that is, the knowledge and understanding a controller needs to carry out the task. In order to separate aircraft, the controller must not only know the separation standards to be applied, he must also understand how to apply them. Similarly, the controller needs to understand some aspects of the formation of thunderstorms in order to be able to predict their effect on operations and to make allowance for those effects when exercising control.

The final outcome of the review of the ATC services provided within the ECAC member States and the analysis of the controllers' tasks were the ratings detailed below and the rating requirements at Appendix 1.

Aerodrome Control

There are two aerodrome control ratings associated with ESARR 5, the Aerodrome Control Visual rating and the Aerodrome Control Instrument rating. They replace the ICAO Aerodrome Control rating, although the ATC procedures associated with the aerodrome control service remain the same. The scope of each service provided by the controller is defined in the task analysis for these ratings.

One of the air traffic services recognised by ICAO is a flight information service that is independent from an air traffic control or air traffic advisory service. A number of States implement this service at aerodromes that are outside controlled airspace to provide flight information in the interests of safety. This service may be limited to information about the runway in use, circuit direction, pressure settings and meteorological conditions. However, a more comprehensive information service including the provision of traffic information to aircraft entering, leaving or operating in the aerodrome circuit may be required, depending on the traffic levels and complexity.

Any further increase in the level of traffic or a change in the type of operations, for example the introduction of scheduled flights, may require the introduction of controlled airspace and an air traffic control service to meet the required level of safety.

Aerodrome Control Visual Rating

The Aerodrome Control Visual rating was introduced in recognition that a State may wish to upgrade its aerodromes, or indeed establish new ones, where the only air traffic control service provided is an aerodrome control service. The initial training associated with the Aerodrome Control Visual rating does not include subjects such as co-ordination with approach control, instrument approaches or low visibility procedures. In this respect, it is not equivalent to the ICAO Aerodrome control rating as its privileges restrict the holder to providing an aerodrome control service only at aerodromes with no instrument approach or departure procedures and no associated approach control service.

Aerodrome Control Instrument Rating

The Aerodrome Control Instrument rating is directly equivalent to the ICAO Aerodrome Control rating. The aerodrome control service conducted under this rating may include all the aerodrome control procedures in DOC 4444 PANS ATM Part V Aerodrome Control Service. The aerodrome control service provided under this rating may be provided as Tower, if Air and Ground Movement control are combined or differentiated into Ground Movement Control or Air Control.

Approach Control Procedural Rating

The Approach Control Procedural rating is directly equivalent to the ICAO Approach Control rating. The word 'procedural' was added to indicate an ATC service where no surveillance equipment is used in the provision of the service. The approach control service conducted under this rating may include all the approach control procedures in DOC 4444 PANS ATM Part IV Approach Control Service.

Approach Control Surveillance Rating

The approach control surveillance rating is directly equivalents to the ICAO approach radar control rating. The word 'surveillance' was used in anticipation of the introduction of other surveillance systems that are not based on radar. Where radar is the surveillance system, the approach radar service conducted under this rating may include the radar procedures from the appropriate parts of DOC 4444 PANS ATM Part VI, Radar Services.

The use of radar is identified in the European Manual of Personnel Licensing - Air Traffic Controllers by the issue of a Radar Rating Endorsement. Where States use other surveillance systems, such as Automatic Dependant Surveillance (ADS), this should be identified in the ATC Licence or Certificate of Competence. There are as yet no ICAO procedures for the provision of an air traffic control service using ADS.

There is no requirement for a controller who holds an approach control surveillance rating also to hold an approach control procedural rating. Controllers will therefore require training in control techniques for establishing procedural separation in the event of the failure of the surveillance equipment. Units should have contingency plans for surveillance failure and controllers should be trained to implement these plans to continue to provide a safe ATC service.

Precision Approach Radar Rating

There is no equivalent rating in ESARR 5 to the ICAO approach precision radar control rating. In the European Manual of Personnel Licensing - Air Traffic Controllers the use of precision approach radar is conducted under the Precision Approach Radar rating endorsement to the approach control surveillance rating. There is nothing in ESARR 5 to preclude States from continuing to recognise and issue the ICAO precision radar control rating.

A table comparing the ESARR 5 ratings and the ICAO ratings is at Appendix 1, together with a table showing the ratings and rating endorsements developed for the harmonised European ATC licence.

Area Control Procedural Rating

The Area Control procedural rating is directly equivalent to the ICAO area control rating. As with the approach control procedural rating, the word 'procedural' is used to indicate that no surveillance system is used in the provision of this service. The area control service conducted under this rating may include all the area control procedures in DOC 4444 PANS ATM Part III Area Control Service.

Area Control Surveillance Rating

The Area Control Surveillance rating is directly equivalent to the ICAO area radar control rating. The word 'surveillance' was used in anticipation of the introduction of other surveillance systems that are not based on radar. Where radar is the surveillance system, the area radar service conducted under this rating may include the radar procedures from the appropriate parts of DOC 4444 PANS ATM Part VI, Radar Services.

The use of radar is identified in the European Manual of Personnel Licensing - Air Traffic Controllers by the issue of a Radar Rating Endorsement. Where States use other surveillance systems, such as Automatic Dependant Surveillance (ADS), this should be identified in the ATC Licence or Certificate of Competence. There are as yet no ICAO procedures for the provision of an air traffic control service using ADS.

There is no requirement for a controller who holds an area control surveillance rating also to hold an area control procedural rating. Controllers will therefore require training in control techniques for establishing procedural separation in the event of the failure of the surveillance equipment. Units should have contingency plans for surveillance failure and controllers should be trained to implement these plans to continue to provide a safe ATC service.

Valid Rating (Requirement 5.2.2.1 a)

To be valid, a rating shall be associated with one or more endorsements detailing the air traffic control unit and, where applicable, the operational positions or sectors on which the air traffic controller is competent to provide an air traffic control service, and/or the specific types of services the holder of the air traffic controller licence may provide, including any type of surveillance equipment.

To be granted a 'valid' rating a controller must have successfully completed:

a) the training requirements, which would normally include successful completion of:

    i. initial training, approved by the Designated Authority and conducted at a training institute, college or training centre, in the rating discipline in which the student/trainee will be undertaking unit training;

    ii. unit training, comprising Transitional training and where appropriate Pre-OJT training; and

    iii. OJT.

b) unit procedures for determining that the controller is competent to provide the air traffic control service to which the rating relates without any support from an OJTI.

The initial training received by an individual have to satisfy as a minimum the Guidelines for Common Core Content Training Objectives for Air Traffic Controllers (Phase 1 and 2). Phase 1 (ab-initio) of the training within the discipline Air Traffic management requires the individual to understand sufficiently the subject of Collision Avoidance (safety nets), both airborne (ACAS, TCAS) and ground segment (MTCD, MSAW, STCA, etc), to enable him to describe and explain (level 2) the effect of collision avoidance systems on ATC operations. In other words, training on safety nets is mandatory through ESARR 5 when implementing the requirements for initial training.

A rating is no longer valid when it has been cancelled or revoked by the Designated Authority, or the controller does not satisfy the requirements for competence. The guidance below relates to licensing action following an ATC incident or aircraft accident. It has been included to illustrate licensing action and other procedures associated with controllers who have been involved in such incidents.

In the event of a controller being involved in an ATC incident or aircraft accident, the ATS provider would be expected to immediately remove the controller from the operational position and conduct a unit-based investigation. This is done without prejudice to allow the unit time to investigate and furthermore will enable the controller to recover from any stress caused by the incident or accident. If the unit based investigation indicates that the controller was not implicated, the controller may be returned to operational duty. If the unit investigation finds that the controller was implicated in the cause of an incident or accident, the provider must advise the Designated Authority, who would take licensing action such as suspend the controller's rating. As with the unit investigation and withdrawal of the controller from operational duty, suspension of the controller's rating is done without prejudice.

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Suspension of a Rating

The process of suspending the rating puts it into abeyance so that the controller may not exercise the privileges of that rating. It gives the Designated Authority time to conduct an in depth investigation into the controller's role in the incident or accident. It also enables the controller concerned to undergo OJT under the supervision of an OJTI who will be responsible for the ATC service being provided. If the investigation reveals that the controller was not implicated in the cause of the incident or accident the suspension of the rating will be immediately withdrawn. If the controller was implicated as being part of the cause, the provider and Designated Authority should agree a course of action by which the suspension may be withdrawn. This would normally be a period of retraining followed by a check of the controller's competence. Retraining would normally be confined to unit training, but some initial training may be required where the investigation has shown that the controller is deficient in basic ATC skills and knowledge. Provided the controller satisfies the training and competence requirements the suspension will be withdrawn.

Suspending the rating prevents the controller from exercising the privileges of an air traffic control service in that rating discipline. However, a rating may be valid for more than one sector or operational position and these will be indicated in the licence or certificate of competence by unit endorsements.

Example: The investigation may conclude that the controller has a problem on only one sector, sector group or operational position. In this case the Designated Authority may decide to suspend only the specific unit endorsement(s). The controller may continue to provide the ATC service associated with the unit endorsements that have not been suspended.

Revocation of a Rating

If a controller is unable to satisfy the requirements for having his suspension removed, and also extensive retraining and attempts to validate the rating at other units have been unsuccessful, the Designated Authority may consider revoking the rating. Revoking is only justifiable on safety grounds where the investigation conducted by the Designated Authority finds that a controller would be unable to provide a safe ATC service in a particular rating discipline. Revoking a rating prevents the controller from providing an ATC service in that rating discipline at any ATC unit. Where a unit endorsement was suspended and the controller is unable to meet the requirements for the removal of the suspension, the provider should discuss with the controller the possibility of voluntarily giving up controlling on the sector or operational position associated with that unit endorsement. If this is not possible the Designated Authority may consider revoking a unit endorsement.

Revocation of the ATC Licence

In very exceptional circumstances the Designated Authority may consider revoking an ATC licence. This action could only be taken if the Designated Authority had reasons to believe that a controller could not provide a safe ATC service in any of the rating disciplines in which he held, or had held, valid ratings. Such action would only be expected to be taken in cases where there had been wilful negligence on the part of the controller or extensive retraining and assessment for competence indicated that the controller could not provide a safe ATC service.

In some ECAC States it will not be possible to revoke an ATC licence due to legal impediments. In some cases it may be possible to revoke a rating, but only under special conditions. In this situation the revocation would be applied to the unit endorsements, an action which will result in the rating(s) associated with those unit endorsements being no longer valid. If all the unit endorsements were revoked there would be no valid ratings in the licence and the ATC licence itself would no longer be valid.

Rating endorsements are not normally subject to licensing action, as if a controller is considered to be not competent in a particular rating he will also not be competent in the rating endorsements associated with that rating. The only circumstance where a rating endorsement would be suspended or revoked would be where additional national rating endorsements had been associated with a rating.

Example: In the UK there is an Oceanic rating endorsement to the Area Procedural rating. This is a computer-based task and a controller could be not competent in the computer-based task but remain competent in an en-route procedural environment where paper strips are used to display aircraft data.

The Designated Authority could vary a rating by revoking a rating endorsement.

Example: It could revoke the Precision Approach Radar rating endorsement associated with the approach control surveillance rating. However it would be impractical to revoke the Radar rating endorsement to this rating if no other surveillance system was available. In this example it would be the rating itself that would be revoked.

Rating Endorsement (Requirement 5.2.2.1 a)

Rating endorsements are issued by the Designated Authority in association with particular ratings. The ATC licence or certificate of competence will need to contain sufficient information about the ATC service that a controller will be providing to enable the Designated Authority to determine if the ATS provider is meeting its safety obligations in respect of competence and training. The rating endorsement associated with the basic ratings provides this assurance.

While a rating indicates the air traffic control discipline in which a controller will be providing an air traffic control service, the rating endorsement is used when a task analysis of an air traffic service indicates that the rating, under which this service is provided, does not by itself satisfactorily describe that air traffic control service.

A rating endorsement is only needed when a task analysis of the ATC services provided at a number of units indicates a common requirement for generic skills which are additional to those normally associated with the rating. A rating endorsement may also be used to indicate specific tasks within a rating.

Example: Rating endorsements AIR and GMC where aerodrome control is subdivided into ground movement control and air control or Tower where aerodrome control is provided in a combination of AIR and GMC.

ESARR 5 does not require the Designated Authority to include any specific rating endorsements in the ATC licence or certificate of competence. The European Manual of Personnel Licensing – Air Traffic Controllers describes a number of rating endorsements and the air traffic services to which they relate.

Example: One rating endorsement is the Radar rating endorsement associated with the approach and area surveillance ratings. This rating endorsement indicates that radar is the surveillance equipment used and that specific training in the use and limitations of radar has been included in the initial training towards the grant of these ratings. Similarly, if Automatic Dependent Surveillance (ADS) is the surveillance system to be used an ADS endorsement would indicate that the rating holder had been trained in the use and limitations of, and ATC procedures associated with, ADS.

Where States have identified a requirement to develop rating endorsements that are not included in this guidance material the Designated Authorities, in co-operation with the ATS providers, will produce a documented task analysis to indicate the additional performance objectives that a controller will have to satisfy to be awarded those rating endorsements.

Unit Endorsement (Requirement 5.2.2.1 a)

Unit endorsements are issued by the Designated Authority; they are endorsements to the ratings that provide unit specific information about the ATC service that a controller will be providing. They identify specific operational positions at aerodromes or specific sectors or groups of sectors at area control or terminal control centres. A unit endorsement indicates that a controller is competent to provide the air traffic control service provided from a specified operational position or that associated with a specified sector or group of sectors.

Rationale and Implications

Air Traffic Control is a safety critical task and to complete that task safely controllers must have specific knowledge and skills. The rating(s), rating endorsement(s) and unit endorsement(s) included in the ATC licence or certificate of competence indicate that a controller has met these requirements by successfully completing appropriate training and demonstrating competence.

The Designated Authority and the Provider should agree which rating(s), rating endorsement(s) and unit endorsement(s) a controller will be required to hold for each operational position, sector or group of sectors. Each individual operational position, sector or group of sectors must be identified by the provider and allocated a unique designator, either using the full name or an abbreviation. It is this designator that is used in the unit endorsement to indicate the operational positions, sectors or groups of sectors on which a controller is competent to provide an ATC service.

The ATS provider should have a process by which the licences or certificates of competence of controllers are monitored to ensure that the controllers hold the appropriate qualifications for the ATC service they will be providing. This implies that the ATC units must have procedures for allocating controllers only to those operational positions or sectors for which they hold the appropriate ratings and endorsements.

To be valid, a rating must be associated with one or more unit endorsements and, where appropriate, one or more rating endorsements. If a controller is no longer required to exercise the privileges of a particular unit endorsement this may be removed from his ATC licence or certificate of competence. Under these circumstances the rating will only remain valid if it is associated with other unit endorsements held by the controller.

Unit endorsements issued as part of a valid rating should specify the length of time they will remain valid.

Example: A unit endorsement may be issued for a period of 12 months and renewed following a successful competence assessment. The term 'valid' is used in this context to indicate that the unit endorsement is current in that it has not expired, and that the controller is competent to provide the ATC service associated with that unit endorsement.

Consequently, the unit endorsement is issued for a specified period and may be renewed by an assessment of the controller's competence.

If a controller:

> (a)   fails a competence assessment, or

> (b)   is found not to be competent during the period in which the unit endorsement is still valid,

The Designated Authority may take licensing action such as suspend the unit endorsement to enable the controller to undertake retraining under the supervision of an OJTI.

Where a controller fails to renew the unit endorsement within the required period the unit endorsement is no longer valid. The controller cannot provide the ATC service associated with that unit endorsement until it is again made valid by an assessment or examination of the controller's competence.

Where, due to operational circumstances, a controller is unable to renew his unit endorsement within the required period, the Air Traffic Services Provider may request that the Designated Authority grant an extension to the period of validity. Such extensions should be of short duration and only granted where the controller's competence is not in doubt.

The ATS provider should have a process to ensure:

a)   that the controller is advised when the unit endorsement must be renewed;

b)   arrangements are in place to enable the controller to renew the unit endorsement(s), and

c)   if the unit endorsement(s) are not renewed, the controller does not provide the ATC service(s) associated with the endorsement(s).

Where the ATS provider has considerable reason to believe that a controller is no longer competent to provide the ATC service associated with a unit endorsement, it should notify the Designated Authority, which may take licensing action such as suspend or revoke that unit endorsement. Suspension of a unit endorsement puts the unit endorsement into abeyance and the controller may not exercise the privileges of that endorsement. This is normally done when a controller is still competent on other operational positions or sectors where he holds unit endorsements associated with the same rating. Suspending the unit endorsement enables the controller to train under the supervision of an OJTI, towards regaining the unit endorsement. If the controller is unable to demonstrate competence on the operational position or sector associated with the unit endorsement the Designated Authority may revoke it.

A clear distinction must be drawn between controllers who have a unit endorsement(s) suspended or revoked and controllers whose unit endorsement(s) are cancelled.

Cancellation of a Unit Endorsement

Cancellation is an administrative action taken by the Designated Authority. Normally this action may be taken when a controller leaves a unit and is no longer required to provide the ATC service associated with that particular unit endorsement or when a controller voluntarily gives up providing the ATC service.

Valid Medical Certificate of the Appropriate Class (Requirement 5.2.2.1 b)

Rationale and Implications

Controllers are required to hold a medical certificate to indicate that they have met notified medical criteria. These criteria are in place to ensure, as far as possible, that controllers are fit to provide an ATC service and to minimise the risk that they will become suddenly incapacitated to an extent that the safety of aircraft is compromised.

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The "appropriate class" within ESARR 5 refers to ICAO Class 3 Medical requirements or to European Class 3 Medical Certification of ATCOs[*]. States are expected, as a minimum, to comply with provisions included in ICAO Annex 1, Chapter 6, 6.1 Medical Assessments – General and Chapter 1, Definitions and General Rules Concerning Licences, 1.2.4 Medical fitness, as they relate to air traffic controller licences and certificates of competence or to EATMP Requirements for European Class3 Medical Certification of Air Traffic Controllers, which have been developed to support the implementation of the European Manual of Personnel Licensing – Air Traffic Controllers. The European Manual of Personnel Licensing- Air Traffic Controllers has been assessed as a means of compliance with ESARR 5.

'Valid' in this case means that the controller holds a medical certificate issued by the appropriate Aeromedical Authority and which has not expired or been suspended or revoked by that authority.

The 'appropriate class' refers to the ICAO Class 3 or the European Class 3 medical requirements contained in the EATMP 'Requirements for European Class 3 Medical Certification of Air Traffic Controllers', which have been developed for use by States intending to implement the European Manual of Personnel Licensing - Air Traffic Controllers as an acceptable means of compliance with ESARR 5. In either case, medical certificates must be renewed at least every 24 months.

The Designated Authority requires, and ATS providers should ensure, that units have in place procedures for ensuring that controllers have a current medical certificate. This may be a process:

a)   that requires controllers to arrange their own medical examinations whereby the provider checks their ATC licences or certificates of competence only or

b)   where the provider reminds controllers that their medical certificate requires renewal and arranges medical examinations.

Whichever is the case, the provider must ensure that controllers are aware of the process for renewing their medical certificates. Nevertheless, it remains the responsibility of student air traffic controllers and air traffic controllers who are providing an ATC service to ensure that they hold a current medical certificate of the appropriate class.

Competence to Provide the ATC Services Notified in the Air Traffic Controller Licence or Certificate of Competence (Requirement 5.2.2.1 c)

Rationale and Implications

For air traffic controllers, 'competence' is taken to mean possession of the required level of knowledge, skills, experience and, where required, proficiency in English, to permit the safe and efficient provision of ATM services. This would include complying with unit and national ATC procedures, while maintaining an orderly and expeditious flow of air traffic even during periods of maximum traffic loading.

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[*] *Pending the acceptance by the Safety Regulation Commission of the EATMP Requirements for European Class 3 Medical Certification as a Means of Compliance with ESARR 5.*

The rating(s), rating endorsement(s) and unit endorsement(s) will identify the individual operational positions, sectors or groups of sectors on which the controller exercises the privileges of his ATC licence or certificate of competence. Before these are issued or renewed a controller must have demonstrated the appropriate level of knowledge and skill required to be considered competent to provide the air traffic control service.

To demonstrate this a controller must be regularly assessed or examined to ensure that he is maintaining the required level of knowledge and skill. ATS providers will therefore need to have processes for assessing, monitoring and documenting the competence of air traffic controllers and for advising the Designated Authority as to which controllers are competent on which operational positions, sectors or groups of sectors

2.3.1.2 Requirement 5.2.2.2

Content

The provider of air traffic services at its ATC unit(s) shall ensure that;

> *a student air traffic controller;*
>
> a)   *holds a current student air traffic controller licence or certificate of competence which authorises him/her to provide the ATC service for which he/she is undertaking OJT, and*
>
> b)   *holds a valid medical certificate of the appropriate class.*

Current student air traffic controller licence or certificate of competence which authorises the holder to provide the ATC service for which he/she is undertaking OJT (requirement 5.2.2.2 a)

Rationale and Implications

Student air traffic controllers are persons holding a student air traffic controller licence or a certificate of competence entitling them to provide an air traffic control service under the supervision of an OJTI who himself must hold a valid rating appropriate to the ATC service to be provided.

'Valid rating appropriate to the ATC service being provided' means that the OJTI holds the rating(s), rating endorsement(s) and unit endorsement(s) identifying the operational position, sector or groups of sectors by the unit as appropriate to conduct OJT training.

After successful completion of initial training in a rating discipline, which provides the student air traffic controller with the basic knowledge and skills required to provide an air traffic control service associated with that rating, a Student ATC licence will be issued.

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The initial training received by an individual have to satisfy as a minimum the Guidelines for Common Core Content Training Objectives for Air Traffic Controllers (Phase 1 and 2). Phase 1 (ab-initio) of the training within the discipline Air Traffic management requires the individual to understand sufficiently the subject of Collision Avoidance (safety nets), both airborne (ACAS, TCAS) and ground segment (MTCD, MSAW, STCA, etc), to enable him to describe and explain (level 2) the effect of collision avoidance systems on ATC operations. In other words, training on safety nets is mandatory through ESARR 5 when implementing the requirements for initial training.

Before commencing OJT, student air traffic controllers will require unit specific training to prepare them to provide, within a second step, an air traffic control service under supervision. Unit training builds upon the basic knowledge and skills learned during the initial rating training course, but does not substitute for them. It is therefore in the interests of safety that a student air traffic controller must not commence unit training in a rating for which he/she has not successfully completed an initial course in the rating discipline that has been approved by the Designated Authority.

Providers must ensure that units have procedures to check student ATC licences or certificates of competence to determine in which rating disciplines the holders have successfully completed initial training. Student air traffic controllers must only be allocated for OJT if their student ATC licence or certificate of competence indicates they have successfully completed initial training in the rating discipline appropriate to the ATC service to be provided under supervision.

Valid medical certificate of the appropriate class (requirement 5.2.2.2 b)

The medical requirements for student air traffic controllers are the same as those for air traffic controllers described in 2.1.4 above

2.3.1.3 Requirement 5.2.2.3

Content

The provider of air traffic services at its ATC unit(s) shall ensure that;

> *unit(s) have unit training plans, approved by the Designated Authority, which detail the processes by which a student and/or trainee air traffic controller is trained to meet the required standards to meet the objective of providing a safe air traffic control service.*

Rationale and Implications

To enable the Designated Authority to approve a unit training plan the provider must provide information on:

❑   the way in which the unit determined what *unit* training is required and

❑   the schedule and methods used to accomplish unit training.

The term 'standards' in the requirement is used in its generic form to indicate that the training objectives a student/trainee is required to meet have a quantitative element. That is, the students/trainees will be required to progress during training to handle an increasing level of traffic intensity and complexity, indicated by performance objectives, until they reach a level of competence when they can provide the air traffic control service without the support of an OJTI.

The unit training is conducted in a number of phases:

a)   transitional training,

b)   where appropriate, pre-OJT training; and

c)   OJT.

At units without high fidelity simulators unit training will comprise transitional training and OJT.

The exit standards for the initial courses are the starting point for the transitional training. The objectives for the end of transitional training and, where appropriate pre-OJT training indicate what a student/trainee needs to know and be able to do to provide a safe ATC service under the supervision of an OJTI and to benefit from the training.

When developing the objectives for the end of transitional training or transitional training and pre-OJT, providers should take into consideration what knowledge and skills a student or trainee will require at the start of OJT. This assessment should take into consideration the skills required to operate equipment, the task including unit specific ATC procedures and traffic levels, and the training environment including facilities for monitoring and intervention and the availability and types of simulations.

Objectives to be met at the end of OJT should be developed from a task analysis of the controller's task for each operational position at the unit. These identify what a controller must know and be able to do to provide a safe air traffic control service that meets the expectations of the unit and the aircraft operators.

The progress of a student or trainee through the training process should be fully documented including any retraining given. The processes by which student/trainee controllers are assessed or examined must also be documented. These assessments should be conducted to determine if the student or trainee has met the objectives for each phase of training before commencing OJT and at regular intervals during OJT.

More detailed guidance on the development of unit training plans is at Appendix 2.

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2.3.1.4 Requirement 5.2.2.4

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

student and/or trainee air traffic controllers are adequately prepared for OJT by Transitional Training and Pre-OJT.

Rationale and Implications

The unit training plan should identify the objectives students/trainees must satisfy before being permitted to commence OJT. These objectives should be published and made available to OJTIs and the students/trainees.

To keep the training up to date and relevant to the unit's evolving operations, the provider should have a process that enables:

a)   OJTIs to report any deficiencies in the knowledge and skills demonstrated by students/trainees and

b)   students/trainees and recently valid controllers to report on any additional training that would have been beneficial to prepare them for OJT.

This information should be used to amend the unit training objectives for the transitional training and pre-OJT training. Information on more fundamental failings that should be addressed during initial rating training should be given to the appropriate training organisation or training centre.

2.3.1.5 Requirement 5.2.2.5

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

an air traffic controller, before being permitted to provide operational training as an OJT instructor, shall:

a)   hold the appropriate valid rating(s), rating endorsement(s) and unit endorsement(s) appropriate to the ATC service being instructed/trained,

b)   hold a valid OJT instructor licence/certificate of competence endorsement issued by the Designated Authority pursuant to the provisions and conditions set forth in paragraph 5.2.1.8 above,

c)   prove his/her competence to provide the ATC services notified in his/her air traffic controller licence or certificate of competence,

d)   hold a valid medical certificate of the appropriate class.

Hold the appropriate valid ratings, rating endorsements and unit endorsements appropriate to the ATC service being instructed/trained (requirement 5.2.2.5 a)

Rationale and Implications

The rationale for this requirement is that generally only experienced operational controllers have the knowledge, skills and operational experience to instruct and supervise students or trainees who are undertaking OJT.

An OJTI who is giving on the job training is responsible for the air traffic control service being provided, therefore the requirement in 5.2.2.1 a) applies. It follows that a controller may only conduct OJT at an operational position, or on a sector or group(s) of sectors at an ATCC, where he holds the appropriate rating(s), rating endorsement(s) and unit endorsement(s) as identified in his licence or certificate of competence.

Although the student or trainee may be providing the ATC service, while being trained, under the supervision of the OJTI, it is the OJTI who is responsible for the safety of the service being provided.

Hold a valid OJT instructor licence/certificate of competence endorsement issued by the Designated Authority (requirement 5.2.2.5 b)

Rationale and Implications:

This requirement recognises that operational controllers who become OJTIs need to be trained in the skills of OJT and must demonstrate their competence in their instructing role. Service providers should put in place a system to monitor the competence of OJTIs to conduct training that is separate from the scheme to determine their operational competence as air traffic controllers. OJTI competence in instructional techniques should be assessed periodically based on the training and other requirements, if necessary, and documented within the service provider competence scheme.

A valid OJTI endorsement is a licence endorsement which has been issued by the Designated Authority when a controller has successfully completed an OJT instructional course and has met the experience requirements in paragraph 5.2.1.8 a) and b) of ESARR 5. The controller must also have been assessed as competent on an operational position or a sector for which he holds an ATC licence or certificate of competence, rating(s) and endorsements, as required in ESARR 5, 5.2.2.5 a).

The ATC licence or certificate of competence OJTI endorsement ceases to be valid if the controller moves to a new unit where he does not satisfy the experience requirements of ESARR 5, 5.2.1.8. b) or it is revoked by the Designated Authority.

A controller who moves within an ATC Centre onto additional sectors may not provide OJT on those sectors until he/she has met the experience requirement in ESARR 5, 5.2.1.8 b), even though he is already providing OJT on sectors at that unit where he already satisfies the experience requirements.

An experienced OJTI who gains a new rating may not provide OJT in that rating until he satisfies the experience requirements in ESARR 5, 5.2.1.8 a) and b). The experience required in respect of ESARR 5, 5,2,1,8 a) and b) may be achieved concurrently provided this is achieved on the same operational position or sector or group(s) of sectors at the same unit.

Prove competence to provide the ATC services notified in his/her air traffic controller licence or certificate of competence (requirement 5.2.2.5 c)

Rationale and Implications:

Air traffic controllers are required to be competent in the ATC services they are providing as notified in their ATC licence or certificate of competence and described in para 2.1.5 of this document. Experience has shown that controllers who are OJTIs need periods of controlling without a student or trainee in order to maintain their competence. Providers should therefore ensure that controllers have sufficient practice at their controlling task without any OJT commitments to enable them to maintain competence.

To promote a common standard, providers will need to ensure that the OJTIs are adequately trained for the task and that, whenever possible, OJTIs are encouraged to work as a team within the provider's organisation and at individual units. Training and co-operation amongst OJTIs will facilitate a common minimum standard of training that can be recognised by all OJTIs.

The assessment of competence of an OJTI to instruct students or trainees should be conducted at notified periods by senior members of the provider's training organisation. However, to encourage OJTIs to take responsibility for the standard of their training skills and the ongoing development of unit training, a system of peer review or of continuous assessment or a dedicated check by selected OJTIs may be more appropriate.

Hold a valid medical certificate of the appropriate class (requirement 5.2.2.5 c)

This requirement relates to all air traffic controller licence or certificate of competence holders who are providing an air traffic control service as described in para 2.1.4.

2.3.1.6 Requirement 5.2.2.6

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

> *unit(s) have approved competence schemes to satisfy the requirement that controllers must maintain operational competence and experience. These procedures shall include requirements for controllers to:*
>
> a) *complete a specified minimum number of controlling hours within a specified period on the sectors or operational positions for which they hold valid ratings,*
>
> b) *be subject to an assessment of their continuing competence,*
>
> c) *undertake periodical refresher and emergency training,*
>
> d) *ensure operational competence after returning from extended periods of absence.*

Rationale and Implications

In this requirement 'approved competence schemes' means competence schemes approved by the Designated Authority.

Para 5.2.2.1 of ESARR 5 requires controllers to be competent to provide the air traffic services notified in their ATC licences or certificates of competence. The purpose of a competence scheme is to ensure operational controllers are competent. 'Competence' is taken to mean possession of the required level of knowledge, skills, experience and, where required, proficiency in English, to permit the safe and efficient provision of ATM services.

Before the ATC licence or certificate of competence will be annotated with the valid rating and any associated rating endorsement and unit endorsement a student or trainee air traffic controller must be examined to determine if he is competent to provide that ATC service without the support of an OJTI. As described in para 2.1.2, the unit endorsement details the operational positions or the sector or groups of sectors on which a controller is competent to provide an ATC service.

Experience has shown that recently validated controllers tend to become more skilful with increasing experience until they reach a level that they maintain. However, there are a number of reasons why a controller's skill level may fall below that required providing a safe ATC service. These could include such factors as increasing age, social/domestic problems, insufficient practice at the controlling task, holding validations on too many sectors and changes to the unit operations, particularly a sudden and considerable increase in traffic.

A competence scheme is required to ensure that any decrease in a controller's competence is detected and retraining is given before his/her competence falls below the required level.

Complete a specified minimum number of controlling hours within a specified period on the sectors or operational positions for which controllers hold valid ratings (requirement 5.2.2.6 a)

Rationale and Implications

Controllers maintain their controlling skills and consolidate their knowledge of the ATC environment and its associated procedures by practising them while they are providing an air traffic control service. It is therefore important that controllers get sufficient practice controlling on each of the operational positions or sectors or group of sectors for which their ratings are valid. The amount of time controllers must spend controlling on each operational position or sector to maintain competence can only be determined from the experience of unit management and the controllers who provide the services.

Time periods should be set for each operational position, sector or group of sectors at the unit. The controlling hours within a specified period may be expressed as hours of controlling for each duty during a watch cycle, or over the whole watch cycle, or for a period of days, weeks or months. These hours within periods determined by the unit are known as 'ongoing experience requirements'. Units should document the ongoing experience requirements and ensure that watch rosters enable controllers to meet them.

For administrative convenience, and to assist in auditing, the Designated Authority may set the time period within which providers must designate the number of controlling hours to be completed.

Example: The Designated Authority may require all minimum hours to be expressed as hours per calendar month. Where the operational requirements dictate, it may be necessary to increase this period of time.

Whatever the arrangements, the providers of air traffic services should submit their proposals for meeting the ongoing experience requirements to the Designated Authority for approval. The submission should contain sufficient records of controlling hours previously completed by controllers to substantiate their proposals. In the event that the Designated Authority and the provider cannot agree the number of controlling hours, the Designated Authority may impose its own ongoing experience requirements

Be subject to an assessment of their continuing competence (requirement 5.2.2.6 b)

Rationale and Implications

The purpose of checking continuing competence is to detect any reduction in a controller's competence and to take corrective action before it falls below an acceptable level. Controllers with a valid rating should already have gone through a process which satisfies ICAO Annex 1, 4.4.2.1, knowledge, 4.4.2.2, experience and 4.4.2.3, skill. This process sets the minimum standard against which continuing competence is measured.

Continuing competence can be assessed for each operational position, sector or group of sectors on which the controller provides an air traffic control service. An assessment should be made at regular intervals, for example once every 12 months or on a continuous basis. It should be made by another controller who is a trained competence assessor and who holds the rating(s), rating endorsement(s) and unit endorsement(s) for the air traffic service in which he/she will be assessing competence or by a suitably qualified controller who is a member of the Designated Authority's staff. According to ESARR 5 5.2.1.4 competence assessors shall be approved by the Designated Authority. The competence check should be conducted by competence assessors and during a period when the traffic is representative of what a controller is expected to handle at that unit. This should also include an oral and a written or CBT test of the controller's knowledge of the ATC environment and its associated procedures.

Competence can also be assessed by continuous assessment when the competence assessor works with the controllers whose competence he/she will be assessing. In any case, the competence assessor must keep records of the performance of all controllers allocated to him and review them at fixed periods to assess the controllers' performance. If the competence assessor does not work with a particular controller for a sufficient period to make an assessment, a dedicated competence assessment for each operational position, sector or group of sectors on which the controller provides an ATC service should be conducted. Even though a continuous assessment is being used there should be a regular oral, a written or CBT test of the controller's knowledge of the ATC environment and its associated procedures.

At units where it is not practical to have a competence scheme, a regular check of controllers' competence should be conducted by experienced competence assessors from other units that have similar air traffic operations. It is recognised that these competence assessors will not have the appropriate licence or certificate of competence qualifications for these other units, but this will probably be the best compromise. These competence assessors would require additional training or briefing on the conduct of competence assessments at units where they do not hold valid ratings. The licence or certificate of competence of these competence assessors should be endorsed as required by the Designated Authority to recognise their status. Suitably qualified controllers who are members of the Designated Authority's staff could also conduct competence assessments at those units. In both of the above cases an OJTI, who holds a valid rating appropriate to the air traffic control service in which the assessment was being made, will be required to monitor the air traffic control service being provided by the student or trainee air traffic controller.

When considering selection of controllers as competence assessors, emphasis should be placed on controllers who are trusted and respected by their peers for their operational expertise, rather than on seniority. The Institute of Air Navigation Services in Luxembourg offers training courses in the assessment of controller competence.

Undertake periodical refresher and emergency training (requirement 5.2.2.6 c)

Rationale and Implications

Refresher training in this requirement refers to training provided to operational air traffic controllers to assist them to maintain their operational competence. The training may be practical or theoretical training. Refresher training may also be given before competence assessments where it is considered that controllers need to refresh their skills and knowledge in little-practised procedures before undertaking the assessment.

Practical training should normally be conducted on simulators where controllers are able to practice procedures in which they do not get sufficient practice to maintain their competence, such as extensive remote holding in the event of runway closure. At units where traffic loading varies seasonally, refresher training should be given to ensure controllers retain their skills to handle high traffic loading.

Theoretical training should be given to ensure that controllers retain the sufficient knowledge of national, international regulations and local operational procedure. This can be done by using CBT programmes which can also be used for theoretical test.

Emergency training has the purpose to give controllers the skills and knowledge to enable them to provide assistance to aircraft in emergency and to deal with unusual circumstances at the ATC unit, such as radar failure. Emergency training should be part of the unit training plan which all students or trainees should have to successfully complete before being issued with a valid rating at that unit. Additionally controllers should undertake regular emergency training and should be assessed for their competence to deal with aircraft emergencies and unusual circumstances.

It has to be recognised that the skills that controllers will use to handle aircraft in emergency are those that they use during their normal controlling duties. Assistance to aircraft in emergency will normally be restricted to providing information about the aircraft's position, adjacent aerodromes, their facilities and availability and giving the aircraft priority over other flights. Emergency training should therefore be directed towards educating controllers in the sort of assistance pilots that require in particular emergency situations. Emphasis should also be placed on ensuring that the controller ascertains from the pilot of an aircraft in emergency exactly what assistance he requires, as misunderstandings in emergency situations can have critical safety implications.

Emergency training should be developed in co-operation with aircraft operators, both commercial and private, the aerodrome safety services and the organisations responsible for search and rescue. In developing the emergency training plan, previous emergency situations and the experience of controllers who dealt with them should also be considered.

To assist ATCO in dealing with emergencies and unusual situations the unit should develop emergency checklists and contingency plans for handling unusual circumstances which affect its ability to provide an air traffic control service. These may include failure of approach or en-route aids, radar and radio failure and runway closure. Practising these contingency arrangements could be done using simulation facilities or other means available to ensure that controllers know and understand how to apply them.

The training, both refresher and emergency should be reviewed regularly in the light of any incidents or controllers' experiences to ensure it remains relevant.

Ensure operational competence after returning from extended periods of absence (requirement 5.2.2.6 d)

Rationale and Implications

Controllers maintain their controlling skills and knowledge of the ATC environment and its associated procedures by practising the ATC task. When a controller returns from an extended period of absence he/she may still be competent as far as the competence scheme is concerned, but will no longer satisfy the requirements for ongoing experience.

To re-establish a controller's ongoing experience units should have procedures to enable the controller to undertake refresher training to ensure he/she has retained, or is retrained to achieve, the required skills and knowledge. Where this cannot be achieved on a simulator, controllers should be given a period of operational controlling during which they have the support of an OJTI. Operational support should continue until both the controller and the OJTI are satisfied that the controller no longer requires it.

The OJTI will be responsible for formally informing the provider that the process has been successfully completed. In the event that an agreement cannot be reached it is the OJTI who will make the final decision. If he is not satisfied that the controller can provide an ATC service without operational support the controller should undergo an assessment or examination of his competence.

2.3.1.7 Requirement 5.2.2.7

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

unit(s) have procedures for monitoring controllers for psychoactive substance abuse and to provide advice to controllers taking medicines.

Rationale and implications

An air traffic controller who is providing an air traffic control service while under the influence of a psychoactive substance may not be aware that his judgement and skill have been degraded to the extent that the service being provided is unsafe.

A controller may be under the influence of a psychoactive substance because he is abusing the substance, or has taken medicine prescribed by a physician or non prescription medicines obtained for a minor illness. The intentional abuse of psychoactive substances is not thought to be prevalent amongst air traffic controllers, but in view of the perceived incidence amongst the general population it is appropriate to take preventative precautions and, in the interests of safety, more direct action.

Procedures for monitoring for psychoactive substances may include:

a) an ongoing awareness campaign and training of operational controllers and controllers with managerial responsibilities within the unit to:

  i. alert them to the hazards of psychoactive substances

  ii. enable them to recognise the symptoms consistent with a person being under the influence of psychoactive substances

b) procedures to enable controllers to report other controllers whose behaviour is reasonably consistent with the symptoms of being under the influence of a psychoactive substance;

c) procedures for the testing of a controller who is reasonably believed to be under the influence of a psychoactive substance;

d) information alerting controllers to the need to obtain advice from their physician or the Aeromedical Authority as to the likely effects on their controlling efficiency of taking a particular medicine;

e) a unit process for determining if a controller, who has reported he is taking medicine, is likely to have his controlling efficiency reduced;

f) random testing for psychoactive substances.

Although random testing for psychoactive substances is likely to be a sensitive issue within the give legal framework and with organisations representing controllers' interests, it is a method of detecting and discouraging psychoactive substance abuse. Testing for psychoactive substance abuse following an air traffic control incident or aircraft accident, for example, would provide evidence as to whether or not substance abuse was a factor.

It is also appropriate for the provider of air traffic services to make available to all ATM staff the Designated Authority's published licensing policy relating to psychoactive abuse and the provider's policy on the subject, including any disciplinary action that may be taken.

2.3.1.8 Requirement 5.2.2.8

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

unit(s) have procedures to prevent the holder exercising the privileges of his/her licence or certificate of competence when there is any decrease in his/her medical fitness, or when the holder is under the influence of any psychoactive substance which might render the holder unable to safely and properly exercise these privileges.

Rationale and Implications

This requirement refers to licence or certificate of competence holders and is considered to include both air traffic controllers and student air traffic controllers.

Controllers who are unfit, or who are under the influence of psychoactive substances which reduce their controlling efficiency, may not be able to provide a safe air traffic control service. These controllers must not be permitted to provide an air traffic control service or, if detected while providing an air traffic control service, are to be immediately withdrawn from duty.

Withdrawal from duty, particularly if a controller feels unwell, is not a licensing matter, although if he/she has been taking medicine that is not notified as likely to have a detrimental effect on his/her efficiency, it may be appropriate to report this to the Aeromedical Authority for their information.

Withdrawal from duty and evidence of psychoactive substance abuse should be reported to the Aeromedical Authority and/or, when specifically so required, to the Designated Authority.

Medical conditions other than illness, such as recovery from surgery, or an accident or pregnancy, will normally result in withdrawal of the controller's medical certificate by the Aeromedical Authority. In this case the controller cannot provide an air traffic control service because he/she does not satisfy the requirement in 5.2.2.1 b) to hold a medical certificate of the appropriate class.

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2.3.1.9 Requirement 5.2.2.9

Content

The provider of air traffic services at its ATC unit(s) shall ensure that;

the designated authority is notified when:

a) *an air traffic controller's competence is in doubt; or*

b) *an air traffic controller is no longer judged competent to provide the ATC service associated with a valid rating, or;*

c) *an air traffic controller or student air traffic controller has been assessed as medically unfit to provide an ATC service;*

d) *an OJT instructor is no longer judged competent to provide operational training;*

An air traffic controller's competence is in doubt (requirement 5.2.2.9 a)

Rationale and Implications

An air traffic controller's competence may be considered to be in doubt following an ATC incident or aircraft accident involving an aircraft to which the controller was providing an air traffic control service. Although the controller may not be implicated in the cause of the incident or accident, his/her competence remains in doubt until an investigation has indicated the cause/causes.

When a controller's competence is in doubt he/she must be immediately withdrawn from duty and the Designated Authority informed. Withdrawing a controller from duty is done without prejudice and does not imply that the controller was the cause of the ATC incident or aircraft accident. The Designated Authority may take licensing action to prevent the controller from providing the air traffic control service that was being provided at the time of the incident/accident, or any air traffic control service.

A preliminary investigation should be conducted by the provider with the aim of determining the controller's involvement and the Designated Authority advised of the outcome. This investigation should be carried out as soon as possible to prevent the controller from having to spend a considerable time away from duty pending the outcome of a protracted in-depth investigation of the whole incident or accident. With the agreement of the Designated Authority, a controller who is found by the preliminary investigation not to be involved in the cause should be returned to duty without delay. A controller who is found to be involved in the cause may be permitted to return to duty subject to conditions set by the Designated Authority. More detailed guidance is at paragraph 2.3.1.1.

A controller's competence may also be in doubt following a series of serious controlling errors which fortuitously did not lead to an incident or accident, but which have been identified by the competence scheme. In this case the Designated Authority may take licensing action similar to that described above

An air traffic controller is no longer judged competent to provide the ATC service associated with a valid rating (requirement 5.2.2.9 b)

Rationale and Implications

A controller who is found to be not competent must be withdrawn from operational duties and not permitted to provide that air traffic control service again until he/she has undergone retraining and demonstrated competence.

The Designated Authority should be advised of the situation and agree a course of action with the provider. If the controller is to undergo a period of retraining the Designated Authority will suspend the controller's valid rating, if he is not considered competent to provide an air traffic control service on any sector or operational position in that rating discipline. Where a controller is assessed as not competent on a particular sector or operational position, the Designated Authority may suspend just the unit endorsement associated with that sector or operational position. The controller can continue to provide an air traffic control service on the other sectors or operational positions for which he holds valid unit endorsements. The purpose of suspending a rating or unit endorsement is to ensure that, when the controller is undergoing OJT, it is the OJTI who is responsible for the safety of the air traffic control service being provided.

The provider should consider if retraining is likely to have a positive outcome, or if the controller should be offered the option of voluntarily giving up validations on one or more sectors or operational positions. Where this is agreed the Designated Authority should be informed and will cancel the appropriate unit endorsements. Cancelling a unit endorsement does not imply that the controller may not at some time in the future regain it.

An air traffic controller or student air traffic controller has been assessed as medically unfit to provide an ATC service (requirement 5.2.2.9 c)

Rationale and Implications

A controller who does not hold a current medical certificate of the appropriate class may not provide an ATC service. A student air traffic controller may not provide an ATC service under the supervision of an OJTI unless he/she holds a medical certificate of the appropriate class.

ATCOs and Student ATCOs who have failed a medical assessment must be immediately withdrawn from operational duties and not returned to operational duties until they are again assessed as fit and issued with a medical certificate of the appropriate class. The Designated Authority is notified accordingly.

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An OJT instructor is no longer judged competent to provide operational training (requirement 5.2.2.9 d)

Rationale and Implications

An OJTI may not provide operational training unless he/she holds an OJTI endorsement associated with his/her ATC licence or certificate of competence. The ATS provider is responsible for ensuring the ongoing competence of OJTIs. If the OJTI is judged to be no longer competent to provide operational instruction, the Designated Authority must be informed. The Designated Authority may take licensing action such as revoke the controller's OJTI endorsement to his/her ATC licence or certificate of competence.

2.3.1.10 Requirement 5.2.2.10

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

> *An air traffic controller at his/her unit(s) whose competence is in doubt, complies with any conditions imposed upon him/her by the Designated Authority.*

Rationale and Implications

If an ATCO's competence is in doubt (see section 2.3.1.9 ESARR 5 requirement 5.2.2.9 a)) the Designated Authority may following consultation with the provider of air traffic services set conditions to permit the controller to retrain under the supervision of an OJTI provided other conditions are also met. These may include:

a)   a period of simulator training and an assessment to demonstrate understanding and application of national and/or unit ATC procedures prior to commencing OJT,

b)   a minimum period of controlling under supervision before a competence assessment/examination is conducted, or

c)   the requirement for a controller to reduce the number of sectors or operational positions for which he/she holds unit endorsements.

The unit procedures will need to ensure that the controller complies with these conditions and that unit management facilitates the controller's being able to meet them.

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2.3.1.11   Requirement 5.2.2.11

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

When a controller fails to satisfy a unit's procedure for ongoing experience, the unit shall deal internally with this matter and shall notify the Designated Authority without delay.

Rationale and Implications

A controller who has not completed the required number of controlling hours to maintain his/her ongoing experience may still be competent to provide the ATC services notified in his/her ATC licence or certificate of competence. The failure to meet this requirement is therefore not a direct licensing matter. Providers are expected to adopt the same procedures for controllers who fail to satisfy the ongoing experience requirements that are applied to controllers returning from an extended period of absence, see para 2.6.7 of this guidance. The Designated Authority must be informed if a controller's failure to satisfy ongoing experience requirements becomes a competence issue. The Designated Authority may suspend the controller's rating(s) or associated endorsement(s) to ensure that when the controller undertakes OJT, it is the OJTI who is responsible for the ATC service being provided.

Providers should provide refresher training if required and operational support for the controller as indicated in section 2.3.1.6 (ESARR 5 requirements 5.2.2.6 d)).

2.3.1.12   Requirement 5.2.2.12

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

The process by which competence is to be assessed is fully documented, indicating the method by which the competence will be judged, this being by continuous assessment or by examination or by a combination of both means.

Rationale and Implications

The ATS provider is required to ensure that controllers at the ATC unit(s) where it is responsible for the provision of air traffic services are competent to provide those air traffic services. The Designated Authority also needs to be assured that the provider has a credible system for assessing competence.

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To enable the Designated Authority to audit the ATS provider's system for assuring competence, and if necessary the competence schemes at individual units, the provider must fully document its procedures and the requirements it places on individual units. This should include a requirement for units to provide sufficient records of controller performance. Regular reports for a continuous assessment scheme or the results of competence examinations will also be required. The ATS provider should also conduct internal audits at individual units to ensure that the competence scheme is being complied with and is maintaining the standard of the air traffic control service being provided at an appropriate level.

For controllers' competence to be assessed there must be performance objectives against which their performance is to be judged. EUROCONTROL provides guidance on the development of task and job descriptions for air traffic controllers and integrated task and job analysis of air traffic controllers. This information is contained in four EATCHIP documents: HUM.ET1.ST01 1000-REP-01 to –04.

A description of the assessment process will be required and there are three options given:

❑ continuous assessment, or

❑ an examination, or

❑ a combination of both means.

'**Continuous assessment**' can be a process where a competence assessor works alongside his/her controller colleagues and makes a written report of their performance at regular intervals. These reports should be available to the individual controllers whose performance he/she will be judging. The assessment process is as much to detect if a controller's performance is deteriorating, so that corrective action can be taken, as it is to judge if a controller is competent against the unit's performance objectives. The competence assessor should apprise the controller of his/her performance, particularly if it is assessed as deteriorating. The unit management should be informed accordingly so that refresher training can be given as soon as possible to avoid any licensing action. At the end of the competence period the assessor should consider all his reports and make a judgement about the controller's overall competence. Where the assessor does not spend enough time with a controller to assess his competence he should conduct an examination, comprising a dedicated practical check, as described below.

'**Examination**' for competence is normally conducted just once during the competence period. It will consist of a dedicated practical check, during which the controller being assessed will be aware that the examination is in progress and the assessor will monitor the controller's performance on each of the sectors or operational positions for which the controller holds a valid rating. Where high fidelity simulators are available they may be used to test the controller on procedures or in high intensity traffic conditions not seen during a dedicated practical check.

An examination of the controller's knowledge of unit and national ATC procedures should also be conducted during, or at the end of, the competence period. This may be accomplished by an oral, a written or CBT test

2.3.1.13 Requirement 5.2.2.13

Content

The provider of air traffic services at its ATC unit(s) shall ensure that:

in cases where the Designated Authority has considered, or can be expected to consider, suspension, revocation or variation of an ATC licence or certificate of competence and/or associated ratings(s) and/or endorsement(s), air traffic controllers are not assigned by the unit to operational positions without appropriate supervision.

Rationale and Implications

A controller may only provide an air traffic control service for which the rating(s) and endorsement(s) to his ATC licence or certificate of competence are valid. Ratings or endorsements are no longer valid if they have been suspended or revoked by the Designated Authority.

The following are cases where Designated Authority has considered, or can be expected to consider, suspension, revocation or variation of an ATC licences:

❑ **A rating is suspended**: a controller may not provide an ATC service in that rating discipline except under the supervision of an OJTI who holds a valid rating appropriate to the ATC service to be provided under supervision.

❑ **A unit endorsement for a particular sector, sector group or operational position is suspended**: the controller may not provide the ATC service associated with that unit endorsement except under the supervision of an OJTI who holds a valid rating with the appropriate unit endorsement. The controller may continue to provide the ATC service associated with other unit endorsements in the same rating discipline that have not been suspended.

❑ **A rating is revoked**: the controller may not provide an ATC service in that rating discipline.

❑ **A unit endorsement is revoked**: the controller may not provide the ATC service associated with that unit endorsement, but may provide an ATC service associated with other unit endorsements in the same rating discipline that have not been revoked.

If a rating or endorsement is suspended or it can be expected to become suspended, the Designated Authority may, in consultation with the provider, set conditions, particularly training requirements, to enable the controller to provide the ATC service under the supervision of an OJTI towards having the suspension lifted. Where a rating or endorsement is varied the Designated Authority may set conditions, such as limiting the sectors on which a controller may provide an ATC service.

The ATS provider needs to have processes to ensure that unit management is made aware of any action taken by the Designated Authority in respect of revoking, suspending or varying the rating or endorsements associated with controllers' ATC licences or certificates of competence.

In this context, 'varying' means placing on a valid licence, certificate of competence, rating or endorsement, conditions that restrict the controller's privileges.

Example: Varying an Area Control Surveillance rating might restrict the number of sectors on which the controller may hold unit endorsements, or varying an Aerodrome Control Instrument rating may restrict the controller to providing a Ground Movement Control service only.

Where the unit identifies that a controller is no longer suitably licensed or certificated to provide an ATC service, the controller must not be rostered for, nor permitted to provide, the ATC service. Where the unit has been informed that the Designated Authority requires a controller to complete a period of training under the supervision of an OJTI, it should ensure that an OJTI is rostered to supervise the controller.

Unit management also needs to ensure that a controller who has had his licence or certificate of competence or any endorsements suspended or varied complies with any conditions set by the Designated Authority.

2.3.2 Section 5.2.3 – Requirements to be Applied to Individual Personnel

General

The requirements in this section relate to air traffic controller licence or certificate of competence holders. ATC licences or certificates of competence are issued to individual air traffic controllers. They entitle the holder to exercise the privileges of their licence or certificate of competence to an extent determined by their associated rating(s), rating endorsement(s) and unit endorsement(s).

Controllers are exercising the privileges of the rating(s) and endorsement(s) when they are providing air traffic control services on operational positions, or sectors or groups of sectors. These individual control positions are identified in the ATC licence or certificate of competence by unit endorsements.

Providers are required to have procedures to ensure that air traffic controllers are, for example, competent to provide the air traffic control services indicated in their licences or certificates of competence and hold a current medical certificate. While controllers are expected to comply with these procedures, there are other circumstances, such as those described below where controllers will be expected to take personal responsibility to satisfy ESARR 5 requirements.

Procedures can be established to satisfy the requirement for the ongoing monitoring of controller competence and medical fitness through a competence scheme and the medical certificate. However, they will not detect controllers who are feeling unwell to the extent that they are not fit to provide an ATC service, or who are aware that their competence has fallen below the required level. In these circumstances it is the controller's responsibility to advise the unit management and to cease providing an ATC service until the situation is resolved.

In particular, it is very unlikely that unit procedures will detect controllers who are under the influence of psychoactive substances. This may be entirely unintentional, for example as a result of taking non-prescription medicines or from social drinking without allowing sufficient time to recover before commencing duty. Responsibility is therefore placed on individual controllers and student air traffic controllers to take actions to ensure they do not provide an air traffic control service under the influence of psychoactive substances. The unit procedures should clearly place the responsibility for not providing an ATC service under the influence of psychoactive substances with individual student and air traffic controllers. Units should bring this requirement to the attention of their controllers, together with unit procedures for providing information on the use of psychoactive substances and how to determine if particular prescribed or non-prescribed medicines would have a detrimental effect on their controlling efficiency.

In this section of ESARR 5 those requirements that are placed upon student air traffic controllers also apply to trainee air traffic controllers. Trainee air traffic controllers are air traffic controller licence or certificate of competence holders who are undertaking training towards the issue of a new rating, an associated rating endorsement or a unit endorsement or the renewal of those.

2.3.2.1 Requirement 5.2.3.1

Content

A licensed/certificated air traffic controller shall ensure that he/she:

> a)   *holds valid rating(s), rating endorsement(s) and unit endorsement(s) appropriate to the ATC service(s) he/she is providing;*
>
> b)   *complies with the unit competency scheme and is competent to provide the ATC services notified in his/her air traffic controllers' licence or certificate of competence;*
>
> c)   *complies with any conditions that may be required by the designated authority when his/her competence is in doubt;*
>
> d)   *holds a valid medical certificate of the appropriate class;*
>
> e)   *informs the management of the unit if he/she is no longer medically fit to provide an air traffic control service;*
>
> f)   *does not provide an ATC service while under the influence of psychoactive substances;*
>
> g)   *does not exercise the privileges of his/her licence or certificate of competence, when there is any decrease in his/her medical fitness which might render the holder unable to safely and properly exercise these privileges.*

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Holds valid rating(s), rating endorsement(s) and unit endorsements appropriate to the ATC service(s) he/she is providing (requirement 5.2.3.1 a)

Rationale and Implications

The ATS provider is responsible for notifying to, or establishing with, the Designated Authority, the rating(s), rating endorsement(s) and unit endorsement(s) that a controller will need to hold for each operational position or sector or groups of sectors. To ensure that controllers are aware of what should be included in their ATC licence or certificate of competence the ATS provider will need to publish the qualifications required for each control position, sector or group of sectors.

To satisfy this requirement controllers will have to ensure that their ATC licence or certificate of competence correctly identifies the operational positions, sectors or groups of sectors on which they are competent to provide an ATC service. Controllers are not allowed to provide an ATC service on any control position for which they do not hold the ATC licence or certificate of competence endorsements required by unit instructions.

To be granted the endorsements of an ATC licence or certificate of competence that will enable a controller to provide the ATC service on a particular control position the controller must:

      a)   hold or have held a valid rating, and where appropriate, a rating endorsement, in the rating discipline appropriate to the ATC service to be provided, or

      b)   have successfully completed an approved course of initial training in the rating and, where appropriate a rating endorsement, in the rating discipline appropriate to the ATC service to be provided, and

      c)   have successfully complete the unit training plan, and

      d)   demonstrate competence to provide the ATC service on the operational position, sector or groups of sectors on which he has been undertaking OJT.

The initial training received by an individual have to satisfy as a minimum the Guidelines for Common Core Content Training Objectives for Air Traffic Controllers (Phase 1 and 2). Phase 1 (ab-initio) of the training within the discipline Air Traffic management requires the individual to understand sufficiently the subject of Collision Avoidance (safety nets), both airborne (ACAS, TCAS) and ground segment (MTCD, MSAW, STCA, etc), to enable him to describe and explain (level 2) the effect of collision avoidance systems on ATC operations. In other words, training on safety nets is mandatory through ESARR 5 when implementing the requirements for initial training.

The OJTI who will be supervising the Student or Trainee ATCO who is undertaking OJT, must hold the OJTI licence endorsement and the rating(s), rating endorsement(s) and unit endorsements appropriate to the operational position, sectors or groups of sectors on which he/she is conducting OJT

Comply with unit competence scheme and is competent to provide ATC services notified in ATC licence/certificate of competence (requirement 5.2.3.1 b)

Rationale and Implications

Air traffic controllers must demonstrate their competence in accordance with the unit competence scheme. To achieve this they will need to comply with the requirements of the scheme.

The scheme may require controllers or the unit management to schedule and organise competence assessments. Whatever the arrangements, controllers should ensure that they are assessed for continuing competence in good time to enable them to continue to provide the air traffic control services for which they hold valid ratings.

Controllers should not provide an air traffic control service on any operational position, sector or group of sectors if they consider they are not competent to do so. A controller who makes a judgement that he/she is no longer competent should advise unit management and request appropriate training.

Comply with any conditions that may be required by the Designated Authority when competence is in doubt (requirement 5.2.3.1 c)

Rationale and Implications

If a controller's competence is in doubt the Designated Authority will take licensing action such as suspend the rating(s), rating endorsement(s) or unit endorsement(s) associated with his ATC licence or certificate of competence. The Designated Authority will set conditions, in co-operation with the ATS provider, by which the licensing action can be lifted. Both the controller and the provider of air traffic services will be informed of these conditions.

The conditions are normally imposed to enable the controller to demonstrate he/she is again competent to provide an ATC service.

Example: A condition can be to undertake retraining, which may include completion of part or all of the unit training plan, under the supervision of an OJTI.

This would usually be followed by an assessment or examination of the controller's competence.

If the controller is unable to satisfy the conditions set by the Designated Authority, it may vary his licence by restricting his privileges, for example by reducing the number of sectors on which he may provide an air traffic service.

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Hold a valid medical certificate of the appropriate class (requirement 5.2.3.1 d)

Rationale and Implications

'Valid' in this case means that the controller holds a medical certificate issued by the appropriate Aeromedical Authority and which has not expired or been revoked by that authority.

A controller who has allowed his/her medical certificate to expire, or who does not hold a valid medical certificate for any other reason, must not provide an air traffic control service, even when under the supervision of an OJTI.

The Designated Authority will provide information on the class of medical required for the issue of ATC licences or certificates of competence and the periods of validity of the medical certificate.

The Aeromedical Authority or any organisation/person accepted/approved by the Aeromedical Authority and known to the service provider will normally conduct the first medical examination for the issue of the licence or certificate of competence. Medical assessments for renewal of medical certificates may be conducted by other medical organisations or doctors authorised by the Aeromedical Authority. Where this is the case the provider of air traffic services should ensure that a list of appropriate authorised medical organisations and doctors is available to air traffic controllers.

The ATS provider may have a process to advise controllers when their medical certificates are due to expire and to arrange medical examinations. Alternatively it may be the controllers' responsibility to ensure they have their medical examinations within the required period. Whatever the arrangements, it remains the controller's responsibility to ensure he has a valid medical certificate.

Inform the management of the unit if no longer medically fit to provide an air traffic control service (requirement 5.2.3.1 e)

Rationale and Implications

A controller who holds a valid medical certificate may become unfit to provide an air traffic control service due to illness, an accident, surgery or pregnancy.

A controller who is not fit or who does not consider he/she is fit to provide an air traffic control service in the circumstances above should inform the unit management.

The Designated or Aeromedical Authority will publish advice to controllers about the action to be taken in these circumstances. This advice should contain how to deal with minor illnesses that will normally be dealt with by the controller's own doctor. Illnesses, accidents and surgery that require protracted recovery times and pregnancy should be reported to the Designated or Aeromedical Authority.

Does not provide an ATC service while under the influence of psychoactive substances (requirement 5.2.3.1 f)

Rationale and Implications

An air traffic controller who is providing an air traffic control service while under the influence of a psychoactive substance may not be aware that his/her judgement and skill have been degraded to the extent that the service being provided is unsafe.

'Psychoactive substances' include not only drink and drugs, but medicines prescribed by a doctor and non-prescription medicines taken for minor ailments. Therefore the Aeromedical Authority should give advice (e.g. flyers, awareness campaign, posters, etc.) to ANSPs and individuals about the reduction of the psychoactive substances in blood over a period of time.

Controllers who are prescribed medicines by their doctor should ascertain if these medicines are likely to have any effect upon their controlling efficiency. Controllers who wish to take non prescription medicines should consult the information published by the Aeromedical Authority. If controllers are uncertain about the effect of medicines they should consult their unit management or the Aeromedical Authority.

Units will need to have procedures to ensure as far as possible that controllers do not provide an air traffic control service while under the influence of psychoactive substances and controllers will have to comply with them. Failure to comply, or being detected as having provided an air traffic control service under the influence of drugs or alcohol, may result in the Aeromedical Authority revoking the controller's medical certificate. If the problem cannot be resolved through a rehabilitation programme, or other treatment, the Designated Authority may consider revoking the controller's licence or certificate of competence.

The issue of how service providers have to implement procedures to monitoring the use of psychoactive substance will be addressed extensively within an additional EUROCONTROL Advisory Material document to ESARR 5.

Not exercise the privileges of a licence or certificate of competence, when there is any decrease in medical fitness which might render the holder unable to safely and properly exercise these privileges (requirement 5.2.3.1 g).

Rationale and Implications

A controller who holds a valid medical certificate of the appropriate class is fit at the time of issuing the medical certificate, but may become unfit or unwell while the medical certificate is still current. A controller who is no longer fit in accordance with 5.2.3.1 e) above he must inform unit management and be withdrawn from duty. A controller who feels unwell to the extent that he considers he can no longer provide a safe air traffic control service should inform unit management and must not provide an ATC service.

2.3.2.2 Requirement 5.2.3.2

Content

A student air traffic controller shall ensure that he/she:

> a) *holds a current student air traffic controller's licence or certificate of competence;*
>
> b) *complies with the unit competency scheme and is competent to undertake on the job training;*
>
> c) *holds a valid medical certificate of the appropriate class;*
>
> d) *informs the management of the unit if he/she is no longer medically fit to provide an air traffic control service(s);*
>
> e) *does not undertake on the job training while under the influence of psychoactive substances;*
>
> f) *does not undertake on-the-job training, when there is any decrease in his/her medical fitness or is under the influence of any psychoactive substance, which might render the holder unable to safely and properly exercise these privileges.*

Hold a current student air traffic controller's licence or certificate of competence (requirement 5.2.3.2 a)

Rationale and Implications

Student ATCO licences or certificates of competence entitle the holders to undertake unit training at an ATC unit, including OJT where they provide an ATC service under the supervision of an OJTI.

To satisfy this, the student ATC licence or certificate of competence will identify the rating discipline and where appropriate the rating endorsement in which the student has successfully completed initial training. Unit training is structured to build upon the knowledge and skills that a student will have gained on a particular initial rating course. Student air traffic controllers must therefore only commence unit training in the rating disciplines indicated in their licence or certificate of competence.

The initial training received by an individual have to satisfy as a minimum the Guidelines for Common Core Content Training Objectives for Air Traffic Controllers (Phase 1 and 2). Phase 1 (ab-initio) of the training within the discipline Air Traffic management requires the individual to understand sufficiently the subject of Collision Avoidance (safety nets), both airborne (ACAS, TCAS) and ground segment (MTCD, MSAW, STCA, etc), to enable him to describe and explain (level 2) the effect of collision avoidance systems on ATC operations. In other words, training on safety nets is mandatory through ESARR 5 when implementing the requirements for initial training.

The student air traffic controller licence or certificate of competence may be issued for a limited period. If this is the case student air traffic controllers should not provide an air traffic control service under supervision if their licence or certificate of competence has lapsed

Comply with the unit competence scheme and is competent to undertake on the job training (requirement 5.2.3.2 b)

Rationale and Limitations:

Student air traffic controllers will be expected to undertake the unit training plan and any associated assessments, which may include a final assessment or validation examination, before being issued with an air traffic controller licence or certificate of competence and associated endorsements.

The process may be one where the unit training conducted is independent of the unit competency scheme. In this system students will undertake a validation examination to demonstrate their competence which may be conducted by controllers approved by the Designated Authority. The validation examination is the process for the transfer of successful candidates from unit training to the competence scheme. The result of the validation exam must be recorded as a formal record.

The unit training may be organised so that the controllers who assess the competence of other controllers on the unit also assess the students at regular intervals during on the job training. Under this system the transition to gaining a licence or certificate of competence is not by a one off validation examination. The controllers who assess the students will determine from their training and assessment records when they have reached the required level of competence. When the competence assessors are satisfied that the student has met all the performance objectives, identified from an analysis of the controller's task, an ATC licence or certificate of competence may be issued. This transition process of a student from the unit training plan to being a licensed/certificated controller who is subject to the competence scheme must be fully documented. This is a formal process and the unit must be able to demonstrate from the training and assessment records that it has been complied with.

The Designated Authority must be advised of the outcome of the validation examination or assessment process in order to issue the appropriate licence or certificate of competence.

The unit training will be organised in phases, the transitional phase, the pre-OJT phase and the OJT phase. At some units that do not have high fidelity simulators there may be no pre-OJT. For each phase of training there must be performance objectives which the student air traffic controller must satisfy before proceeding to the next phase of training.

The training may be formal classroom instruction and simulator training or, at smaller units, guided self - study or CBT. When students have been assessed as having met the performance objectives for the transitional training and, where appropriate, the pre-OJT training they will commence OJT. Students who are not confident that they are ready to commence OJT should advise their on the job training instructor who should arrange for additional training or a review of the student's training. If at any time during OJT students are not confident that they can competently handle the traffic situation or are not sufficiently familiar with the ATC procedures they should inform their OJTI.

Hold a valid medical certificate of the appropriate class (requirement 5.2.3.2 c)

Rationale and implications

Valid in this case means that the medical certificate has not expired or has not been revoked by the Aeromedical Authority.

If a student air traffic controller should become suddenly incapacitated while providing the ATC service it will take a finite time for the OJTI to take over control of the traffic situation. In busy and/or complex traffic situations this could result in a reduction in safety. Student air traffic controllers are therefore required to have a valid medical certificate of the same class and offering the same level of assurance of not becoming incapacitated as air traffic controllers.

2.3.3   Informs the management of the unit if he/she is no longer medically fit to provide an air traffic control service(s) (requirement 5.2.3.2 d)

Rationale and Implications

The same explanations of section 2.3.2.1 (ESARR requirement 5.2.3.1 e)) are applicable here.

2.3.4   Not undertake on the job training while under the influence of psychoactive substances (requirement 5.2.3.2 e)

Rationale and Implications

The same explanations of section 2.3.2.1 (ESARR requirement 5.2.3.1 f)) are applicable here.

2.3.5   Not undertake on-the-job training, when there is any decrease in medical fitness, or while under the influence of any psychoactive substance, which might render the holder unable to safely and properly exercise these privileges (requirement 5.2.3.2 f)

Rationale and Implications

The same explanations of section 2.3.2.1 (ESARR requirement 5.2.3.1 g)) are applicable here.

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APPENDIX 1

Table 1 - List of ESARR 5 and ICAO ATC Ratings

ESARR 5 Rating	ICAO Rating
Aerodrome Control Visual	Aerodrome Control
Aerodrome Control Instrument	Aerodrome Control
Approach Control Procedural	Approach Control
Nil	Approach Precision Radar Control
Approach Control Surveillance	Approach Radar Control
Area Control Procedural	Area Control
Area Control Surveillance	Area Radar Control

Table 2 – ICAO Ratings and Equivalent ESARR 5 Ratings and Associated Rating Endorsements

Below are tables indicating the ratings associated with the ICAO ATC licence procedures and the equivalent European licence ratings and endorsements, as developed for the harmonised European ATC licensing project.

AERODROME CONTROL

Type of Unit and Controller Function	Existing ICAO Rating	Harmonised European Rating	Rating Endorsement
Aerodrome without instrument approach or departure procedures or an associated approach control service	Aerodrome Control	Aerodrome Control Visual (ADV)	State specific only
Aerodrome with instrument approach and departure procedures and an associated approach control service	Aerodrome Control	Aerodrome Control Instrument (ADI)	Additional State endorsements as required
Controller provides an aerodrome control service at a unit where aerodrome control is not differentiated into Ground Movement Control (GMC) and Air Control (AIR)	Aerodrome Control	Aerodrome Control Instrument (ADI)	Tower Control (TWR)
Controller provides Ground Movement Control only	None	Aerodrome Control Instrument (ADI)	Ground Movement Control (GMC)
Controller with GMC or TWR rating endorsements uses Aerodrome Surface Movement and Guidance systems (GMS)	Aerodrome Control	Aerodrome Control Instrument (ADI)	Ground Movement Surveillance Control (TWR or GMC + GMS)

Aerodrome Control (cont ...)

Type of Unit and Controller Function	Existing ICAO Rating	Harmonised European Rating	Rating Endorsement
Controller provides Air Control (AIR) only	Aerodrome Control	Aerodrome Control Instrument (ADI)	Air Control (AIR)
Controller with AIR or TWR rating endorsement uses surveillance radar in the provision of an aerodrome control service	Aerodrome Control	Aerodrome Control Instrument (ADI)	Radar (TWR or AIR + RAD)

APPROACH CONTROL

Type of Unit and controller function	Existing Rating	Harmonised European Rating	Rating Endorsement
Approach control unit established at an aerodrome or area control centre. Controller provides an approach control service without the use of any surveillance equipment	Approach Control	Approach Control Procedural (APP)	State specific only

Approach Control Surveillance

Type of Unit and Controller Function	Existing Rating	Harmonised European Rating	Rating Endorsement
Approach control unit established at an aerodrome providing an approach control service with the use of surveillance equipment	Approach Radar Control	Approach Control Surveillance (APS)	Additional State endorsements as required
The surveillance equipment is radar	Approach Radar Control	Approach Control Surveillance (APS)	Radar (RAD)
The surveillance radar is used to provide Surveillance Radar Approaches (SRAs)	Approach Radar Control	Approach Control Surveillance (APS)	Surveillance Radar Approach (SRA)
The controller provides Ground Controlled Approaches using Precision Approach Radar (PAR)	Precision Approach Radar	Approach Control Surveillance (APS)	Precision Approach Radar (PAR)
The surveillance equipment is Automatic Dependent Surveillance (ADS)	None	Approach Control Surveillance (APS)	Automatic Dependent Surveillance (ADS)
The controller provides a service in Terminal Control Airspace and associated adjacent sectors as designated by the State using radar or ADS.	Approach Radar Control	Approach Control Surveillance (APS)	Terminal Control (TCL)

AREA CONTROL

Type of Unit and Controller Function	Existing Rating	Harmonised European Rating	Rating Endorsement
An area control service is provided from an Area Control Centre without the use of any surveillance equipment.	Area Control	Area Control Procedural (ACP)	State specific endorsement only

Area Control Surveillance

Type of Unit and Controller Function	Existing Rating	Harmonised European Rating	Rating Endorsement
An area control service is provided from an area control centre with the aid of surveillance equipment	Area Radar Control	Area Control Surveillance (ACS)	Additional State endorsements as required
The surveillance equipment used is radar	Area Radar Control	Area Control Surveillance (ACS)	Radar (RAD)
The surveillance equipment used is Automatic Dependent Surveillance (ADS)	None	Area Control Surveillance (ACS)	Automatic Dependent Surveillance (ADS)
The controller provides a service in Terminal Control Airspace and associated adjacent sectors as designated by the State using radar or ADS	Area Radar Control	Area Control Surveillance (ACS)	Terminal Control (TCL)

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APPENDIX 2

GUIDANCE ON THE DEVELOPMENT OF UNIT TRAINING PLANS

This Appendix contains the guidance on the development of unit training plans. It is recognised that there would be a need for two levels of unit training, one at large and medium sized ATC units and the other for smaller ATC units with limited staff resources.

PART A – GENERAL

A.1 Requirement to have an Approved Unit Training Plan

EUROCONTROL Safety and Regulatory Requirement (ESARR) 5, ATM Services Personnel, requires all operational ATC units to have unit training plans which must be approved by the relevant Designated Authority. The following guidance is based on the European Manual of Personnel Licensing, Air Traffic Controllers, Chapter 8, Air Traffic Control Safety Regulation Procedures – Training, but provides supplementary advice on unit training and assessment.

A.2 Types of Unit Training Plan

A.2.1 Unit training needs to fill the gap between the knowledge and skills learned on the initial training courses and those student/trainee controllers' needs in order to benefit from OJT with a minimum impact on the safety and efficiency of aircraft operations.

A.2.2 There will be two levels of unit training plan:

a)   Level 1 for the smaller units where the unit training will be managed by the on-the-job training instructors (OJTIs) and

b)   Level 2 for the larger units where the unit training plan will be managed by person(s) that are responsible for the unit training.

In both cases a formal assessment scheme, and where appropriate a validation examination is required.

A.3 Unit Training Plan (UTP) Documentation

The unit training plan shall be approved by the Designated Authority and should be fully documented, indicating:

a)   the objectives of the training;

b)   the training processes by which the objectives will be met;

c)   the assessment process by which progress will be judged;

d)   the minimum training time and the maximum time in which student and/or trainee air traffic controllers are expected to achieve the objectives of the training;

e)   the process by which successful completion of OJT is to be judged.

A.4   Phases of Unit Training

A.4.1   It is the responsibility of the provider to ensure that student air traffic controllers and air traffic controllers are competent. This includes ensuring that, before a student or trainee air traffic controller commences OJT, he has the skills and knowledge to provide a safe ATC service under supervision.

A.4.2   Unit training is broken down into three phases, Transition, Pre OJT and OJT. Although three training phases have been identified, pre-OJT may only be appropriate at units where simulator facilities are available. Unit training may therefore consist of all three phases, or just transitional training and OJT. The phases of training adopted must be identified in the unit training plan.

A.4.3   A student/trainee must demonstrate that he has met the objectives for each phase of training before being allowed to commence the next phase.

A.4.4   Transitional Training Phase

Definition: *The stage following initial training during which site specific theoretical knowledge and understanding will be transferred to the trainee using a variety of methods and during which skills will be developed through the use of site specific simulations.*

A.4.4.1   The objective of transitional training is to take students/trainees from the level of knowledge and skill they will have reached on successful completion of initial training to a level where they can commence, where applicable pre – On-the-Job Training (pre-OJT), or proceed directly to OJT.

A.4.4.2   Transitional training consists generally of classroom sessions or guided self study during which the student learns about the unit, its environment, associated airspace and ATC procedures. Training and assessment in the application of ATC procedures may include the use of part task and full task training on simulators that do not replicate the operational environment to a high level of reality. The success of this training, that is, the results of written or oral assessments and, where appropriate, practical exercises should be assessed before progression to the next phase of training.

A.4.5   Pre-On-the-Job-Training

Definition: *The phase of locally based training during which extensive use of simulation, using site specific facilities, will enhance the development of previously acquired routines and abilities to an exceptionally high level of achievement.*

Pre-OJT is the phase of training during which students/trainees will integrate all previously learned procedures and routines, including national ATC procedures, into the decision making process and learn to allocate priority. The Pre-OJT phase is only conducted where a unit has a simulator that accurately replicates the operational environment. The term 'exceptionally high level of achievement' is taken to mean that student or trainee air traffic controllers will be trained to a level where they are competent in the operational task on a simulator.

A.4.6 On the Job Training (OJT)

Definition: *The integration in practice of previously acquired job related routines and skills under the supervision of a qualified on the job training instructor in a live traffic situation.*

A.4.6.1 During this phase students/trainees will be providing an air traffic control service under the supervision of an On-the-Job Training Instructor (OJTI) who must hold a valid rating appropriate to the service being provided.

A.4.6.2 All phases of training must be reported upon and assessed before the student/trainee commences the next phase and particularly OJT. Reports of these assessments must be included in the student/trainee records and be available for audit by the Designated Authority.

A.5 Unit Training

A.5.1 Starting Point for Unit Training

The starting point of any unit training plan will be the terminal objectives of the initial rating training courses conducted at the training centres (colleges or training institutions). Units should therefore familiarise themselves with the knowledge and skills the training centres require a successful candidate to have demonstrated. This is best done by visiting a training centre while training is in progress, particularly during the latter stages of the courses.

A.5.2 Unit Training Prior to OJT

Although the unit training conducted before OJT does not directly impinge on safety, it should provide a sound basis on which the safety critical OJT will be built. Units will need to assess what students/trainees must know and be able to do before they are allowed to start OJT. This assessment will determine the training objectives and establish whether it will consist of transitional training alone, or transition and pre-OJT training. The objectives of this phase (or phases) of training must be documented to ensure that the students/trainees are aware of what they have to achieve before commencing OJT and to enable the OJTIs to be confident about what students/trainees know and are able to do.

A.5.3 Units should take into consideration:

a)   Skills required to operate equipment, including:

   i.   Data input

   ii.   Radar

   iii.   GMS

   iv.   Information systems

   v.   Communication systems

b) The task, including:

  i.   Local and adjacent environment

  ii. Local ATC procedures

  iii. Co-ordination within the unit and with other ATC units or agencies

  iv. The level of decision making and negotiation skills required

  v.   Requirement for specialist controlling techniques

  vi. The tolerance of the environment to controlling errors

  vii. Unusual circumstances and aircraft emergencies

c) The traffic levels:

  i.   The periods during which traffic levels are appropriate to introduce students/trainees to OJT

  ii. Acceptable loss of efficiency to aircraft operations

d) The training environment:

  i.   Facilities for monitoring and intervention

  ii. Availability and types of simulations

  iii. Opportunities for retraining

  iv. The training commitment (number of students/trainees engaged in OJT)

A.5.4 Task Analysis

The training for any task should start with a task analysis to determine what knowledge and skills need to be taught to enable the student/trainee to do that task.

A.6 'Rating Requirements for Air Traffic Controllers'

A.6.1 Units developing unit training plans will need to obtain the relevant parts of 'Rating Requirements for Air Traffic Controllers', that contain the requirements for the ratings. The rating requirements are divided into parts, one for each rating. Using subsequently the" Aerodrome Control Instrument" training as example, it may be helpful to have Part B, 'Rating requirements for air traffic controllers – Aerodrome Control Instrument', to hand while reading this guide, particularly in relation to the section on assessment at para A9 below.

A.6.2 When developing training objectives, each of the Topics and Sub-Topics will need to be considered. The Topics are very general and apply to most aerodromes. Some, however, will not be relevant to a particular unit; for example, Topics E6 and E7 of the Aerodrome Control Instrument rating will not apply to a unit that does not have surface movement radar. The Sub-topics associated with the topics that are selected as applying to the unit should all be relevant to the air traffic control service being provided.

A.6.3 Each Sub-Topic has associated with it Performance Objectives, Conditions and Essential Knowledge:

'Performance Objectives' are the objectives that an operational controller will have to be able to satisfy to provide the type of air traffic control service to which the rating requirements relate.

'Conditions' are the conditions under which the assessment of the performance objectives are made. In the rating requirements, they relate to the national ATC procedures taught on the initial courses.

'Essential Knowledge' relates to the national requirements associated with a rating.

A.6.4 The rating requirements represent the task analysis for all the ratings, rating endorsements and licence endorsements, but the 'Conditions' and 'Essential Knowledge' relate to initial training. To apply the rating requirements at a particular unit, the conditions will need to be made applicable to that unit. It will also be necessary to determine what essential knowledge, in the form of the unit's environment and ATC procedures, is required by controllers to enable them to provide the air traffic control services at the unit. In this regard, some units may find it beneficial to undertake a unit-specific task analysis of the ATC services they provide.

A.6.5 The unit's documentation of its operational ATC procedures should contain most of what the student/trainee will be required to know, but additional sources of information such as maps, charts and national and international publications should be used where appropriate.

A.7 Developing Training Objectives

A.7.1 Objectives should indicate what is required of students/trainees and reflect the way in which they will be assessed. It is useful to think of the phrase 'a student/trainee must be able to' as prefixing every objective. It is therefore inappropriate to require a *student to 'know' the aerodrome layout*. The objective could be expressed *as' Using an outline map of the aerodrome, indicate the runway designations, holding points and taxi routes'*. If instead of using a map an OJTI wanted to test the student/trainee's knowledge of an aerodrome orally, the objective could be: *'From the visual control room, indicate and name the runways, taxiways, holding points, etc.'*

A.7.2 It is advisable to avoid having a large number of objectives and this may be achieved by writing general objectives. Although a student/trainee must, for example, be able to name the visual reporting points (VRPs) and give their position, a separate objective is not required for each VRP. Oral assessment objectives could be as simple as: *'Name and give the position of the VRPs', and at a later stage during OJT: 'Use the VRPs to integrate inbound VFR traffic into the circuit'*. Specific objectives will only be required where a particular unit procedure varies significantly from national procedures or from other unit procedures.

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A.7.3 Transitional Training Objectives

The initial training courses will deliver student air traffic controllers who have demonstrated their ability to apply basic ATC procedures in a simulated environment. Transitional training objectives will therefore be focused on the local ATC procedures and the ATC environment, for example aerodrome layout, taxi routes, associated airspace etc. Although it is convenient to teach students all the local ATC procedures during Transitional training, it is unrealistic to expect them to retain this theoretical knowledge, particularly where they do not practice its application using simulation. It may be appropriate to phase in the training of some ATC procedures while the students/trainees are undertaking OJT. Where additional theoretical training is conducted during OJT it should be noted in the training plan.

A.7.4 Pre-OJT Training Objectives

The objectives for pre-OJT will relate to application and demonstration of the ATC procedures learned during transitional training in a simulated environment. The objectives for assessment using a simulator will be similar to those for OJT; where necessary they should reflect any limitations imposed by the simulator.

A.7.5 OJT Objectives

During OJT the progress of students/trainees should be regularly assessed. These assessments are normally made at 50 hour intervals but other time periods may be appropriate. Whatever the period selected units will have to decide what objectives a student/trainee of average ability can be expected to have achieved by the end of each training period.

A.7.6 Level Assessments

Assessments conducted at the end of each selected period are known as 'level assessments', for example, 'level 50 assessment' or 'level 100 assessment' etc. However, assessment of the 100 level will not necessarily be at 100 hours; a slow learner may take 120 hours to meet the 100 level objectives. On the other hand, an experienced controller being accelerated through the training plan might reach the 100 level in considerably less than the target time.

A.7.7 Objectives for the Level Assessments

A.7.1.1 Objectives developed for the level assessments should be referenced against the Topics and Sub-Topics from the rating requirements. Objectives for successive assessments should allow for a steady progress through the OJT phase of training, leading to a final assessment at a level where students/trainees will be expected to demonstrate their competence to provide a safe ATC service without support from the OJTI.

A.7.7.2 The OJT phase is also a time when students or trainee controllers' knowledge and understanding of the application of local ATC procedures should be reinforced. OJTIs should question students during the pre-brief and explain the use of procedures if students are unsure of their application. This should also be done during de-brief session including the positive and negative aspects of the training session.

A.8   Setting Targets and Reporting

A.8.1   The unit training plan should set targets for the student/trainee based upon the expectations of the unit. The rate at which a trainee develops will be determined by many factors including the complexity of the unit, the trainee's background or experience and his ability to absorb information and develop skills. The plan should take as its base-line an average student/trainee who has recently qualified from a training centre, but should have an element of flexibility built in to allow for different rates of learning. However, all student and trainee controllers and trainers should be aware of the targets and expectations of the training system.

A.8.2   Student and trainee controllers should be kept aware of their progress, including any areas where improvement is needed and the goals they must achieve to successfully complete the training.

A.8.3   A report of the student/trainee controller's performance should be completed after each training session and should be sufficiently detailed to enable other OJTIs to determine his/her strengths, weaknesses and level of competence. Units may find it useful to complete progress reports at regular intervals, separate from any formal assessments, which indicate how the students/trainees are progressing with their training.

A.9   Assessment

A.9.1   Assessment of the trainee's development is an integral part of the training plan. The method of assessing and the assessment regime will need to be detailed in the plan. This effectively sets the targets for the trainee and trainer alike.

A.9.2   Assessment is a process of gathering evidence about the student/trainees' performance to determine how they are progressing with their training and to identify any shortcomings that need to be addressed. Assessment is not a sampling process, as all the objectives of the training must be assessed and the process fully documented to provide evidence of the trainees' performance. There is no pass mark; students/trainees must know all that they are required to know and be able to demonstrate they can provide an air traffic control service to the required level of competence.

A.9.3   The assessor may use both 'indirect evidence', for example, the results of tests and training reports from training section staff and OJTIs, and 'direct evidence', that is, what he sees and reports upon while he is testing or supervising the student/trainee himself. If the assessor will not be conducting OJT with the student/trainee he will rely solely on indirect evidence. Although assessors are trained to collect evidence and make a judgement in these circumstances, they should endeavour to assess the student or trainee controller directly.

A.10   Assessing Transition and Pre-OJT Training

Trainees should be assessed at least at the end of transitional training and, where applicable, at the end of pre-OJT. Failure to reach a satisfactory standard should preclude progression to the next stage of training. Assessment at these phases may include written and verbal assessments and practical assessments using simulation. These phases should also be used to confirm that the student/trainee controllers have retained the knowledge and skills gained on the initial rating courses that they will be required to apply during OJT.

A.11   Assessing OJT

A.11.1 Student/trainee controllers should be assessed at the end of each level of OJT for which training objectives have been identified, for example at level 50, level 100 etc. (see paragraph A7.6 above). Assessment of this phase consists of observation of practical work and reference to training reports from other OJTIs for supporting evidence.

A.11.2 Supplementary oral questioning should be used to test understanding of the applicable techniques and rules governing them. Understanding can be tested orally during pre-briefing and de-briefing of practical training sessions. Where time constraints are not a major consideration, table-top exercises (analytical simulations) can be used as a means of testing operational scenarios that units are unable to simulate. Essential knowledge can also be tested orally, and although this is more difficult to administer than written questioning it is also more flexible.

A.12   Formative Reports

A.12.1 Reports of student/trainee performance during the day to day practical training sessions are known as 'formative reports'. These reports should contain the OJTI's comments on the student's performance and state whether or not he or she satisfied the training objectives; they are not graded. It is recommended that OJTIs should complete formative training reports on a regular basis.

A.12.2 The trainee should be given a verbal debrief of his performance against the target level of achievement for the stage of training and it is useful to include a précis of this feedback as part of the written report. It is advisable to have the student/trainee sign the report as confirmation of having understood the comments, both from the training viewpoint and as potential evidence in the event of an appeal against an assessment.

A.13   Summative Assessments

A.13.1 'Summative assessments' may be conducted at any stage of training where a more definitive measure of the student's progress is required, for example at the end of each level of training. They may be carried out by an assessor or an OJTI.

A.13.2 During a summative assessment, the performance of the student/trainee will be marked and classified as either 'satisfactory' or 'not satisfactory' against the written training objectives for that level of training. Additional written formative comments should also be included where necessary, indicating areas of weakness where improvement is required. Formative reports should be used to support the evidence of summative assessments in determining whether a student/trainee's performance is reliable and consistent. Where summative assessments confirm the student's performance as indicated by the formative assessments, they provide a useful additional indication of the student/trainee's progress against the expectations of the training plan. A mismatch between the summative and formative assessments is a useful indication that a student/trainee has a particular problem or that the OJTIs have been too generous or unduly harsh in their formative reports.

A.13.3 Students/trainees must be given prior warning of any summative assessments and should sign the resulting assessment report.

A.13.4 It is important to make sure that the reports are formulated using the training plan objectives as a standard and should indicate the level of traffic the trainee handled during the practical session.

A.13.5 There is more detailed guidance giving examples of formative and summative assessment reports at Part Three of this Guide.

A.14 Reviewing and Amending the UTP

A.14.1 Units must have a process for reviewing and amending their UTPs. The UTP should therefore be subject to a quality control system that not only identifies the processes but also the roles and responsibilities of those involved.

A.14.2 The UTP must be regularly reviewed to ensure that the training continues to satisfy the objective of producing valid controllers. The progress of students/trainees undertaking OJT should be monitored and recently valid controllers and OJTIs should be asked to identify any additional skills or knowledge that should be taught prior to or during OJT.

A.14.3 Changes to the training processes which are made as a result of the review should be documented in the UTP, together with the reasons for making them

PART B – GENERIC UNIT TRAINING PLAN

The guidance in this document is not intended to prescribe the layout of a UTP or the quality process to be involved. However, it does indicate the minimum that would be needed to satisfy the criteria for approval by the Designated Authority.

INTRODUCTION

The introduction should identify the Unit, the Provider of Air Traffic Services and the level of UTP. i.e. Level 1 or Level 2. Both Level 1 and Level 2 UTPs should contain all sections below.

Level 1 UTP

Level 1 unit training plans will consist of transitional training and OJT. An outline structure of the unit training will be required, together with a description of the training, how it will be accomplished, its objectives and how they will be assessed.

Transitional training will usually consist of guided self study and briefings from an OJTI. Assessment will normally consist of oral testing conducted by the OJTI in the VCR and more practical assessments that enable the student/trainee to demonstrate his knowledge and skills.

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Level 2 UTP

Level 2 unit training plans will consist of transitional training, Pre-OJT and OJT, or just transitional training and OJT.

The transitional training is expected to be more structured than for level 1 UTPs and will consist of classroom instruction, formal written and oral assessments and, where appropriate, simulator training and the assessment of the application of ATC procedures.

Pre-OJT training will only be conducted where the unit has a simulator capable of faithfully replicating the ATC environment and operations at that unit.

SECTION 1 – Organisation of Training and Personnel Responsibilities

Section 1 of the UTP should contain:

a)   an organisational tree of the training structure within the organisation;

b)   the job titles, roles and responsibilities of persons involved in:

   i.   training policy and its application,

   ii.   transition and pre OJT training,

   iii.   OJT.

c)   details of the process by which the provider applies the requirement "to ensure that staff are adequately trained, motivated and competent for the job they are required to do, in addition to being properly licensed if so required", to its training staff;

d)   a brief statement of any other unit policies if they are material to the unit training, such as recruitment, initial training, retraining and termination policies;

e)   details of the process for reviewing the UTP, including any documentation to be used. This should include:

   i.   determining from the OJTI any shortcomings in the students/trainees' knowledge, understanding or application that should be addressed during transitional training,

   ii.   determining from students/trainees any additions or changes to the transitional training that would better prepare them for OJT.

These details are required for both level 1 and level 2 unit training plans.

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SECTION 2 – Training Plan Structure and Time Periods

Section 2 of the UTP should contain:

a)   an overview of the UTP which identifies the structure of the unit training in terms of transitional training, pre-OJT training where appropriate, OJT and the time periods allocated to each phase of training;

b)   details of the transitional training and where appropriate the pre-OJT training including:

    i.   the training timetable,

    ii.   the methods used for training, e.g. classroom lessons, guided self study, CBT and simulator training,

    iii.   the objectives of training for each phase,

    iv.   the assessment programme.

c)   details of OJT including:

    i.   the training timetable, giving the minimum and maximum times to complete this phase of training,

    ii.   the objectives for each topic and where appropriate sub-topic for each of the assessments to be conducted; if the objective may be met with the support of the OJTI this should be stated,

    iii.   the traffic levels (low, medium or high) at which the objectives will be assessed,

    iv.   the time periods at which assessments are to be conducted.

Minimum time. The 'minimum time' referred to in c) i. above would relate to student/trainee controllers who are training towards the particular rating for the first time. Controllers who had previously held the rating in question may, however, be accelerated through the UTP provided they meet the training objectives.

Maximum time. 'Maximum time' would be the time at which the student/trainee should be withdrawn from OJT as having failed to meet the objectives, and a major review of his progress conducted. The outcome should be either a structured plan of re-training, with time limit for satisfying the objectives, or termination of training.

OJTI operational time. Notwithstanding any other competence requirements or time constraints, an OJTI should be permitted to provide an air traffic control service without any training responsibilities for at least 25% of his operational time on the specific sector/operational position for which he provides OJT.

Transitional training. Transitional training should be fully documented showing the structure of this phase, its objectives and the teaching methods and assessments to be used. The objectives of each of the classroom lessons, guided self study and simulations should be included in the training plan. If these are available elsewhere, such as in the lesson packs or simulator briefs, this should be stated and only the subject need be noted in the plan.

Pre-OJT. Where there is a pre-OJT phase this should be fully documented. The type of simulator to be used and brief specifications indicating the extent to which it replicates the operational environment should be included. The objectives of each simulation exercise should be noted unless they are available in the exercise documentation, in which case an outline of the training purpose of each simulation or groups of simulations is all that would be required in the plan.

OJT objectives. The objectives for each level of OJT should be referenced against the Topics and Sub-Topics from the rating requirements. At larger, more complex units more specific objectives relating to each Sub-Topic may need to be developed, in which case they should be included in the UTP.

SECTION 3 – Training in Unusual Circumstances and Aircraft Emergencies

Section 3 of the UTP should contain details of emergency training including:

a)   Site specific emergency training given to students/trainees before they will be awarded a valid rating; and

b)   Site specific emergency training given routinely.

SECTION 4 – Assessments/Examinations

This section should include:

a)   the occasions upon which trainees will be assessed/examined,

b)   the methods by which the assessments/examines will be carried out,

c)   unit specific responsibilities of OJTIs, assessors and verifiers/examiners in the assessment/examination process,

d)   the process to be followed when a trainee is shown to be making less than satisfactory progress, particularly in respect of remedial training.

SECTION 5 – Training Records

This section should include complete training records for all students/trainees and cover all phases of the UTP. Records of transition, pre-OJT, OJT training and assessments should be to a common format.

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PART C – A SUGGESTED SCHEME FOR THE PERFORMANCE OBJECTIVES AND ASSESSMENT FOR OJT

C.1   Using the Rating Requirements

C.1.1   For level 1 unit training plans the generic performance objectives from the Rating Requirements should provide suitable objectives for OJT; all that is required is to determine which objectives must be met at the completion of each assessment level. An example of using the Rating Requirements to identify the appropriate performance objectives for each level is given below. The Topics and Sub-Topics are taken from Part A – Aerodrome Control Visual; only those that are to be assessed are shown. OJTIs would have to refer to the performance objectives and any specific unit objectives that are required when making an assessment.

Topic and Sub topic	Description	Assessed at level* *(see Part 1 para 4.6 of Guide)		
		50	100	150
A.1	**Check and operate communications equipment**			
A.1.1	Establish and monitor the communications equipment serviceability	X	X	X
A.1.2	Use the communications equipment	X	X	X
A.2	**Communicate from a visual control room**			
A.2.1	Use standard phraseology applicable to aerodrome control	X	X	X
B.1	**Correlate flight data into appropriate proforma for display**			
B.1.1	Obtain flight data information	X	X	X
B.1.2	Insert flight data into the appropriate proforma	X	X	X
B.2	**Maintain a representative flight data display for aerodrome control**			
B.2.1	Correlate flight data into a display for aerodrome control	X	X	X
B.2.2	Update the aerodrome control flight data display	X	X	X

Topic and Sub topic	Description	Assessed at level* *(see Part 1 para 4.6 of Guide)		
		50	100	150
C.1	**Obtain, interpret and disseminate meteorological information**			
C.1.1	Obtain meteorological information	X	X	X
C.1.2	Interpret meteorological information		X	X
C.1.3	Disseminate meteorological information		X	X
C.2	**Obtain, interpret and disseminate aeronautical information**			
C.2.1	Obtain aeronautical information	X	X	X
C.2.2	Interpret aeronautical information		X	X
C.2.3	Disseminate aeronautical information		X	X
D.1	**Select the runway in use and appropriate visual aids**			
D.1.1	Select the runway in use	X	X	X
D.1.2	Operate aerodrome lighting		X	X
G.1	**Manage flights operating in the vicinity of the aerodrome**			
G.1.1	Manage flights operating under the visual flight rules.	X	X	X
G.1.2	Manage flights operating under the instrument flight rules		X	X
G.2	**Manage aerodrome surface movements**			
G.2.1	Control aircraft on the manoeuvring area and aprons and vehicles and personnel on the manoeuvring area	X	X	X
G.8	**Effect liaison with other agencies**			
G.8.1	Liaise with non ATC agencies		X	X
G.8.2	Liaise with the safety services		X	X

Topic and Sub topic	Description	Assessed at level* *(see Part 1 para 4.6 of Guide)		
		50	100	150
G.9	**Handle diversions**			
G.9.1	Handle diversions			X
G.10	**Work as a team member for the aerodrome control operational position**			
G.10.1	Accept responsibility for the operational position		X	X
G.10.2	Monitor performance whilst responsible for the operational position			X
G.10.3	Transfer responsibility for the operational position		X	X
H.1	**Manage developed emergencies from the aerodrome control unit**			
H.1.1	Manage radio failures			X
H.1.2	Manage situations arising from unlawful interference			X
H.1.3	Manage Aircraft Emergencies			X
H.1.4	Provide Alerting Service		X	X
H.2	**Manage domestic contingencies in an aerodrome visual control room**			
H.2.1	Safely evacuate the control room			X

C.1.2 It is not necessary to assess whether or not a student/trainee has met the objectives for all Sub-Topics at all levels. In the example above, the Sub Topics G.10.1 to G.10.3 are associated with handing over and taking over watch. The objectives from the rating requirements for the aerodrome control visual rating for Sub-Topic G.10.1, Accept responsibility for the operational position are:

G.10.1.1   Compliance with licensing and medical requirements is confirmed.

G.10.1.2   Pre task briefing is carried out.

G.10.1.3   The current and projected traffic situation is obtained from the duty controller.

G.10.1.4   Current and projected workload is evaluated to determine whether the resources available are appropriate.

G.10.1.5   Action is taken to ensure resources are adequate for the task.

C.1.3   The objectives for G.10.3, Transfer responsibility for the operational position are:

G.10.3.1   The current traffic situation is clearly communicated to the relieving controller.

G.10.3.2   The current and projected operating conditions are clearly communicated to the relieving controller.

G.10.3.3   Current and projected workload is evaluated to determine whether the resources available are appropriate.

G.10.3.4   Action is taken to ensure resources are adequate for the task.

C.1.4   In the example above the assumption is that the OJTI performs the hand-over and take-over for the first 50 hours of training, after which the trainee performs this task under supervision. Once a Sub-Topic is introduced, the performance objectives associated with it should continue to be assessed at all further levels.

C.1.5   After attaining level 100 students/trainees will additionally be expected to analyse the workload they are experiencing and their ability to sustain it. The students/trainees are assessed at the 150 level against the performance objectives for G10.2, Monitor performance whilst responsible for the operational position. They must also be assessed against the performance objectives for G10.1 and G 10.3 for assurance that they are continuing to satisfy these objectives.

C.1.6   The performance objectives for G.10.2 are:

G.10.2.1   Assistance is called for in sufficient time to ensure personal capabilities are not exceeded.

G.10.2.2   Assistance provided to other team members is appropriate to the circumstances.

G.10.2.3   Current and projected workload is evaluated to determine whether the resources available are appropriate.

G.10.2.4   Action is taken to ensure resources are adequate for the task.

G.10.2.5   Rest/fatigue break requirements are complied with.

G.10.2.6   Concentration is maintained at an appropriate level for the task.

G.10.2.7   Indications of reduced or inadequate performance are acted upon in an appropriate manner.

C.2   Level 2 Unit Training Plans

C.2.1   At more complex units with Level 2 unit training plans the performance objectives from the rating requirements may be too generic to provide a satisfactory indication of a student's progress. For example Sub-Topic G.1.2 Manage flights operating under the instrument flight rules, Performance objective G.1.2.2, A control strategy is developed to achieve separation with the least average delay to flights.

C.2.2   The performance objective G.1.2.2 includes implementing a planned departure sequence, applying vortex wake separation and outbound IFR separations based on

speed category, outbound track, indications on the aerodrome traffic monitor etc. This is one of the major controlling tasks which should be broken down into unit specific objectives. The plans should also state the level of traffic, low, medium or high and the level of support from the OJTI at which the objective should be achieved for each assessment level. OJTI support level can be expressed as, with support, with minimum support and with no support. The traffic and support levels may be indicated as an opening statement relating to a list of objectives or for each objective.

C.2.3 For example a 50 hour check of performance objective G.1

G.1.2.2, A control strategy is developed to achieve separation with the least average delay to flights

Objectives to be achieved during low traffic levels with support from the OJTI

a) implement the planned departure sequence

b) apply IFR separation to departing aircraft

c) apply vortex wake separation

d) integrate arriving and departing aircraft

C.2.4 The above is just an example and unit objectives may be more specific. Units should avoid having too many objectives. OJTIs and the assessors will know, for example, the IFR separations specific to the unit, so it is not necessary to write an objective for each individual separation.

C.2.5 At the 50 level students may also be expected to undertake some co-ordination with approach control. They may be required to ask radar for a departure gap in the approach sequence. Objectives for this would be included in Sub-Topic G.3.1 – Co-ordinate with approach control operational positions.

C.3 Summative and Formative Training Reports

C.3.1 For Level 1 unit training plans, student/trainee performance should be recorded for each training session to ensure that they are kept aware of their progress and given the opportunity to address any shortcomings. For level 1 training plans the unit might use individual report forms, or a plain ruled book in which the student/trainee keeps a log of training sessions against each of which the OJTI makes comments.

C.3.2 Assessments at the required levels should take into account the trainee's performance noted in the training log. Summative assessments may be conducted for each identified level, but it is satisfactory for the OJTI to make an assessment based on the training log, particularly where the OJTI making the assessment also regularly supervises the trainee during OJT.

C.3.3   Assessment forms may be of the type indicated in this guidance document or can be based on a list of the Topics and Sub-topics in para 3.1 above, used to determine the training objectives for each assessment level. In the example below 'X' indicates the sub topic to be assessed at level 50. 'S' indicates that the student/trainee has met the objective, whereas 'N' would show that he has yet to meet the objective.

Topic and Sub topic	Description	Assessed at Level 50	
A.1	**Check and operate communications equipment**		
A1.1	Establish and monitor the communications equipment serviceability	X	S
A1.2	Use the communications equipment	X	S
A.2	**Communicate from a visual control room**		
A2.1	Use standard phraseology applicable to aerodrome control	X	S
B1	**Correlate flight data into appropriate proforma for display**		
B1.1	Obtain flight data information	X	S
B1.2	Insert flight data into the appropriate proforma	X	S

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C.4   Level 2 Unit Training Plans

C.4.1   Units with level 2 unit training plans will be expected to use formative and summative training reports, examples of which are given below. Units may use any design of report they wish provided it accurately indicates the students progress. The summative summary may be used to indicate if a student has met or has not yet not met the training objectives. As indicated previously a unit may have a number of unit specific objectives associated with the Rating Requirement's performance objectives. It is not necessary for all these additional objectives to be included in training and assessment reports provided they are documented in the unit training plan and the OJTIs, students and assessors are aware of them.

Aerodrome Control Instrument Training Formative Report

Name		Date	
Training time this session		**Total training time**	

Traffic :   Heavy   Medium   Light

Objective 1: Establish and monitor the communications equipment serviceability	Summative Summary
Performance objectives	
Visual and/or aural indications are checked whilst making and receiving transmissions for indications of normal operation.	
Documentation confirming equipment status is checked.	
Malfunctions and defects are recorded and reported to the appropriate authority according to standing procedures.	
Formative summary	

C.4.2   To ensure consistency, the phrasing of *e*ach performance objective should remain the same throughout the plan.

C.4.3   Ultimately the same basic layout can be used for the summative assessment forms which facilitates comparing the students progress indicated by the formative reports with the summative assessment.

Aerodrome Control Visual Training Summative Assessment

Level 50

Name		Date	
Training time this session		**Total training time**	

Traffic :   Heavy   Medium   Light

Objective 1: Establish and monitor the communications equipment serviceability	Grading
Performance objectives	
Visual and/or aural indications are checked whilst making and receiving transmissions for indications of normal operation.	
Documentation confirming equipment status is checked.	
Malfunctions and defects are recorded and reported to the appropriate authority according to standing procedures.	
Assessors comment	

C.4.4   The report will need to show whether the trainee's performance is satisfactory or improvement is needed. Units may wish to include a more detailed breakdown to indicate whether the trainee is just making satisfactory progress, is considerably ahead of expectation or falling well behind. Whatever method is used, it should be self evident from the assessment form what the target is.

C.5   Verification of Assessments

Units must, as part of the quality control system for their unit training, have processes to ensure that the assessment process is been conducted in accordance with the UTP. Units should allocate to an assessor the responsibility of independently checking summative assessments and formative reports to ensure that the result of the assessment can be justified.

APPENDIX 3

UNIT COMPETENCE SCHEME

1. Introduction

1.1 The scheme described in this Appendix is in use in an ECAC member State and would be appropriate at most ATC units that will put in place a competence scheme. The number of staff to support the implementation of the competence scheme is not the subject of this guidance material A or an additional one for ESARR 5. This competence scheme provides the necessary guidance for those intending to set-up competence scheme for air traffic controllers.

1.2 Under that State's ATC licensing scheme, air traffic controllers must be assessed at least once every 12 months for their ongoing competence to provide a safe ATC service on each of the sectors or operational positions for which they hold a unit endorsement.

1.3 The competence of controllers is assessed by unit competence assessors (known historically in this scheme as 'competence examiners'), at units that participate in the local competence scheme, or at the smaller units by the Designated Authority's Inspectors of Air Traffic Services. This Appendix does not describe the assessment of competence by the Designated Authority's personnel.

1.4 To be permitted to conduct their own competence assessments, units must meet the licensing requirements set out below.

2. Providers of Air Traffic Services

2.1 At units with approved local competence schemes, assessment of the continuing competence of controllers for the renewal of unit endorsements may be conducted by local competence examiners/assessors approved by the Designated Authority.

2.2 The scheme should be fully documented indicating:

   a)   the process by which controllers will be assessed;

   b)   the operational objectives they will be required to meet;

   c)   the person(s) responsible for formally accepting that the process has been correctly conducted;

   d)   the formal mechanism by which the competent authority will notify the controller of the result of any competence assessment;

   e)   the method by which the unit keeps controllers' competence records.

2.3 Assessment for competence should be conducted when there is a representative traffic sample in respect of the traffic levels and the range of procedures to be used. Simulators may be used to augment the assessment of competence.

2.4 The Designated Authority will audit units' Local Competence Schemes.

2.5 The outcome of meeting the above requirements is expected to be:

2.5.1   For paragraph 2.2 a):

(i)   An outline of the whole scheme, giving such details as the identity, number and organisation of examiners and the process for selecting and training them;

(ii)   The process for determining competence and for re-training where required;

(iii)   The process for allocating controllers to particular examiners and any procedures to permit controllers to appeal against being allocated to a particular examiner.

(iv)   Administrative arrangements for advising controllers when their competence assessment is due and the processes by which the competence check will be conducted.

(v)   The records to be kept by the competence examiner/assessor and how they record and advise the provider of the outcome of the competence assessment.

(vi)   The name of the person on the unit who is formally responsible for ensuring that the process has been correctly carried out.

2.5.2   For paragraph 2.2 b), the objectives may be either the performance objectives from the relevant parts of the task analysis published in the rating requirements and unit specific objectives extracted from the final assessment objectives of the unit training plan, or broad objectives or category standards associated with a standard scale.

2.5.3   For paragraph 2.2 c), the name(s) of the person(s) or job title of responsible manager to whom the competence examiners/assessors report the outcome of the competence assessments.

2.5.4   For paragraph 2.2 d), the way in which the Designated Authority is advised of the results of competence assessments. This does not imply that the unit must formally advise the Designated Authority of the outcome of each competence assessment. Where so authorised, the unit could maintain records on site and make them available for audit by the Designated Authority.

2.5.5   For paragraph 2.2 e), the recording system must be auditable to enable the Designated Authority to satisfy itself that the competence scheme is being correctly conducted. Written records kept by the competence examiner/assessor should be retained for a reasonable period (e.g. from three to five years)depending on what is required by the Designated Authority.

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3.   Selection of Competence Examiners

3.1   Competence examiners/assessors (referred to in the licensing requirements as 'Local Competence Examiners' or 'LCEs') are chosen by the watch management on the basis of their experience, their suitability and willingness to undertake the task. Other possibilities of choosing Examiners/Assessors will be welcome based that they are approved by the Designated Authroity. It is not always the best controllers who make the best competence examiners. A competence examiner requires interpersonal and communication skills, personal integrity and a commitment to maintaining standards which are not necessarily primary considerations when selecting personnel to become air traffic controllers.

3.2   When this scheme was first introduced in the State concerned, controllers were designated as competence examiners by unit management. It may be more appropriate to allow operational controllers to nominate candidates for the unit management to consider for appointment as competence examiners. Unit management would have the authority to reject the nominations, but would be required to provide a formal written justification of their decision.

3.3   Having been selected for duties as a competence examiner the controller is informed and if he agrees to undertake the task he is allocated to an examiners' course run by the Designated Authority. This examiners' course is similar to the course conducted by the Institute of Air Navigation Services (IANS) in Luxembourg. The candidate must pass the course at the first attempt as further attempts are not permitted.

3.4   Having passed the examiners' course the candidate is allocated to an experienced competence examiner who acts as a mentor to ensure that the new examiner is fully conversant with the unit's competence scheme. The newly trained examiner is not allocated any controllers whose competence he will assess until he has conducted a number of dedicated practical checks and oral assessments under the supervision of the competence examiner who is training him.

3.5   Units should have procedures to enable controllers to appeal against being allocated to competence examiners who they consider may be prejudiced against them. This formal process should be in place but is unlikely to be invoked if all the competence examiners are involved in the allocation process. To prevent complacency and to assist in ensuring consistency of assessment, controllers should be allocated to a different competence examiner at least once every five years and preferably every three years.

3.6   The licensing scheme places a number of additional responsibilities on the competence examiner to check on the licence qualifications of the controller whose competence he is assessing. The following is an extract taken from the licensing regulatory documentation.

Local Competence examiners

Local competence examiners (LCEs) are responsible for determining whether controllers they are assessing are competent to exercise the privileges of their ATC licences in respect of particular unit endorsements.

An LCE is only authorised to assess for continuing competence for the renewal of a unit endorsement on sector(s) or operational position(s) for which his ratings are valid.

LCEs shall ensure that controllers whose competence they examine towards the renewal of a unit endorsement:

(a)   hold a current air traffic controller licence;

(b)   hold current unit endorsements for the sector(s) or operational position(s) for which competence is to be assessed;

(c)   have successfully completed unit TRaining in Unusual Circumstances and Emergencies(TRUCE) and been assessed as competent to handle unusual circumstances and aircraft in emergency;

(d)   hold a current medical certificate of the appropriate class.

Note. The 'TRUCE' training represents the annual training and assessment of the controller's ability to handle aircraft emergencies and failure of ATC equipment.

3.7   Units should have a process for internal audit of the competence scheme. Written audit reports should be produced and retained so as to be available for audit by the Designated Authority.

4.   Conduct of Competence Assessments

4.1   Competence may be assessed by a process of continuous assessment, by a dedicated practical check, or by a combination of both of these methods. Additionally an oral examination of the controller's knowledge and understanding of local and national ATC procedures is conducted. The following is an extract from the licensing requirements that describe the processes.

> ***Conduct of annual competence assessments by local competence examiners***
>
> *The LCE must only certify continuing competence on sector(s) or operational position(s) for which his ratings are valid.*
>
> *The assessment of continuing competence may, at the discretion of the LCE, be conducted by:*
>
> *(a)   continuous assessment; or*
>
> *(b)   a dedicated practical check; or*
>
> *(c)   a combination of (a) and (b) above*
>
> 5.1.1   Continuous assessment
>
> *Continuous assessment may be achieved by the LCE observing the standard of the air traffic control service provided by those whose competence he will certify as he works with them during normal watch keeping duties. The LCE should, before he certifies the controller as competent or declares him as not competent, apprise the controller of his performance.*

Where the LCE has not had sufficient contact with the controller to adequately assess his performance he will not certify the controller's competence until he has conducted a dedicated practical check. The controller concerned must be advised that a dedicated practical check is to be conducted.

To conduct a dedicated practical check, the LCE should sit adjacent to the controller to observe any radar or data display being used and to monitor the RTF and telephones. If there are overriding operational reasons an LCE may assess a controller from a remote position. It is important in these circumstances that the controller is advised of the situation. Following a dedicated practical check the LCE should de-brief the controller being examined and apprise him of his performance.

4.2 At least once during the assessment period, unit management should obtain a random unannounced recording of the RTF during a period when the controller who is being assessed is providing an air traffic service. The competence assessor and the controller should listen to the tape together. The competence assessor should make a brief written note of any comments, indicating whether the controller's use of RTF was satisfactory.

5. Record Keeping

5.1 Competence examiners would be expected to keep records of the periods during which they assessed the competence of the controllers they have been allocated. These would be short and informal if the examiner had no doubts about the controller's competence. Where the examiner is concerned that a controller's operational proficiency is falling, but not yet to the extent that he is assessed as not competent, more comprehensive records would be required.

5.2 The formal assessment of the controller's ongoing competence to satisfy the licensing/certificate of competence requirements should be to a standard format agreed between the provider and the Designated Authority.

6. The Oral Assessment

6.1 The oral assessment is usually conducted after the practical competence assessment, but this is not a requirement. Oral assessment requires considerable skill and it is difficult to ensure consistency of content of the assessment between the individual competence examiners. It does, however, have the advantage of the examiners being able to ask scenario type questions to illustrate operational situations that the less experienced controller may not have encountered and to determine how they would have dealt with them. The unit should review ATC incidents and other operational situations that have caused difficulties for useful material on which the competence examiners can base questions.

6.2 It is easier to administer and ensure the consistency of written assessments particularly when using multi choice questions. However, to comprehensively assess the controller's knowledge and understanding of unit and national ATC procedures would require a large question bank and procedures to maintain and update the questions. Although multi choice questioning can test knowledge, it is not appropriate for determining what a controller would do in a particular operational situation.

6.3   The best compromise would probably be a combination of multi choice questions that assess the controller's knowledge of unit and national procedures conducted using CBT and a separate oral assessment which tests the controller's reactions to operational situations.

6.4   The following is an extract from the licensing requirements for oral assessments including the action to be taken when a controller fails an oral assessment.

> *At some time prior to the date by which competence must be certified the LCE must conduct an oral check. Questions asked will be those indicated below:*
>
> *(a)   Questions from:*
>
> > *(i)   the unit ATC operating procedures manual*
> >
> > *(ii)   current supplementary instructions;*
> >
> > *(iii)   temporary operating instructions and other relevant operational documents;*
> >
> > *(iv)   relevant parts of National ATC operating procedures manual*
> >
> > *(v)   relevant AIC's;*
> >
> > *(vi)   other safety related documents;*
>
> *(b)   questions relating to the practical check;*
>
> *(c)   scenario type questions relating to:*
>
> > *(i)   the use of operational procedures not seen during the practical check; and*
> >
> > *(ii)   handling of unusual situations and aircraft in emergency and*
>
> *(d)   any additional requirements as part of the Local Competence scheme.*

Being assessed as not competent at an oral assessment will not result in a controller's current unit endorsement being withdrawn. LCEs must report failures of the oral assessment to the ATS Provider concerned, who should consult with the Designated Authority to determine the action to be taken. The controller must pass the oral assessment before the unit endorsement can be reissued. Continued failure of the oral assessment may result in the suspension and ultimately the revocation of the ATC licence or any of its associated ratings and rating endorsements.

7.   Failure of a Competence Assessment

7.1   With a competence scheme based on continuous assessment competence examiners should be able to detect controllers whose operational proficiency is declining but who are not yet below the required competence level. An examiner who identifies such a problem should talk over his concerns with the controller to determine, if possible, the cause of the decline and determine in conjunction with the unit management any remedial action to be taken. If the remedial action proves ineffective and the controller's performance continues to decline he should, where possible, be given the opportunity to voluntarily give up a validation rather than be declared not competent and be subject to licensing action by the Designated Authority.

7.2   Where continuous assessment indicates that a controller's competence may be in doubt, the competence examiner should conduct a dedicated practical check to confirm his assessment. If this check confirms that the controller is not competent the controller should be immediately informed of the result and unit or watch management advised. The controller must be withdrawn from operational duty. If the controller is to undergo retraining the Designated Authority should be advised, who will suspend the controller's rating or unit endorsement to ensure that while undergoing OJT the OJTI is responsible for the safety of the air traffic control service being provided. As in the paragraph above on falling competence, the opportunity to enable a controller to voluntarily give up a validation should be considered.

7.3   The following is an extract from the licensing requirements relating to controllers who are assessed as not competent at an annual dedicated competence check:

> ### Retraining and Assessment of Controllers Found Not Competent
>
> *A controller who has been assessed as not competent at an annual competence assessment will not have his unit endorsement renewed. Before the unit endorsement can be reissued, he will be required to undergo a period of training under the supervision of an OJTI and demonstrate his competence at an assessment/examination.*

8.   Consistency of Assessment Across the Unit or Watches

8.1   In the competence scheme being described each watch has a number of Competence Examiners determined by a formula that permits each examiner to assess the competence of a maximum of six other controllers. Competence Examiners also check the operational competence of other competence examiners who are allocated to them in the same way as are operational controllers.

8.2   Each watch has a designated competence co-ordinator who is one of the Competence Examiners. They have a number of functions; one of the most important is to establish the safety culture amongst the competence examiners and other operational controllers through briefings and presentations identifying incident trends. They are also responsible for ensuring consistency of assessment amongst the other competence examiners on their watches. By meeting, under the chairmanship of operational unit management, with competence co-ordinators from other watches, they ensure consistency of assessment across the unit.

8.3   Competence examiners can also play an important role in establishing a safety culture amongst the operational controllers by asking questions on incident trends and other safety related topics during the oral assessment. Their other duties may also include taking part in simulations and checking out controllers following the introduction of new operational procedures. They may also have a role to play in unit investigations following incidents or accidents in determining whether or not a controller's competence is in doubt. As part of the strategy to assure consistency of assessment across watches, competence examiners from one watch attend dedicated practical checks conducted on other watches.

9.   Summary

The competence scheme is a process by which a provider assures the Designated Authority that the air traffic controllers, at units where he is the provider of air traffic services, are competent. It is a unit based process and units are expected to deal internally with the competence of their controllers, the Designated Authority only becoming involved where the unit cannot resolve a competence issue or a controller has been assessed as not competent and licensing action is required.

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