



**AIM TRAINING
CATALOGUE 2020**

The first Training Academy exclusively focused on AIM

The GroupEAD team consists of experts from all key areas of air traffic business including AIS/AIM Officers, Air Traffic Control, Airports and Airlines. Our unique background of multinational and multilingual staff members allows us to provide our experience to our clients in an engaged and flexible way. Refreshing the know-how is a key to continuous improvement.

GroupEAD's AIM Training Academy is pleased to provide varied trainings to support different types of learners and subject areas in our full service portfolio. We provide standard and customized training solutions to enrich your experts to benefit your aeronautical data organization. Our learning strategy promotes long retention levels by mixing methods including lecture, reading, audio-visual, demonstration practice and real environment simulation, discussion and scenario based trainings. Our course curriculum includes

- Training courses are designed specifically for AIM staff
- Trainers experienced and operational experts
- Flexibility to address needs through Modules and Training Locations

Content customization to fit your requirements. You will enjoy our training through active participation and involvement.

More than 900 Training
courses conducted
2003-2019

More than 40 different
organisations during
2019

Handling, management and operation of data are our core competences.

Transferring these competences through training is the way GroupEAD supports the AIM Community to move forward.

GroupEAD has developed a sophisticated Quality Management System (QMS), and is ISO 9001:2015 certified with continuously successful re-certifications over the past years.



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General Information

On GroupEAD Training Programme

Frankfurt, Madrid or at your Place!

We are pleased to offer training in either of our 2 classroom locations or to travel to your location. Within the programme, you will see our pre-planned trainings occur in either our Madrid, Spain or Frankfurt, Germany training and operations centres. In addition to our pre-planned training listed in this catalogue, we can also provide on request trainings at our place or happy to travel to yours. We only need a classroom set-up (with or without computers, depending on the courses) to travel to you!

The standard language of training is English, but based on our talented training staff, we are pleased to offer some of our training courses in a variety of languages such as:



Of course our training material remains in English, but contact us if you are interested in the possibilities above.

Course Enrolment

1. Enrolment on our website – please join us at www.groupead.com and click on “AIM Training Academy” button in the top row. This link will take you to our training portal where you can explore and sign up for courses with your own login.
2. Electronically – you can download our enrolment form in pdf from our website or request in an email to training@groupead.com. Just print, fill it in and email it back to us and we will enroll you in the classes of your choice.
3. If you cannot get to a computer, we can still receive your enrollment form by regular mail to the address at the top of the enrolment form on page 29 of this book.

Please plan your enrolments that it reaches us at minimum 35 days in advance to the course start date. Once we receive it, you will receive a confirmation email. If you do not receive a confirmation from us, send us an email as it may have been lost in transit!

If you would like to book within 35 days of the course start date, contact us to see if we still have seats available. If we do, we would be happy to include you in the training.

Training Fees

Prices in this brochure cover the costs of the training including all documentation and are quoted in Euro (excluding VAT) based on a per person price.

Course Start, Details and Classroom

Once your enrolment is processed, the online training portal will show your course status as "Scheduled". This will let you know that you have a seat in the course reserved. About 35 days in advance of the course, once the course has been confirmed, the status will change to "Confirmed" and you will receive an official invitation via email with all details needed to join the class. In general, on the first day all courses will start at 0900 hrs local time. Please plan to arrive 15 min before the start time so that the class can also begin on time. Your training material will be provided by the Trainer on your first day. After completion of the course(s), you will receive an individual Certificate of Attendance for each course you attended.

Both of our training locations have a break area where you can refresh yourself with a drink and a cookie before the class and during breaks. There are close-by eating facilities where lunch can be purchased or alternatively, you can pack your lunch and eat in our comfortable lounge areas.

Choosing your Courses

We have developed a Training Programme addressed to those people who want to become AIM Staff including simulation experience in a real AIM environment. Whether you have aviation background or not, our Training Programme will allow you to understand and participate in present and future AIM developments.

AIM Basic Training

If you do not have aviation background, these Training courses will allow you to acquire the necessary know-how to join Organisations managing aeronautical data.

AIM Advanced Training

If you have aviation background and you want to improve your skills in AIM, these Training Courses will provide you with the necessary knowledge to be part of daily AIM operations.

Procedure Design

In depth training courses by module to acquire the knowledge needed to design procedures based on ICAO standard.

Material and Ownership

All copyrights and other intellectual property rights of the course material, including all documentation, data, technical information and know-how provided as part of the training, remains in possession of GroupEAD, unless otherwise specified in the material. All such information shall be held in confidence and may not be disclosed to third parties without the express permission of GroupEAD.

Substitution, Postponement, Cancellation Policy

Booked participants may be substituted up until the training course will commence if the replacement trainee fulfills the necessary conditions for the training course in question. Substitution of trainees is for free. No refunds will be made for non-attendance of trainees.

If the postponement is requested before 35 days in advance of the training, all out of pocket costs to GroupEAD will be covered by Customer.

If the postponement is requested 35 days or less in advance of the training, in addition to all out of pocket costs, a 500 EUR fee will be issued to cover the additional management and scheduling costs associated to postponement.

Up to 35 days prior to the training, a cancellation will not be charged. Upon cancellation within 15 to 35 days prior to the training, 50% of the contract value will be charged. Cancellation less than 15 days prior to the training will be charged in full. In case cancellation cost for travel arrangements for trainer occur, those cancellation cost plus a 10% handling fee will apply in addition.

The Terms and Conditions for AIM training are available upon request or by download from our website "AIM Training Academy" at www.groupead.com.

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GroupEAD Europe S.L. is committed to protecting and respecting your privacy and we are in compliance with the EU General Data Protection Regulation (GDPR). Further details can be found on our website under Privacy Note.

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Training 2020

Schedule and Price List

Courses	Length	Scheduled Dates	City	Price per 1 Person
AIM Basic				
AIS Ab Initio Course	15 days	27. January - 14. February	Frankfurt	4.950 €
		22. June - 10. July	Frankfurt	4.950 €
Air Navigation for AIS	3 days	24.-26. February	Frankfurt	1.100 €
		25.-27. May	Frankfurt	1.100 €
Dynamic Data	2 days	17.-18. February	Madrid	1.100 €
		27.-28. April	Madrid	1.100 €
Aviation for Executives	2 days	20.-21. February	Madrid	1.100 €
AIM Advanced				
AIXM 5.1 Basic	5 days	04.-08. May	Madrid	1.950 €
		01.-05. June	Madrid	1.950 €
		28. September - 02. October	Madrid	1.950 €
		16.-20. November	Madrid	1.950 €
AIXM 5.1 Advanced	5 days	08.-12. June	Madrid	1.950 €
		05.-09. October	Madrid	1.950 €
		23.-27. November	Madrid	1.950 €
AIXM 4.5 Basic	5 days	On request	On request	1.950 €
AIXM 4.5 Advanced	5 days	On request	On request	1.950 €
AIS To AIM Basic	2 days	09.-10. March	Madrid	1.100 €
		04.-05. May	Frankfurt	1.100 €
		02.-03. November	Madrid	1.100 €
AIS To AIM Advanced	3 days	11.-13. March	Madrid	1.400 €
		06.-08. May	Frankfurt	1.400 €
		04.-06. November	Madrid	1.400 €
ICAO documents for AIM. Annex 15, PANS-AIM and Doc 8126	2 days	On request	On request	1.100 €
Quality Assurance	3 days	16.-18. March	Madrid	1.400 €
Electronic Terrain and Obstacle Data (eTOD)	2 days	18.-19. May	Frankfurt	1.100 €
		10.-11. November	Frankfurt	1.100 €
Global Navigation Satellite System (GNSS)	2 days	15.-16. January	Madrid	1.100 €
		15.-16. July	Madrid	1.100 €
ADQ Executive Awareness	1 day	23. March	Madrid	700 €
ADQ Requirements & Implementation	5 days	30. March - 03. April	Madrid	1.950 €
Procedure Design				
General Criteria and Conventional Practice	4 weeks	On request	On request	On request
Performance Based Navigation (PBN) Procedures	2 weeks	On request	On request	On request
RNP Navigation (Doc 9905) & BARO-VNAV	2 weeks	On request	On request	On request
Helicopters (Point in Space) Procedures	1 week	On request	On request	On request
PANS OPS Recurrent Course	1 week	On request	On request	On request
Obstacle Assessment and Management	1 week	On request	On request	On request

AIS Ab Initio Course

AIM-AIS



Course Details

Duration: 15 days, classroom

Participants: Future AIS/AIM Officers with no or limited aviation knowledge

Minimum number: 5

Course Objective

This course provides the prospective AIS/AIM Officer with the background aviation knowledge to follow further trainings to become an operational member of an AIS department. The course will cover a variety of modules that introduce the participant to the aviation industry.

Course Content

Module 1: Introduction to AIS: This module will cover the definition and tasks of an AIS unit, the need for aeronautical information in ATM, including global uniformity in aviation data, and the respective ICAO documents related to the AIS functions, including the ICAO Annexes, Documents and Standard Practices

Module 2: Aviation Legislation: Introduction to key national and international aviation organizations, ICAO and Air Navigation Services. The participant will be introduced to the Rules of the Air concerning classes and functions of airspaces and the associated flight rules (VFR/IFR).

Module 3: AIS Data and Documentation: This module covers the differentiation between static and dynamic data and the methods how this information is distributed outside of the AIS unit (AIP, NOTAM, SUP, AMDT, AIC etc.). Participants will understand the organization of the unit including workflows with other related services. Raw data from point of collection to distribution pertaining to the Aeronautical Data Chain will be discussed in detail. Dynamic data will include the main concepts of this type of data, the different types of TAM messages and NOTAM/SNOWTAM creation, distribution and processing concepts, including database completeness and coherence messages. Discussion will include Pre-Flight Information Bulletins (PIB) types, content and structure.



Module 4: Principles of ATM: In this module, the participant will learn to recognize the different subjects related to Air Traffic Management and explain the main concepts of ATM and its features. Contents will cover the types of Air Navigation Services (ATS, ATFM, CNS etc.), flight data processing, altimetry and level allocation, separation principles, collision avoidance, Flow and Capacity management. Participants will learn about the phases of emergency, air-ground communications, standard ICAO phraseology, phonetic alphabet, ATC Clearances and Instructions, acronyms and terminology.

Module 5: Equipment and Systems: This module will familiarize the participant with the different types of aeronautical telecommunication and surveillance systems, including principles of radio, frequency, networks and broadcasting systems. Centralized Database Concept including real world examples and focus on the European AIS Database (EAD) is covered.

Module 6: Aerodromes: This module will introduce the participant to the basics of aerodromes and recognizing the main elements and parts that make up the aerodrome environment. Content includes discussion and focus on aerodrome layout, including runways, taxiways, apron, landing areas, services and facilities, obstacles and aerodrome data, lighting including familiarization with Heliport.

Module 7: Characteristics of Aircraft: This module introduces the participant to the principles of flight, types and characteristics of aircraft and aircraft performance at take-off, cruise, descent and landing. It includes an introduction to the types and categories of aircraft and how to identify them.

Module 8: Introduction to Air Navigation: This module focuses on the concepts behind air navigation, beginning with the earth, geodetic information, magnetic field, projections, reference systems etc. Further discussion will include applied navigation, NAVAIDS and conventional flight procedures.

Module 9: ATS Reporting Office (ARO): This module covers the main concepts and tasks of the ATS Reporting Office. Flight plan and flight plan messages will be discussed in detail including the types and message replies and associated actors.

Module 10: Quality Management: This module introduces the need and benefits of a Quality Management System, including the ISO standard with focus on KPIs, certification and audits. Coverage includes the need for a system related to the ICAO and EUROCONTROL requirements for AIS units.

(Portions of this course can be purchased separately upon request).

Air Navigation for AIS

AIM-NAV

Course Details

Duration: 3 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Course Objective

This course will provide the participant with the background knowledge related to Air Navigation including the earth, types of projections, Navigation Aids and conventional flight procedures.

Course Content

- The Earth, including reference points, lines, direction, distance, position, geodetic concepts, the magnetic field and compass and vertical, horizontal and temporal reference systems.
- Projections including the basis for type of projections and their uses in aviation charting.
- Applied navigation including distance between two points, speed and course.
- Navigation Aids with coverage of on-board systems and instruments and ground based/ satellite systems (NDB, VOR, TACAN, ILS etc.)
- Conventional flight procedures such as holding, IAP, SID, STAR etc.





Dynamic Data

AIM-DYN

Course Details

Duration: 2 days, classroom
Participants: Current and future AIS/AIM Officers
Minimum number: 5

Course Objective

With this course, the participant will be able to describe the main concepts of Dynamic Data, list the different types of TAM messages, recognize the codes used in the Q Line to process the information contained in a NOTAM

Course Content

The student will be able to read and understand the information contained in a NOTAM. As well, the participant will be able to create new NOTAM and a complete and coherent database. He/she will handle the other type of TAMs, like SNOWTAM, state the concept of the Pre-Flight Information Bulletin (PIB), describe the scope, content, types and structure of PIB. At the end of the course, the participant will be able to describe the evolution of today's dynamic data to a new format as the Digital NOTAM.

From: Indicate								
Address:								
Date and time of day		431						
Originator's address		431						
Group: Series, Routine and identifier								
NOTAM conveying new information	NOTAM (series and number/year)							
NOTAM replacing a previous NOTAM	NOTAM (series and number/year) (series and number/year of NOTAM to be replaced)							
NOTAM cancelling a previous NOTAM	NOTAMC (series and number/year) (series and number/year of NOTAM to be cancelled)							
Qualifiers								
PIB	NOTAM Code	Route	Priority	Class	Lower Limit	Upper Limit	Comments, Remarks	
Q	N						431	
Identification of CDD (radio altimeter in which the facility, altitude or condition reported on is located)				N				431
Period of validity								
From: (date and time group)	N						431	
To: (PIB or reference group)	N						431 ESP PIB	
Time Reference (if applicable)	N						431	
Text of NOTAM (Plain Language Entry Using EAD Abbreviations)								
N				431				
Lower Limit	N					431		
Upper Limit	N					431		
Signature								

Aviation for Executives

AIM-OVR

Course Details

Duration: 2 days, classroom

Participants: Managers and Administrators newly working in aviation

Minimum number: 4

Course Objective

This course will provide the participant with general knowledge related to Aviation, allowing for familiarization in the aviation industry

Course Content

This course covers the AIS Ab-initio course at an introductory level to provide a basic understanding of the background knowledge needed to manage or administrate in the aviation industry. Topics include:

Starting with an introduction to AIS and to the aviation legislation, the participant will familiarize with the AIS Data and documentation, he/she will learn and explain the principles of the ATM, the equipment and systems and the basic layouts of the airports. The participant will be able to state the characteristics of an aircraft and do a brief introduction to the air navigation main topics. A final part of the course will provide with an overview of the Air Reporting Office (ARO) and the basics of a Quality Management System



AIXM 5.1 Basic

AIXM-5.1B

Course Details

Duration: 5 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Course Objective

With the completion of this course, participants will be familiar with today's data models for Aeronautical Information storage and exchange as well as create their own model. Also participants will be introduced to the basics of UML, focusing on Class Diagrams, as well as to AIXM 5.1 and analyse its requirements. They will study the AIXM 5.1 UML Model and create their own xml code based on their own model to the basics of GML. Additionally, participants will receive an introduction to the basics of XML and GML and will create their own GML code based on their own model. The AIXM 5.1 XML Model/Schema will also be studied.

Course Content

The following technical topics will be covered during the course:

Data models for aeronautical information storage and exchange

- AICM and AIXM Overview
- Airport Mapping Exchange Model (AMXM)
- Weather Information Exchange Model (WXXM)
- Airport Network Information Exchange Model (ANXM)
- Flight Information Exchange Model (FIXM)
- Terrain Information Exchange Specification (TIXS)
- System Wide Information Management (SWIM)
- ATM Information Reference Model (AIRM)
- The Future of the data exchange models

Introduction to AIXM

- Current and future AIM information flows
- Version update to AIXM 5.1.1
- Future AIXM versions

AIXM 5.1 Requirements and approach

- Approach
- Architecture
- Requirements Analysis and Design
- AIXM 5.1 and GML

UML Basic Concepts

- The class model
- Database modelling

AIXM 5.1 UML Model

- UML Modelling conventions
- Other aspects of the model

XML Basic Concepts

- Getting to know XML
- Well-formed XML File
- Valid XML file

Geography Markup Language

- Geometries in GML
- GML Core and application schemas
- Dictionaries
- XML and GML

AIXM 5.1 XML Model/Schema

- AIXM – core XSD
- Mapping inheritance
- Mapping Name of Classes
- Mapping Features
- Mapping Objects
- Mapping Choices
- Mapping relationship to Objects
- Mapping relationship to Features
- Mapping Data Types

AIXM 5.1 Advanced

AIXM-5.1A

Course Details

Duration: 5 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Prerequisite: AICM/AIXM 5.1 Basic Course

Course Objective

Participants will study AIXM 5.1 Temporality Model. Additionally, the course will provide participants with introduction to AIXM 5.1 Feature Identification and references, AIXM 5.1 Metadata profile, GML recommendations for aviation data as well as AIXM 5.1 Business Rules and the basics of data edition and processing using Excel. Participants will be able to map raw data to AIXM 5.1 using Altova MapForce, and edit and validate AIXM 5.1 using Altova XML Spy.

Course Content

The following technical topics will be covered during the course:

Temporality model

- Building the temporality model
- Properties with schedule
- Application aspects
- Usage examples

AIXM 5.1 Feature Identification and Reference

- UUID definition
- Namespace
- Uniform Resource Identifier (URI)
- AIXM 5.1 Feature Identification using UUID
- Feature Reference (xlink:href)

Use of GML for aviation data

- Geographical data in Aeronautical Information
- WGS-84
- Positions
- Lines and Surfaces
- Airspace aggregation
- Point references and annotations
- Geographical border references
- AIXM GML Profile

AIXM 5.1 Metadata Profile

- Aviation Profile of ISO 19115
- Metadata requirements

AIXM 5.1 Business Rules

- Semantic of business vocabulary and business rules (SBVR)
- Schematron
- XML Schema vs. Schematron
- AIXM business rules

Data Edition and Processing

- Compilation of the data received
- Edition of Raw Aeronautical Data

Mapping data to XML Using Altova MapForce

- Overview
- Common mappings for aeronautical data
- Saving results AIXM/XML file

Edition and validation of AIXM/XML files using Altova XMLSpy

- Overview
- Edition of AIXM/XML message files
- Schema view
- Check well-formedness of AIXM files
- Validate AIXM messages



AIXM 4.5 Basic

AIXM-4.5B

Course Details

Duration: 5 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Course Objective

By attending this course the participant will be familiar with the current computer models intended for aeronautical data storage and exchange. Aeronautical Information Conceptual Model (AICM) main concepts (Entity-Relation diagram notation, Technical and business rules, Geometrical aspects, Time schedules, Main entities) will be studied in the AIXM 4.5 Basic course.

Course Content

The following technical topics will be covered during the course:

Data models for aeronautical information storage and exchange

- AICM and AIXM Overview
- Airport Mapping Exchange Model (AMXM)
- Weather Information Exchange Model (WXXM)
- Airport Network Information Exchange Model (ANXM)
- Flight Information Exchange Model (FIXM)
- Terrain Information Exchange Specification (TIXS)
- System Wide Information Management (SWIM)
- ATM Information Reference Model (AIRM)
- The Future of the data exchange models

Aeronautical Information Conceptual Model (AICM)

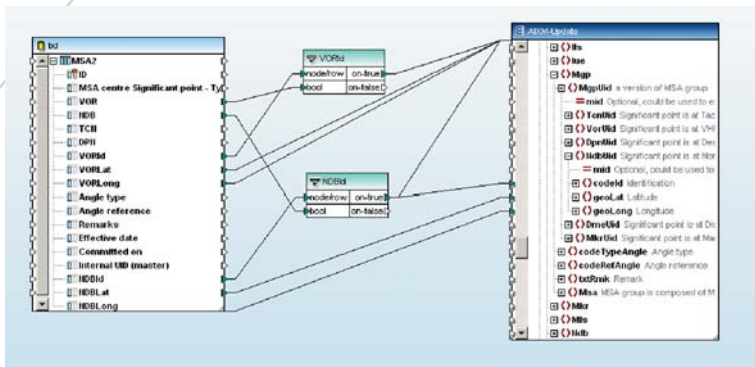
- Geometrical Aspects of AICM
- Time Schedules
- Main entities (Aerodrome and Runway, Airspace, Significant Points, Navaids, Routes, and SID/STAR/IAP)

XML Basic Concepts

- Getting to know XML
- Well-formed XML File
- Valid XML file

Aeronautical Information Exchange Model (AIXM)

- AIXM and AICM
- Basic concepts
- AIXM Schema files
- AIXM Message Types
- Data integrity



AIXM 4.5 Advanced

AIXM-4.5A

Course Details

Duration: 5 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Prerequisite: AICM/AIXM 4.5 Basic Course

Course Objective

The participant will:

1. Create, edit and export to CSV a basic database using Excel.
2. Map data from CSV files, Databases and Snapshot to XML (AIXM-Update) using MapForce
3. Edit, validate and correct AIXM-Update files using Altova Spy
4. Check, explain and repair level A errors from SDO Upload Status Report

Course Content

Editing raw data

- SDO Reports as a source of data
- Microsoft Excel - most common formulas and functions for aeronautical information purposes

Related entities in a database

- Database principles
- Databases with Microsoft Access
- Relation among tables

Uploading valid AIXM files to Static database

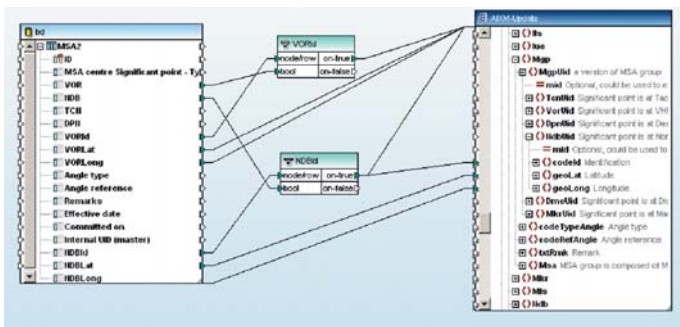
AIXM Message (Altova MapForce)

- Altova Mapforce: Basics
- Mapping
- Libraries, filters and conditions
- Saving resulting XML file

Editing AIXM messages (Altova Spy)

- Altova Spy: Basics
- Edition of AIXM messages
- Check and validation against the AIXM 4.5 schema

Exercises



AIS TO AIM Basic

AIS-BAS

Course Details

Duration: 2 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Course Objective

This course will provide the participant with an introduction to the main concepts and considerations needed for the transition from AIS to AIM

Course Content

- Need for AIS Development, New Requirements and Global Challenges
- Historical Background – Meetings and Conferences
- The Global ATM Operational Concept, ICAO GANP, Recommendations
- Quality management system (QMS)
- Use of automation enabling digital data exchange and Data Standardization
- Electronic AIP (concept)
- NOTAM, OPADD
- Electronic terrain and obstacle data
- ICAO Roadmap from AIS to AIM, Concept and Main Aspects
- Overview of Controlled and Harmonised Aeronautical Information Network (CHAIN)
- Static Data – ADP, SDP, processes
- Aeronautical Information Conceptual Model – AICM and AIXM - Overview and Concept
- Integrated Briefing – Overview and Concept
- Digital NOTAM Concept Overview
- Introduction to ASBU, FIXM, WXXM, WXXM, WXXS
- System-Wide Information Management – Objectives, Principles and Benefits
- ATM Information Reference Model (AIRM) – Objectives and Benefits
- SESAR and NextGen Concepts
- Concepts of Regional or Global AIS Database



AIS TO AIM Advanced

AIS-ADV

Course Details

Duration: 3 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Prerequisite: AIS to AIM Basic course

Course Objective

This course will provide the participant with more details and an in-depth look at the main concepts and initiatives for the transition from AIS to AIM.

Course Content

Phases for transitioning to AIM

- Consolidation, Going Digital and Information Management

Improvement Steps

- Data quality monitoring (P-01 - PHASE 2)
- Data integrity monitoring (P-02 - PHASE 2)
- AIRAC adherence monitoring (P-03 - PHASE 1)
- Monitoring of States' differences to Annex 4 and Annex 15 (P-04 - PHASE 1)
- WGS-84 Implementation (P-05 - PHASE 1)
- Integrated Aeronautical Information Database (P-06 - PHASE 2)
- Unique Identifiers (P07 - PHASE 2)
- Aeronautical information conceptual model (P08 - PHASE 2)
- Aeronautical Data Exchange (P09 - PHASE 2)
- Communication networks
- Communication networks (P10 - PHASE 3)
- Electronic AIP - eAIP (P-11 PHASE 2) .
- Aeronautical Information Briefing (P12 - PHASE 3)
- Terrain (P13 - PHASE 2)
- Obstacles (P14 - PHASE 2)
- Aerodrome Mapping (P15 - PHASE 2)
- Training (P16 - PHASE 3)
- Quality (P17 - PHASE 1)
- Agreement with data originators (P18 - PHASE 3)
- Interoperability with meteorological products (P19 - PHASE 3)
- Electronic aeronautical charts (P20 - PHASE 3)
- Digital NOTAM (P21 - PHASE 3)

AIS to AIM Roadmap Timeline

- Main areas of development towards AIM
- AIRAC Adherence Monitoring (Phase 1, P- 03)
- Introduction
- Non-adherence
- Safety
- Data Providers
- Freeze Dates
- The Causes
- Possible solutions
- ISO 9000
- EAD

Quality (Phase 1, P-17)

- Aeronautical Data Quality Implementing Rule (ADQ IR)
- Manual of the Quality Management System for Aeronautical Information Management (Doc 9839).
- Data Quality Monitoring (Phase 2, P-01)
- Data Integrity Monitoring (Phase 2, P-02)

Aeronautical Information Conceptual Model (Phase 2, P-08) and Aeronautical Information Exchange Model (Phase 3, P-09)

- Electronic Terrain and Obstacle Data (Phase 2, P-13 And P-14)
- Aerodrome Mapping Database (Phase 2, P-15)
- Airport Mapping Exchange Model (AMXM)
- AMDB Applications
- Integrated Briefing (Phase 3, P-12)
- Levels of Integration - Level 1 to 6
- Digital NOTAM (Phase 3, P-21)
- Training (phase 3, p-16)
- SWIM principles and benefits

ICAO documents for AIM. Annex 15, PANS-AIM and Doc 8126

ICAO-40

Course Details

Duration: 2 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4



Course Objective

The participant will:

- Explain Annex 15 requirements and performance specifications.
- Explain PANS-AIM's procedures, processes, formats and technical specifications.
- Describe the Data Catalogue
- Describe the content of ICAO Doc 8126
- Determine best practices of the AIS Manual.
- Receive guidance on application and implementation.

Course Content

Annex 15:

- The complete restructuring of Annex 15 needs a deep study to become familiar with the incorporation of AIM requirements: Safety, financial. Security, environmental and efficiency impacts. As well, the new edition of Annex 15 comes with some changes to the technical content to facilitate that transition from AIS to AIM environments. Annex 15 keeps the Quality Management System, although shared with some content in PANS AIM Document.
- Some new aspects appear as weather information, and data accuracy, data integrity, data quality, data resolution, and the changes in SNOWTAM.

PANS-AIM:

- As a new document, we will offer a general overview, study the new processes for collection, processing, quality control and distribution of the data. As a complement of the QMS in Annex 15, we include here data quality specifications: Timeliness, Completeness, Traceability and format and requirements for the Data origination.
- New concept of AIM Products and Services and their updates. Different publications: AIP and associated documents. Dynamic Data (NOTAM, specifications, Checklists)
- New digital datasets: AIP, Instrument Flight Procedures Data Sets, Terrain and Obstacles Data Sets.
- Aeronautical Data Catalogue.

Doc 8126:

New document 8126 will be published (3 of 4 volumes) in 2019. Overview of the regulatory Framework for AI Services, Processing Aeronautical Data and AI in standardized presentation and related services.



Quality Assurance

AIM-QA

Course Details

Duration: 3 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum Number: 5

Course Objective

With this course, the participant will be able to differentiate, explain and apply Data Quality Assurance principles and procedures related to aeronautical data.

Course Content

1. Data Quality Assurance (DQA)
2. DQA Regulation and Concepts
3. Quality Assurance Methodology
4. Scope of Quality Assurance Procedures
5. Objective of Quality Assurance procedures
6. Definition of Sampling Plan
7. Definition of Reviews
8. Error Classification
9. Quality Assurance: Review and Recording
10. Quality Assurance: Verification and Reporting
11. Quality Assurance: Actions
12. Guidelines for Implementing Quality Assurance Procedures



Introduction to eTOD

AIM-eTOD

Course Details

Duration: 2 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 5

Course Objective

This course provides the participants with an overview introduction to the eTOD concept, including a familiarization on the aspects of electronic terrain and obstacle data. It introduces the types of obstacles and explains related workflow and methodologies.

Course Content

- eTOD Definition
- Terrain
- Obstacles
- Terrain and obstacle coverage area
- Feature classes in the AIS Data Model
- Terrain Data
- Obstacle Data
- Workflow
- Methodologies for eTOD



Global Navigation Satellite System (GNSS)

AIM-GNSS

Course Details

Duration: 2 days, classroom

Participants: Current and future AIS/AIM Officers

Minimum number: 4

Course Objective

The student will be able to:

1. Explain the main concepts of GNSS systems, including a detailed description of the spatial, ground and user segments, some details on the signal structure.
2. List the main sources of errors when using GNSS data to navigate.

Course Content

- GNSS Core constellations and augmentations.
- Augmentation systems – EGNOS, the European augmentation to GPS.
- GPS System Evolution.
- GPS and other systems' developments: Galileo, GLO-NASS, BeiDou and IRNSS.
- Concept of RAIM and Dual Frequency Multi-Constellation (DFMC)
- Aviation GNSS Applications Framework (ICAO, RTCA, etc.).
- Introduction to PBN (Performance Based Navigation) and GNSS.
- GNSS Based procedures implementation impact on ANSP/AIS.
- Overview of GNSS-Based implementation procedures status. Implementation strategies and level of implementation in different regions of the world. Different approach procedures that will be implemented in each zone (RNP, APCH, RNP, AR, GBAS, etc.)
- GNSS on-board systems and pilot perspective
- GNSS flight test (on certified flight simulator Garmin G1000).



ADQ Executive Awareness

ADQ-EA

Course Details

Duration: 1 day, classroom

Participants: Current and future AIS/AIM Officers, Management or Administrators wanting an overview of the regulation

Prerequisite: AIS knowledge

Minimum number: 4

Course Objective

This course will provide the participant with an introduction to the Aeronautical Data Quality regulation

Course Content

The course will provide the participant with a global overview of the ADQ Regulation (EC 73/2010), the different actors and affected organizations. As well, it will make aware the participant of the need of the implementation of the regulation and take further actions related to this goal.



ADQ Requirements & Implementation

ADQ-GR

Course Details

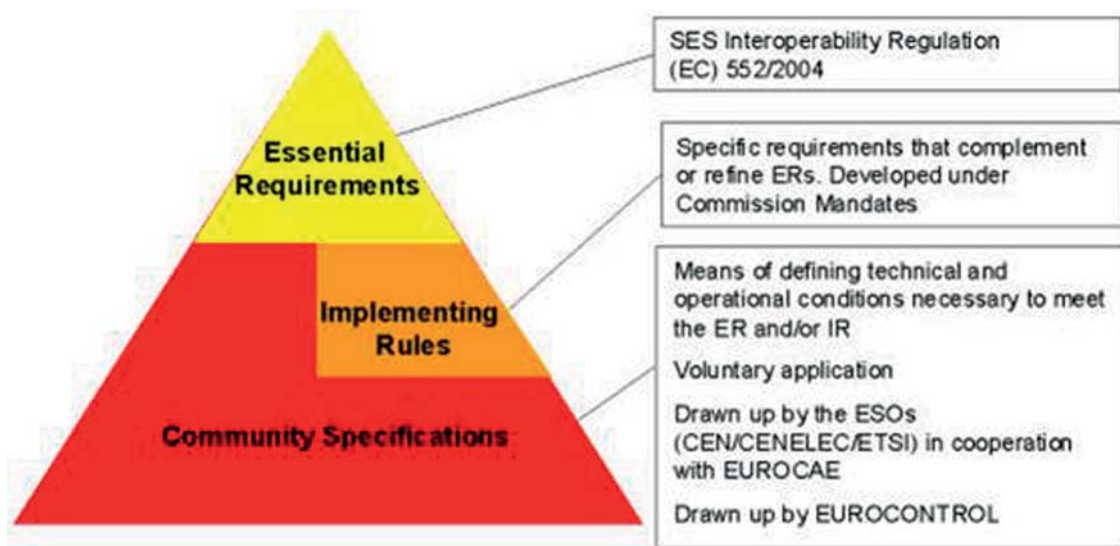
Duration: 5 days, classroom
Participants: Current and future AIS/AIM Officers
Prerequisite: AIS Knowledge
Minimum number: 4

Course Objective

This course will provide the participant with a deep knowledge related to the Aeronautical Data Quality regulation, the different processes to comply with it. The course will support servers of data, airports, and AIM officers to apply the requirements of the Aeronautical Data Chain, the quality assurance of the data management to grant the required levels of accuracy, resolution and integrity.

Course Content

With a complete study of the ADQ Regulation (EC 73/2010), the participant will have a guidance on the planning of the implementation and different strategies followed by different actors. The deep analysis of the regulation, the list of citations and recitals, how to establish an audit and check the compliance level. List the Means of Compliance and Specifications from EUROCONTROL, Analyse the Data Assurance Levels, Data Quality Levels, Aeronautical Information Conceptual Model (AICM), state the most important aspects for Data Originators, including the SLA and SLS related to ADQ.



General Criteria and Conventional Practice

Module 1

Course Details

Duration: 4 weeks

Participants: Minimum number: 8

Prerequisites: Geodesy for procedure designers; if you are not sure we have a free self-assessment test

Upon completion participants will receive a certificate of attendance.

Course Objective

The course is based on PANS-OPS ICAO Doc 8168 Volume II Construction of Visual and Instrument Flight Procedures; it describes the essential areas and obstacle clearance requirements for the achievement of safe, regular instrument flight operations

Course Content

- Introduction to PANS-OPS Vol II & General Design Criteria
- Terminal Area Fixes and Tolerance
- Introduction to Non-Precision Approaches
- Non Precision Approach – Final Segment
- Non Precision Approach – Intermediate and Initial Segments
- Non Precision Approach – Reversal and Race-track procedures
- Non Precision Approach – Missed Approach
- Conventional Holding Procedures
- Conventional Departures
- Circling Approach (Visual Manoeuvring)
- Minimum Sector Altitude (MSA)
- Conventional Departures
- ILS Precision Approach
 - Introduction and Principals
 - Surfaces
 - Obstacle Assessment
 - CRM
- Practical application

Performance Based Navigation (PBN) Procedures

Module 2

Course Details

Duration: 2 weeks

Participants: Minimum number: 8

Prerequisites: Knowledge of General Criteria and Conventional Procedures

Upon completion participants will receive a certificate of attendance.

Course Objective

This course will explain the components which are required for the construction of RNAV instrument flight procedures based on the Global Navigation Satellite System (GNSS).

Course Content

- RNAV changes introduced in November 2014
- RNAV – Missed Approach
- RNAV Holding Pattern
- RNAV – Arrivals
- TAA
- Proposed changes to PANS-OPS criteria
- RNAV – Final Segment
- RNAV Departure with transition
- RNAV – Intermediate and Initial Segments
- Practical application



RNP Navigation (Doc 9905) & BARO-VNAV

Module 3

Course Details

Duration: 2 weeks

Participants: Minimum number: 8

Prerequisites: Knowledge of General Criteria, Conventional Procedures and Performance Based Navigation

Upon completion participants will receive a certificate of attendance.

Course Objective

This Course describes the vertical component of the APV/Baro-VNAV procedure criteria.

Required Navigation Performance Authorization Required (RNP-AR) APCH operations are classified as approach procedures with vertical guidance (APVs). This type of operation requires a positive vertical navigation (VNAV) guidance system for the final approach segment (FAS). Baro-VNAV approach procedure are classified as AVP procedure, they utilize a DA/H and not an MDA/H, and neither a FAF nor a missed approach point (MAPt) is identified. They use obstacle assessment surfaces similar to those for ILS, but based on the specific lateral guidance system.

Course Content

- APV (BARO-VNAV)
- RNP – Final Segment
- RNP – Missed Approach
- RNP – Arrivals
- RNP – Intermediate and Initial Segments
- Advanced RNP
- Practical application

Helicopters (Point in Space) Procedures

Module 4

Course Details

Duration: 1 weeks

Participants: Minimum number: 8

Prerequisites: Knowledge of General Criteria, Conventional Procedures and Performance Based Navigation.

Upon completion participants will receive a certificate of attendance.

Course Objective

A specialised course that covers the general criteria and the modified area navigation (RNAV) approach procedure; applicable to helicopters only.

It will also cover the Point-in-space Approach and Departure procedure that consists of an instrument segment followed by a visual segment or vice versa. These specified procedures are designed by using the same conventional techniques and practices for aeroplane categories.

Course Content

- General Helicopter Criteria
- Point in Space Departure
- Point in Space Approaches
- Practical application



PANS OPS Recurrent Course

Module 5



Course Details

Duration: 1 week

Participants: Minimum number: 8

Prerequisites: Procedure design experience

Upon completion participants will receive a certificate of attendance.

Course Objective

This course will cover new amendments to PAN-SOPS and future developments, and assess the impacts and associated risks on existing flight procedures or the implementation of new ones.

Course Content

- PANS-OPS changes last 24 months
- Future developments
- Customer-Specific Requirements
- PANS-OPS proposed changes
- Forum discussion

Obstacle Assessment and Management

Module 6

Course Details

Duration: 1 weeks

Participants: Minimum number: 8

Prerequisites: Background in Annex 14 / PANS-OPS.

Upon completion participants will receive a certificate of attendance.

Course Objective

This course will provide airport operators or obstacle control personnel the necessary skills to evaluate aerodrome obstacles from a practical perspective.

It describes different methods to efficiently evaluate obstacles within the vicinity of the airport including the straight segments of published flight procedures.

Course Content

- ICAO Annex 14
 - Declared Distances
 - Obstacle limitation surfaces
 - Objects outside the obstacle limitation surfaces
 - Obstacle Restriction and Removal
 - Obstacle limitation requirements
 - Modified OLS (State Requirements)
- ICAO Doc 8168 (PANS-OPS)
 - VSS
 - Missed approach (Straight)
 - Aeronautical Data Quality requirements
 - ILS (by clients request)
 - Final/Intermediate straight segment up to 2000ft
 - (Commencement Altitude)
 - Departure (Straight)
 - Practical application

Enrolment for AIM Course

Please send:

Postal address:
GroupEAD Europe S.L.
Stützeläckerweg 12-14
60489 Frankfurt am Main, Germany

E-Mail:
training@groupead.com

Applicant (Please print all information clearly):

Surname:

Position:

First name:

Phone:

Company

e-mail:

Superior:

Surname:

First name:

Superior e-mail:

Enrollment in the following course(s):

No:	Course	Date Request	Alternative Date Request
1			
2			
3			
4			

Company information:

Invoice address for Company:

VAT number of the Company:

Signatures

Date	Applicant	Superior

Directions

to Group EAD Europe S.L.

Madrid

GroupEAD Europe S.L.

Business Premises Madrid
Parque Empresarial San Fernando
Avenida de Castilla 2,
Edificio Francia, Escalera A - Piso 2
28830 San Fernando de Henares, Madrid

SPAIN

Arriving by car

From Avenida de América

Head east on A-2. Take exit 17A for M-115 towards M-50/ M45/R-2/Ajalvir, and at the fork keep right towards Parque Empresarial Zona Industrial. Then slight right onto Av. de Castilla and the Business Park is on your right hand side.

From Adolfo Suarez Madrid Barajas Airport – Terminal 1 (via Vía de Servicio)

From Terminal 1, head North to take M-14, Exit 1, Vía de Servicio and E-90/A-2 to Av. de Castilla. At the roundabout, take the 1st exit. Keep left at the fork; follow signs for M-14/Madrid Centro ciudad/Avda. América/A-2/M-40/A-3/A-4/A-5 and merge onto M-14. Use the right 2 lanes to take exit 1 for E-90/A-2 to Zaragoza Vía de Servicio. Continue onto Coslada / San Fernando - Vía De Servicio and stay in Vía De Servicio. Use the left lane to merge onto E-90/A-2 via the ramp to Zaragoza/Barcelona. Take exit 17A for M-115 towards M-50/M45/R-2/Ajalvir, and at the fork keep right towards Parque Empresarial Zona Industrial. Slight right onto Av. de Castilla and the San Fernando Business Park is on your right hand side.

From Avenida de América

Head east on A-2. Take exit 17A for M-115 towards M-50/ M45/R-2/Ajalvir, and at the fork keep right towards Parque Empresarial Zona Industrial. Then slight right onto Av. de Castilla and the Business Park is on your right hand side.

Hotel recommendation

Hotel Axor Feria

Calle Campezo, 4,
28022 Madrid
Telephone +34 913 12 23 79
en.axorhoteles.com/feria/

Hotel Axor Barajas

Calle Campezo, 4,
28022 Madrid
Telephone +34 913 12 19 60
en.axorhoteles.com/suites-barajas/



Arriving by train and bus

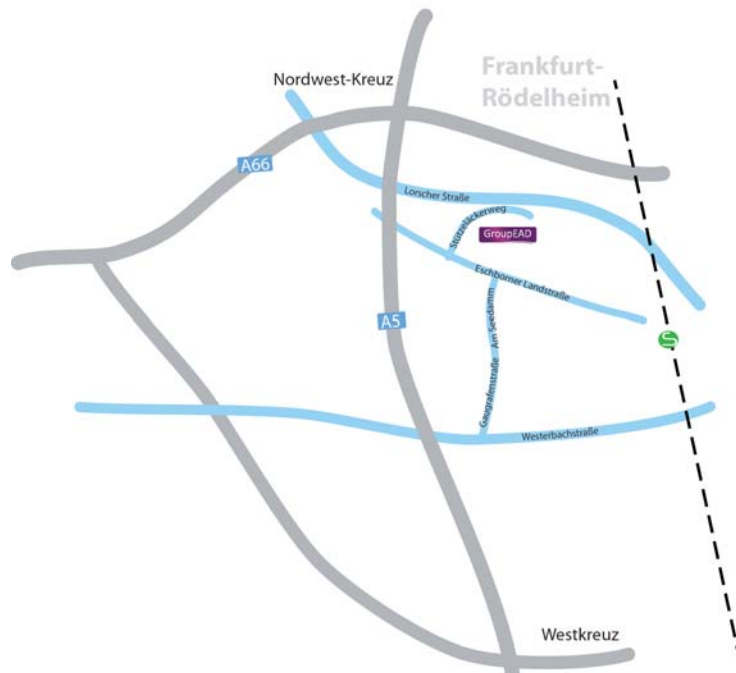
From Atocha Railway station

Take line C7 (red) direction Alcalá de Henares or line C2 (green) direction Guadalajara. There is a free shuttle service, which connects Torrejón de Ardoz Railway Train Station (Renfe) with our premises in San Fernando Business Park. In Torrejón de Ardoz, the shuttle stop is located in Alicante Street, 2.

From Madrid (Avenida de América)

Take the bus 1 Pol. Industrial (in the directions to C.C. San Fernando)
211 (in the directions to Guadalajara)
223 (in the direction to Alcalá de Henares)
224 (in the directions to Torrejón de Ardoz)
224 A (in the directions to Torrejón de Ardoz, La Mancha Amarilla)





to Group EAD Europe S.L.
Frankfurt

Arriving by car

From the east, west or south

Take motorway A5 at „Frankfurter Kreuz“ to the north up to exit „Nordwestkreuz Frankfurt“. After exiting stay in the right lane until you reach the traffic light where you pick the left lane. Turn left at the traffic lights, following the road under the bridge where you should get into the left lane in order to turn to the left at the next traffic lights. The road follows a long left curve in the upward direction to the next traffic lights. Turn left again and then turn right at the first intersection into Eschborner Landstraße. The first access road to the right is Stützeläckerweg (right behind the „Hotel Rödelheimer Hof - Am Wasserturm“)

From the north

Take motorway A5 to the south until you reach „Westkreuz Frankfurt“, from there follow Wiesbadener Straße (A648) in the direction of Eschborn to the exit „Frankfurt-Rödelheim“. This exit leads you right into Westerbachstraße. After crossing motorway A5, turn left into Gaugrafenstraße and then into Am Seedamm road (after appr. 50 metres). When you reach the first intersection with traffic lights, turn into Eschborner Landstraße. The first access road to the right is Stützeläckerweg (right behind the „Hotel Rödelheimer Hof - Am Wasserturm“)

Arriving by train and bus

From Frankfurt Airport

Take the commuter train S8 or S9 to Frankfurt central station.
Travel time: appr. 15 min

From Frankfurt central station

Take S3 (in the direction of Bad Soden)
S4 (in the direction of Kronberg) or
S5 (in the direction of Friedrichsdorf)

Exit at Frankfurt-Rödelheim station. Travel time: appr. 10 min. From Rödelheim station (exit West), take bus no. 55 or no. 60 (in the direction of Heddenheim). Leave the bus at the second stop „Wolf-Heidenheim-Straße“. Walk appr. 10 min straight ahead from there to reach Stützeläckerweg.

GroupEAD Europe S.L.

Business Premises Germany
Stuetzelaeckerweg 12 - 14
60489 Frankfurt am Main

GERMANY



Hotel recommendation

Hotel Rödelheimer Hof am Wasserturm

Eschborner Landstraße 146
60489 Frankfurt am Main
Telephone +49 69 153947100
www.roedelheimer-hof.de

Best Western Plus iO Hotel

Graf-Zeppelin-Straße 2
65824 Schwalbach am Taunus
Telephone: +49 6196 999590
www.bestwestern.de/hotels/Schwalbach/BEST-WESTERN-PLUS-iO-Hotel

GroupEAD

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Stuetzelaeckerweg 12 - 14

60489 Frankfurt am Main

GERMANY

Phone: : +49 69 78072 893

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