AIRBORNE ELECTRONIC HARDWARE TRAINING – ED-80

EUROCAE ED-80 (EQUIVALENT TO RTCA DO-254) HAS BEEN THE BASIS FOR AIRWORTHINESS APPROVALS OF AIRBORNE ELECTRONIC HARDWARE SINCE ALMOST 20 YEARS AND IS RECOGNIZED BY ALL CERTIFICATION AUTHORITIES. KNOWLEDGE OF THIS STANDARD IS A PREREQUISITE FOR ALL PERSONS INVOLVED IN THE DEVELOPMENT OR APPROVAL OF AIRBORNE ELECTRONIC HARDWARE.

The objective of the course is to provide the basics to understand ED-80 principles and how to fulfil ED- 80's objectives for both in-house designed and COTS electronic hardware.

The course also introduces Certification Authorities' document AMC / AC 20-152A.

Who should attend?

Anyone involved in the development or qualification of airborne electronics, including developers, project managers, persons in charge of design assurance or supplier monitoring, compliance verification engineers.

A prior knowledge of electronic hardware engineering is expected. A prior knowledge of ED-80 is not required. However, persons having already practiced ED-80 can still take benefit from the course.

Course content

- Aviation system safety background (system safety assessment, concept of DAL)
- Introduction to ED-80 (history, basic principles, recognition by airworthiness regulation, basic concepts)
- ED-80 detailed concepts (processes, objectives, modulation according to the criticality level)
- Advanced verification methods for DAL A & B
- Additional considerations (use of previously developed hardware, COTS components usage, product service experience, tool assessment and qualification)
- Introduction to AMC / AC 20-152A (Development Assurance for Airborne Electronic Hardware)

Learning objectives

The purpose of the training is to enable participants to have an overview of EUROCAE ED-80 and associated documents used by Certification Authorities.

Having completed the training, participants should:

- Have a good knowledge and understanding of ED-80
- Especially, have assimilated the major concepts (processes, objectives, modulation according to the design assurance level)
- Understand the key requirements for airborne electronic hardware approval from Certification Authorities and how to map ED-80 objectives to electronic hardware engineering practice

Benefits of attending

- Get a clear understanding of ED-80 principles, how it is interpreted and supplemented by Certification Authorities, how to implement it for a given project
- Share experiences with colleagues from other aviation stakeholders/countries
- Participants having a prior knowledge of ED-80 will still benefit through interactive questions and answers
- Course provided by senior expert in airborne electronic hardware
- Extensive course handouts distributed
- Certificate on completion of the course

Trainer

After holding initial positions in the armament industry and systems engineering, Gilles Loopuyt has worked for 25 years in the aeronautics industry, mainly in the field of airborne systems.

For more than 12 years, he has been consecutively the head of airborne software design assurance and airborne electronic hardware design assurance for Airbus Helicopters, being involved in numerous projects up to DAL A, both for supplier-developed and in-house developed systems.

He also served as a regulation manager, participating in all public consultations for avionics.

Gilles Loopuyt has been active in several working groups in the areas of airborne electronic hardware (DO-254 user's group), software (elaboration of AMC/AC 20-115D), as well as Integrated Modular Avionics (industry working group for ETSO-2C153, ETSO-C214 and AMC 20-170).

He is a graduate engineer from Institut National Polytechnique de Grenoble and holds an MBA from IAE Paris

Supporting documents

The course will refer to supporting documents. One is ED-80, which will be provided as a complimentary copy to the participants. Others are regulations which may be freely downloaded. The list of these documents and where applicable the corresponding link for the download will be provided upon registration.