

## The Instructors

**John FAVARO** has more than twenty years of experience in the information technology field. After spending several years at CIT-Alcatel in Paris and Siemens AG in Germany working in the area of software engineering environments and telecommunications, he joined Intecs as project leader for the European Space Software Engineering Environment. He now coordinates R&D activities at Intecs, and is on the steering committee for the International Conference in Software Reuse. Mr. Favaro took his degrees in computer science at Yale University and the University of California at Berkeley.

**Andrea MUSONE** is Deputy R&D Coordinator of Intecs. He has some 12 years experience in software engineering and software quality. He has contributed to the definition of software standards for large space programs such as Hermes. He has been ISO 9001 and software engineering consultant to International Organizations and other relevant Companies. He also contributed to the definition of a number of ESA space software standards in the PSS series. He has also a large technical experience in several software domains, such as GIS and Earth Observation.

## The Company

Intecs is a Software-House providing leading-edge technological support to the major European organizations in the design and implementation of complex electronic systems. It operates at the forefront of the software market, where innovation, complexity and quality aspects are essential to determine the company success.

Intecs was founded in 1974. Today Intecs has about 200 employees. Its headquarters are in Roma with branches in Pisa, Naples and Toulouse (France).

Intecs has been one of the first Italian software firms to obtain the ISO-9000 certification in 1994. The current certification is **ISO 9001:2000 for software development of defence, space and civilian applications.**

## General Information

### Location

Courses may be arranged in-house at the customer site upon request.

### Contact

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## ECSS Q80B

## Software Product Assurance Standards

*One-day course*

The course material has been prepared by Intecs HRT and formally approved by ESA/ESTEC.

## ECSS Software Product Assurance Standards

In June 1994, the ESA Council adopted resolution ESA/C/CXIII/Res 1 (Final), confirming the Agency's commitment to the transfer of the PSS system of ESA space standards to the new set of standards prepared by the European Cooperation for Space Standardization (ECSS).

Software is addressed by two standards: ECSS-E-40 for Software Engineering and ECSS-Q-80 for software Product Assurance. They are both based on ISO/IEC 12207 and available at the ECSS Web site: <http://www.estec.esa.nl/ecss/>. They are applicable to software activities of ESA projects, although it is not required to apply them retroactively to projects already using ESA PSS-05-0.

### The Course

The objective of the course is to give the understanding of the ECSS-Q-80 standard to the managers and the engineers of projects involving software, in the view of applying them in their project.

The course includes a general introduction to the ECSS standards and presents in detail the requirements related to software product assurance in the Q-80 standard. It provides a good understanding of the deliverables associated with the software processes and the required outputs in process and product assurance implementation.

### Intended audience

The course addresses project managers, system engineers and product assurance engineers who need to understand how the software product assurance standards can help them to manage the software part of their project or system, as well as software project managers, software engineers and software product assurance engineers who want to have in addition a deeper understanding of the content of the Q-80B standards.

### Prerequisites

The participants are expected to be familiar with the fundamental concepts of software engineering, project management, software standardization, ESA PSS standards other than the most basic familiarity with software life cycle and modern software development techniques. Experience as a practicing software product assurance engineer is also assumed.

### Benefits

The course will primarily familiarize the attendees with the specific approach and terminology found in the ECSS standards as well as the structure and nature of the inter-relationship between software processes and system processes. Moreover they will understand the most important activities to implement quality assurance both of the process and the product in the context of a real project execution.

### Methods and Media

Classroom presentations with Power Point slides and practical exercises.

### Material

The participants are provided with copy of the following material:

- course handouts
- ECSS-Q-80B Standard
- ECSS-E-40 Standard

## Course Outline

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An Overview of the ECSS Standards	9.00
Introduction to the Q80B Standard	9.30
Software PA Process Implementation (part 1)	10.00
<b>Break</b>	<b>10.30</b>
Software PA Process Implementation (part 2)	11.00
Software Process Assurance (part 1)	11.30
<b>Break</b>	<b>12.30</b>
Software Process Assurance (part 2)	14.00
<b>Break</b>	<b>15.30</b>
Software Product Assurance	16.00
Documentation	16.30
Overview of migration from PSS to ECSS	17.00