



THE GOLD STANDARD FOR AVIATION SINCE 1935

**RTCA Software Developers' Course:
*Software Considerations in Airborne
Systems and Equipment Certification***

Module 1
Course Introduction

This courseware was developed by
The MITRE Corporation for RTCA

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RTCA, Inc.
1150 18th Street, NW
Suite 910
Washington, DC 20036-3816
USA

Software Considerations in Airborne System
and Equipment Certification

Edited by: [illegible]
Project Engineer: [illegible]

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Welcome!

Opening Remarks

Introductions

Registration

Objectives

Course Overview

Course Evaluation


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Opening Remarks

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Part I

Introductions of

Instructors

and Participants

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Instructor Introductions



MR. JOHN CHARLES ANGERMAYER

- 25 year Designated Engineering Representative (DER)
- MITRE Lead Staff, Specializing in Real-Time Embedded Software and Software Engineering
- Co-author of DO-178C
- Active member of RTCA SC-205



MR. KENT V. HOLLINGER, P.E.

- MITRE Principal Engineer
- RTCA SC-200 (Integrated Modular Avionics) SG3 Co-chair

Image Source: MITRE



Student Introductions

Please share your:

- Name
- Job Title
- Experience
- Course Expectations



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Part III

Administrative

Information

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Registration

Participant list

- Name for certificate
- Contact information

The image shows a 'Course Sign-in Sheet' form. At the top, there is a box with the 'RTCA' logo. Below the logo is a box labeled 'Course Sign-in Sheet'. The form contains a table with multiple rows for recording participant information. The table has columns for 'Name', 'Title', 'Company', and 'Phone'. The 'Name' column is the widest, followed by 'Title', 'Company', and 'Phone'. The table is currently empty, with only the headers visible.

Housekeeping

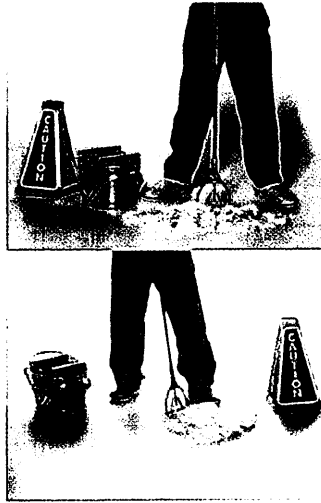


Image Source: MS

- ✓ *Class participation*
- ✓ *Exercises*
- ✓ *Breaks / Restrooms*
- ✓ *Lunch*
- ✓ *Phones / Internet*
- ✓ *Evacuation Procedures*
- ✓ *Weather Policy*

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Part III

Course Objectives, Content and Structure

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Course Objectives

You will be provided with:

- ☐ An overview of RTCA DO-178C.
- ☐ A thorough understanding of the fundamental techniques for software aspects of certification for airborne systems and equipment.
- ☐ The ability to understand how to employ DO-178C to allow industry to meet the intent of the document to assure the complete and correct implementation of the system requirements allocated to software.
- ☐ The ability to understand and determine the applicability of DO-178C objectives based on software level.
- ☐ An understanding of DO-178C objectives, activities, and life cycle data.

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Course Overview

Overview of Modules - 13

Exercises - 6

Course Materials:


- Course Notebook,
including Acronyms, Last TAB***
- DO-178C***
- Supplement of your choice***

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Course Agenda

Day	AM/ PM	Module	Instructor	Tentative Duration
Day 1	AM	1. Course Introduction	John/Kent	30 min
	AM	2. DO-178-C Overview (including 4 Supplements' Overview)	John	1 hour
	AM	3. System Aspects Relating To Software Development	Kent	1 hour 30 min
	PM	4. Software Life Cycle	Kent	30 min
	PM	5. Software Planning Process	John	2 hours
	PM	6. Software Development Processes	John	1 hour
	AM	7. Software Verification Process	John	5 hours
Day 2	PM	8. Software Configuration Management Process	Kent	2 hours
Day 3	AM	9. Software Quality Assurance Process	Kent	1 hour 30 min
	AM	10. Certification Liaison Process and Overview of Certification	John	30 min
	PM	11. Software Life Cycle Data	Kent	1 hour
	PM	12. Additional Considerations	John	2 hours 30 min
	PM	13. Course Review, Summary, Course Evaluations and Presentation of Certificates	John/Kent	1 hour 30 min

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Part IV

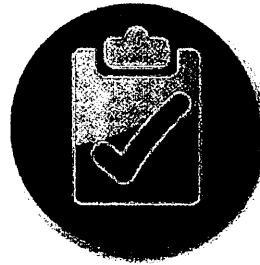
Evaluation

Procedures

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Course Evaluation

- You will be asked to complete a form to provide MITRE Aviation Institute Instructors and RTCA feedback on:
 - Course
 - Exercises
 - Ways to improve courseware



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