HCRQ, Inc.

"The Key To A Safer World"

Newsletter - April Update 2010

RTCA "DO"-178B (e.g.)

At one of our recent courses, one of the attendees asked what "DO" stands for. RTCA informed us that it simply means "document".

Free Webinar

After 22 years specializing in system safety, we feel quite confident presenting the following.

Topic: System Safety - Where Are We?

Date: April 28

Time: 11:00AM EST (provides a convenient window for a number of time zones)

Duration: 1 hour

To Register: e-mail Karl Lindberg at klindberg@hcrq.com

Note: Attendance is limited due to the capacity of the webinar software.

FTA Paper

Some time ago, we became aware of a paper entitled "Beauty and the Beast—Use and Abuse of the Fault Tree as a Tool". You can easily locate this yourself using Google.

Depending on your experience and expertise with FTA, you may find it interesting.

Software Safety Program Plans, Software Safety Cases Survey Status

This month we asked to hear from you if your organization produces one or both of these. We are hoping to publish the results within next month's newsletter.

Thus far, we have only heard from one person.

Formal Methods

"Formal Methods" refers to mathematically rigorous techniques and tools for the specification, design and verification of s/w and h/w systems.

It has been our experience that the use of formal methods remains rare in the U.S. We have only had the opportunity to use formal methods once ourselves.

We would like to hear from you if your organization uses this approach. Again, we will publish the results in our next newsletter, respecting your privacy and that of your organization.

FTA Tools

There are many people who are using FTA tools that, given a choice, we would never use. These tools should be easy to use (i.e., allows you to focus on creating FTs). They should provide fully automatic pagination. In addition, one should be able to open their databases using tools such as MS ACCESS.

Pending Course

Next month:

- Software Safety (3 Day)
  - Williamsburg, VA
  - May 4-6

49CFR238.105

For example, 49CFR238.105 - "The hardware and software safety program shall be based on a formal safety methodology that includes a Failure Modes, Effects, Criticality Analysis (FMECA); verification and validation testing for all hardware and software components and their interfaces; and comprehensive hardware and software integration testing to ensure that the hardware and software system functions as intended."

Although performing a FMECA on hardware does not present a problem, applying the methodology to software does. i.e., we are talking about SFMECA, not SFMEA.

We developed a technique based on Risk Priority Numbers (RPN) using S, O, and D rankings which range from 1-5 instead of the usual 1-10.

If you have been faced with a SFMECA requirement, perhaps you would like to share your thoughts/approach with others on the newsletter distribution list.

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