



Real-time and Embedded Systems

Joe Bergmann

<j.bergmann@opengroup.org>

Report – RT&ES Working Groups

- ❑ **RT OS Profiles & Certification --**
 - **Update from IEEE PASC SSWG RT**
 - **IEEE PASC SSWG RT to collocate at the San Francisco meeting**
- ❑ **RT Java for Safety/Mission Critical Applications**
 - **Consensus to develop JSRs for submittal to Java Community Process**
 - **Need clarification on issues like --**
 - **IPR ownership**
 - **Royalties on follow-on implementations**
 - **Route to international standardization**
 - **Follow-on meeting 30 October in Irvine, California**
- ❑ **Security for RT & Embedded Systems--**
 - **Update from Boston Meeting**
 - **Follow-on meeting on 14 November in the Chantilly, Virginia to facilitate development of a generic RT Protection Profile under the Common Criteria**
- ❑ **Safety/Mission Critical Applications –**
 - **European Audience**
 - **High level of interest in best practices & development of safety related OS profiles**
- ❑ **RT Infrastructure Requirements –**
 - **No activity**
- ❑ **RT/QoS Vendor Challenge – Report from QoS Task Force**

Going Forward

- ❑ **Focus on the Boundaryless Information Flow**
- ❑ **Increase emphasis on membership**
 - **System Integrators**
 - **Universities**
 - **National Research Laboratories**
 - **Expand contacts in Europe**
- ❑ **Accelerate Deliverables through additional workshops**
 - **RT Java JSR development – 30 October in Irvine, California**
 - **Security Protection Profile development – 14 November in Chantilly, Virginia**

RT&ES Forum Working Group Deliverables CY2003

RT Operating System Profiles and Certification.

Working with the IEEE PASC SSWG RT group and major suppliers and users of real-time systems the working group will --.

- 1) Publish a Certification Program for a Generic POSIX Real-time Operating Systems – Q3
- 2) Publish a Real-time Operating Environment Profile and Certification Program based on the US Army Operating Environment – Q2

Security for RT and Embedded Systems.

Working with providers of real-time operating systems, middleware providers for the real-time environment and major users of the real-time systems the working group will --.

- 1) Develop a Security Protection Profile based on the Common Criteria – Q3
- 2) Verify Security Requirements for the Real-time Protection Profile based on Use Cases from the RT&ES Forum Members – Q2
- 3) Develop a Certification Program for the Real-time Protection Profile – Q4

Safety/Mission Critical Applications.

Working with both COTS component developers and system integrators to remove barriers for the use of COTS in mission/safety-critical Systems the working group will –

- 1) Develop Best Practices for the documentation and related services that a COTS vendor should provide with a product targeted to the mission/safety critical marketplace – Q2
- 2) Develop an end-to-end safety verification assurance argument for approval by the cognizant government agency or certification authority – Q4

Real-time Java for Mission/Safety Critical Environments.

Working with RT Java developers, systems integrators and major users of mission/safety critical environments the working group will --.

- 1) Develop two JSRs for approval through the Java Community Process. One JSR will focus on creating a safety-critical Java profile. The second JSR will focus on updating the Java Real-time specification to reflect additional needs of the Real-time community – Q1
- 2) Organize a Real-time Java Expert Group under the auspices on The Open Group – Q1
- 3) Based on approval of the JSRs develop a RT Java profile/specification/ for Mission/Safety Critical Applications – Q4

RT Enterprise Requirements.

This is a new working group created to investigate real-time requirements to support the Boundaryless Information Flow Environment.