

# Real-time and Embedded Systems Forum

San Francisco RT&ES Forum  
24-28 January 2005  
What Happened?

THE *Open* GROUP

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Note: Minor update on 11 February 2005

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- New Consumer Electronics Activity Started – On-Going discussions with the CE Linux Forum on Collaboration. Effort was Initiated in response to RT&ES Forum members in Japan
  - Areas of Potential Collaboration Identified
    - Product Standards and Certification
    - System Test and Certification
    - Security for Real-time & Embedded Systems
    - Safety/ Mission Critical Java
    - High Assurance Operating System Profile
    - Dynamic Resource Management
  - Other Technical Areas Identified such as APIs for SMP, Core Processing, etc are to be investigated
- Planned for a Medical Devices Product Standard and Certification Activity for the July Meeting in New York. Areas of Potential Collaboration same as Consumer Electronics above.

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### What Happened? (Cont'd)

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- Security for Real-time and High Assurance
  - Completed a Draft Outline for a Managers & Software Developers Guide for –
    - Security for Real-time
    - High Assurance/Safety Critical Applications

**Note: It is anticipated that both documents will be widely used as a standard.**
  - Started Review of Two New Real-time Security Protection Profiles
    - Console
    - Partitioning Communications System
  - Reviewed --
    - Issues in Layered Assurance Certification
    - MILS Architecture for High Assurance Design
    - Continued Progress on a RTOS High Assurance Profile - A Collaboration Effort with IEEE PASC SSWG RT and ARINC 653 APEX Working Group

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### What Happened? (Cont'd)

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- ❑ Open Architecture for RT –
  - **Revisited Dynamic Resource Management Standards as it Relates to Autonomic Computing. WG Will Collaborate with OASIS on Standards Effort to Ensure Real-time DRM Requirements are Included in New Standard -- Web Services Distributed Management (WSDM). Collaboration with The Open Group Enterprise Management Group Was Initiated.**
  - **Discussed Issues Concerning Software Portability POSIX/UNIX/LINUX. A Software Utilities Session Will Be Added to the April RTES Forum Agenda in Dublin,.**
  - **Reviewed Proposal from X.Org on a Light Weight “X” Interface for Real-time and Embedded Systems and Integration of a Multi-Media Application Server. There Will Be Additional Dialogue with X.Org.**
  - **Reviewed Commonality of Various DoD Open Architectures – from programs JTRS, MBMS, FCS, JSF and others.**
  - **Reviewed Service Oriented Architectures Elements for Time Critical Applications**
  - **Updated the Forum on the IEEE POSIX 1003.13 PSE54 Certification Program. Expect final approval from IEEE by 31 March 05.**

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### What Happened? (Cont'd)

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- Safety Critical RT Java
  - Continued Work on Safety Critical RT Java with a Slight Shift in Focus to NASA Requirements. The Shift in Focus Was Due to The Availability of Funding for a NASA Project to Develop a Safety Critical RT Java RI and TCK. See Kestrel Institute Presentation.
  - Three Members Expressed Concern That the “Current“ Safety Critical Specification Did Not Address a Distributed Environment, to Include The “Mission-Critical“ Specification. The Three Members Were Asked to Detail Their Requirements for Consideration.
- Open Source
  - Started Effort to Investigate Potential Impact of Open Source on High Assurance Applications. Planning an All Day Session on Topic at the July Meeting in New York – July 2005.

Further details:- Please check 'Documents' for presentations

Agenda from San Francisco - <http://www.opengroup.org/rtforum/doc.tpl?gid=6323>

Non-Members Documents - <http://www.opengroup.org/rtforum/documents.tpl>

Members Documents --Requires Password - <http://www.opengroup.org/rtforum/protected/index.tpl?CALLER=documents.tpl>

# RTES Forum Deliverables 2005

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- **Strategic Deliverables:**
  - **Open Architecture for Real-time**
    - Templates April 2005
    - Technical Reference Model July 2005
    - Dynamic Resource Management Standard Draft October 2005
  - **Safety Critical Real-time Java**
    - Draft Specification October 2005
    - Subset Reference Implementation (RI) December 2005
    - Subset Technology Compatibility Kit (TCK) March 2006
  - **Security Protection Profiles**
    - EAL 6 Deeply Embedded OS Draft July 2005
    - EAL 6 Web Services Draft October 2005
  - **High Assurance, Safety Critical**
    - Security/High Assurance Guide Book for Managers Draft July 2005
    - Security/High Assurance Guide Book for Software Developers Draft October 2005
    - High Assurance RT Profile IEEE POSIX/ARINC 653 Draft July 2005
  - **Initiate Consumer Electronics Activity** January 2005
  - **Initiate Medical Devices Product Standards Activity** July 2005
- **Other Supporting Deliverables:**
  - **Certification for POSIX 1003.13 PSE53** December 2005
  - **Software Development Patterns for RT** December 2005
  - **Mission Critical RT Java Specification Draft** October 2005

# Future RTES Forum Activities

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- For the Boundaryless Enterprise --
  - Software Assurance\*
  - Software Design and Coding Standards\*
  - Software Design Patterns\*
  - Software Conformance Tools\*
  - Software Traceability\*
  - MILS Off the Shelf RTOSs
  - MILS for Web Services\*
  - Quality of Service\*
  - Data Base for RT Environments
  - Directory Services/DNS for RT Environments\*
  - Security Interoperability\*
  - Aggregated Real-time Systems\*
  - System/Family of Systems Certification\*
  - Open Source for High Assurance Applications Guide Book\*
  - Acquisition/Procurement of RT Systems\*
  - Standardized XML Tags - Trace Requirements\*
  - Architecture Tool Standards - Integration of Disparate Architectures \*
  - Product Standards/Certification for Medical Devices/Consumer Electronics

\* Potential Collaboration Activities

# Real-time and Embedded Systems Forum Schedule for 2005

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- ❑ **Dublin, Ireland -- 25-29 April 2005**
- ❑ **New York City, New York -- 18-22 July 2005**
- ❑ **Houston, Texas -- 17-21 October 2005**

<http://www.opengroup.org/rtforum>