Real-time and Embedded Systems Forum

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

Note: Minor update on 11 February 2005
San Francisco RT&ES Forum
24-28 January 2005
What Happened?

- 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.
San Francisco RT&ES Forum
24-28 January 2005
What Happened? (Cont’d)

- 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
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 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.
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


Further details:- Please check 'Documents' for presentations
RTES Forum Deliverables 2005

- **Strategic Deliverables:**
  - Open Architecture for Real-time
    - Templates
    - Technical Reference Model
    - Dynamic Resource Management Standard Draft
  - Safety Critical Real-time Java
    - Draft Specification
    - Subset Reference Implementation (RI)
    - Subset Technology Compatibility Kit (TCK)
  - Security Protection Profiles
    - EAL 6 Deeply Embedded OS Draft
    - EAL 6 Web Services Draft
  - High Assurance, Safety Critical
    - Security/High Assurance Guide Book for Managers Draft
    - High Assurance RT Profile IEEE POSIX/ARINC 653 Draft
  - Initiate Consumer Electronics Activity
  - Initiate Medical Devices Product Standards Activity

- **Other Supporting Deliverables:**
  - Certification for POSIX 1003.13 PSE53
  - Software Development Patterns for RT
  - Mission Critical RT Java Specification Draft
Future RTES Forum Activities

- 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

- 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