

ARTIST2 – Year 1 Review

Grenoble, October 3rd-4th, 2005

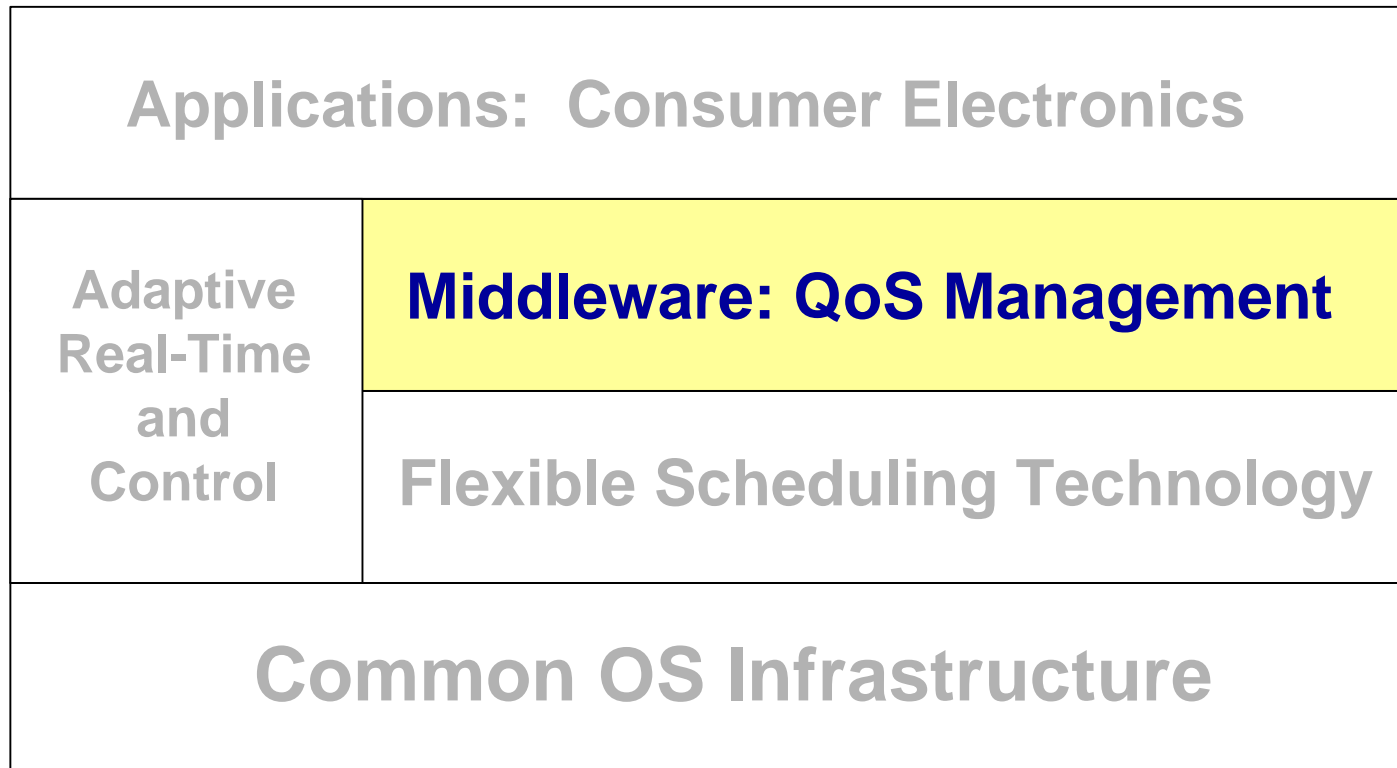
Activity

NoE Integration

QoS Aware Components

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Overview of the activities of the ART cluster



Outline of the Presentation

Objectives and Approach

Industrial Needs and Experience

Year 1 Activities

- Achievements & Ongoing Work
- Management Perspective

18 Month Perspective

- Work planned for the next 18 months
- Significant events or achievements expected

Activity 4: JPRA NoE Integration

QoS-Aware Components

Objectives

Improve support for development and execution of QoS aware components

- Consider QoS characteristics in interfaces and infrastructures
- Integrate resource needs

Approach

- Build on partners experience:
 - Participation in standards writing and interaction with industry*
- Identify open issues of common interest
- Propose solutions that integrate different approaches
- Feedback with industry

Industrial Needs and Experience

- **Interaction with Industry:**
 - Consumer electronics: Philips, Nokia
 - High Integrity Systems: Thales

- **Industrial Needs**
 - Ensure an stable output quality and optimize resource usage
 - Use software from third parties
 - Support to dynamic configuration: Aml, pervasive systems

- **Possible Global Impacts of Research Results**
 - Reduce development cost
 - Optimize user benefits for a given platform

Year 1 activities

Achievements & Ongoing Work

Brief State of the Art

- **Specification of QoS Characteristics**
 - *Notations to include QoS characteristics in the interfaces*
 - *Integrate of information for resource management*
- **Composition of QoS Characteristics**
 - *Ensure that the required interfaces are provided with the needed QoS characteristics*
 - *Evaluation of a set of interconnected components*
- **Components infrastructures**
 - *Support extra-functional requirements*
 - *Negotiation mechanisms btw components and infrastructures*
 - *Resource management based on reservation*

Year 1 activities

Achievements & Ongoing Work

- Definition of a common terminology
- Consensus on the topics suitable for collaboration:
 - Alignment between modeling styles of MARTE and QoS and FT profile
 - Development of a contract model with well founded semantics
 - QoS aware components infrastructures
- Identified the interested teams
- Start of integration of research from partners
- A document with the integrated view is being done
- Activity meeting in Madrid

Year 1 activities

Management Perspectives

- *What worked well*
 - *Partners very motivated in the integration*
 - *Real interest and ongoing work in the activity topics*

- *Difficulties encountered*
 - *Slightly different concepts for the same terms*
 - *Difficulties for organizing meetings*

- *Structural changes in the activity*
 - *Select specific QoS characteristics and resources for experimentation*

18 Month Perspective

Work Planned for the next 18 months

- Continuation of the planned activities
- Interact with industry to ensure usability of the results
- Identification of suitable QoS characteristics for experimentation:
 - Selection of a real scale example for the evaluation of the proposed techniques

18 Month Perspective

Significant Events or Achievements Expected

- Report the results of the collaboration effort:
 - QoS notations:
 - Integration of MARTE and “QoS and FT” profiles*
 - Guidelines for their use*
 - QoS components composition
 - Propose a contract model that considers:*
 - quality required and provided and resource needs*
 - Components infrastructures
 - Propose an API that considers the different approaches*
 - Propose compatible resource management techniques*
- Organization of meetings for live discussion on these topics