

Global Software Development Research at Siemens

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Siemens Corporate
Research

Siemens Overview

- Presence in over 190 countries
- Builds mission/safety critical software intensive systems
 - Power plant control systems
 - Power distribution systems
 - Telecommunications systems
 - Building control systems
 - Automotive systems
 - ...
- Largest developer of software in the world

Siemens Corporate Research

- US research facility
- Performs applied research/consulting in Software Engineering
 - Project Management
 - Software Architecture
 - Quality
 - Requirements Engineering
 - Rapid Prototyping/Agile methods
- Currently attempting to codify best practices for distributed development

Model Driven Distributed Development

- Project Management
 - Time boxed approach
- Requirements Engineering
 - Capture requirements in UML model
- Architecture
 - Develop component spec with distribution in mind

Next Steps (issues)

- How do we resolve architecture quality requirements with functional requirements?
 - Typically different teams, need to integrate the processes
- How do we specify components so resulting system exhibits desired qualities?
- How do we validate components that are developed?
 - Currently it is typical to see 50% of costs going to integration and testing