
What I have Learned this Morning

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General Statements

The papers have highlighted the pressing need for SE methodologies for adaptive systems

⇒ M-ADAPT is timely

As a research field, this is very much in the embryonic stage, with many building blocks but also many open questions

⇒ M-ADAPT is timely

There are actually very few forums where the constituent researchers can get together

⇒ M-ADAPT is timely



The Building Blocks

Methods

- Components/ context/ composition/ adaptation [Cámara]
- Context and policies [Chauvel]
- State-based models (at run-time) [Ballagny, Aretxandieta]
- Real-time (reflective) component models [Ueyama]
- Adaptation patterns, adaptation taxonomy [Gomaa]

Methodologies

- Modelling of adaptation for embedded systems [Adler]
- Models, roles and self-stabilizing [Parzyjegla]
- Models and architectural constraints [Khan]



Pragmatics: The Challenge of Complexity

Moving from small scale examples to real world distributed applications

- Large design space of components and features
- Anticipated vs unanticipated events
- Contextual parameters at all levels
- Distributed and decentralised logic

Domain specific solutions or general solutions



Autonomic vs Adaptive: A Key Issue

Model-driven techniques for adaptive systems

- Characterised by design-time planning of (anticipated) adaptation

Model-driven techniques for autonomic systems

- Models managed at run-time according to target self-* properties

Stage 4: Software engineering methodologies for adaptive and autonomic systems?



Shaping the Discussion

Key Questions

- What is an appropriate MDE methodology for adaptive and/ or autonomic (distributed) systems
- What are the appropriate constituent models?
- What is an appropriate transformational process?
- Where is adaptation folded into such a process?
- Is there a role for models@run-time?

Meta-questions

- What do we know (useful building blocks)?
- What do we not know (towards a roadmap)?
- And of course, what should we do next!

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Key Questions

- What is an appropriate MDE methodology for ... and/ or autonomic (distributed) systems
- What are the appropriate constitutions ...
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- Is there a role ... @run-time?

Meta-questions

- ... we know (useful building blocks)?
- ... what do we not know (towards a roadmap)?
- And of course, what should we do next!

What is your most pressing question?