Does software architecture research have any impact on software architecture practice?

The practitioners’ view

Anna Liu, Eltjo Poort, Eoin Woods, Uwe Zdun
The Panel

- **Anna Liu** - formerly consulting architect at Microsoft, now at NICTA, WICSA 2014 chair
- **Eltjo Poort** - NL country lead architect at Logica
- **Eoin Woods** - software architect at UBS
- **Uwe Zdun** - professor at U. of Vienna, editor at IEEE Software
Research Deliverables

- **ADLs** - over 25 (AADL, Acme, ADLARS, ADML, … UniCon, Weaves, Wright, xADL, XYZ/ADL)
- **Analysis** formalisms and techniques
- **Evaluation** methods - at least 15 (ALPSM, ARID, ATAM, ATMA, … SAAM, SAAMCS, SARA, TARA)
- **Methods and techniques** (decisions, requirements…)
- **Quality property** analysis and models
- **Reference models and ontologies**
The Impact on Practice

My experience of what gets used ...

- **UML** (maybe MDA) ... barely software architecture!
- **Structural analysis** tools (inspired by research)
- **Viewpoints** (a little - growing)
- More awareness of **quality properties**
- **Evaluation** - ATAM, SAAM, ... (a little)
- Some of the best known **books** (SAiP, DSA, ...)
- Accessible **analysis techniques** (e.g. performance)
Why so little?
Different Events

Research

Practice

Crossover

WICSA
ICSE
VARSA 2011
ECSA 2010
CompArch 2012
QoSA
SATURN Conference 2012
SPLASH
jax 2012
DevWeek 2013
Software Architect 2012
AGILE 2012
Oracle World
OOP 2013

Friday, 24 August 12
Different Sources

Research

Practice

Crossover
Different Priorities

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Suggestions

• A lot of “technology” exists but **not much has transferred**
• do you care? (seriously - is it a problem? if so change something)
• Can you take **problems from industry**?
  • interact with the QCON people, use open source, startups, ...
• Why such **proliferation**?
  • are you competing? if not, can you **cooperate and reuse**?
• Make **validation and transfer** projects in their own right
  • be there for the long haul (even Spring took 5+ years!)
• **Avoid silos** of specialisation ... most problems have multi-dimensions
Always Remember

"The purpose of software engineering is to control complexity, not to create it"

Pamela Zave