Session Objectives

Brainstorm, share and refine ways to include software architecture methods and concepts in college and university courses.

Form working relationships among participants and nurture an educators software architecture “community.”

SEI resource:
http://www.sei.cmu.edu/architecture/comm_resources.html
Agenda

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9:00 – 10:00 ArchE presentation
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   - How to connect in the future
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# 2004 Workshop Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marty Barrett</td>
<td>East Tennessee State University</td>
</tr>
<tr>
<td>Len Bass</td>
<td>SEI</td>
</tr>
<tr>
<td>Mike Battig</td>
<td>Saint Michael’s College</td>
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<tr>
<td>Steve Chenoweth</td>
<td>Rose-Hulman Institute of Technology.</td>
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<tr>
<td>Janet Hartman</td>
<td>Embry-Riddle Aeronautical University</td>
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<tr>
<td>Larry Jones</td>
<td>SEI</td>
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<tr>
<td>Mike Lutz</td>
<td>Rochester Institute of Technology</td>
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<tr>
<td>Manton Matthews</td>
<td>University of South Carolina</td>
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<tr>
<td>Linda Northrop</td>
<td>Software Engineering Institute</td>
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<tr>
<td>Arturo Sanchez</td>
<td>University of North Florida</td>
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<tr>
<td>Celia Schahczenski</td>
<td>Montana Tech of The University of Montana</td>
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<tr>
<td>Jim Tomayko</td>
<td>Carnegie Mellon University</td>
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<tr>
<td>Robert A. Willis</td>
<td>Hampton University</td>
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<tr>
<td>Rob Wojcik</td>
<td>SEI</td>
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</tbody>
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2004 Discussions - 1

Fitting essential concepts into a “small package”

- one week in a single software engineering course

Threading concepts throughout the curriculum

A single course in software architecture and design (Rose Hulman)

How do you teach synthesis?

Forums for spreading the word

- OOPSLA (Educator’s workshop, panels, workshops, Design Fest, birds-of-a-feather session)
- SIGCSE
- CSEET
2004 Discussions - 2

Forums for spreading the word

- OOPSLA (Educator’s workshop, panels, workshops, Design Fest, birds-of-a-feather session)
- SIGCSE
- CSEET (Conference on Software Engineering Education & Training)
- Frontiers in Education
- ITiCSE (Innovations and Technology in CS Education) sponsored by SIGCSE
- Consortium for Computing Sciences in Colleges

Funding sources

- NSF, Department of Education, Andrew Mellon Foundation, US Labor Department, ACM SIGCSE
2005 Attendees

Mari Anvari  ZIFIT
Len Bass  SEI
Roger Champagne  Ecole de technologie superieure
Mario Garcia  Texas A&M University - Corpus Christi
Elsa Golden  Carnegie Mellon University
Larry Jones  SEI
Roger Lee  Central Michigan University
Bhabani, Misra  University of St. Thomas
Warren Moseley  Southwestern Oklahoma State University
Parviz Partwow-Navid  California State University
Rodney Rambally  University of Trinidad and Tobago
William Sheers  Washington & Jefferson College
Ludwig Slusky  California State University
Mei-Huei Tang  Gannon University
Jim Tomayko  Carnegie Mellon University
Rob Wojcik  SEI
Cui Zhang  California State University
2005 Discussions - 1

How to think architecturally

• What are the skills needed to be an architect?
• What are architects thought processes?

Key ideas to incorporate into software engineering course(s)

• quality attributes
• working in groups
2005 Discussions - 2

Exercises and tool support for exercises

- maintenance exercise as a motivator
- students start their own company
- students present case studies
- take on the role of advocate for a particular quality attribute
- Lego robot project

Forming and expanding the software architecture educator’s community

- influence model curricula
- share contacts and work products
- apply to be an SEI visiting scientist
2006 Attendees

Mohammad Ayati
Mehdi Beheshtian
Vijay Deokar
Ajantha Herath
Suvineetha Herath
Allen Holliday
Adam Hurang
Suradet Jitprapaikulsarn
C.Luis Fernando Castro
Eduardo Rodriguez-Flores
Robert Silverman
Ming Wang
George Wang

Cal State Los Angeles
University of La Verne
Cal State Los Angeles
The Richard Stockton College NJ
The Richard Stockton College NJ
Cal State Fullerton
Cal State Los Angeles
Naresuan University
Universidad Autonoma Metropolitana
Universidad Autonoma Metropolitana
Cal State Stanislaus
Cal State Los Angeles
Cal State Northridge
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ArchE Presentation

See Len’s slides.
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Seed Topics for Discussion

Software Architecture Documentation in Undergraduate Curricula

- What from the course can be used in undergraduate courses?
- What format is best? How would you include the topics?
  - a complete course in software architecture versus embedding software architecture in existing courses
  - weaving software architecture into a curriculum
  - packaging blocks of instruction: what to include and where to include it
- What materials would you need to teach the topics?
  - supporting instructor materials
  - exercises and lab assignments
  - pedagogical examples

Software Architecture Documentation in Graduate Curricula

- Same topics as above

Others?
Group Discussion

Brainstorm topics
Cluster topics
Prioritize topics
Develop time budget
Discuss topics
  • Larry facilitate
  • Len record
  • Judy kibitz
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Contact Information

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