RETR'05

The 1ˢᵗ International Workshop on Reverse Engineering To Requirements

Collocated with WICSA/WCRE'05

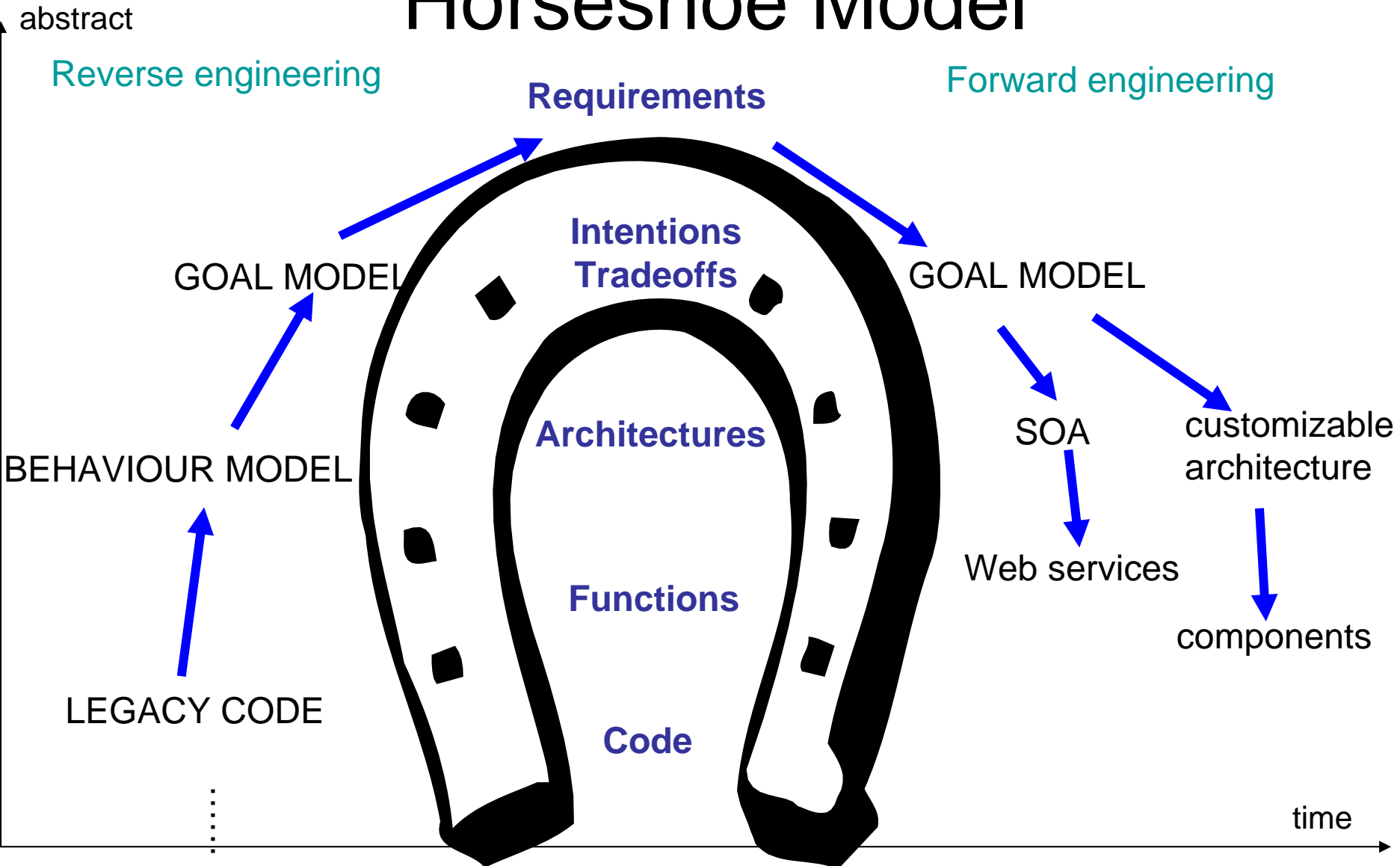At Pittsburgh, PA

November 7, 2005

An intersection of interests

- Engineering Research communities
  - Software Engineering community
    - 27 annual international conferences
  - Requirements Engineering community
    - 13 annual international conferences
  - Reverse Engineering community
    - 12 annual international conferences
- Industrial community
  - Highly involved

An intersection of authorships

The following statistics are based on DBLP retrieved on November 2, 2005 using XSLT scripts.

- 1966 ICSE research papers
  - 2921 unique authors (**22 Victor R. Basili, 21 Barry W. Boehm,** …)
- 378 RE research papers
  - 662 unique authors (**12 Bashar Nuseibeh, 8 Michael Jackson**, …)
  - 133 of them also has ICSE papers **(=20.0% of |RE|)**
- 344 WCRE research papers
  - 491 unique authors (**15 Richard C. Holt, 13 Kostas Kontogiannis**, …)
  - 102 of them also has ICSE papers (=**20.0% of |WCRE|**)
- Intersection of these authors
  - 11 unique authors (amounts to **2.2%** of WCRE and **1.6%** of RE authors)

	WCRE	RE	ICSE	RETR-PC
John Mylopoulos	2	7+2	5	Y
Julio Cesar Sampaio do Prado Leite	2	7+1	2	Y
Betty H. C. Cheng	2	5+1	4	N
Colin Potts	1	8	7	N
Margaret-Anne D. Storey	1	5	4	N
Harald Gall	1	5	3	N
Wojtek Kozaczynski	1	1	6	N
Mehdi Jazayeri	1	1	3	N
Stan Jarzabek	1	1	2	Y
Roland Mittermeir	1	1	1	N
Eleftherios Koutsofios	1	1	0	N

For a given author in the intersection, |WCRE| <= |RE|

- Relatively, we *want* more people in the WCRE community to contribute to RE
  - **Mike Godfrey**   4   +1   0

Put into reengineering perspective
Horseshoe Model

abstract

Reverse engineering

Requirements

Forward engineering

**Intentions
Tradeoffs**

GOAL MODEL

GOAL MODEL

Architectures

BEHAVIOUR MODEL

SOA

customizable
architecture

Web services

Functions

LEGACY CODE

components

Code

time

Missions for RETR: bridge the gap

- Aim WCRE **higher**:
  Reverse engineering to requirements, not just architectures and designs

- Ground RE **deeper**:
  Requirements to be retrieved back and forth with implementations

- Reveal new potentials:
  Autonomic systems may combine both

Workshop Schedule

8:30	Opening and Introduce ourselves
9:00	Invited talk: ***The Challenge to Recover 15 Years of "Why" Behind a Product Design*** by Kevin Dunipace
9:30	Invited talk: ***Learning from Past Trial and Error: Some History of Reverse Engineering to Requirements*** by Elliot Chikofsky
10:00	Presentation: *Automatic Extraction of Abstract-Object-State Machines Based on Branch Coverage* by Hai Yuan & Tao Xie
10:45	Presentation: *Extracting Business Policy and Business Data from the Three-Tier Architecture System* by Maokeng Hung & Ying Zou
11:30	Panel discussions on *RETR from legacy software design*
12:00	Lunch break
13:00	Break, you may attend Grady Booch's keynote speech at WICSA
14:30	Invited talk ***Autonomic Computing: Now You See It, Now You Don't*** by Hausi Muller
15:00	Invited talk by Kostas Kontogiannis and Ladan Tahvildari
15:30	Presentation: *Requirements-Driven Configuration of Software Systems* by Yijun Yu, Alexei Lapouchnian, Sotirios Liaskos & John Mylopoulos
16:00	Break
16:30	Presentation: *Towards a Framework to Incorporate NFRs into UML Models* by Sabrina Anjum Tonu & Ladan Tahvildari
17:00	Panel discussion on *RETR for autonomic systems*
17:30	Wrap up & conclusions on lessons learnt, next steps
18:00	End of the workshop