Putting Requirements and Quality at the Core of Global Service Delivery: Current Efforts and Future Plans at Pace University

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Service Delivery

Supplying users
with services
needed or demanded
(assuming software services)

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Supply Perspective

- Who are the users?
- What do they need/demand?
- How do we find this out?
- How do we check we understood their needs?
- How do we describe this for development?
- How do we account for conflicting needs?
- How do we deal with changing needs?
- How do we confirm we have satisfied these needs?
- …

Demand Perspective

- How do we describe our needs?
- How do we know what is available/possible?
- How do we select from alternatives?
- Can we customize what we get?
- Can we trust the offering?
- Can we trust the provider?
- …

The ability to answer these questions lies at the heart of service delivery

GLOBAL Service Delivery

- For the provider - does it matter where the demand comes from?
- For the end-user - does it matter where the supply comes from?

In a global context, issues of language and culture can make answering the previous questions problematic

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Our Framework

What skills?

What preparation?

Requirements

Software engineering process

Services technology infrastructure

Really Understand Needs

True Quality Supply

QA

Testing

Globalization

Undergraduate students

Graduate Students

Foundations

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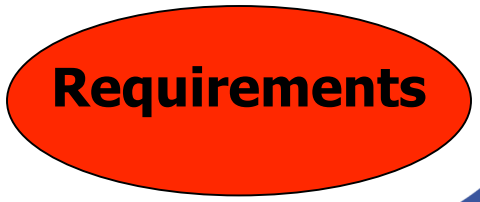
Requirements Courses

- Techniques for stakeholder identification
- Approaches for needs elicitation, negotiation and validation
- Requirements description in terms of service capabilities and measurable qualities of service
- Requirements management and traceability for a changing and on-demand world
- Sourcing the satisfaction of a requirement from multiple parties
- *Use of IBM Rational Requisite Pro*



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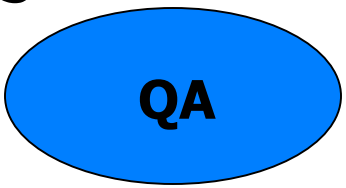
Quality Assurance Courses

- Emphasis on the critical link between requirements and quality
- Techniques to assure quality of service *prior* to deployment (e.g. reliability)
- Techniques to assess quality of candidate services and supplier processes, especially as combined and integrated
- Focus on suitable metrics and measurement
- Does the selected service do what is required and no more?



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Testing Courses

- Emphasis on the critical link between requirements and testing
- Testing at the unit, component, systems and user acceptance level
- Emphasis on test-first and test-driven development, with close customer involvement
- Is the testing process working?
- Are we ready to deploy?
- *Use of Eclipse/JUnit and IBM Functional Tester*

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Service-Oriented Courses

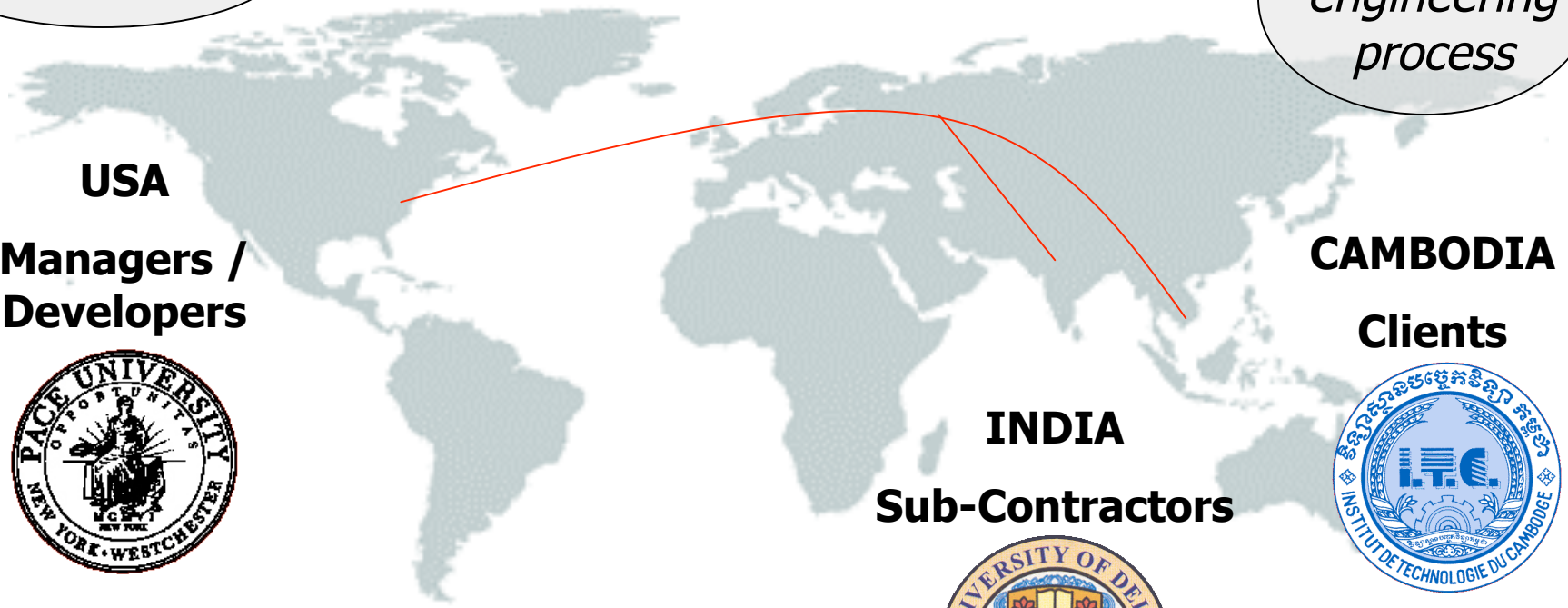
- BladeCenter awarded to Pace University (Dr. Lixin Tao)
- Offered courses:
  - Internet Computing with Distributed Components
  - Enterprise System Integration with Web Services
  - Grid Computing

Services technology infrastructure

Software Engineering Courses with a "Global" Component

Globalization

Software engineering process



USA

Managers / Developers

INDIA

Sub-Contractors

CAMBODIA

Clients

Java MySQL eclipse JUnit Rational software

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Future Plans

- PREMISE: students need these foundational skills to exploit service-enabling technology
- Provide students with projects that focus on globalization, service definition and provisioning, and multi-disciplinary teaming
- Explore distributed agile software development for dynamic service provisioning
- End-to-end technical infrastructure for students via open source, IBM Academic Initiative, IBM Shared Service Infrastructure
- Seminar series: IBMers and other practitioners encourage new ideas and curriculum changes

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