Global Software Development

OHJ-1860 Software Systems Seminar, 3 cr

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Basic Information

- Audience
  - This course is intended for both undergraduate and postgraduate students

- Time and place
  - Tuesdays (12:00-14:00) in room TC128

- Some of your presented material may be used in future instances of the course
Course Requirements

- Attending at least 50% of all the sessions (min of 6 sessions)
- One 30-45 minute presentation
- Submission of a written report (about 7-10 pages)
- Active participation in the discussions is highly recommended, may compensate for absence
  - The presenter should conclude the presentation with “main lessons learned”, “future directions”, etc.
  - The audience should discuss the concluding points, or any other points related to the content of talk, by asking questions to the presenter
  - The presenter should also prepare at least three questions concerning the topic, the audience is expected to provide the answers 😊
Other Practical Information

- Presentation slides should be sent in advance
- The written report can be submitted later, but preferably in advance
- Assessment scale: “Passed” or “Failed”
- Course webpage:
  http://www.cs.tut.fi/~imed/courses/GSD/
Guest Lecture

- Time and place
  - Tuesdays, 23.10.2007 at 12:15 in room TC128

- Title
  - Communication and Collaboration Practices in GSD Projects

- Speaker
  - Dr. Maria Paasivaara, SoberIT- Helsinki University of Technology
Offshoring versus Outsourcing

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2007 SIIA Report

- Survey of 114 software companies on their use of offshore developers

- Research objectives and results:
  - The overall impact of global software development on companies
  - The current use of various business models
  - Global software development’s impact on productivity
  - The success of offshoring activities
  - Challenges associated with global software development
  - Attitudes of companies not currently offshoring
  - Potential future changes in global software development
2007 SIIA Report

- Companies are increasing their global development efforts:
  - 57% of the participants have significantly increased offshore work in the past 18 months
  - many plan to add still more in the next 18 months

- Most important drivers:
  - growth strategy ("important" or "critical" driver for 84% of respondents)
  - speed to market and productivity

- Business models:
  - ~ 50% working with an offshore provider
  - ~ 2/3 operating a subsidiary or captive
  - employing a hybrid model
2007 SIIA Report

- Achieving 80-100% of cost savings goals
- Gains in productivity is less than expected
- 73% of respondents reported a positive impact on profits
- 2/3 of companies who work offshore claim the quality of work is above average when compared to onshore staff
  - 25% rating the quality as "excellent" or "outstanding"
2007 SIIA Report

- Companies not offshoring their software development:
  - concerns about *product quality*
  - loss of *control*
  - fear of exposing their *intellectual property*
  - negative impact on *internal staff morale*
GSD: an Opportunity and a Challenge

- Opportunities (Carmel):
  - specialized talent
  - mergers and acquisitions
  - reduction in development cost
  - globalized presence
  - reduction in time to market
  - proximity to the consumer
GSD: an Opportunity and a Challenge

- **Sources** of challenges
  - temporal distance
  - spatial distance
  - socio-cultural distance
  - organizational distance
  - others: political, legal,…

- **Challenges** affect:
  - project management
  - development process
  - communication, coordination, collaboration and knowledge management
  - planning, management and development of product artifacts
Selected Literature

- WWW
- Online digital libraries (IEEE, ACM, Springer, etc)
- Conference series on Global Software Engineering
- Workshop series on Global Software Development
- Workshop series on Cooperative Supports for Distributed Software Engineering Processes
- Journal special issues (IEEE software, Communications of the ACM, etc)
- Books:
- Others:
Available Topics

- **T1.** Geographically-distributed software engineering, *Inka*
- **T2.** Open source software development, *Antti*
- **T3.** Collaborative software engineering
- **T4.** Tools and technologies supporting coordination, *Jakub*
- **T5.** Distributed agile methods
- **T6.** Offshoring and outsourcing, *Mayank*
- **T7.** Teams and organization
- **T8.** Distributed development environments
- **T9.** Social and cultural factors in global software development (e.g. trust, cooperation), *Jawid*
- **T10.** Web 2.0 and GSD, *karri*
- **T11.** Coordination risks in global software development, *Jukka*
- **T12.** HCI and Offshoring, *Jammu*
- **T13.** Project management in GSD
- **T14.** Process issues in GSD, *Harsha*
- **T15.** Software inspection in GSD, *Sarath*
- **T16.** Managing software artifacts in GSD
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