Global Software Development 17-609

Spring 2008
M,W 10:30-11:50
SCR 265

course website

overview  schedule  grading

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Office</th>
<th>Phone</th>
<th>Email</th>
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<tbody>
<tr>
<td>James Herbsleb</td>
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Office hours: Send email to set up a time.

Overview

Software development is increasingly a globally-distributed undertaking. The search for talent across national boundaries and the integration of groups thrown together by mergers and acquisitions are but two of the many forces conspiring to fundamentally change the organizational context of software development. The skills that allow developers and managers to thrive in this milieu are among the most important in today’s development organizations.

Distributed software development organizations are also receiving attention from researchers interested in communication, collaboration, and coordination over distances. Creating trust, awareness, shared understanding, and many other essentials of teamwork typically relies on face to face interaction. Creating effective technology-mediated mechanisms to support distributed teams requires a deep understanding of how individuals come together to form teams and organizations.

This course covers a set of topics that are essential to both professionals who will become participants and leaders in globally-distributed projects, as well as researchers interested in studying virtual teams, distributed organizations, and global software development.

Topics covered in this course will include:

* Overview, problems of GSD (1)
* Global software industry (1)
* Distance, virtual teams, distributed organizations (1)
* Challenges of culture (1)
* Facilitating trust, cooperation, social capital (2)
* Organizational/business models (1)
** Project set up case (1)
* Communication and awareness (1)
* Distributed development environments (1)
Schedule

(readings with * are optional)

**Week 1**
Jan. 14: Overview, course requirements, expectations.

Jan. 16: Overview, problems of GSD homework


**Week 2**
Jan. 21: The global software industry homework


Communications of the CACM, 50, 2, pp. 89-94.


Jan. 23: Distance, virtual teams, distributed organizations homework


Week 3
Jan. 28 Challenges of culture homework


Jan. 30 Facilitating trust, cooperation, social capital 1 homework


Week 4
Feb. 4 Facilitating trust, cooperation, social capital 2 homework


Feb. 6 Organizational/business models


Week 5
Feb. 11 Project set up case discussion

Feb. 13 Communication and awareness

Week 6
Feb. 18 Distributed development environments

Feb. 20 Collaboration technologies

Week 7
Feb. 25 Social networks and knowledge networks
**Communications of the ACM**, 50, 7, pp. 86-91.

Feb. 27 Guest Lecture

**Week 8**
Mar. 3 Siemens Knowledge Networking case

Mar. 5 Requirements in GSD


Mar. 10-14 Spring Break

**Week 9**
Mar. 17 Lessons from open source 1


Mar. 19 Lessons from open source 2


**Week 10**
Mar. 25 Open source ecologies


Mar. 27 Eclipse case discussion

**Week 11**
Mar. 31 GSD and agile methods


**Week 12**
Apr. 2 The outsourcing relationship 1


Apr. 9 Assessing coordination risk


Week 13
Apr. 14 Architectures and coordination 1

Apr. 16 Architectures and coordination 2

Week 14
Apr. 21 Architecture case discussion

Apr. 23 Best practices for global development 1

Week 15
Apr. 28 Best practices for global development 2

Apr. 30: Looking ahead

Grading
Grades will be based on three factors:
<table>
<thead>
<tr>
<th>Component</th>
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<tbody>
<tr>
<td>Homework</td>
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<td>Case analyses (4)</td>
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<td>Class participation</td>
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