

Informatics 217: Software Processes
Winter 2011

Term Projects

Working in a team of 2, students will undertake a project where they conduct a field study of software process at an organization that develops software. Students will need to visit the organization multiple times over the quarter to observe work and conduct interviews. If you cannot find an organization to study or prefer not to conduct a field study, an alternative project is given at the end of this hand out. All projects are to be approved by the Instructor.

1 Data Collection

Students should plan to visit the company regularly. Plan to spend 4-5 days spread over the quarter observing people do work. As well, students should conduct 4-5 interviews with team members who have different roles. Data collection will include observations, taking notes, photographs, and audio recordings.

2 Research Topics

This quarter we'll be focusing two research questions that center on hybrid source software development. You should choose one to investigate at your field site.

Code Search on the Web

1. How do developers decide to search for source code on the web? What do they search for? How do they make relevance and suitability judgments? How do they ultimately use the code that they have selected?

Socio-Technical Congruence

2. According to Conway's law, the organization of the team is reflected in the organization of the source code. How does this play out for teams engaging in hybrid source software development? How is responsibility for different parts of the code allocated?

3 Grading

The final report for your term project is due on the last day of the quarter, March 18, 2011. You must use the paper format for the ICSE (International Conference on Software Engineering) proceedings and the report must be 10 pages. At various points in the quarter, you will hand in sections of the report.

Site Description	10%
Methods and Research Questions	10%
Preliminary Results	40%
Discussion Section	20%
Final Report	20%

3.1 Site Description

Due January 27 at 10am by email

Write a 1-page description of your field site. Include details on:

- Size of team and size of company
- Composition of software team
- Software being developed
- Tools and methods used
- Physical layout of space
- Examples of artifacts
- Photographs

3.2 Methods and Research Questions

Due February 10 at 10am by email

Write a 1-page description of how you will be collecting and analyzing your data, and the research question that you will be answering.

3.3 Preliminary Results

Due February 24 at 10am by email

Write a preliminary version of the results for your studies. (You will probably revise this for the final report.) You should also submit your raw data and notes.

3.4 Discussion Section

Due March 3 at 10am by email

Write the discussion section of the paper, where you consider the broader implications of your results.

3.5 Final Presentation

During the last meeting of the quarter on March 11, you will give a 30-minute presentation on your project.

4 Alternative Project

Complete all the exercises in the Personal Software Process, as described by Watts S. Humphrey in “A Discipline for Software Engineering”. This project is to be completed individually and is offered as an option for students who are unable to find a suitable research project.