

PHD WORK

-CASE KASURINEN

**ECSE MEETING, JUSSI KASURINEN,
23.1.2012**

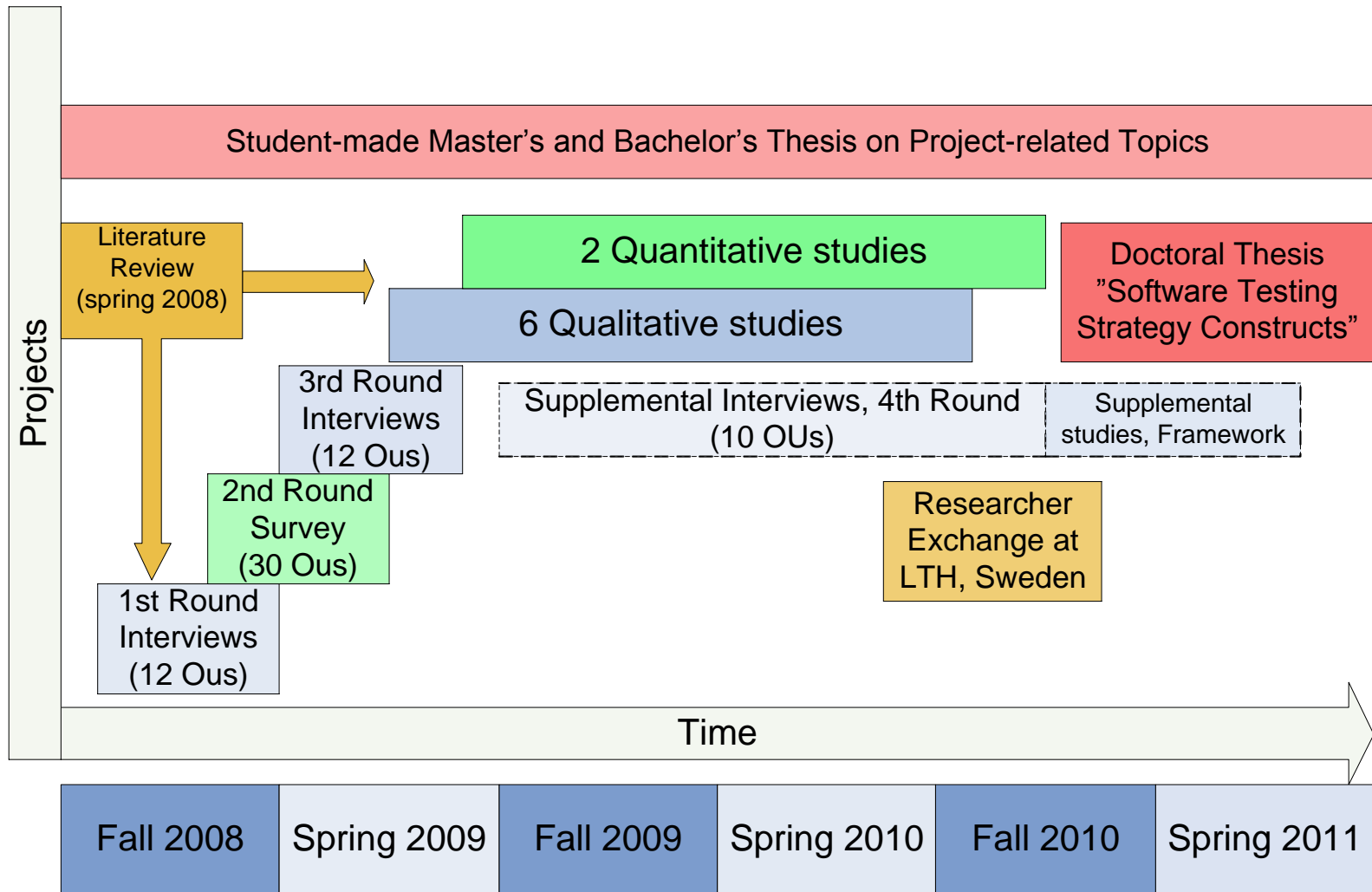
BACKGROUND

- ❑ **Master of Science (Software Engineering) at LUT Information Technology in 12/2007.**
- ❑ **Doctor of Science (Software Engineering) at LUT Information Technology in 11/2011.**
- ❑ **So far 17 peer reviewed papers, of which**
 - ❑ 4 journal articles
 - ❑ 1 book chapter
 - ❑ 1 discussion paper for PhD symposium
 - ❑ Rest conference articles
- ❑ **Teaching assistant 06/2006-09/2008, Full-time PhD student 09/2008-11/2011, Project manager and post-doc 11/2011→**

BACKGROUND

- ❑ **Interestingly, Masters Thesis and the original topic for dissertation in Computer Science Education and Computer-Assisted Learning**
- ❑ **Switch to Software Engineering and Testing during Fall 2008.**
 - ❑ Financial reasons, interesting topic
 - ❑ Existing, strong project giving backup and resources
 - ❑ Hardest part was walking away from dissertation manuscript with 3 papers and a wealth of existing data.
- ❑ **The Software Engineering and Testing dissertation went as follows:**

TIMELINE



STUDY METHOD

Qualitative grounded method study with 12+10 organizations.

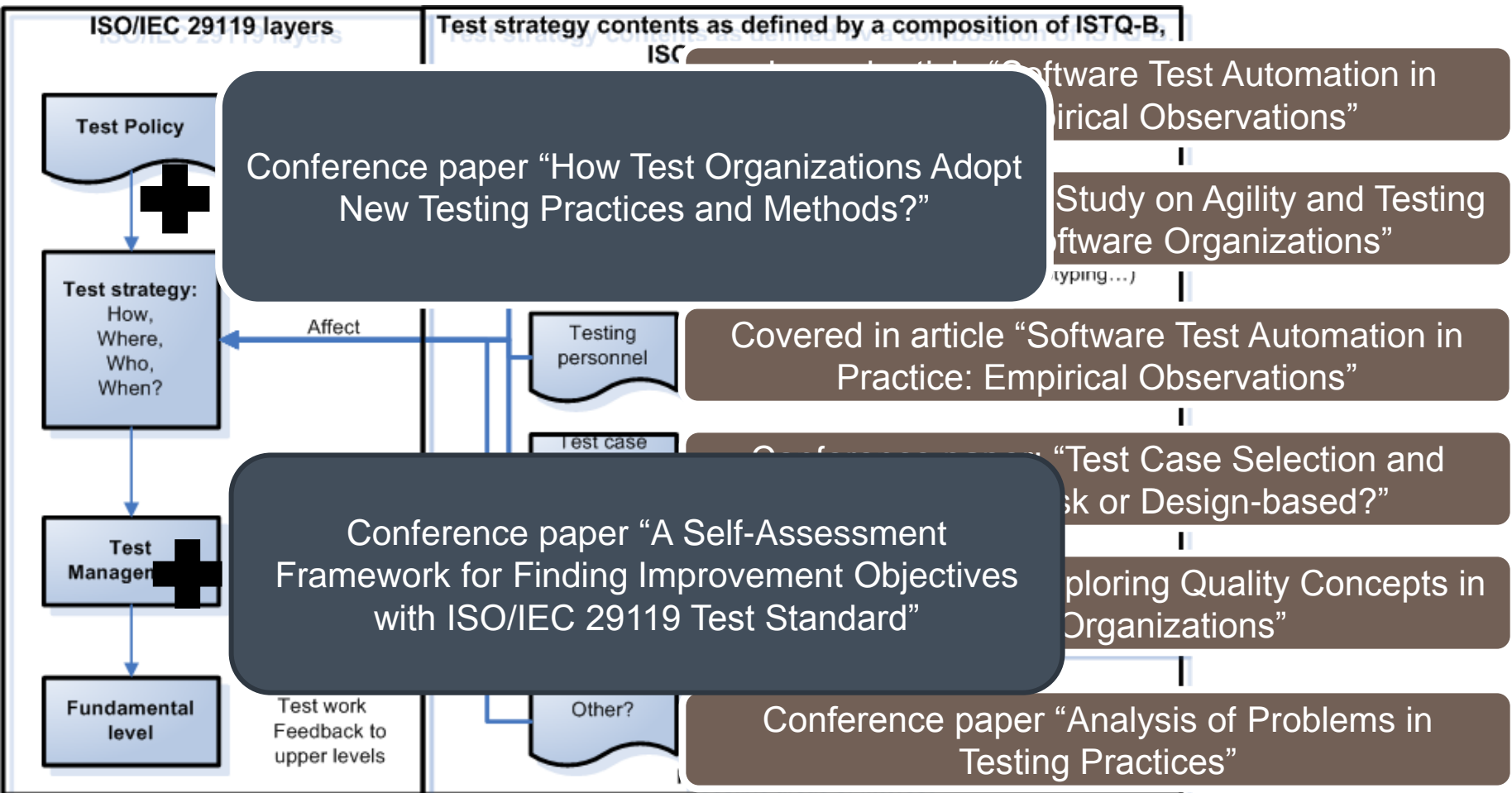
- Interviews – interview people on study themes
- Codification process – observe what concepts are prevalent and how they are related.
- Open coding:

Interview transcript	Codes, Category: Code
<p><i>"Well, I would hope for stricter control or management for implementing our testing strategy, as I am not sure if our testing covers everything and is it sophisticated enough. On the other hand, we do have strictly limited resources, so it can be enhanced only to some degree, we cannot test everything. And perhaps, recently we have had, in the newest versions, some regression testing, going through all features, seeing if nothing is broken, but in several occasions this has been left unfinished because time has run out. So there, on that issue we should focus."</i></p>	<p>Enhancement proposal: Developing testing strategy</p> <p>Strategy for testing: Ensuring case coverage</p> <p>Problem: Lack of resources</p> <p>Problem: Lack of time</p>

DATA SOURCES

- **12 organizations from the Finnish software industry**
 - Small to medium, national and international
 - From 3-man test consultancies to software product developers to organization building embedded software for the hardware platform to public sector.
- **31 organization survey**
- **10 organizations in the validation interviews**
- **4 organizations in the development of a framework for self-assessment.**
- **+ SQUID-project team at Aalto University**

DISSERTATION PUBLICATIONS AND THE TOPICS OF INTEREST



Test strategy constructs (and layers)

RESULTS

- ❑ **Three main results on Test processes**
 - ❑ Identification of those development process areas, which affect test processes most.
 - ❑ Assessment of the ISO/IEC 29119 Test process standard model in real-life organization.
 - ❑ Development of a self-assessment tool which could help organizations to identify and improve their testing practices.
- ❑ **On more detailed results on the work itself we could spend the entire day here, but lets focus on the actual thesis project itself.**

IDEAS, RECOLLECTIONS (BESIDES THAT STUFF WRITTEN EVERYWHERE)

- Large changes are not the end of the world.
- Its OK to accept that your “obviously perfect” paper got rejected for A+++ journal, sometimes the last 10% is pure luck.
 - Getting things published is way more important than getting stuff to the highest possible tier venue.
- Make a long-term timeline to go with the research plan.
- It may be worthwhile to write a paper based on your research plan to some conference PhD symposium.
 - Feedback on ideas
 - Prepares to defend own viewpoints and results
- If possible, try to match the researcher visit abroad to the time when you are writing your last included papers and starting up with the thesis itself.

IDEAS, RECOLLECTIONS (BESIDES THAT STUFF WRITTEN EVERYWHERE)

- Make a first concept draft of your dissertation manuscript as soon as you have nailed down the theory**
 - My first concept version (only theory, explanation on what you are doing, placeholders) was dated late 2009 (defense was 18.11.2011)
 - It breaks the ice on the actual writing part
 - ...and if the 5-6 pages of the theory are good enough for final version, you are already 5% done!
- After every published paper, do the following things**
 - “What do the existing papers say about my work?”
 - “What more should be said?”
 - Update the thesis manuscript
- And most importantly, Its not a monument for your effort, its ”only” a ~100-page article with extremely close and personal peer review.**

QUESTIONS, FEEDBACK, ROTTEN FRUITS TO TOSS?

**MY DISSERTATION ITSELF AVAILABLE VIA DORIA
(WWW.DORIA.FI)**