Software Engineering 2 (SWT2)

Chapter 1:

Introduction and Organization

Agenda: Introduction and Organization
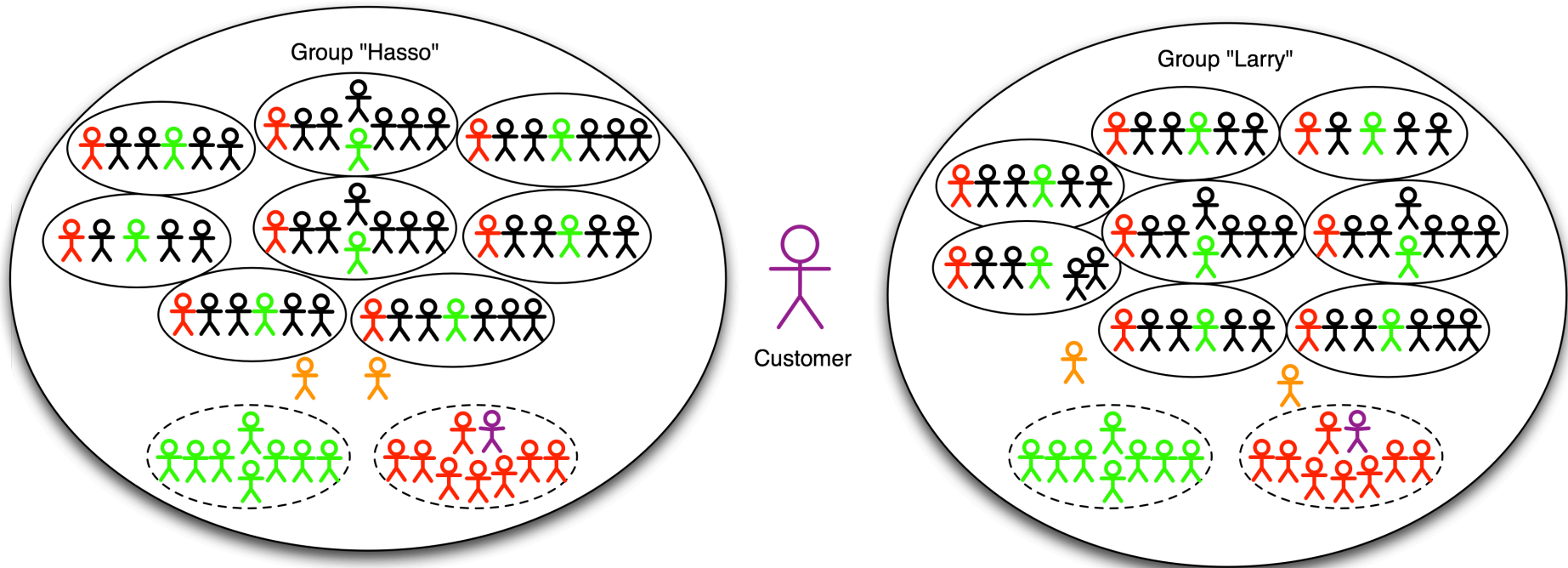
- **High-level Overview of SWT2**

- Organization

- SWT2 Project

- SWT2 Lecture

- Basic IT Infrastructure

- Literature

Software development in the large
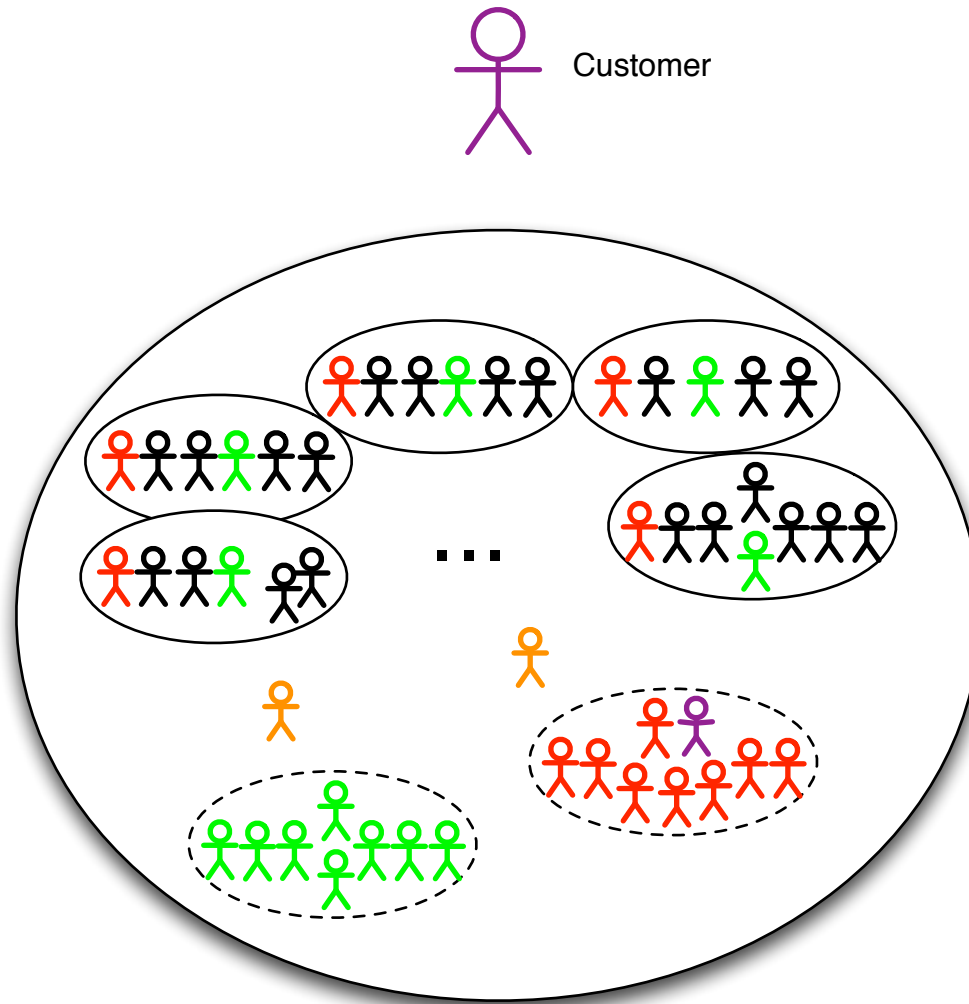
Customer

High-level Overview of SWT2

Your semester in a nutshell

- Introduction into technology, methodology, requirements etc.
- Sprints #1 + #2 + lectures
  - Sprint planning
  - Doing incl. "Daily Scrum"
  - Estimation meeting
  - Scrum of Scrums
  - Planning of planning
  - Sprint review
  - Sprint retrospective
  - Result presentation
- Christmas holidays
- Sprints #3 + #4 + lectures
- Oral or written exam

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Organization

Prerequisite to SWT2

- Undergraduate program
- Softwaretechnik 1

Class

- 4 SWS (~8h work per week)
- 6 ECTS credit points (graded)

Organization

Important dates

- Enrollment until October, 2012
- Preparation exercise starts today
- Project starts November 12, 2012

Lectures

- Friday, 11:00 – 12:30, HS3
- Friday, 13:30 – 15:00, HS3

Exercises: Block

Web

- http://epic.hpi.uni-potsdam.de/Home/SoftwaretechnikII2012

Organization

Responsible
- Jürgen Müller (juergen.mueller@hpi.uni-potsdam.de)

Teaching Team
- Thomas Kowark (thomas.kowark@hpi.uni-potsdam.de)
- Ralf Teusner (ralf.teusner@hpi.uni-potsdam.de)
- Martin Lorenz (martin.lorenz@hpi.uni-potsdam.de)
- Arian Treffer (arian.treffer@hpi.uni-potsdam.de)

Tutors
- Christian Godde (christian.godde@student.hpi.uni-potsdam.de)
- Christoph Matthies (christoph.matthies@student.hpi.uni-potsdam.de)

Grading

- Preparation exercise (completion mandatory)
- Oral exam (30%, individual mark), will be replaced by written one if #students > 30
- Usage of presented methods and concepts (45%, team mark)
  - □ Scrum
  - □ Behaviour-driven development
  - □ Test-driven development
  - □ Software Configuration Management
  - □ Continuous Integration
- Software development results (25%, team mark)
- If work is not distributed equally amongst team members, individual adjustments of the marks are possible
- To pass, you have to reach a 4.0 in **each** category

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multi-team-setups

Git

Scrum

BDD

Deployment

time-management

Rails

TDD

requirements-prioritization

Break down of people into groups and teams

- Development Group is split into teams of 5-8 people
- Each team
  - □ 1 Product Owner (PO)
  - □ ~½ Scrum Master (SM)
  - □ Several team members
- Questions
  - □ Who is not in the 5th semester?
  - □ Who is not an HPI student?

Content of the Project

Break down of people into groups and teams
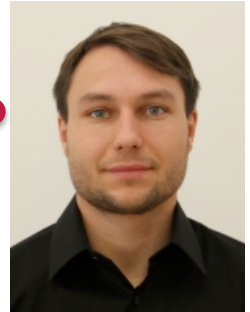
- Special teams
    - Scrum of Scrums (SoS)
    - Planning of Planning (PoP)
- Addition from the teaching team for each group
    - 1 customer (Ralf)
    - 1 chief product owner for tough decisions (Martin)
- Tutors accompany each team

Content of the Project

Software engineering assignment

- Build Extensions for a Massive open online course system
- Stable core will be provided
- Extensions should showcase possibilities of such a platform
- Strong focus on avoiding "patchwork" (UI, Workflows, Data)

- Programming framework is fix: Ruby on Rails
- Requirements will be presented in detail next week

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Content of the Project

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SWT2 Lecture

Lecture supports project

- Rails intro
- MOOC intro
- Scrum Lego exercise
- Scaling Scrum
- Project infrastructure in detail
- BDD & TDD (in Rails)
- Performance Bottlenecks
- Slide-Ins: Code Review, Tool presentations, Process Improvements
- Large-scale deployment
- Guest Lectures (Industry)

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Literature

- **General literature**
    - Ruby, S.; Thomas, D.; Hansson D. H.: Agile Web Development with Rails, 2010 (ebook)
    - Swicegood, T.: Pragmatic Guide to Git, 2010 (ebook)
    - Rappin, N.: Rails Test Prescriptions, 2010
    - Rasmusson, J.: The Agile Samurai, 2010 (ebook)
    - Pichler, R.: Agile Product Management with Scrum, 2010
    - Wirdemann, R.: Scrum mit User Stories, 2009
    - Larman, C.; Vodde, B.: Scaling Lean & Agile Development, 2009
    - Ludewig, J.; Lichter, H.: Software Engineering, 2006
    - Sommerville, I.: Software Engineering, 2004

- Specific literature is provided in each chapter of the lecture
- Ebooks will be made available for chosen books