

# Seminar in Requirements Engineering



**Introduction  
Frühjahrssemester 2014**

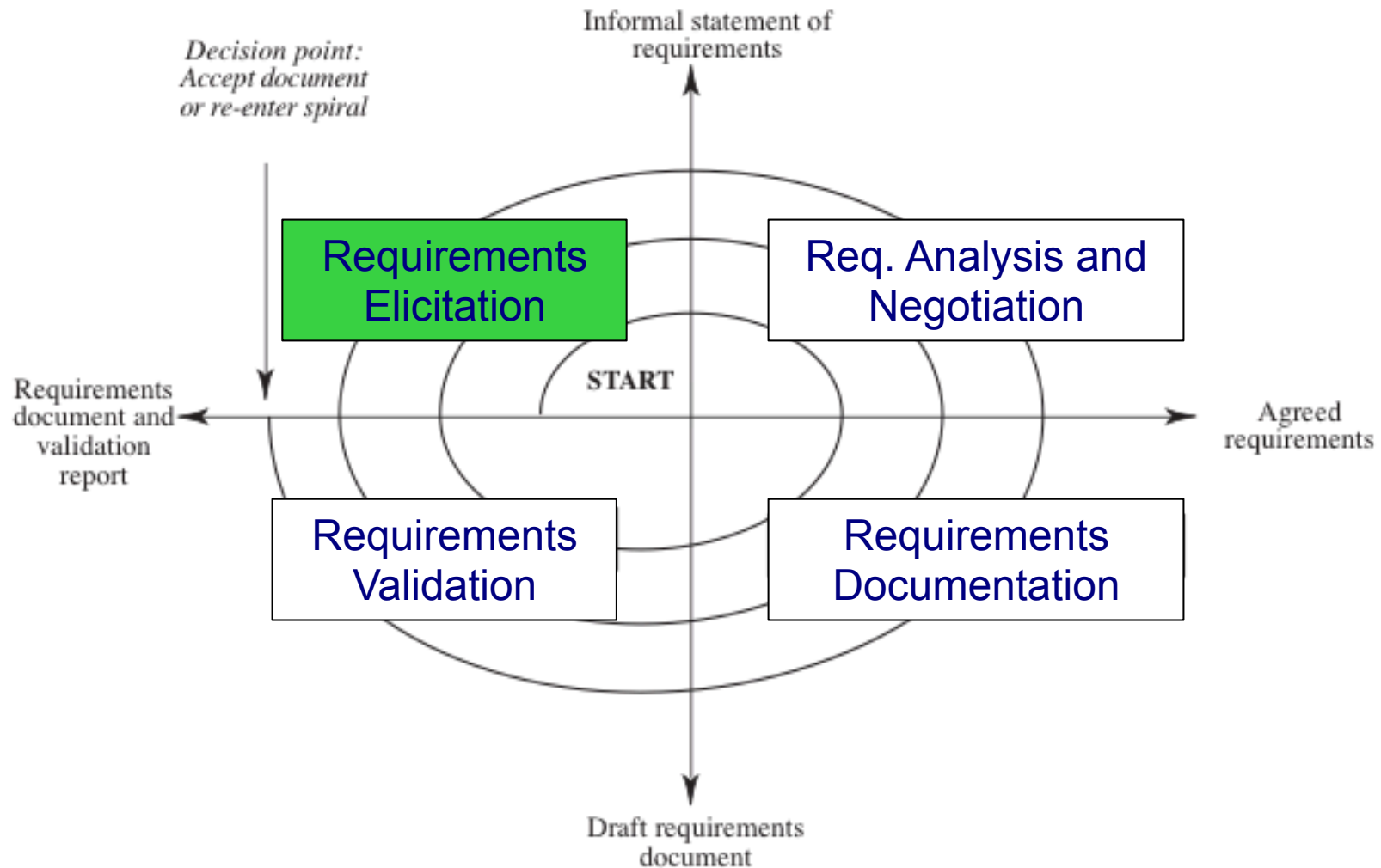
**February 17, 2014**

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# Requirements Engineering



# Requirements Elicitation



“Elicitation is all about determining the needs/requirements of stakeholders”

“Elicitation is learning, uncovering, extracting, surfacing, and/or discovering needs of customers, users, and other potential stakeholders”

*Source: Ann M. Hickey, Alan M. Davis, Requirements Elicitation and Elicitation Technique Selection: A Model for Two Knowledge-Intensive Software Development Processes*

# Requirements Elicitation Settings



Who documents requirements Where are requirements doc.	<b>Analyst</b>	<b>End-User</b>
<b>Out of work context</b>	Workshop-Based RE Approaches e.g. ART-SCENE	Agile Approaches e.g. XP, Scrum
<b>In the work context</b>	Ethnographically Informed Approaches e.g. Contextual Inquiry	iRequire, Contexter

# Organization



## Supervision

- Prof. Dr. Martin Glinz ([glinz@ifi.uzh.ch](mailto:glinz@ifi.uzh.ch))
- Dr. Norbert Seyff ([seyff@ifi.uzh.ch](mailto:seyff@ifi.uzh.ch))

## 3 ECTS Credits

## Examination Process

- Seminar paper (15 pages in Springer LNCS format)
- Reviewing (2 seminar papers of other seminar participants)
- Own presentation (20 minutes)
- Participation presentation day

## Grading

- 2/3 seminar paper, 1/3 presentation

# Appointments



Date	Appointment
17.02 09:00	Introduction
~ 03.03 by appointment	Q&A seminar topics, paper structure (by choice)
~ 17.03 by appointment	Review and discussion of draft (by choice)
07.04 23:59 CET	Paper submission deadline
21.04 23:59 CET	Review submission deadline
11.05 23:59 CET	Camera ready submission deadline
~ 12.05 by appointment	Review and discussion of presentation (by choice)
~ 14.05 in the morning	Presentation day

# Goals of the Seminar Paper



## Goals

- BSc: *“The students are able to write and present a scientific survey paper on a topic in Requirements Engineering.”*
- MSc: *“The students are able to write and present an **advanced-level** scientific survey paper on a topic in Requirements Engineering.”*

Do not just read and present a single paper, but work on a number of papers, and derive knowledge

Provide a summary and highlight what problem is solved and what can be done with the presented solution

MSc: Identify issues (what is still missing) regarding the presented research and present initial ideas how to overcome these issues

# Q&A Seminar Topic



By appointment

Prepare the meeting

- Plan the story line of your paper
- Draft an outline
- For each planned section have a short description what you plan to write



## Review and Discussion of Draft



By appointment

Send draft to Norbert 7 days before your appointment

Read the material on writing before starting to write

Have a coherent paper available (details might be still missing)

# Peer Review



Adhere to the reviewer forms (will be provided)

Be constructive:

- When filling in the form, put yourself in the authors place: Formulate constructive criticism that helps the author.

Concrete suggestions for improvement

- Name weaknesses of the paper and describe ideas how to improve these aspects. Try to make concrete suggestions. For example, the remark „In section X and Y the term A is defined differently“ is more concrete than the remark „Some terms in the text are inconsistently used“ or, even worse, „there are inconsistencies“.

Check for plagiarism

- If the writing style of sections differs, the texts might be copied from other sources. Compare the outline of the paper and parts of the paper with the original, using online search engines. Let the seminar supervisors know if you find plagiarism.

# Presentation Day



Presentations of the seminar topics

Participation on presentation day is mandatory

Own presentation (20 minutes)

Prepare presentation well, will be part of your grade!

Look at presentation tips

Train your presentation with a peer beforehand

# News and Info



BSc:

[http://www.ifi.uzh.ch/rerg/courses/fs14/sem\\_re\\_bsc/](http://www.ifi.uzh.ch/rerg/courses/fs14/sem_re_bsc/)

MSc:

[http://www.ifi.uzh.ch/rerg/courses/fs14/sem\\_re\\_msc/](http://www.ifi.uzh.ch/rerg/courses/fs14/sem_re_msc/)

# Topics



Working Topic 1: **Requirements Elicitation – An Overview**

Working Topic 2: **Distributed Requirements Elicitation**

Working Topic 3: **Eliciting Requirements in the form of Sketches and Models**

Working Topic 4: **Contextual Requirements Elicitation**

Working Topic 5: **End-user Driven Requirements Elicitation**

Working Topic 6 (if needed): **Elicitation in Workshops**

# Topic 1: Requirements Elicitation – An Overview



## Key Questions

- What does the requirements elicitation activity consist of?
- What are the existing techniques for requirements elicitation?
- In what contexts can the existing methods be applied?

## References

- [1] Jane Coughlan and Robert D. Macredie. Effective Communication in Requirements Elicitation: a Comparison of Methodologies, in Requirements Engineering, vol. 7, Springer-Verlag, 2002, pp. 47-60.
- [2] Neil A. M. Maiden and Gordon Rugg. ACRE: Selecting Methods for Requirements Acquisition, Software Engineering Journal, vol. 11, no. 3, 1996, pp. 183-192.
- [3] Bashar Nuseibeh and Steve Easterbrook. Requirements Engineering: a Roadmap, Future of Software Engineering at ICSE 2000, 2000, pp. 35 – 46.

# Topic 2: Distributed Requirements Elicitation



## Key Questions

- What are the challenges of distributed requirements elicitation?
- How does the requirements elicitation activity differ in distributed settings from traditional settings?
- What methods are suitable for distributed requirements elicitation?

## References

- [1] Fabio Calefato, Daniela Damian and Filippo Lanubile. Computer-Mediated Communication to Support Distributed Requirements Elicitations and Negotiations Tasks, in Empirical Software Engineering, vol. 17, 2012, pp. 640-674.
- [2] Daniela Damian. Stakeholders in Global Requirements Engineering: Lessons Learned from Practice, in IEEE Software, March/April 2007, pp. 21-27.
- [3] Wesley James Lloyd, Mary Beth Rosson and James D. Arthur. Effectiveness of Elicitation Techniques in Distributed Requirements Engineering, Proceedings of the IEEE International Conference on Requirements Engineering (RE'02), 2002.

# Topic 3: Eliciting Requirements in the form of Sketches and Models



## Key Questions

- Why is sketching in so common?
- What are the problems when sketches are used to document requirements?
- How do sketches and (semi-)formal models differ in terms of understandability?

## References

[1] D. Wüest, N. Seyff, and M. Glinz, “FlexiSketch: a mobile sketching tool for software modeling”, in 4th International Conference on Mobile Computing, Applications and Services (MobiCASE), Seattle, USA, pp. 225–244, 2013.

[2] M. Cherubini et al., "Let's go to the whiteboard: how and why software developers use drawings", in CHI '07: Proceedings of the SIGCHI conference on Human factors in computing systems, pp. 557–566, 2007.

[3] M. D. Gross and E. Y.-L. Do, "Ambiguous intentions: a paper-like interface for creative design", in Proceedings of the 9th Annual ACM Symposium on User Interface Software and Technology, pp. 183–192, 1996.



# Topic 4: Contextual Requirements Elicitation



## Key Questions

- Why is eliciting requirements “on-site” beneficial?
- What are the problems?
- What kind of tool support is provided?

## References

- [1] John A. Hughes, Val King, Tom Rodden, Hans Andersen: Moving Out from the Control Room: Ethnography in System Design. CSCW 1994: 429-439
- [2] Neil A. M. Maiden, Cornelius Ncube, Simin Kamali, Norbert Seyff, Paul Grünbacher: Exploring Scenario Forms and Ways of Use to Discover Requirements on Airports that Minimize Environmental Impact. RE 2007: 29-38
- [3] Norbert Seyff, Florian Graf, Neil A. M. Maiden, Paul Grünbacher: Scenarios in the Wild: Experiences with a Contextual Requirements Discovery Method. REFSQ 2009: 147-161

# Topic 5: End-user Driven Requirements Elicitation



## Key Questions

- Why is including the user important?
- What strategies do exist?
- What kind of tool support is provided?

## References

[1] Norbert Seyff, Florian Graf, Neil A. M. Maiden: Using Mobile RE Tools to Give End-Users Their Own Voice. RE 2010: 37-46

[2] Kurt Schneider: Focusing spontaneous feedback to support system evolution. RE 2011: 165-174

[3] Dennis Pagano, Walid Maalej: User feedback in the appstore: An empirical study. RE 2013: 125-134

## Topic 6: Elicitation in Workshops



### Key Questions

- What do we have to consider when conducting requirements workshops?
- What kind of approaches do we know?
- Are workshops more efficient than other elicitation approaches?

### References

[1] Ellen Gottesdiener: Requirements by Collaboration: Getting It Right the First Time. IEEE Software 20(2): 52-55 (2003)

[2] Neil A. M. Maiden, Sharon Manning, Suzanne Robertson, John Greenwood: Integrating creativity workshops into structured requirements processes. Conference on Designing Interactive Systems 2004: 113-122

[3] Joost Schalken, Sjaak Brinkkemper, Hans van Vliet: Assessing the Effects of Facilitated Workshops in Requirements Engineering. Conference on Evaluation and Assessment in Software Engineering 2001: 135-144