



## Assignment 2

### Conflict Management

*Prof. Dr. Martin Glinz*

*Anne Koziolok*

## I. Task

### Individual Tasks

- Read the mandatory items in the reading list
- Prepare two questions about each paper to ask your classmates. These questions can, for example, be about aspects of the paper that are not clear to you, or about your classmate's opinion on interesting aspects.
- Be prepared to give a short summary of each paper in class. This summary should address the following questions:
  - What is the main message of the paper?
  - What are the expected benefits of the proposed method or the paper in general?
  - What are weaknesses of the paper in your opinion?
- Be prepared to answer the questions given below in class

### Group Tasks

- Prepare a 15 minutes presentation (5-10 slides) on the theme assigned to your course group and choose two persons from your group to present it.
  - At the beginning of your presentation, relate your topic to the session's topic (as represented by the mandatory reading)
  - Browse/read additional papers and/or web pages where necessary.
- In the case study presented in RE-I, identify the requirements conflicts between Mr Grönstrom and Ms Correverde and document these conflicts. Furthermore, assess whether the technique associated to your theme is suitable to handle these conflicts and explain why. If this technique is suitable, describe how it can be used to handle these conflicts. If this technique is more suitable for other types of conflicts, make up another situation within the NRG Corp case study that illustrates the technique (e.g. invent a new stakeholder with new, conflicting requirements). Finally, report on your experience in your presentation (artifacts, difficulties and opportunities).

## II. Reading List

### Mandatory reading

[Carlshamre 2001] identifies various kinds of interactions among requirements while [Robinson 2003 p. 132-159] surveys techniques for managing these interactions. [Grünbacher 2005] presents an overview about negotiation research.

### Theme-specific reading

[Easterbrook 1996], [Sabetzadeh 2006]: Requirements engineering with viewpoints

[Dardenne 1993], [Lamsweerde 1998]: Conflict management with goal oriented RE  
 [Fricker 2010a], [Fricker 2010b]: Dialogue between customer and supplier

### III. Questions

- What are the main kinds of interactions among requirements?
- What are the main activities involved in the requirements interaction management (RIM)?
- What are the important phases in the evolution of the RIM field? Which other research fields has influenced it?
- Beyond the identification and resolution of conflicts, what are the benefits of requirements negotiation?
- What are the main dimensions of requirements negotiation?

### IV. Themes for Presentation

Themes will be assigned by the assistant who tutors this course; your group can apply for a theme.

#### A. Requirements Engineering with Viewpoints

What is a viewpoint, what is it made of? How can viewpoints help in managing conflicts?

#### B. Conflict Management with Goal Oriented Requirements Engineering

What is KAOS? How can goal models help in managing conflicts?

#### C. Dialogue between Customer and Supplier

What is an implementation proposal? What are the benefits of using them?

### References

- Carlshamre, P., K. Sandahl, M. Lindvall, B. Regnell, J. N. och Dag (2001). An Industrial Survey of Requirements Interdependencies in Software Product Release Planning. *5<sup>th</sup> IEEE International Symposium on Requirements Engineering (RE'01)*. Toronto, Canada.
- Dardenne, A., A. van Lamsweerde, S. Fickas (1993). Goal-Directed Requirements Acquisition. *Science of Computer Programming* **20**, 1-2 (Apr. 1993). 3-50.
- Easterbrook, S., B. Nuseibeh (1996). Using ViewPoints for Inconsistency Management. *Software Engineering Journal* **11**, 1 (Jan. 1996). 31-43.
- Fricker, S., M. Glinz (2010a). Comparison of Requirements Hand-Off, Analysis, and Negotiation: Case Study. *18<sup>th</sup> IEEE International Requirements Engineering Conference (RE'10)*. Sidney, Australia.
- Fricker, S., T. Gorschek, C. Byman, A. Schmidle (2010b). Handshaking with Implementation Proposals: Negotiating Requirements Understanding. *IEEE Software* **27**, 2 (Mar. 2010). 72-80.
- Grünbacher, P., N. Seyf (2005). Requirements Negotiation. In Aurum, A., C. Wohlin. *Engineering and Managing Software Requirements*. Springer. 143-162.
- van Lamsweerde, A., R. Darimont, E. Letier (1998). Managing Conflicts in Goal-Driven Requirements Engineering. *IEEE Transactions on Software Engineering* **24**, 11 (Nov. 1998). 908-926.
- Robinson, W.N., S.D. Pawlowski, V. Volkov (2003). Requirements Interaction Management. *ACM Computing Surveys* **35**, 2 (Jun. 2003). 132-190.
- Sabetzadeh, M., S. Easterbrook (2006). View Merging in the Presence of Incompleteness and Inconsistency. *Requirements Engineering* **11**, 3 (Jun. 2006). 174-193.