



## Assignment 2

### Conflict Management

*Prof. Dr. Martin Glinz, Prof. Dr. Norbert Seyff, Dr. Eya Ben Charrada, Dr. Eimitzá Guzmán*

## I. Task

### Individual Tasks

- Read the mandatory items in the reading list.
- Prepare a critique of each mandatory paper. For each paper, we will select a student to present her or his critique orally in class (3-5 minutes). Particular questions to be addressed are:
  - What is the main message of the paper?
  - What are the expected practical benefits?
  - What are the strengths and weaknesses of the paper?
  - What questions do you have about the paper? (prepare at least two questions)
  - What is your personal opinion about the paper? Do you agree or disagree with its findings?
- Be prepared to answer the questions given in Sect. III below in class.

### Group Tasks

- Prepare a 10-12 minutes presentation (plus 6-8 minutes of discussion) on the theme assigned to your course group (cf. Sect. IV) and choose two students 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.
  - Send your presentation to Norbert after the session to share it with others.
- In the case study presented in RE I, identify potential requirements conflicts between the stakeholders 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 regarding the 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 et al. 2001] identify various kinds of interactions among requirements while [Robinson, Pawlowski and Volkov 2003 (p. 132-159)] survey techniques for managing these interactions. [Grünbacher and Seyff 2005] present an overview about negotiation research.

### Theme-specific reading

[Easterbrook and Nuseibeh 1996], [Sabetzadeh and Easterbrook 2006]: Requirements Engineering with viewpoints

[Dardenne, van Lamsweerde and Fickas 1993], [van Lamsweerde, Darimont and Letier 1998]: Conflict management with goal-oriented RE

[Fricker et al. 2010], [Fricker and Glinz 2010]: 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

#### 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

How does handshaking with implementation proposals work? What are the benefits? In which situations is this technique applicable?

### References

Carlshamre, P., K. Sandahl, M. Lindvall, B. Regnell, J. Natt 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)*. 84-92.

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 (2010). Comparison of Requirements Hand-Off, Analysis, and Negotiation: Case Study. *18<sup>th</sup> IEEE International Requirements Engineering Conference (RE'10)*. 167-176.

Fricker, S., T. Gorschek, C. Byman, A. Schmidle (2010). Handshaking with Implementation Proposals: Negotiating Requirements Understanding. *IEEE Software* **27**, 2 (Mar. 2010). 72-80.

Grünbacher, P., N. Seyff (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.