



Requirements Engineering II

Assignment 2

Conflict Management

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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 classmates' opinion on interesting aspects.
- Be prepared to give a short summary of each paper in class. This summary should address the following questions:
 - o What is the main message of the paper?
 - What are the expected benefits of the proposed method or the paper in general?
 - o What are weaknesses of the paper in your opinion?
- 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 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)
 - o Browse/read additional papers and/or web pages where necessary.
 - o Send your presentation to Norbert and Eya 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 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

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

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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. 18th 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. 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 Conficts 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.