University of Zurich[UZH]

RERG

Requirements Engineering II

Assignment 2

Requirements Negotiation and Conflict Management

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I. Task

Individual Tasks

- Read the mandatory items in the reading list. If you have questions about the papers, be prepared to ask them in class.
- Prepare a critique of each mandatory paper. For selected papers, we will ask a student to present her or his critique orally in class (3-5 minutes). Particular issues to be addressed are:
  - What is the paper about? (short summary)
  - What is the main message of the paper?
  - Your critical assessment of the paper (strengths and weaknesses? expected practical benefits? your personal opinion?)
- Be prepared to answer the questions given in Sect. III below in class.
- Send your critiques to Norbert before the assignment discussion.

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

[Boehm et al. 2001], [Kukreja and Boehm 2012], [Seyff et al. 2015]: Social Software for Requirements Elicitation and Negotiation
[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)?
- 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. Social Software for Requirements Negotiation

What is (Easy)WinWin? What RE activities are supported by WinBook? How can negotiation (as well as elicitation) be applied with the help of social networks? What are the benefits and limitations?

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

Boehm B., P. Gruenbacher, R. Briggs (2001). Developing Groupware for Requirements Negotiation: Lessons Learned. *IEEE Software* **18**, 3. 46-55.

Carlshamre, P., K. Sandahl, M. Lindvall, B. Regnell, J. Natt och Dag (2001). An Industrial Survey of Requirements Interdependencies in Software Product Release Planning. *5th IEEE International Symposium on Requirements Engineering (RE'01)*. 84-92.

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. *18th 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.

Kukreja, N., B. Boehm (2012). Process Implications of Social Networking-based Requirements Negotiation Tools. *Conference on Software and System Process (ICSSP)*. 68-72.

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.

Seyff, N., I. Todoran, K. Caluser, L. Singer, M. Glinz (2015). Using Popular Social Network Sites to Support Requirements Elicitation, Prioritization and Negotiation. *Journal of Internet Services and Applications* **6**,7.