



Social Software for Requirements Negotiation

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How can Social Software be applied to Requirements Negotiation?

- Support for Requirements Interaction Management activities
- Support Negotiation process

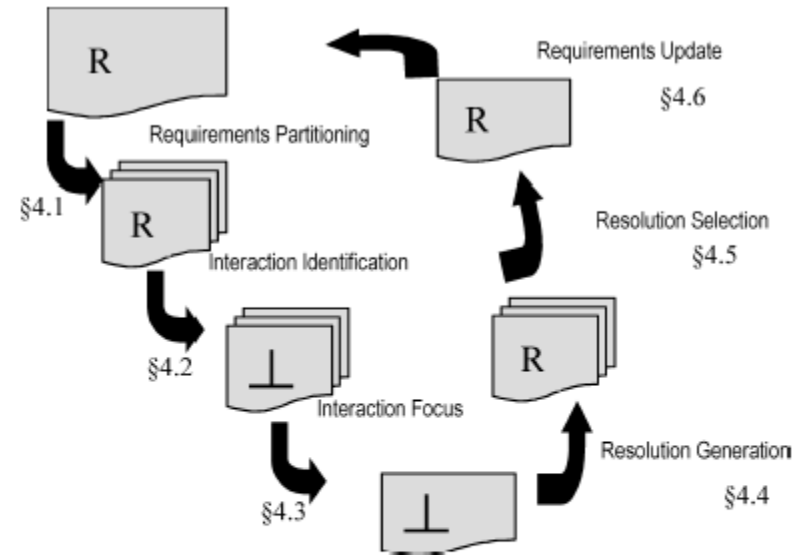


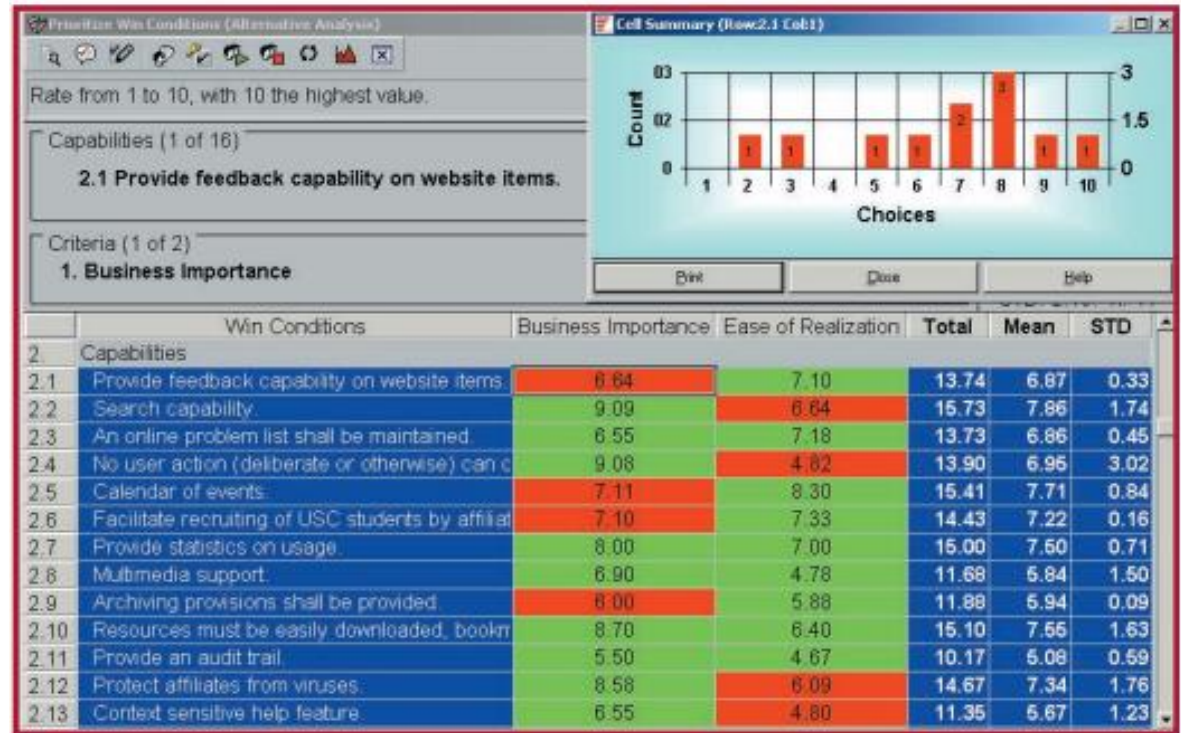
Fig. 3. An illustration of the activities that are managed as part of the requirements interaction management life-cycle. Each number indicates the section where an activity is introduced. The symbol, R, depicts a set of requirements, while the symbol, $\perp$, depicts conflicting requirements.



(Easy)WinWin

- Approach for Requirements Negotiation involving a Group Support System
- Set of activities to guide stakeholders through gathering, elaborating, prioritizing and negotiating of requirements
- Dimensions of Requirements Negotiation:
 - *Conflict Resolution Strategy*: Collaboration-oriented negotiation strategy
 - *Collaboration Situation*: Could be any combination of synchronous/asynchronous and co-located/dislocated
 - *Negotiation Support Tool*: Active facilitative support
- Stakeholders express goals as **win conditions**
- Stakeholders can agree to win conditions or identify conflicted win conditions and raise an **issue**
- Solutions to issues are presented as **options**, to which stakeholders can agree to.
- **WinWin equilibrium condition** is reached when no more issues are open

- Refine and expand negotiation topics
- Brainstorming stakeholder interests
- Converge on win conditions
- Glossary of Terms
- Prioritize win conditions
- Reveal issues and constraints
- Identify issues and options
- Negotiate Agreements



EasyWinWin - Step Prioritize Win Conditions



How does it support RIM activities?

Requirements Partitioning: win conditions can be partitioned according to topics

Interaction Identification: Polling

Interaction Focus: Win conditions and Issues can be sorted

Resolution Generation: Options to resolve issues

Resolution Selection: The stakeholders select an option



EasyWinWin applied on Case Study

- Opportunities:

- Stakeholders

- Infrastructure



EasyWinWin applied on Case Study

- Difficulties:

- Setup

- Involving mainstream users



Using a Social Network to support RE activities

- Generic approach based on well-known social network functionalities, introduced by Seyff et al. (2015)
- Activities:
 1. Required preparation (space set up, description of/information about project)
 2. Requirements elicitation, prioritization and negotiation (invitation of participants, brainstorming, review ideas, approval and prioritization of ideas)
 3. Requirements analysis and follow-up (moderator transcribes ideas into prioritized requirements)



What are the benefits and limitations?

- + Users don't need to learn how to use tool
- + large scale consolidation and prioritization of needs
- + incentives based on friendship and common interest
- outcome highly dependent on moderator
- only binary approval
- no classification of ideas, comments

WinBook



Figure 3. Equilibrium View

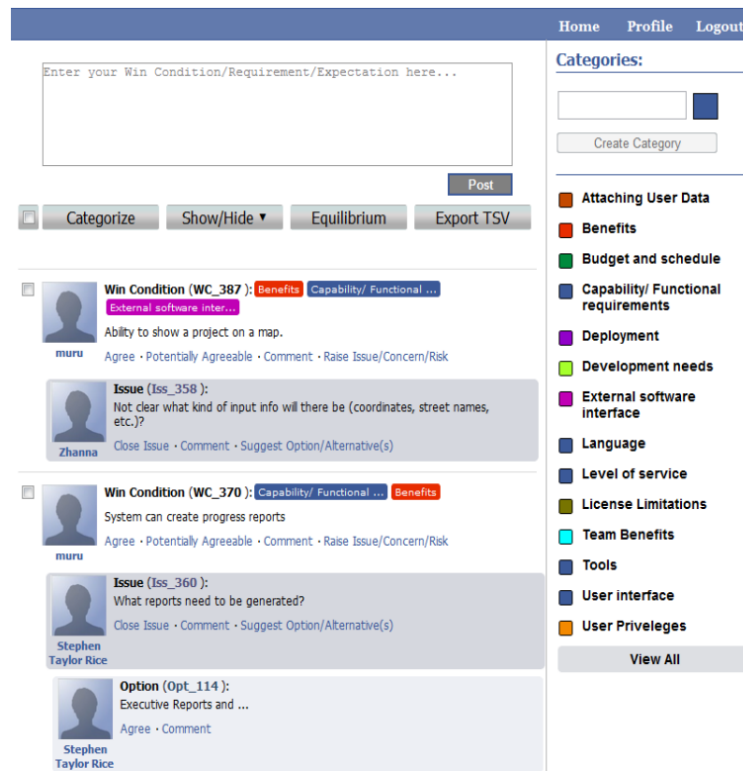


Figure 2. Wall Page view of a project with win conditions, issues, options and categories on the right



References

- 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.
- Kukreja, N., B. Boehm (2012). Process Implications of Social Networking-based Requirements Negotiation Tools. Conference on Software and System Process (ICSSP). 68-72
- 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
- Grünbacher, P., N. Seyff (2005). Requirements Negotiation. In Aurum, A., C. Wohlin. Engineering and Managing Software Requirements. Springer. 143-162
- Robinson, W.N., S.D. Pawlowski, V. Volkov (2003). Requirements Interaction Management. ACM Computing Surveys 35, 2 (Jun. 2003). 132-190
- https://en.wikipedia.org/wiki/Social_Software, last visited on 11/11/2018