



Social Software for Requirements Elicitation and Negotiation

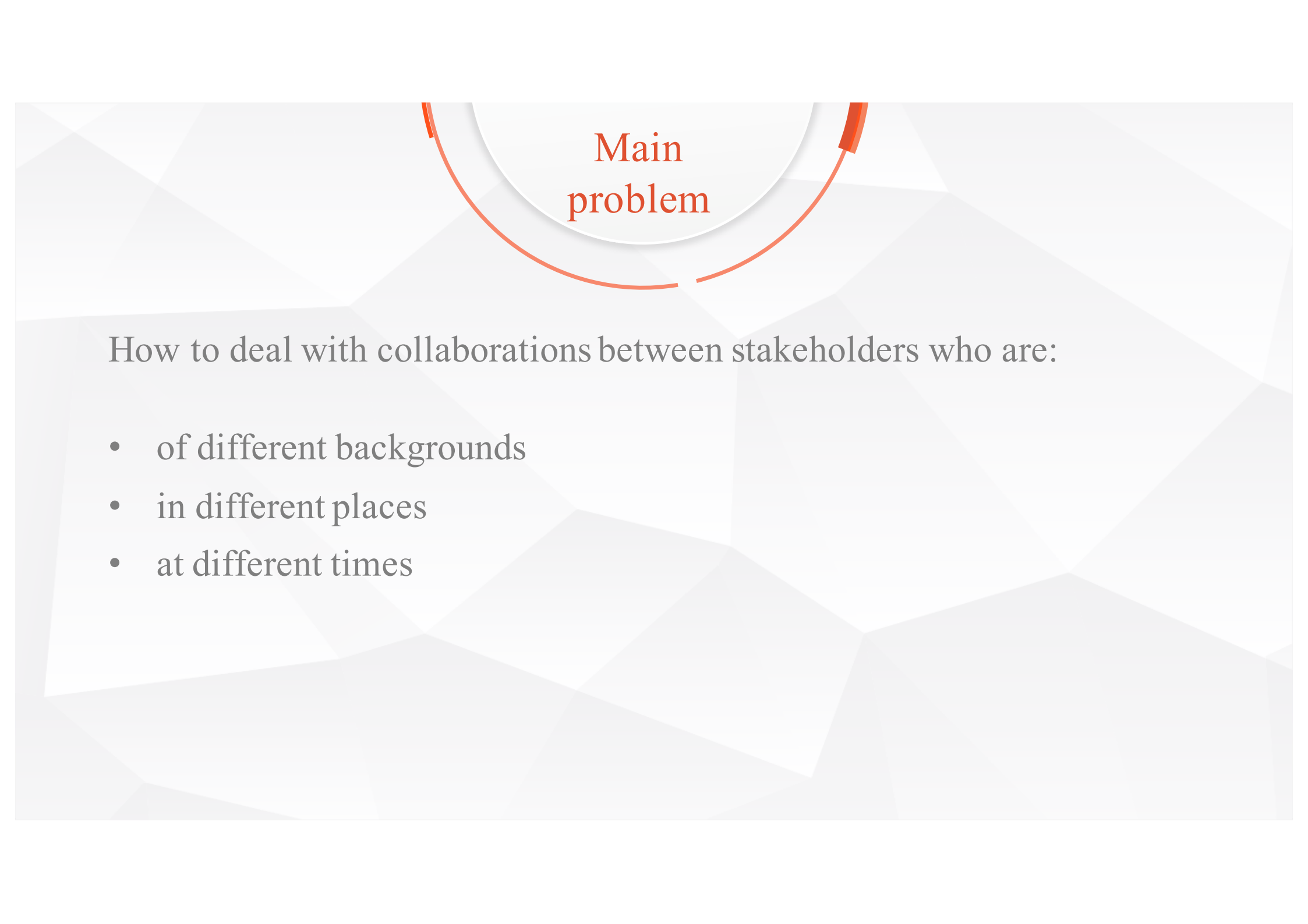
Group1

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Develop groupware for Requirements Negotiation and lessons

Barry Boehm



Main problem

How to deal with collaborations between stakeholders who are:

- of different backgrounds
- in different places
- at different times



Win Win approach

principles and practices that:

enable interdependent
stakeholders work out

set of mutually
satisfactory

shared
commitments



express goals as win conditions

→ identify conflicts

→ invent options for trade-offs

→ turn options into agreements

→ build glossary and prioritize



Win Win groupware



	Win Conditions	Business Importance	Ease of Realization	Total	Mean	STD
2.	Capabilities					
2.1	Provide feedback capability on website items.	6.64	7.10	13.74	6.87	0.33
2.2	Search capability.	9.09	6.64	15.73	7.86	1.74
2.3	An online problem list shall be maintained.	6.55	7.18	13.73	6.86	0.45
2.4	No user action (deliberate or otherwise) can c	9.08	4.82	13.90	6.95	3.02

EasyWinWin:

- guide negotiating process
- voting tools for prioritization
- real-time communication . etc.

Lessons

- give process guide
- emphasize group dynamics
- representative negotiators

- be flexible
- easy of use
- robust infrastructure



- involve mainstream users
- perseverance pays off

Process Implications of Social networking based Requirements Negotiation Tools

Nupul Kukreja

WinBook

targeting at non-technical users

Facebook

social networking,
freeform conversational
style

Gmail

content organization,
colored labels

The screenshot displays the WinBook web application interface. At the top, there is a navigation bar with links for Home, Profile, and Logout. Below this, a large text input field is labeled "Enter your Win Condition/Requirement/Expectation here...". To the right of this field is a "Post" button. Below the input field, there are four buttons: "Categorize", "Show/Hide", "Equilibrium", and "Export TSV". The main content area shows a list of user-submitted items, each with a profile picture, a title, and a description. The items are color-coded: green for "Win Condition (WC_387)", yellow for "Win Condition (WC_370)", and red for "Issue (Iss_350)", "Issue (Iss_360)", "Option (Opt_144)", and "Win Condition (WC_346)". Each item has a "You agree to this" or "Agree" button. On the right side, there is a "Categories" section with a search bar and a "Create Category" button. Below this is a list of categories with checkboxes: "Attaching User Data", "Benefits", "Budget and schedule", "Capability/ Functional requirements", "Deployment", "Development needs", "External software interface", "Language", "Level of service", "License Limitations", "Team Benefits", "Tools", "User interface", and "User Privileges". At the bottom of the categories list is a "View All" button.



Advantages

Eliminating SSRD is possible



Up-to-date capture of needs



More effective



very positive feedbacks



Using popular social network sites to support requirements elicitation, prioritization and negotiation

Norbert Seyff



Goal

Increase end user participation in RE through the use of (existing) social networks.

Research Questions:

- Can social network sites support requirements elicitation, prioritization and negotiation?
If yes, how can existing features be used to do this?
- What are the benefits of this approach compared to traditional ones?
- What are the challenges and limitations of this approach?



3 different exploratory studies were conducted (FHNW, UZH & FH Hagenberg).

Candidate Social Network Sites for the studies:

Table 1 Initial comparison of social network sites

Requirements	Facebook	Twitter	LinkedIn	Google+
R1: Users communicate ideas	✓	✓	✓	✓
R2: Users comment on ideas	✓	✓	✓	✓
R3: Users express approval	✓	✗	✓	✓
R4: Control content distribution	✓	✓	✗	✓
R5: Dedicated space for group disc.	✓	✗	✓	✓
R6: Control group access	✓	✗	✓	✓

Social Network Site chosen to support the studies is **Facebook**.

1. Facebook has the biggest user base (over a **billion** users worldwide) in comparison.
2. Target group more likely to **already** have an account and be familiar with Facebook.



A social network site-supported RE approach for requirements elicitation, prioritization and negotiation.

Process consists of 3 High-Level Activities.

1. Required preparation activities (moderator).
 - i. Set up a space for discussion.
 - ii. Provide key information about the project.
2. Requirements elicitation, prioritization and negotiation activities (stakeholders & moderator).
 - i. Invitation of participants.
 - ii. Participants brainstorm ideas.
 - iii. Participants discuss ideas.
 - iv. Participants approve and prioritize ideas.
3. Requirements analysis and follow-up (moderator).
 - i. Transcribe ideas into prioritized requirements.



Research Questions Re-visited after the studies.

- Can social network sites support requirements elicitation, prioritization and negotiation?
If yes, how can existing features be used to do this?
 - Social network sites can indeed support the requirements.
 - Students satisfied with the requirements elicited.
- What are the benefits of this approach compared to traditional ones?
 - Gathering needs from audience without any learning overhead.
 - Consolidation and prioritization of needs can be supported on a large scale.
 - This approach can be integrated to the overall RE process.
 - New stakeholders get involved.
- What are the challenges and limitations of this approach?
 - Should be used in specific contexts in conjunction with other methods.
 - Number of needs elicited depends on the moderator's abilities and motivation.
 - Snowball effect can be difficult to achieve.



Main lessons learned from the studies.

- Moderators play an important role in steering discussions and should be carefully chosen.
- High inner motivation of participants leads to high numbers of generated and prioritized needs.
- The social aspect is a factor contributing to success: friendships, personal relations and interests increase the participation rate.
- The moderator should, on a regular basis, invite participants to have continuous contributions.
- Friendly and funny posts stimulate discussions and creativity and should therefore be encouraged.



What comes next?

- Vision: SNS-supported RE approaches will complement traditional RE.
- Future research goals:
 1. Better understanding risks and issues.
 2. Evaluation of other suitable SNS (e.g. LinkedIn, Google+)
 3. Evaluation in real-world projects.
 4. Exploring the motivation of end users (via collaboration with the field of Psychology).



Discussion