

Intercultural Requirements Engineering for Software Development: Culture and its Impact on Requirements Negotiation

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Introduction

As far as globalization and internationalization forces companies to close ranks, to build networks and to collaborate, the effect on Requirements Engineering (RE) practices used in Software Development needs to be challenged. Previous work has concentrated on culture and its dimensions ([1], [2]), on behavior and the importance for international collaboration [3] as well as on the effect of culture on negotiations ([4], [5], [6]), but there are no findings adopting this knowledge on negotiations between customers and developers in the field of RE.

The study

Academia can provide coherent solutions for industrial practice to professionalize negotiation processes between customers and developers, to avoid failure and to reach sound and stable win-win situations to reduce requirements changes to the necessary minimum by examining intercultural behavior. In other words (*research question*): *does knowing the cultural background of the negotiation counterpart in globally distributed Software Development lead to better negotiation results* (where “better” needs to be interpreted by the measure “amount of change requests relative to the overall amount of requirements”)?

Evaluating culture and behavior is complex because of the “soft” nature of the term culture and gaining profound results needs well-chosen empirical research items. Therefore an all-encompassing approach cannot be presented at this stage of research; asking the right questions is highly dependent on the precise activities of the examined companies or their business units. Nevertheless the study can be divided into the following artifacts:

1. Actual state analysis: how are requirements negotiated?
Result (R): process description
2. How will the cultural background of negotiation involved parties be measured?
R: cultural clusters¹
3. What is the impact of culture on the different negotiation process steps?
R: mapping outcome with the cultural clusters
4. Target state: how can the negotiation process be improved by cultural knowledge?
R: e.g. cultural success factors for each process step

Wanted from industry

Research partners from industrial practice should be involved in global distributed Software Development projects with a high rate of cultural diverse participants no matter what size the company has. As far as organizational culture affects members' behavior of this organization, companies working together with legal independent entities are welcome (e.g. established by sourcing). In concrete terms potential partners need to:

- Develop Software
- Support a high rate of customer-involvement during RE processes
- Have different cultures in their teams involved
- Want to professionalize their requirements negotiation processes
- Want to minimize change requests at a late stage in the RE process

References

1. Hofstede, G.: Culture's Consequences, Comparing Values, Behaviours, Institutions, and Organizations Across Nations, 2nd ed., London (2003)
2. Hofstede, G., Hofstede, J., Minkov, M.: Cultures and Organizations: Software of the Mind, 3rd ed., New York (2010)
3. Imai, L., Gelfand, M.J.: Interdisciplinary perspectives on culture, conflict, and negotiation, in: Bhagat, R.S., Steers, R.M. (eds.): Cambridge Handbook of Culture, Organizations, and Work, Cambridge (2009)
4. Grünbacher, P., Seyff, N.: Requirements Negotiation, in: Aurum, A., Wohlin, C. (eds.): Engineering and managing software requirements, Heidelberg (2005)
5. Koeszegi, S.T., Vetschera, R., Kersten, G.E.: National Cultural Differences in the Use and Perception of Internet-based NSS - Does high or low context matter?, in: International Negotiation, Vol. 9 (1), pp. 79 – 109, (2004)
6. Kersten, G. E., Koeszegi, S.T., Vetschera, R.: The Effects of Culture in Computer-mediated Negotiations, in: JITTA - Journal of Information Technology Theory and Application, Vol. 5 (2), pp. 1 – 28, (2003)

¹ e.g. by cultural society, nationality, mother tongue, domicile, training place, academic education inter alia as well as combinations of these domains