

Keynote talk:

“Tacit Knowledge in Requirements”

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Abstract:

The importance of tacit knowledge in requirements elicitation and understanding is widely accepted but poorly understood. There is no clear definition of tacit knowledge, with definitions spanning knowledge that cannot be articulated to knowledge that is merely unarticulated. The situation is further confused by the fact that the most widely cited author on tacit knowledge (Michael Polanyi) actually wrote about tacit knowing. As a phenomenon, tacit knowledge is regarded both as a problem and an advantage. It's a problem because if knowledge remains tacit, then it cannot be effectively communicated and codified, making the explicit knowledge that we hold incomplete. It's an advantage because if it is valuable to our company, our competitors cannot easily gain access to it.

In requirements engineering, we know that we cannot make everything explicit. Much must remain implicit; we need to assume that sufficient shared understanding exists between the stakeholder and the analyst to obviate the need for complete, explicit description of all the requirements and their context. However, problems occur when this shared understanding is poor and particularly when one or both of the parties fails to understand the extent of their imperfect shared understanding.

A skilled analyst will recognize the presence of tacit knowledge and use a range of techniques to expose it, or as much of it as is feasible to extract. Important information evades even skilled analysts, however, and many analysts lack the skill and experience to recognize its absence or its significance. My interest is in deepening our understanding of tacit knowledge in RE and in seeking to develop tools and techniques to mitigate its harmful effects. I and my colleagues are investigating the use of techniques from computational linguistics to define baseline knowledge and to infer the presence of tacit knowledge. The general problem is so nuanced that no complete solution is possible. However, it may be possible to draw the analyst's attention to missing or incomplete knowledge that may be rooted in stakeholders' inability, difficulty or inhibition with articulating their knowledge and from which the analyst can formulate appropriate requirements.

In my talk I will briefly review the problem of tacit knowledge in RE and suggest some techniques that may contribute to exposing its presence.

Panel:

“Challenges of the Requirements Engineering field”

Abstract:

Requirements Engineering is recognized as a crucial stage in the success of software systems development. As complexity and size of software systems increase each day, we need to investigate effective techniques to tackle the development of such systems. The main goal of the panel is to bring together a variety of perspectives from academic and industrial researchers as well as to engage workshop attendees in an open discussion of current challenges of the Requirements Engineering field.