Motivation

Requirements Engineering and Software Architecture have become established areas of research, education and practice within the software engineering community. Requirements Engineering is concerned with identifying the purpose of a software system, and the contexts in which it will be used. Software architecture is related to the principled study of large grained software components, including their properties, relationships, and pattern of combination.

Significant advances have been made on both fronts. We have seen the development of techniques for eliciting and analysing stakeholders’ goals, modelling scenarios that characterize different contexts of use, the use of social techniques for studying organizations and work settings, and the use of formal methods for analysing safety and security requirements. Using an architecture based approach, applications have been built which exhibit remarkable flexibility, demonstrate significant reuse of off-the-shelf components, leverage experience from related applications in the same problem domain, and are analysable earlier in their development than ever before.

Despite these advances, we still need frameworks, techniques and tools to support the systematic achievement of architectural objectives in the context of complex stakeholders relationships. For example, little effort has been devoted to date to techniques for deriving architectural descriptions together with the requirements specifications. It also remains very difficult to show that a given software architecture satisfies a set of functional and non-functional requirements. This is somewhat surprising, as software architecture has long been recognized to have a profound impact on the achievement of non-functional goals (“ilities”) such as availability, reliability, maintainability, safety, confidentiality, evolvability, and so forth. Therefore greater effort should be devoted to bridging the gap between Requirements Engineering research and Software Architecture research.

Goals

The goal of the workshop is to bring together professionals from academia and industry to exchange ideas, experiences to improve our understanding of the relationship between requirements engineering and software architecture. Topics of interest include:

- Requirements and Architecture modelling
- Deriving architectural description in concert with requirements specifications.
- Tracing architectural decisions to requirements
- Systematic derivation of parameter settings from requirements
• Dealing with requirements and architectural evolution
• Formal foundations and analyses
• Object-Oriented Requirements to Object Oriented Architectures
• Agent-Oriented Requirements to Architectures
• Education and Training: skills and traits for good requirements engineers and software architects
• Case studies and empirical studies,
• Tools/Environments for Requirements Engineers and Software Architects

Participant Solicitation and Selection Process

A maximum of 30 participants will be selected on the basis of the submitted material. Submissions must not exceed eight (8) pages in length, and must be in IEEE CS Press format (http://www.csr.uvic.ca/icse2001/format.html). Send them electronically (RTF or PDF) to the Co-Chair, Jaelson Castro straw01@cin.ufpe.br.

Papers will be reviewed by a programme committee in terms of their relevance to the aims of the workshop and technical content.

The best papers of the workshop will be invited to submit extended versions for a Special Issue of the Requirements Engineering Journal to be published in the Fall of 2001.

Important Dates

- Hard submission deadline: March 09, 2001
- Notification of acceptance: April 09, 2001
- Papers available electronically: April 14, 2001
- STRAW’01 workshop: May 14, 2001

Co-Chairs

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Jeff Kramer (chair) - UK
Axel van Lamsweerde – Belgium
Jeff Magee - UK
Bashar Nuseibeh - UK
Dewayne Perry - USA
Manuel Kolp - Canada

Pre-Workshop Activities and Planned Workshop Activities

The workshop will feature an invited speaker who will present a view of the interplay between software architecture and requirements engineering, indicating where we are, where we should be, where the hard problems are, and where the strong leverage points are.

The workshop will be an interactive forum. Accepted papers will be made available electronically to all workshop participants before the workshop, so that presentations can be kept short. The presentation of each paper is restricted to 15 minutes to allow time for intensive discussions.

Prior to the workshop, participants will be asked to read all papers in his/her session. Each paper presentation will be summarized and commented on by two other speakers of the session acting as discussants. The discussants will be followed by a plenary discussion of the paper. At the end of the workshop there will be a general discussion, possibly including a brainstorming session about areas or topics of research that the participants perceive as important.

Workshop Outputs

All the results obtained by discussions will be summarized and published as a technical report and made electronically available in the organizers' web sites. It aims to highlight outstanding issues that should form a part of the forthcoming research agenda.