STRAW '03
Second International
SofTware Requirements to Architectures Workshop

Foreword by the Workshop Co-Chairs

Over the past 10 years, software requirements engineering and software architecture have been the topic of fastly growing research disciplines. Requirements engineering has seen the advent of

- goal-oriented approaches,
- scenario-based requirements engineering,
- sociology- and linguistics-based techniques, and
- formal techniques

for identifying and specifying requirements.

Architecture design has seen the advent of

- patterns research,
- architectural style research,
- attribute-based architecture design,
- architecture description languages,
- component-based approaches, and
- product-line architectures.

There is a clear relationship between requirements engineering and architecture design. However, for the most part, the two disciplines have evolved independently from each other, and promising areas of mutual interest remain to be explored. For example, an important type of design research consists of relating classes of problems to classes of solutions. In software engineering, there are interesting connections between software problem patterns and software solution patterns. Recent research in problem frames could therefore be extended by including architecture patterns and investigating relationships between the two kinds of patterns.

The patterns paradigm may be extended by including the wider business context, consisting of business processes, actors, and strategies. In this wider context, the problem is one of alignment of software architecture with business architecture. Here, domain knowledge may be codified using reference architectures.

A third area of potential fruitful interaction is that of component-based development. Assembling components into a system requires an architecture that mediates between the system requirements and the requirements on the components. More generally, when we extend our view from a single system to a hierarchy of systems, the interplay between requirements and architectures is a central guiding principle in system design.

The goal of the Second International SofTware Requirements to Architectures Workshop (STRAW'03), to be held in Portland, Oregon, U.S.A. in conjunction with the 2003 International Conference on Software Engineering, is to bring together researchers from the requirements engineering and architecture communities to exchange views and results that are of mutual interest, and to discuss topics for further research. Topics of interest include, but are not limited to:

- deriving architecture descriptions in concert with requirements specification,
- attribute-based architecture design,
- tracing architectural decisions to requirements,
- evolving architectures and requirements,
- alignment between software architecture and business architecture,
- relating architecture patterns to requirements patterns,
- reference architectures,
- reuse of requirements and architectures,
- systems engineering approaches,
- formal foundations of the requirements–architecture relationship,
- requirements and architecture specification languages, and
- tools and environments for requirements engineers and software architects.

Participation in the workshop is limited to 30 people and is based upon the submitted papers, the best of which will be presented. All submitted papers will be distributed to the participants before the workshop starts and are included in these proceedings. Each presented paper will be assigned an discussant, who will lead the discussion about the paper. During the day, participants are expected to propose issues to be discussed at the end of the day. The workshop is expected to lead to the generation of several lists, of issues discussed, of disagreements identified, of conclusions reached, and of topics to be further researched.

It is important to remember that a workshop is not a formal conference. Rather, it is focused on discussion of current, on-going, and possibly incomplete work. Moreover, the papers appearing in these proceedings are position papers submitted both to suggest topics for discussion and to indicate the authors' interests in the subject of the workshop. They are not to be considered formal publications, and they may be sent in the future to more formal avenues of publication. Consequently, the organizing committee, in consultation with the program committee, decided to accept all papers submitted for publication in the proceedings. The organizing committee then selected a small number of these papers for presentation at the workshop. This small number would allow for more workshop-style discussion without the pressure to cover a whole lot of papers, each with only a short period for presentation and an even shorter period for questions and discussion.

The papers in these proceedings are divided into three groups,

1. about moving from architectures to requirements and realizations,
2. about moving from requirements to architectures, and
3. about requirements–architecture integration.

All papers, counterpoints, and discussion summaries will be made available electronically at the workshop website at

`http://se.uwaterloo.ca/~straw03/`

soon after the workshop. The site aims to highlight outstanding issues that should be the focus of future research in the area.

This second workshop follows the first workshop of the same name, that was held in Toronto, Ontario, Canada, in conjunction with the 2001 International Conference on Software Engineering (ICSE'01). That workshop's website is

`http://www.cin.ufpe.br/~straw01/.`

We extend our thanks to all those who have participated in the organization of this workshop, particularly to the program committee who helped to design the call for papers and to solicit submissions and who provided advice to the organizing committee. They are:

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Finally, we hope that you will enjoy these proceedings.

Sincerely,

Daniel M. Berry, Canada,
Rick Kazman, USA, and
Roel Wieringa, the Netherlands
the Organizing Committee