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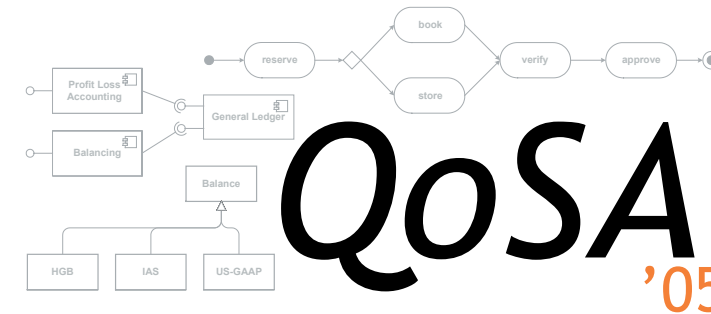
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QoSA '05

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Fraunhofer Institut Experimentelles Software Engineering



1st International Conference on
 Quality of Software Architectures
 September 20th - 22nd, 2005 in Erfurt, Germany



in conjunction with



One of the original motivations for explicitly modelling software architectures was the treatment of software quality attributes. These attributes can be either internal (such as maintainability) or external (such as performance, resource consumption or availability). Architectural models proved helpful for areas such as model-driven development, software product lines, or software migration. However, the impact that the organisation developing the software, architectural design decisions, and development processes have on software quality is still under investigation. QoSA 2005 aims at bringing together researchers from academia and industry who are concerned with the different quality attributes and their influencing factors. Thereby, QoSA 2005 strengthens a unified view on software quality attributes for the following reasons:

First of all, software quality attributes often have strong interdependencies to each other. On the one hand, there are extrinsic relations, such as the increase of one property (e.g., performance) diminishes another property (e.g., maintainability). These dependencies force software architects to find trade-offs between related quality attributes. However, these dependencies are system-dependent, i.e., do not necessarily occur for all systems and design decisions. On the other hand, there are intrinsic interdependencies, since many quality attribute depend per definition on other quality attributes (e.g., reliability depends on the system's timing behaviour in real-time systems). Due to that, it is highly important to foster the exchange between several areas of research which have been historically divided into different communities (e.g., performance engineering, software reliability, software metrics, etc.). Progress in software quality research is to be expected by joining research efforts of several groups.

Moreover, software quality attributes typically are influenced by various factors. Besides the obvious (but not well-understood) impact of the architectural design, organisational issues (e.g. team structuring and individual software development processes) as well as aspects of the software development process (e.g. quality assurance measures like reviews and the deployment of so-called agile methods) have an impact on software quality. This is mainly known by anecdotal reports, but nearly not investigated in detail yet.

What is currently lacking are theories and conceptual frameworks which foster the evaluation of software architectures and thereby take into account the above identified factors that influence the quality of software architectures. These theories and frameworks would ground on but also extend our understanding on software quality attributes and have to be validated by the means of empirical software engineering. QoSA 2005 fosters the formation and evaluation of such theories and conceptual frameworks by taking a closer look on the **DESIGN**, **EVALUATION**, and **MANAGEMENT** of software architectures from a software quality perspective.

As conference organizers, we kindly invite you to contribute to the success of QoSA 2005 by submitting a paper.

Ralf Reussner, Judith Stafford,
Sven Overhage, and Steffen Becker

QoSA 2005 welcomes original, unpublished submissions that have not been submitted elsewhere. Topics of interest include, but are not limited to:

ARCHITECTURE DESIGN

- ▶ Design decisions and their influence on the quality of software architectures
- ▶ Organisational issues and processes which influence software architecture quality in a positive or negative way
- ▶ Architectural patterns and their quality impacts
- ▶ Lessons learned and empirical validation of theories and frameworks on software architecture quality

ARCHITECTURE EVALUATION

- ▶ Models and specification techniques to evaluate the quality attributes of software architectures, which consider one or several influencing factors
- ▶ Processes for the evaluation of software architecture quality (including QA measures)

ARCHITECTURE MANAGEMENT

- ▶ Coordination of business architecture, business processes, and software architecture
- ▶ Development and enforcement of architectural decisions
- ▶ Architectural standards and reference architectures
- ▶ Assessment and integration of COTS components
- ▶ Integration of heterogeneous software architectures

We also intend to call for contributions for a special track on **SOFTWARE ARCHITECTURE EDUCATION**. Details will be announced in a separate call for contributions and on the conference website.

Author Information

We plan to publish the conference proceedings within the **Springer Lecture Notes** in Computer Science series. All Papers must be written in English and should be prepared using Springer's LNCS style.

We accept research papers and experience reports. Research papers present research results and should be no longer than 15 pages including abstract, figures, and bibliography. Experience reports present experiences relating to architectural quality in industrial projects and should be no longer than 5 pages.

The acceptance of a paper implies that at least one of the authors will register for the conference and presents the paper. Electronic submissions in PDF are required. For details about the submission, please consult the conference website www.qosa.informatik.uni-oldenburg.de.

▶ Net.ObjectDays

QoSA 2005 will be held in conjunction with the Net.ObjectDays, which is one of the major international conferences on object-oriented and internet-based technologies, concepts, and applications. Based on a strong research and innovation focus, Net.ObjectDays has a tradition in bringing together leading researchers from academia and industry on the one hand and system architects, developers, and users from industry and administration on the other hand.

Net.ObjectDays offers a variety of tutorials, workshops, and sub-conferences, which are held in one huge congress center and can be attended by all participants. In 2004, five sub-conferences published their proceedings within Springer's LNCS series and thus demonstrated the excellence of the combined event.

To participate at QoSA 2005, a registration for the Net.ObjectDays is required. You can register online at www.netobjectdays.org. This site also lists a variety of accommodations.

▶ Erfurt (excerpt from www.erfurt.de)

Being the capital city of the state of Thuringia and located in the „green heart of Germany“, Erfurt can easily be reached via its international airport or by train. Thuringia is one of the „new“ states of Germany and not too far from Berlin. Erfurt has grown in the middle ages to become a powerful centre of the trading industries and an important university. Erfurt's cultural, intellectual and economic strengths attracted great personalities such as Luther, Adam Ries, Goethe, Schiller, Herder, Wieland, Bach, W. v. Humboldt, Zsar Alexander, and Napoleon.

The former wealth of the city is reflected in the many carefully restored Renaissance and half-timbered houses. There are many other historical buildings, which together with the Krämerbrücke make up one of the best preserved medieval city centres in Germany. At one time Erfurt gained the two titles of „Rome of Thuringia“ and „erfordia turrita“. The latter title (Erfurt city of towers and spires) was given on account of the city's 36 parish churches and chapels as well as its 15 monasteries and other ecclesiastical buildings. Without a doubt, Erfurt is one of the most beautiful cities in Germany.

