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Preface

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Preface

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Abstract: The International Workshop on Graph Based Tools (GraBaTs 2006) is the third workshop of a series that serves as a forum for researchers and practitioners interested in the development and application of graph-based tools. Based upon mathematically solid underlying concepts, graph-based tools are frequently used in various application areas in software and systems engineering.

Keywords: graph-based tools, graphs, graph transformation, model-driven development

1 Motivation and History

Graphs are well-known means to capture structural aspects in various fields of computer science. Based upon mathematically solid underlying concepts, graph-based tools are frequently used in various application areas in software and systems engineering. Successful application areas include (but not limited to) compiler construction, constraint solving, CASE tool generation, software engineering, pattern recognition techniques, program analysis, software evolution, software visualization and animation, visual languages, and many more. A commonality in all these areas is that tools heavily rely on graphs as an underlying data structure.

The International Workshop on Graph Based Tools (GraBaTs 2006) is a forum for researchers and practitioners interested in the development and application of graph-based tools. The current event is already the third in a series which is traditionally organized bi-annually as a satellite event of the International Conference on Graph Transformation (ICGT). The first workshop on this topic took place in 2002 in Barcelona, Spain, while the second workshop was organized in 2004 in Rome, Italy.

Both events have demonstrated that the GraBaTs workshop is of special relevance for a conference on graph transformation. Frequently, the application of graph transformation technology requires the existence of reliable, user-friendly and efficient tool support.

Moreover, these tools are frequently built on top of basic services or frameworks provided by popular open development environments such as Eclipse which significantly reduce development efforts, and provide a professional look-and-feel of the tools thus facilitating industrial acceptance.

2 Aims and Scope

The GraBaTs 2006 workshop focused on attracting submissions mainly on the following topics:

- Tools for model-driven systems development, Meta CASE tools & generators;
- Tools for Visual languages: UML, Domain-specific languages, etc.
- Model transformation tools; Tool integration techniques; Animation and simulation tools
- Analysis tools (verification & validation, static analysis techniques, testing)
- Efficient algorithms (pattern matching, manipulation of large graph models)
- Case studies, empirical and experimental results on tool scalability, novel application areas

Furthermore, the GraBaTs 2006 workshop had a special focus on tool presentations organized as a separate session of the workshop. Authors were encouraged to submit tool papers which report on new features of existing tools or completely novel tools having graph-based foundations. The presentations of tools papers contained a mandatory live demonstration part during the workshop.

The mission of the tool demonstration part was to provide an overview on the state-of-the-art of tools for the graph transformation community and to local participants as well.

3 Workshop Organization

Each paper was reviewed by three members of the Program Committee prior to the workshop to decide if a contribution was to be presented at the workshop. Afterwards, in a second round of review, the Program Committee checked if the authors have sufficiently addressed the requested changes.

Altogether, 13 papers have been accepted for the current GraBaTs volume. Two short contributions are invited papers written by developers of popular graph transformation tools. The rest of the papers have been accepted as regular contributions.

The program committee of this workshop consisted of Luciano Baresi, David Déharbe, Holger Giese, Gabor Karsai, Mark Minas, Arend Rensink, Andy Schürr, Gabriele Taentzer, Dániel Varró, Pieter Van Gorp, Hans Vangheluwe, Andreas Winter, and Albert Zündorf. We would like to highly acknowledge their excellent work, which was carried out in the middle of summer.

As a conclusion, the GraBaTs 2006 workshop, held in Natal, Brazil, was a successful event to promote and compare the use of graphs in tool development.

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