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Preface

This volume consists of papers selected from the presentations given at the International Workshop and Symposium on “Applications of Graph Transformation with Industrial Relevance” (AGTIVE 2003). The papers underwent up to two additional reviews. This volume contains the revised versions of these papers.

AGTIVE 2003 was the second event of the Graph Transformation community. The aim of AGTIVE is to unite people from research and industry interested in the application of Graph Transformation to practical problems. The first workshop took place at Kerkrade, The Netherlands. The proceedings appeared as vol. 1779 of Springer-Verlag’s Lecture Notes in Computer Science series. This second workshop, AGTIVE 2003, was held in historic Charlottesville, Virginia, USA.

Graphs constitute well-known, well-understood, and frequently used means to depict networks of related items in different application domains. Various types of graph transformation approaches – also called graph grammars or graph rewriting systems – have been proposed to specify, recognize, inspect, modify, and display certain classes of graphs representing structures of different domains.

Research activities based on Graph Transformations (GT for short) constitute a well-established scientific discipline within Computer Science. The international GT research community is quite active and has organized international workshops and the conference ICGT 2002. The proceedings of these events, a three volume handbook on GT, and books on specific approaches as well as big application projects give a good documentation about research in the GT field (see the list at the end of the proceedings).

The intention of all these activities has been (1) to bring together the international community in a viable scientific discussion, (2) to integrate different approaches, and (3) to build a bridge between theory and practice.

More specifically, the International Workshop and Symposium AGTIVE aims at demonstrating that GT approaches are mature enough to influence practice, even in industry. This ambitious goal is encouraged by the fact that the focus of GT research has changed within the last 15 years. Practical topics have gained considerable attention and usable GT implementations are available now. Furthermore, AGTIVE is intended to deliver an actual state-of-the-art report of the applications of GT and, therefore, also of GT implementations and their use for solving practical problems.

The program committee of the International AGTIVE 2003 Workshop and Symposium consisted of the following persons:

Jules Desharnais, Laval University, Quebec, Canada
Hans-Joerg Kreowski, University of Bremen, Germany
Fred (Buck) McMorris, Illinois Institute of Technology, Chicago, USA
Ugo Montanari, University of Pisa, Italy
Manfred Nagl, RWTH Aachen University, Germany (Co-chair)
Francesco Parisi-Presicce, Univ. of Rome, Italy
and George Mason Univ., USA
John L. Pfaltz, University of Virginia, Charlottesville, USA (Co-chair)
Andy Schuerr, Technical University of Darmstadt, Germany
Gabriele Taentzer, Technical University of Berlin, Germany.

The program of the workshop started with a tutorial on GT given by L. Baresi and R. Heckel (not given in the proceedings). The workshop contained 12 sessions of presentations, two of them starting with the invited talks of H. Rising and G. Karsai, respectively. Two demo sessions gave a good survey on different practical GT systems on the one hand and the broad range of GT applications on the other.

At the end of the workshop five participants (G. Taentzer, H. Vangheluwe, B. Westfechtel, M. Minas, A. Rensink) gave a personal summary of their impressions, each of them from a different perspective. In order to enliven the workshop there were two competitions, namely for the best paper and for the best demo presentation, which were won by C. Smith and aequo loco by M. Minas and A. Rensink, respectively. The proceedings contain most of these items.

The workshop was attended by 47 participants from 12 countries, namely Belgium, Brazil, Canada, France, Germany, Italy, Poland, Spain, Sweden, The Netherlands, the UK, and the USA. The success of the workshop is based on the activeness of all participants contributing to presentations and discussions. Furthermore, it is due to the work done by referees and, especially, by the members of the program committee.

A considerable part of the workshop’s success was also due to the familiar Southern State atmosphere we witnessed at Charlottesville. Omni Hotel, the workshop conference site, gave us complete support from excellent meals to any kind of technical equipment. On Wednesday afternoon, the main social event was a visit to the homes of Thomas Jefferson (Monticello) and James Monroe (Ash Lawn), followed by the workshop dinner. Jefferson was the 3rd, Monroe the 5th president of the United States. Especially, Thomas Jefferson, also being the founder of the University of Virginia and the author of the Declaration of Independence, had a strong influence on the Charlottesville area.

A more comprehensive report about AGTIVE 2003, written by Dirk Janssens, was published in the “Bulletin of the European Association for Theoretical Computer Science” and in the “Softwaretechnik-Trends” of the German Association of Computer Science.

The workshop was made possible by grants given by the following organizations: Deutsche Forschungsgemeinschaft (the German Research Foundation), the European Union Research Training Network SEGRAVIS, the United States
National Science Foundation, and the Society for Industrial and Applied Mathematics. In particular, the donations have allowed researchers from abroad as well as young scientists to come to Charlottesville by partially financing their travel expenses. Furthermore, the grants covered part of the organizational costs of the workshop.

Last but not least, the editors would like to thank Peggy Reed, Scott Ruffner, and Bodo Kraft for their help in the organization of the workshop.

March 2004

John L. Pfaltz
Manfred Nagl
Boris Boehlen
List of Referees

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Table of Contents

Web Applications

Graph Transformation for Merging User Navigation Histories  
*Mario Michele Gala, Elisa Quintarelli, and Letizia Tanca*  
1

Towards Validation of Session Management in Web Applications  
based on Graph Transformation  
*Anilda Qemali and Gabriele Taentzer*  
15

Data Structures and Data Bases

Specifying Pointer Structures by Graph Reduction  
*Adam Bakewell, Detlef Plump, and Colin Runciman*  
30

Specific Graph Models and Their Mappings to a Common Model  
*Boris Böhlen*  
45

Engineering Applications

Transforming Graph Based Scenarios  
into Graph Transformation Based JUnit Tests  
*Leif Geiger and Albert Zündorf*  
61

On Graphs in Conceptual Engineering Design  
*Janusz Szuba, Agnieszka Ozimek, and Andy Schürr*  
75

Parameterized Specification of Conceptual Design Tools  
in Civil Engineering  
*Bodo Kraft and Manfred Nagl*  
90

Agent-Oriented and Functional Programs, Distribution

Design of an Agent-Oriented Modeling Language Based  
on Graph Transformation  
*Ralph Depke, Jan Hendrik Hausmann, and Reiko Heckel*  
106

Specification and Analysis of Fault Behaviours Using Graph Grammars  
*Fernando Luis Dotti, Leila Ribeiro, and Osmar Marchi dos Santos*  
120
Object and Aspect-Oriented Systems

Integrating Graph Rewriting and Standard Software Tools
\textit{Uwe Aßmann and Johan Lövdahl} ......................................................... 134

Expressing Component-Relating Aspects with Graph Transformations
\textit{Alon Amsel and Dirk Janssens} .................................................... 149

Natural Languages: Processing and Structuring

Modeling Discontinuous Constituents with Hypergraph Grammars
\textit{Ingrid Fischer} .............................................................................. 163

Authoring Support Based on User-Serviceable Graph Transformation
\textit{Felix H. Gatzemeier} ...................................................................... 170

Re-engineering

Re-engineering a Medical Imaging System Using Graph Transformations
\textit{Tobias Röttschke} ................................................................. 185

Behavioral Analysis of Telecommunication Systems
by Graph Transformations
\textit{André Marburger and Bernhard Westfechtel} .......................... 202

Reuse and Integration

Specifying Integrated Refactoring with Distributed Graph Transformations
\textit{Paolo Bottoni, Francesco Parisi Presicce, and Gabriele Taentzer} .... 220

A Domain Specific Architecture Tool: Rapid Prototyping
with Graph Grammars
\textit{Thomas Haase, Oliver Meyer, Boris Böhlen, and Felix Gatzemeier} .... 236

Modelling Languages

Graph Transformations in OMG’s Model-Driven Architecture
(Invited Talk)
\textit{Gabor Karsai and Aditya Agrawal} ........................................... 243

Computing Reading Trees for Constraint Diagrams
\textit{Andrew Fish and John Howse} .................................................. 260
UML Interaction Diagrams: Correct Translation of Sequence Diagrams into Collaboration Diagrams
Björn Cordes, Karsten Hölscher, and Hans-Jörg Kreowski .................. 275

Meta-Modelling, Graph Transformation and Model Checking for the Analysis of Hybrid Systems
Juan de Lara, Esther Guerra, and Hans Vangheluwe ......................... 292

Bioinformatics

Proper Down-Coloring Simple Acyclic Digraphs
Geir Agnarsson, Ágúst S. Egilsson, and Magnús M. Halldórsson .......... 299

Local Specification of Surface Subdivision Algorithms
Colin Smith, Przemyslaw Prusinkiewicz, and Faramarz Samavati ........ 313

Transforming Toric Digraphs
Robert E. Jamison ......................................................... 328

Management of Development and Processes

Graph-Based Specification of a Management System for Evolving Development Processes
Markus Heller, Ansgar Schleicher, and Bernhard Westfechtel .......... 334

Graph-Based Tools for Distributed Cooperation in Dynamic Development Processes
Markus Heller and Dirk Jäger ............................................. 352

Multimedia, Picture, and Visual Languages

MPEG-7 Semantic Descriptions: Graph Transformations, Graph Grammars, and the Description of Multimedia (Invited Talk)
Hawley K. Rising III ....................................................... 369

Collage Grammars for Collision-Free Growing of Objects in 3D Scenes
Renate Klempien-Hinrichs, Thomas Meyer, and Carolina von Totth ... 383

VISUALDIAGen – A Tool for Visually Specifying and Generating Visual Editors
Mark Minas ................................................................. 398
### Demos

**Genged – A Visual Definition Tool for Visual Modeling Environments**  
*Roswitha Bardohl, Claudia Ermel, and Ingo Weinhold*  
413

**Chasid – A Graph-Based Authoring Support System**  
*Felix H. Gatzemeier*  
420

**Interorganizational Management of Development Processes**  
*Markus Heller and Dirk Jäger*  
427

**Conceptual Design Tools for Civil Engineering**  
*Bodo Kraft*  
434

**E-Cares – Telecommunication Re- and Reverse Engineering Tools**  
*André Marburger and Bernhard Westfechtel*  
440

**AGG: A Graph Transformation Environment for Modeling and Validation of Software**  
*Gabriele Taentzer*  
446

**Process Evolution Support in the Ahead System**  
*Markus Heller, Ansgar Schleicher, and Bernhard Westfechtel*  
454

**Fire3: Architecture Refinement for A-posteriori Integration**  
*Thomas Haase, Oliver Meyer, Boris Böhlen, and Felix Gatzemeier*  
461

**A Demo of OptimixJ**  
*Uwe Aßmann and Johan Lövdahl*  
468

**Visual Specification of Visual Editors with VisualdiaGen**  
*Mark Minas*  
473

**The Groove Simulator: A Tool for State Space Generation**  
*Arend Rensink*  
479

### Summaries of the Workshop

**AGTIVE’03: Summary from the Outside In**  
*Arend Rensink*  
486

**AGTIVE’03: Summary from the Theoretical Point of View**  
*Gabriele Taentzer*  
489

**AGTIVE’03: Summary from the Viewpoint of Graph Transformation Specifications**  
*Mark Minas*  
491
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGTIVE’03: Summary from a Tool Builder’s Viewpoint</td>
<td>493</td>
</tr>
<tr>
<td>Best Presentation and Demonstration Awards</td>
<td>496</td>
</tr>
<tr>
<td>Author Index</td>
<td>497</td>
</tr>
<tr>
<td>Books on Graph Transformation</td>
<td>498</td>
</tr>
</tbody>
</table>