2nd International Workshop on Scalable Natural Language Understanding (ScaNaLU)

Proceedings of the
HLT-NAACL 2004 Workshop

May 6, 2004
Boston, MA, USA

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Association for Computational Linguistics
3 Landmark Center
East Stroudsburg, PA 18301 USA
+1-570-476-8006 phone
+1-570-476-0860 fax
acl@aclweb.org

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Robert Porzel, editor

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PREFACE

This volume contains the papers presented at the HLT/NAACL 2004 workshop entitled: Scalable Natural Language Understanding. The workshop was held on May 6th, 2004 and is the second in a series that started in Heidelberg, Germany on May 23rd and 24th 2002. The papers were refereed by an international panel of experts in the field.

The workshop is the first held under the auspices of the HLT/NAACL to be directed at issues concerning the scalability of natural language understanding and generation systems. There is a growing need for systems that can understand and generate natural language in applications that require substantial amounts of knowledge as well as reasoning capabilities. Most current implemented systems for natural language understanding (NLU) are decoupled from any reasoning processes, which makes them narrow and brittle.

Furthermore, they do not appear to be scalable in the sense that the techniques used in such systems do not appear to generalize to more complex applications. While significant work has been done in developing theoretical underpinnings of systems that use knowledge and reasoning (e.g., development of models of linguistic interpretation using abductive reasoning, intention recognition, formal models of dialogue, formal models of lexical and utterance meaning, and utterance planning), it has often proved difficult to utilize such theories in robust working systems.

Another major barrier has been the vast amount of linguistic and world knowledge needed. But there is now significant progress in compiling the required knowledge, using manual, statistical and hybrid techniques. But even as these resources become available, we still lack some key conceptual and computational frameworks that will form the foundation for effective scalable natural language systems.

The collection of researchers who face the challenges involved in scaling human language technology is growing, as well as a greater effort to develop systems that robustly interact interact with users in intuitive and conversational ways.

We wish to thank the members of the Program Committee for reviewing the submissions on a very tight schedule.

James Allen, University of Rochester
Jerome Feldman, International Computer Science Institute
Rainer Malaka, European Media Laboratory, GmbH
Johanna Moore, University of Edinburgh
Robert Porzel, European Media Laboratory, GmbH

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Table of Contents

Robustness versus Fidelity in Natural Language Understanding
Mark G. Core and Johanna D. Moore 1

Towards Measuring Scalability in Natural Language Understanding Tasks
Robert Porzel and Rainer Malaka 9

A Little Goes a Long Way: Quick Authoring of Semantic Knowledge Sources for Interpretation
Carolyn Penstein Rosé and Brian S. Hall 17

Ends-based Dialogue Processing
Jan Alexandersson, Tilman Becker, Ralf Engel, Markus Löckelt, Elsa Pecourt, Peter Poller, Norbert Pfleger and Norbert Reithinger 25

Scalable Construction-Based Parsing and Semantic Analysis
John Bryant 33

Scaling Understanding up to Mental Spaces
Eva Mok, John Bryant and Jerome Feldman 41

Different Sense Granularities for Different Applications
Martha Palmer, Olga Babko-Malaya and Hoa Trang Dang 49

Making Relative Sense: From Word-graphs to Semantic Frames
Robert Porzel, Berenike Loos and Vanessa Micelli 57

HYPERBUG: A Scalable Natural Language Generation Approach
Martin Klarner 65

WORKSHOP PROGRAM

Thursday, May 6, 2004

09:00-9:15 *Welcome*

09:15-09:45 *Robustness versus Fidelity in Natural Language Understanding*
Mark G. Core and Johanna D. Moore

09:45-10:15 *Towards Measuring Scalability in Natural Language Understanding Tasks*
Robert Porzel and Rainer Malaka

10:15-11:00 *Break*

11:00-11:30 *A Little Goes a Long Way: Quick Authoring of Semantic Knowledge Sources for Interpretation*
Carolyn Penstein Rosé and Brian S. Hall

11:30-12:00 *Ends-based Dialogue Processing*
Jan Alexandersson, Tilman Becker, Ralf Engel, Markus Löckelt, Elsa Pecourt, Peter Poller, Norbert Pfleger and Norbert Reithinger

12:00-13:00 *Lunch*

13:00-13:30 *Scalable Construction-Based Parsing and Semantic Analysis*
John Bryant

13:30-14:00 *Scaling Understanding up to Mental Spaces*
Eva Mok, John Bryant and Jerome Feldman

14:30-15:00 *Different Sense Granularities for Different Applications*
Martha Palmer, Olga Babko-Malaya and Hoa Trang Dang

15:00-15:30 *Making Relative Sense: From Word-graphs to Semantic Frames*
Robert Porzel, Berenike Loos and Vanessa Micelli

15:30-16:00 *Break*

16:00-16:30 *HYPERBUG: A Scalable Natural Language Generation Approach*
Martin Klarner

16:30-17:00 Final Discussion

Author Index

Alexandersson, Jan 25
Babko-Malaya, Olga 49
Becker, Tilman 25
Bryant, John 33, 41
Core, Mark G. 1
Dang, Hoa Trang 49
Engel, Ralf 25
Feldman, Jerome 41
Hall, Brian S. 17
Klarner, Martin 65
Löckelt, Markus 25
Loos, Berenike 57
Malaka, Rainer 9
Micelli, Vanessa 57
Mok, Eva 41
Moore, Johanna D. 1
Palmer, Martha 49
Pecourt, Elsa 25
Pfleger, Norbert 25
Poller, Peter 25
Porzel, Robert 9, 57
Reithinger, Norbert 25
Rosé, Carolyn Penstein 17