

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 with users in intuitive and conversational ways.

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