# Tagging Text with Lexical Semantics Why, What, and How?

## **Proceedings of the Workshop**

4-5 April 1997 Washington, D.C., USA Sponsored by the Association for Computational Linguistics Special Interest Group on the Lexicon

Published by the Association for Computational Linguistics

# Tagging Text with Lexical Semantics Why, What, and How?

## **Proceedings of the Workshop**

4-5 April 1997 Washington, D.C., USA Sponsored by the Association for Computational Linguistics Special Interest Group on the Lexicon

Published by the Association for Computational Linguistics

#### ©1997, Association for Computational Linguistics

Order additional copies from:

ACL P.O. Box 6090 Somerset, NJ 08875 1-908-873-3898 acl@bellcore.com

#### PREFACE

The general topic of this volume is tagging word tokens with lexical semantic information. The first six papers discuss what information should be tagged and how human tagging (hand-tagging) can be performed so as to maximize accuracy. Hand-tagging is important because it can be used to create standard corpora on which to train and evaluate automated methods for tagging lexical semantic information. The next seven papers concentrate on such automated methods. Automatic tagging should prove useful in a variety of areas including machine translation, information retrieval, information extraction, and dialog understanding.

Although the general topic is tagging lexical semantic information, the majority of the papers concentrate on a more specific problem: word sense disambiguation. However, particular word senses often entail general lexical semantic information. For example, if the sense of *bank* used refers to something that lies along a river, then one knows that it is a natural formation, inanimate, etc. Consider also the verb *bounce* which in *she bounced a check* is a telic and in *she bounced a ball* is an activity. Such entailments are especially transparent when using a structured lexicon such as WordNet, which is the case for many of the papers in the volume.

The workshop itself and these proceedings are the result of many people's efforts. The people who submitted articles provided high quality papers to choose from, the program committee provided in depth reviews and did so punctually, the presenters and workshop leaders provided polished final documents in a timely fashion, and Priscilla Rasmussen answered many questions regarding money matters, hotel reservations, etc. To all these people, thanks! In addition, a very special thanks to Martha Palmer who both served on the program committee and acted as a ghost co-chair, providing general guidance and answering questions on a myriad of topics.

The members of the program committee should not go unnamed: Martha Evens, Helmut Feldweg, Michael Johnston, Douglas Jones, Kevin Knight, Boyan Onyshkevych, Martha Palmer, Philip Resnik, Evelyne Viegas, David Yarowsky, and Annie Zaenen.

Finally, I would like to gratefully acknowledge the US Government inter-agency TIPSTER Text Program which provided partial funding for the workshop.

Marc Light Program Chair March, 1997 University of Tübingen, Germany

### **TABLE OF CONTENTS**

#### Presentations

Getting serious about word sense disambiguation (invited talk) Hwee Tou Ng1
Experience in WordNet sense tagging in the Wall Street Journal Janyce Wiebe, Julie Maples, Lei Duan, and Rebecca Bruce
Desiderata for tagging with WordNet synsets or MCCA categories Kenneth C. Litkowski
A frame-semantic approach to semantic annotation John B. Lowe, Collin F. Baker, and Charles J. Fillmore
A lexicon for underspecified semantic tagging Paul Buitelaar
Analysis of a hand-tagging task (invited talk) Christiane Fellbaum, Joachim Grabowski, and Shari Landes
Measuring semantic entropy I. Dan Melamed
Sense tagging: semantic tagging with a lexicon Yorick Wilks and Mark Stevenson
Selectional preference and sense disambiguation Philip Resnik
Investigating complementary methods for verb sense pruning Hongyan Jing, Vasileios Hatzivassiloglou, Rebecca Passonneau, and Kathleen McKeown
Towards a bootstrapping framework for corpus semantic tagging Roberto Basili, Michelangelo Della Rocca, and Maria Teresa Pazienza
Sense tagging in action Andrew Harley and Dominic Glennon
A perspective on word sense disambiguation methods and their evaluation Philip Resnik and David Yarowsky

### Working Sessions

Writing annotation instructions Janyce Wiebe	
Combining knowledge sources for automatic semantic tagging Douglas Jones and Boyan Onyshkevych	
Semantic tagging and NLP applications Thierry Declerck and Judith Klein	
Evaluating automatic semantic taggers Philip Resnik and David Yarowsky91	
Constructing semantic tagsets Alain Polguère	
Structured lexicons and semantic tagging Bonnie J. Dorr and Mari Broman Olsen	\$