KIMMO:
A TWO LEVEL MORPHOLOGICAL ANALYZER

Foreword

This collection of papers came about as a result of a course in computational linguistics that was offered in the spring of 1983. It was decided that, as a class project for the course, we would construct a Lisp implementation of Kimmo Koskenniemi's "two-level model" for morphological analysis and synthesis. The result would be a general purpose analyzer/recognizer, a computer program that could use a morphological description of a language to recognize and generate all inflected and derived forms for any word in its lexicon.

Our Lisp program is closely related to the Pascal implementation that Koskenniemi discusses in his forthcoming dissertation. Because of that, we have named it "KIMMO". At the time when we started the project, we had Koskenniemi's program but no documentation for it. We had not yet seen any general discussion of the model. Because Lisp and Pascal are very different programming languages, we designed our system from scratch without paying attention to the details of Koskenniemi's code. Nevertheless, the two implementations turned out to be quite similar in concept. No functional discrepancies have surfaced so far between the two versions.

The first paper (by L. Karttunen) in this collection is a general introduction to the project and the underlying theory of morphology. It shows what kind of morphological description the program can use. The second article (by O. Gajek et al.) discusses implementation details, such as the Lisp representation of lexicons and transducers. The third paper (by R. Khan et al.) is a user's guide to the system. It is meant for someone who would like to experiment with KIMMO, perhaps to try it out with his own description of some language. Knowledge of Lisp is not assumed. The remaining papers contain sample descriptions for English (L. Karttunen & K. Wittenburg), Japanese (Y. Alam), Rumanian (R. Khan), and French (S. Lun) with some discussion about the problems they pose for the Two-level model.

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A comprehensive presentation of Koskenniemi's theory will appear in his doctoral dissertation (University of Helsinki, Finland) in the fall of 1983.

Lauri Karttunen

The editors of *Texas Linguistic Forum* are happy to include this collection of articles on computational analysis of morphology. The papers have been published exactly as they were received from the authors, to whom any inquiries should be directed.

John J. McCarthy
for the editors,
*Texas Linguistic Forum*