

# Compiling Unification Grammars into Recognizers: a Bibliography

Manny RAYNER, Beth Ann HOCKEY

UCSC/NASA Ames Research Center

Moffet Field, CA 94035

{mrayner, bahockey}@riacs.edu

Pierrette BOUILLON

University of Geneva

TIM/ISSCO

40, bvd du Pont-d'Arve

CH-1211 Geneva 4, Switzerland

pierrette.bouillon@issco.unige.ch

## Abstract

This document provides a bibliography for the ACL 2004 tutorial, “Building Linguistically Motivated Speech Recognizers Using Regulus”. We provide references to papers describing methods for compiling unification grammars into context free grammars, spoken language systems built using these methods, and comparisons with other methods.

## 1 Compiling unification grammars into CFGs

An interesting early paper is (Chappelier et al., 1999). (Moore, 1998) describes the algorithm developed by Moore and Gawron, which was implemented within the SRI Gemini system; (Rayner et al., 2000b) describes work applying the Moore-Gawron algorithm to linguistically motivated unification grammars. (Kiefer and Krieger, 2000) describes the *HPSG2CFG* algorithm and system, which was used to compile a substantial domain-independent HPSG grammar into CFG form. The Moore-Gawron and Kiefer-Krieger approaches are compared in (Dowding et al., 2001), which also describes use of the Kiefer-Krieger method in the context of building concrete speech recognizers. The REGULUS system is described in (Rayner et al., 2001a; Rayner et al., 2003b). Issues concerning compilation of specialized grammars into recognizers are discussed in (Rayner et al., 2002); the methods have been implemented in both the Gemini and REGULUS systems. UNIANCE, which has several points of contact with REGULUS, is described in (Bos, 2002).

## 2 Systems using grammar-based recognition

Systems built using the SRI Gemini system are described in (Stent et al., 1999; Rayner et al., 2000a; Lemon et al., 2001; Dowding and Hieronymus, 2003). Systems built using REGULUS are described in (Rayner et al., 2001c; Rayner and Bouillon, 2002; Rayner et al., 2003a; Rayner et al., 2003c). (Bos et al., 2003) describes a system built using UNIANCE.

## 3 Evaluation

(Rayner et al., 2001b) describes experiments investigating the extent to which inclusion of linguistic features in a unification grammar improves performance of a derived recognizer. (Knight et al., 2001) compares performance of grammar-based and statistical recognizers.

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