

METAL-Austin Monthly Report

OCTOBER 1989

Author: Winfield S. Bennett

Date: 3 November 1989

Status: Report

Scope: METAL Project-Austin

The following is a summary of METAL and METAL-related activities for the Austin METAL group during the month of October 1989.

Software

Jennifer Oppenheim spent the majority of her time doing research in the frames software. In the course of this work she was able to uncover several bugs which have been reported to Leuven. Improved frame software is to be released with the new METAL release. Jennifer also wrote a frame constructor to build reflexive (RFX) nodes. Additionally she worked with Susan merging the English monolingual and English-German bilingual lexicons from Munich with those in our database.

Linguistics

Susan Chapman worked with Jennifer merging the English monolingual and English-German bilingual lexicons from Munich with those in our database. She also worked on cleaning up the verb transfer entries which we had received from Lesley Jezierny. Some of the entries contained syntactic errors for Tests and XFMS. Additionally Susan continued her work coding entries for the benchmark texts. Susan, Jocelyn, and I met to decide on a standardized coding strategy for certain classes of verbs with N0 constituents. Specific examples are:

Class 1

[[they] advised [her] [to go]]
\$SUBJ \$DOBJ \$SOBJ

Class 2

[[they] wanted [her to go]]
\$SUBJ \$DOBJ

Class 3

[[they] elected [her] [to be president]]
\$SUBJ \$DOBJ \$OCOMP

Lesley Jezierny continued her work coding the English-German VST transfer lexicon. She estimates that she will have the work done in time for the February release.

Robert Khan returned to his work with compounds, in particular examining problems with coordinate and gapped structures, e.g., *the Paragraph, Catalog, and Tab commands* and *different column and margin settings*. Although determiner and number features can be used to identify the correct structure for some gapped and coordinate structures, many will remain ambiguous to the system.

Jocelyn Liu revised the analysis of sub-clauses to allow for proper identification of unmarked infinitive clauses (INF-), improved the treatment of marked infinitive clauses (INF+), and revised the frame tests for N0-\$DOBJ and N0-\$SOBJ. In conjunction with her second and third tasks, Jocelyn, Susan, and I met to develop the standardized approach to coding the verbs of the classes, illustrated above. Additionally she continued her work analyzing and fixing the problems in the current system's analysis of the Ss in the Frame-2.MTI benchmark text. Further, Jocelyn is studying the current analysis of NPs in the English-German system, especially with an eye to the MIR; she will write a report on her findings in the near future.

Ana Santisteban continued to work on parentheticals, especially at the word level, e.g., *book(s)*, *church(es)*, and on quoted strings, e.g., *'the Boss'*. The parentheticals at the word level have to be transformed substantially for the purposes of translation into several of the current METAL target languages. The strategy Ana adopted is to transform the parenthetical into a disjunction, e.g., *book(s)* => *Buch oder Bücher*. The quoted strings are generally handled by the same rules as those for parentheticals, except when it comes to attachment, e.g., *Bruce 'the Boss' Springsteen* or *Bruce (the Boss) Springsteen* are both acceptable as strings, but only *'the Boss'* can be used as an NP. Quoted strings pose another problem in their interaction with punctuation in certain English written styles, e.g., *I talked with 'the Boss.'* or *I talked with 'the Boss'.*

I spent much of my time investigating the capabilities of the current system to provide the sort of functionality needed for our VST transfers and enhancing the system's ability to provide features for control of VST transfer. Among other improvements the TYPE filter is now written in such a way that it will mark NPs with TY value(s) when the node does not have a TY (e.g., pronouns, nominalized adjectives, and unknowns); this provides TY value(s) for use in the rest of analysis and in synthesis. I also 'cleaned up' the frame tests, rewrote part of the FREE-CONSTITUENT-FILTER to reflect the decisions made in Barcelona, and wrote parts of the frame constructors to handle reflexives. Additionally, I continued my work with sub-clauses, in particular gerunds.