

# HPSG Processing at DFKI and Saarland University

## Summary of Results and Plans



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DELPH-IN MEETING LISBON 2005



### DFKI

- ☆ DISCO
- ☆ Verbmobil
- ☆ Whiteboard
- ☆ JACY
- ☆ QUETAL
- ☆ planned: NTT Cooperation,  
COLLATE extension

### Saarland University

- ☆ PERFORM
- ☆ DEEP THOUGHT
- ☆ Lisbon Collaboration on Portuguese
- ☆ planned: SaSPECT





## Overview

- ☆ grammars: German, Japanese, Greek, Chinese
- ☆ engineering platform: tsdb
- ☆ run-time parser: PET
- ☆ research on robustness/coverage: lexicon acquisition
- ☆ platform for implementing hybrid processing architectures: HoG
- ☆ shallow components for hybrid processing: TnT, SPROUT
- ☆ treebanks: Eiche, German MRS treebank
- ☆ hybrid applications: IE, QA, MT?





## Grammars

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- ☆ German: adaptation to Matrix standard  
Berthold Crysmann was recently made reversible  
open-source version planned for 2006
- ☆ Japanese: used in YY System  
Melanie Siegel further development in cooperation with NTT
- ☆ Greek: smaller well documented Greek grammar  
Valia Kordoni further development with Greek partner  
Alexandros Poulis
- ☆ Chinese: small Chinese grammar  
Yi Zhang hopefully to be continued with Chinese partner



engineering platform: tsdb



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☆ development is continued by Stephan Oepen in Oslo



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run-time parser: PET

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- ☆ developed by Ulrich Callmeier (supervised by Stephan Oepen)
- ☆ maintenance by Bernd Kiefer
- ☆ planned steps: API and LKB approximation





research on robustness/coverage

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- ☆ robust HPSG parsing: work by Frederik Fouvry
- ☆ automated lexicon acquisition: Yi Zhang and Frederik Fouvry



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platform for hybrid processing: HoG

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☆ platform Heart of Gold HoG was made Open Source resource

by Ulrich Schäfer



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shallow components for hybrid processing

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- ☆ both components are integrated in HoG (Ulrich Schäfer)
- ☆ TnT (Thorsten Brants) is released free of charge to all research sites
- ☆ SPROUT (Jakub Piskorski, Feiyu Xu, Uli Krieger, Witold Drozdzyński, U. Schäfer et al.) will be made Open Source Resource within a few months





☆ Eiche: HPSG treebank

☆ German MRS treebank:      700 hand-corrected sentences  
   2000 sentences uncorrected



- ☆ Information Extraction in Whiteboard (F. Xu)
- ☆ Information Extraction in Deep Thought  
(M. Siegel, U. Schäfer, A. Eisele)
- ☆ Question Answering in QUETAL (A. Frank, B. Crysmann, F. Xu, U.  
Krieger, U. Schäfer)
- ☆ Planned: Hybrid Grammar Checking (SaSPECT)
- ☆ Machine Translation ???



**THANK YOU FOR YOUR ATTENTION!**