Welcome to Lisbon!

Many thanks to our local hosts!

What is DELPH-IN?

What are we doing here?

DELPH-IN:

BACKGROUND, PURPOSE & STATE

Hans Uszkoreit

☆ Deep interest in deep linguistic processing

☆ Deep interest in understanding the essence of human language, i.e., the mapping between form and meaning

☆ Deep interest in grammar and grammatical processing

☆ Convergence on a linguistic framework that seems suited for the task

☆ Deep processing means to maximally exploit grammatical knowledge for language processing

☆ Deep linguistic processing is what you need to get at the meaning of language

☆ The opposite of deep is not statistical but shallow

☆ The members of the DELPH-IN initiative have selected a common strategy for achieving progress in deep linguistic processing

The probem of deep processing is so complex that it demands

☆ division of labor

☆ a multitude of competing approaches

☆ a sharing of resources

and therefore also

☆ some common ground

Solve the problem of lacking performance

☆ by agreeing on a common formalisms and format for grammars

☆ by working on shared tasks

☆ by comparing techniques and systems

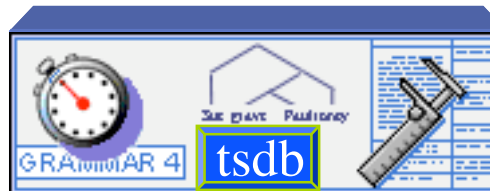☆ by sharing (positive and negative) experience

☆ by sharing resources

**PET
Runtime Parser**

**LKB
Development Platform**

**English
Grammar**

**German
Grammar**

**Japanese
Grammar**

Application

GRAMMAR 4   tsdb

German Research Center for Artificial Intelligence GmbH

HANS USZKOREIT: BACKGROUND, PURPOSE & STATE OF DELPH-IN

PET Runtime Parser

LKB Development Platform

English Grammar

German Grammar

Japanese Grammar

Application

GRAmmAR 4 tsdb

Current Setup

LKB Development Platform

MATRIX

...
Grammar

Norwegian Grammar

English Grammar

German Grammar

Japanese Grammar

French Grammar

...
Grammar

PET Runtime Parser

TnT POS Tagger

RASP Shallow Parser

SPROUT IE System

HOG Platform

Application

GRAMMAR 4   tsdb

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German Research Center for Artificial Intelligence GmbH
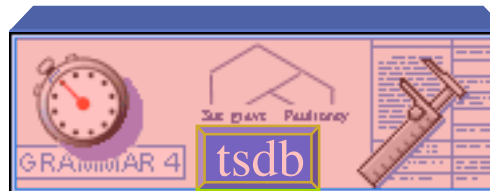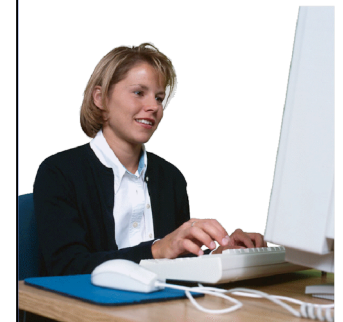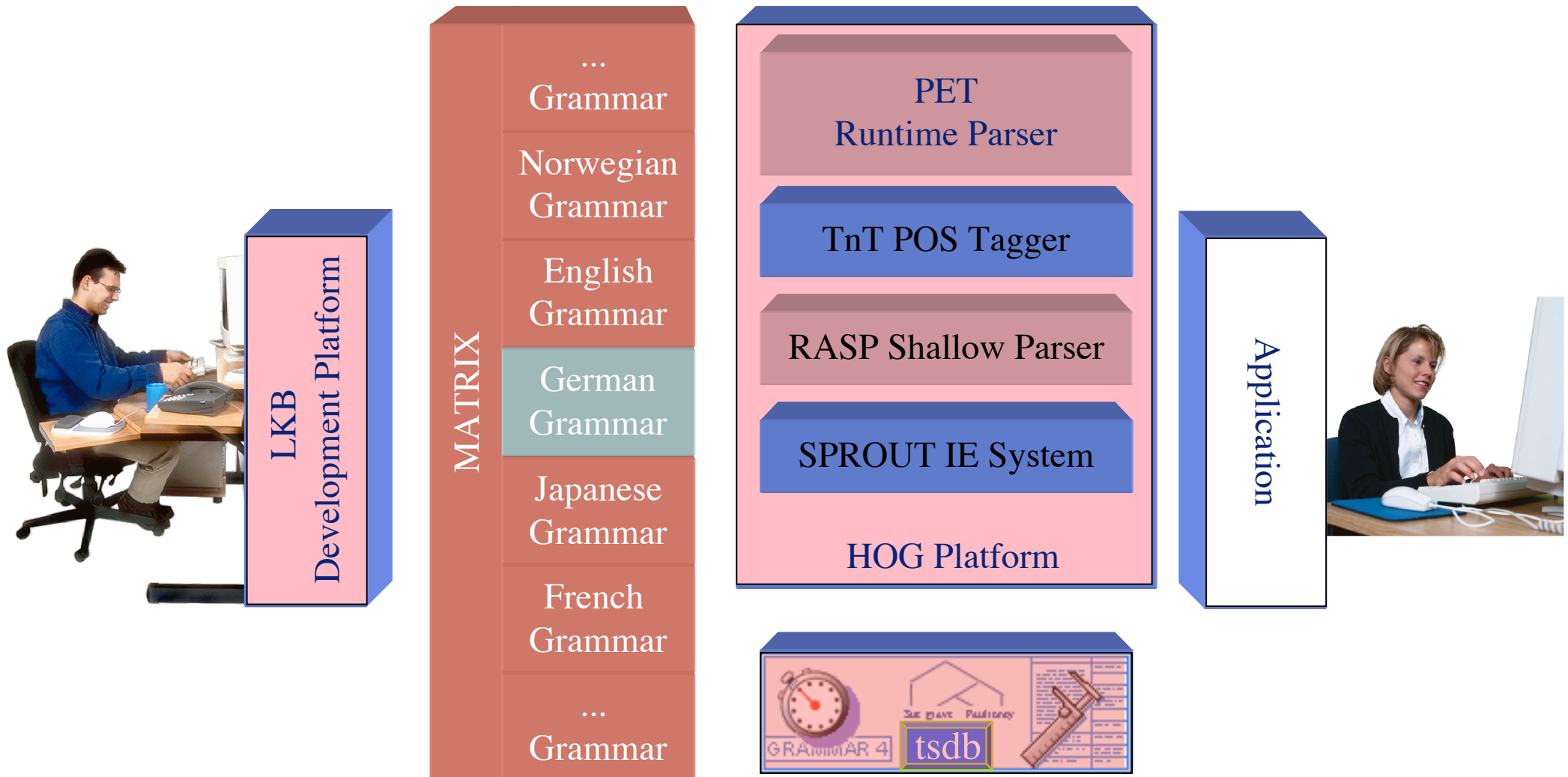
☆ Joint Computational Formalism (set by ERG Grammar and LKB)

☆ Grammar Development Tools (LKB)

☆ An Interlingual Core Grammar (The Matrix)

☆ Implemented Grammars (ERG, Japan., French, German, Greek,...)

☆ HPSG Treebanks (Redwoods, Eiche, ...)

☆ Parsers (PET, LILFES, ...)

☆ Generator (in the LKB)

☆ Engineering Platform (tsdb)

☆ Platform for Hybrid Processing (HoG)

☆ Comparative Evaluations

☆ Exchange, Cooperation and Mutual Assistance

☆ Joint Promotion and Project Acquisition

focus has shifted from efficiency to

☆ coverage/robustness and specificity

☆ systematic multilinguality

☆ finding and building applications for which the benefits of deep processing can be demonstrated

☆ hybrid processing methods

☆ as a means of improving processing

☆ as model of human performance

One special approach for real-life applications: Let deep processing
    assist shallow processing

☆ prevent falling below the baseline of best shallow approaches

☆ machine translation

☆ knowledge based applications
– gaining knowledge through analysis
– verbalizing knowledge

☆ problem of some semantic interlingua for both machine translation and knowledge-based applications

Systematic Coverage

☆ achieving, measuring and characterizing coverage w.r.t. meaninful
areas: real-life applications or linguistic concepts

☆ striving for "complete" coverage w.r.t. to an area

Confidence Assessment

☆ providing confidence values with the help of statistical methods
provide

☆ Demand for high quality MT (better 50% at 100% quality than 100% at 50% quality)

☆ Demand for hybrid MT

☆ Demand for self-critical MT

☆ Do we have a chance of applying HPSG processing in real-life MT?

for...

☆ organizing comparative evaluations

☆ enlarging the repository of open-source resources

☆ promoting our program and our results

☆ defining and acquiring joint projects