THE PARGRAM PROJECT

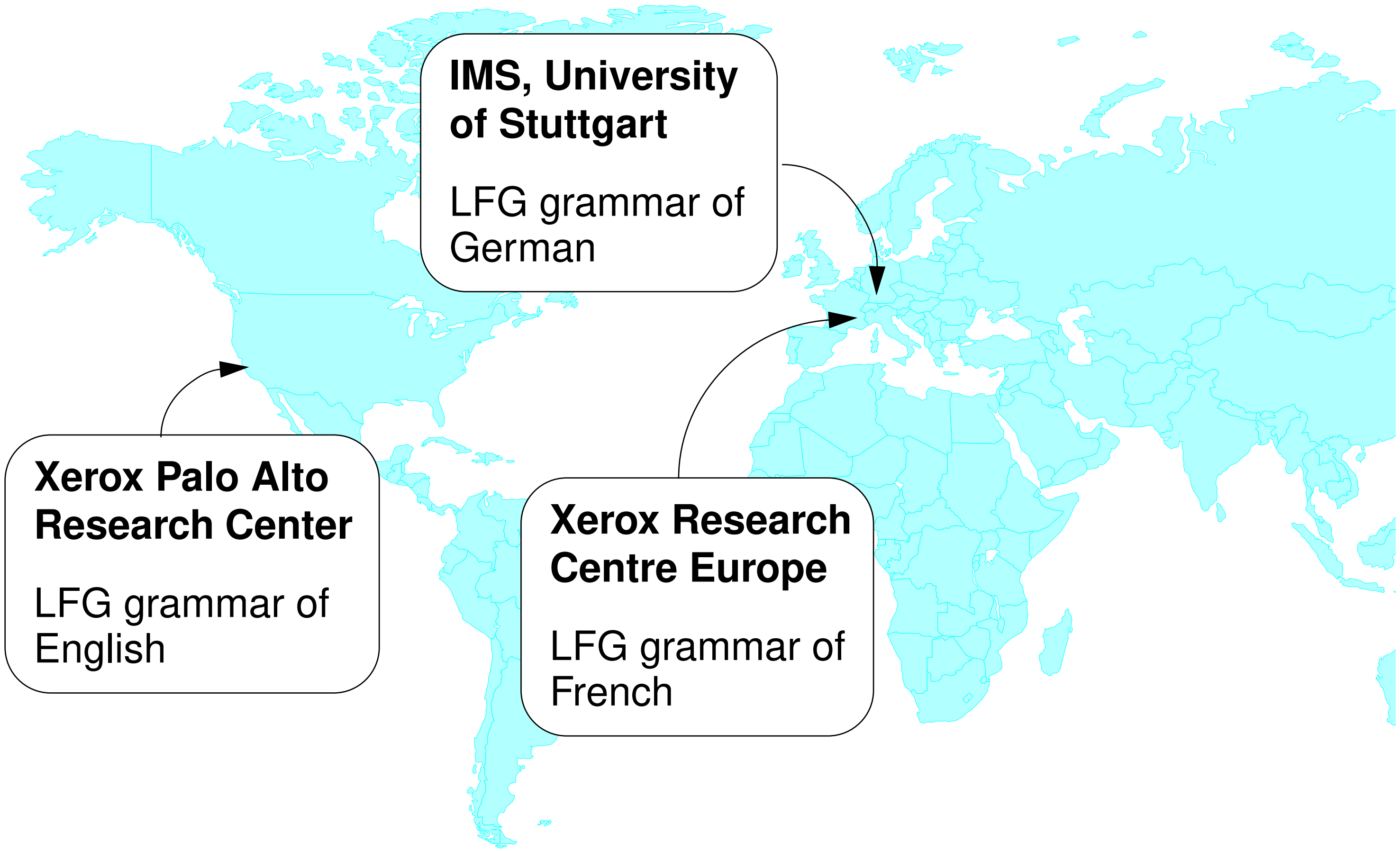
A Project of Parallel Grammar Development

Institute of Computational Linguistics

University of Stuttgart

http://www.ims.uni-stuttgart.de/projekte/pargram/

THE PARGRAM PROJECT – PARTICIPATING PARTNERS



PROJECT OBJECTIVES

Broad coverage grammars

- treatment of all important and generally occuring linguistic constructions
- linguistically motivated analyses

Parallel development of grammars between the participating sites

- coordination of linguistic analyses and means of representation/generalization
- identical treatment of central crosslinguistic phenomena

Methods in grammar engineering

- test methods and evaluation strategies
- maintenance and the problem of complex interaction
- distributed development

THE PLATFORM

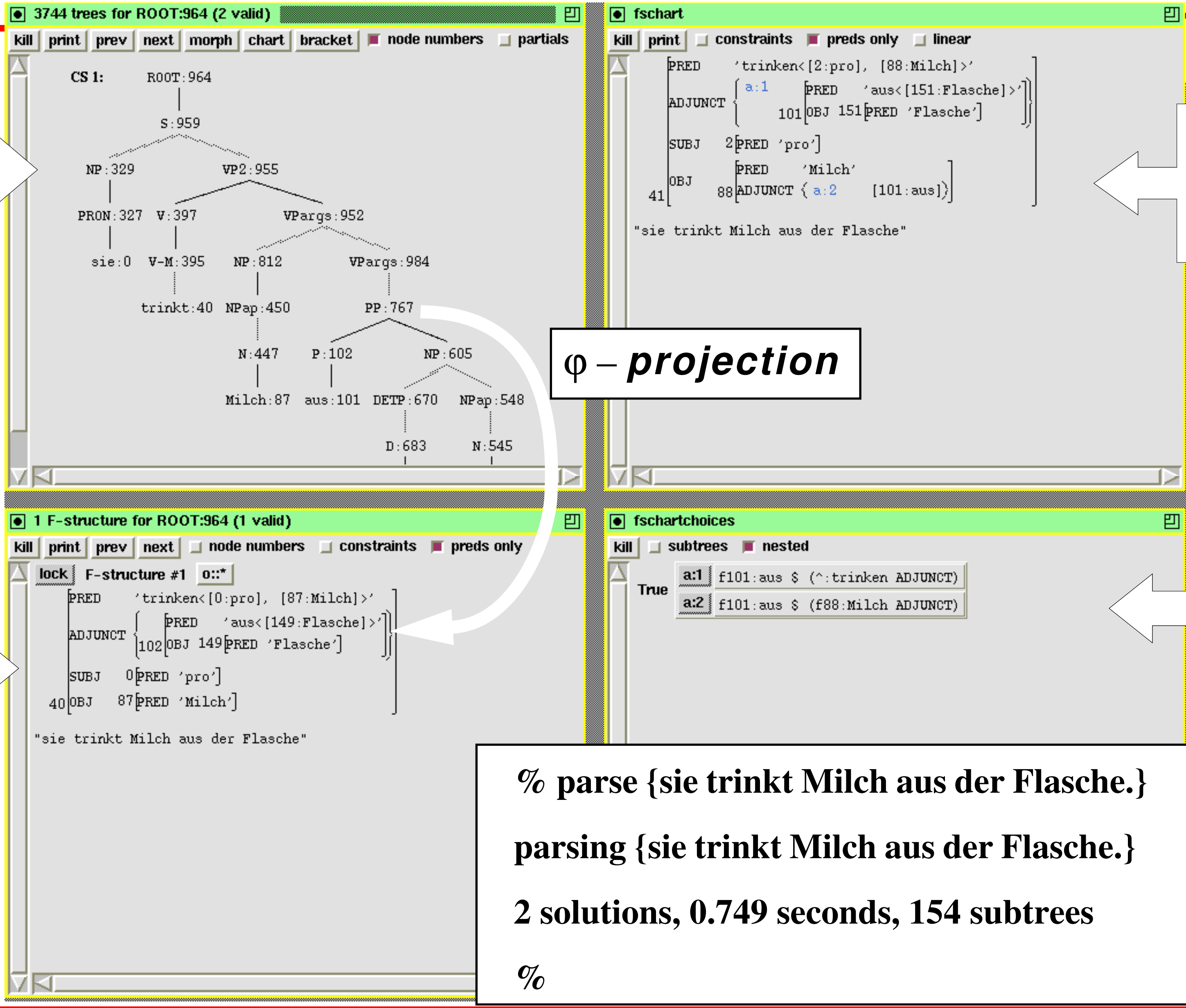
Xerox Linguistic Environment (XLE)

- under development at Xerox (Kaplan, Maxwell and colleagues)
- implementation of the *Lexical-Functional Grammar* Formalism
- compatible with the *LFG Grammar Writer's Workbench* (in Medley LISP), which was mainly designed for teaching and illustration

- implemented in C; lives under Unix
- provides various graphical inspection tools
- integrates a morphological analyzer (Finite State Technology)
- outputs packed F-structures (in Prolog format)

constituent (c-)structure

functional (f-)structure



φ – ***projection***

packed representation of f-structures

representation of logical choices

% parse {sie trinkt Milch aus der Flasche.}

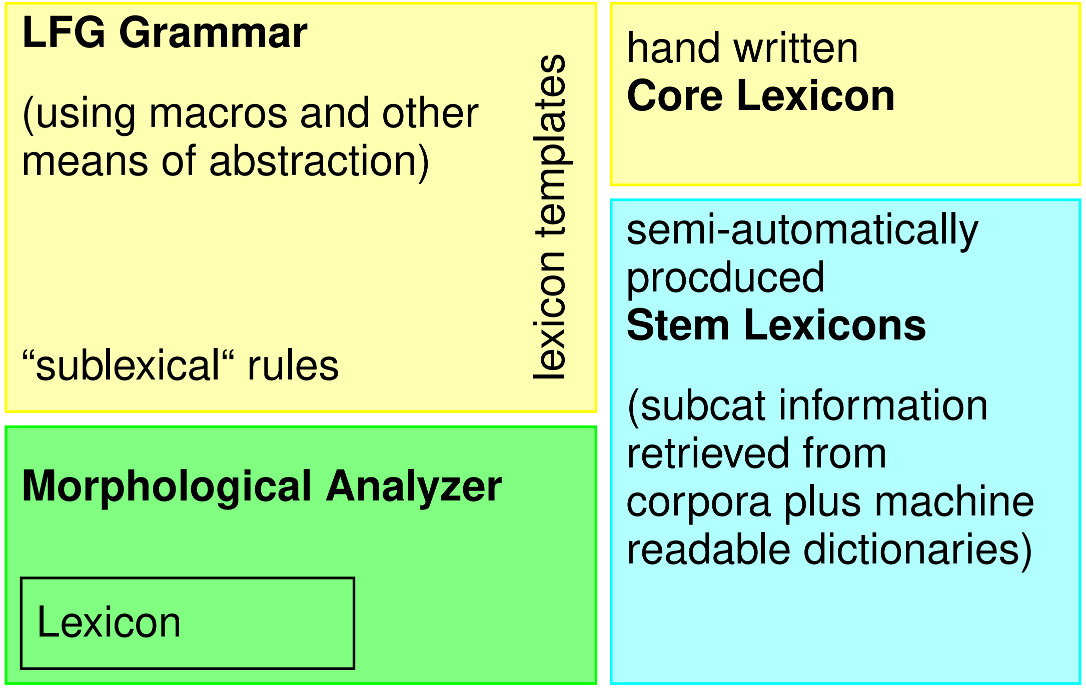
parsing {sie trinkt Milch aus der Flasche.}

2 solutions, 0.749 seconds, 154 subtrees

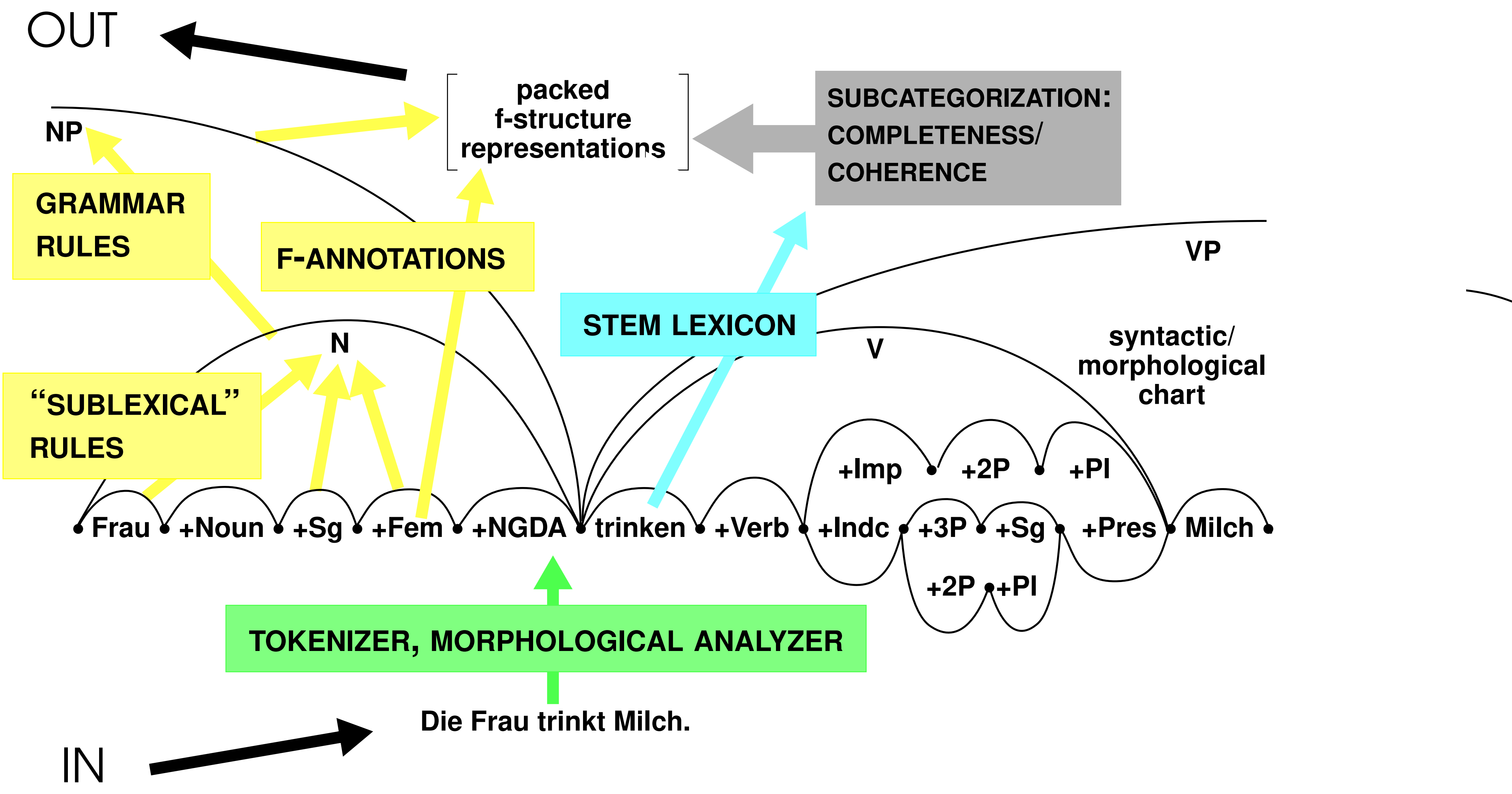
%

GRAMMAR ARCHITECTURE

The Interplay of Resources



Information from Different Resources



FACTORS IN GRAMMAR ENGINEERING

Performance:

- broad coverage
- great depth of analysis

Reliability:

- no overgeneration
- correct representations (according to specifiation)
- the right readings

PARSING WITH LARGE-SCALE GRAMMARS

Efficiency:

- fast processing

Maintainability:

- readable, structured code
- documentation
- easily extendable
- adequate methods for distributed development