

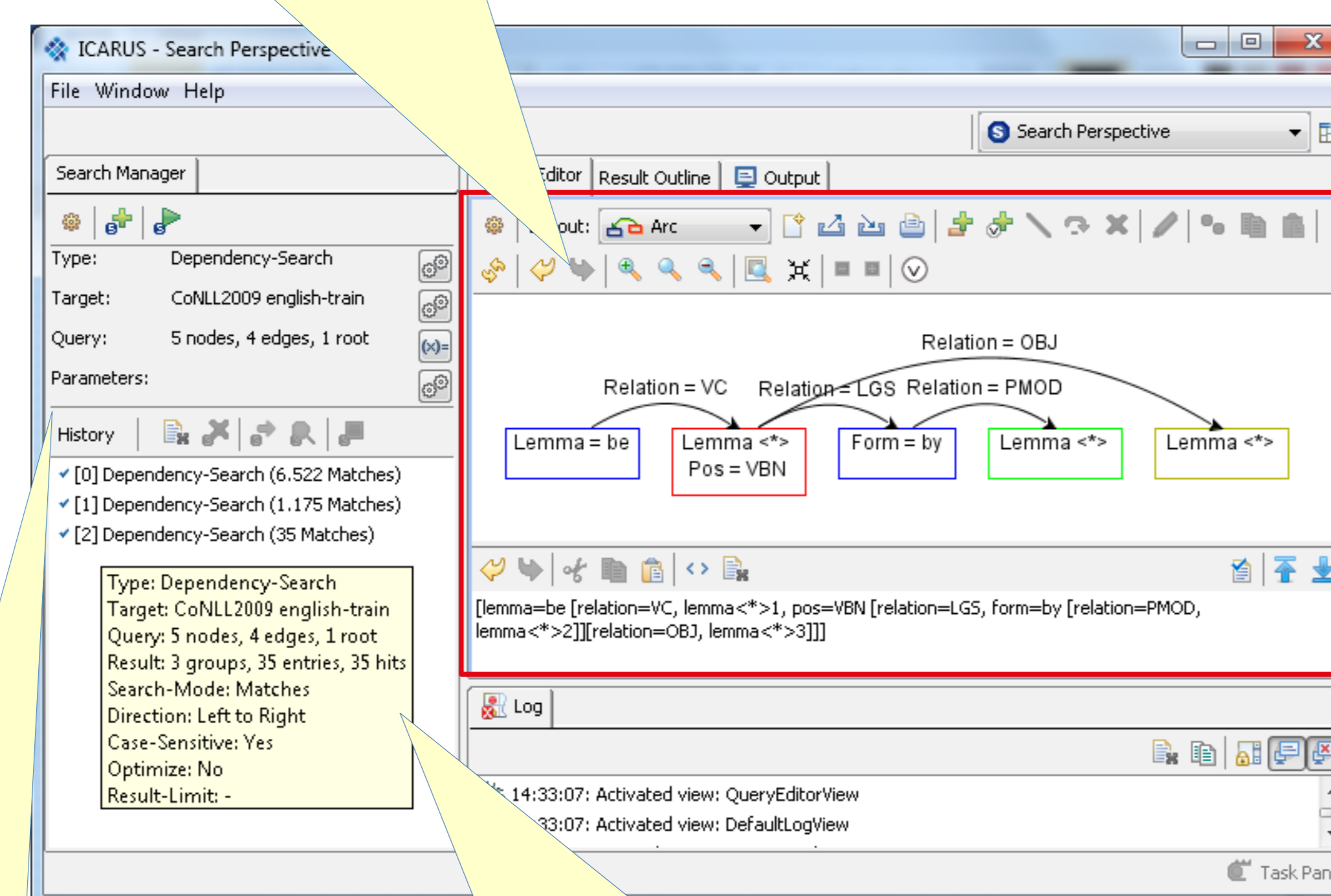
ICARUS – An Extensible Graphical Search Tool for Dependency Treebanks

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Graphical and text-based query editor

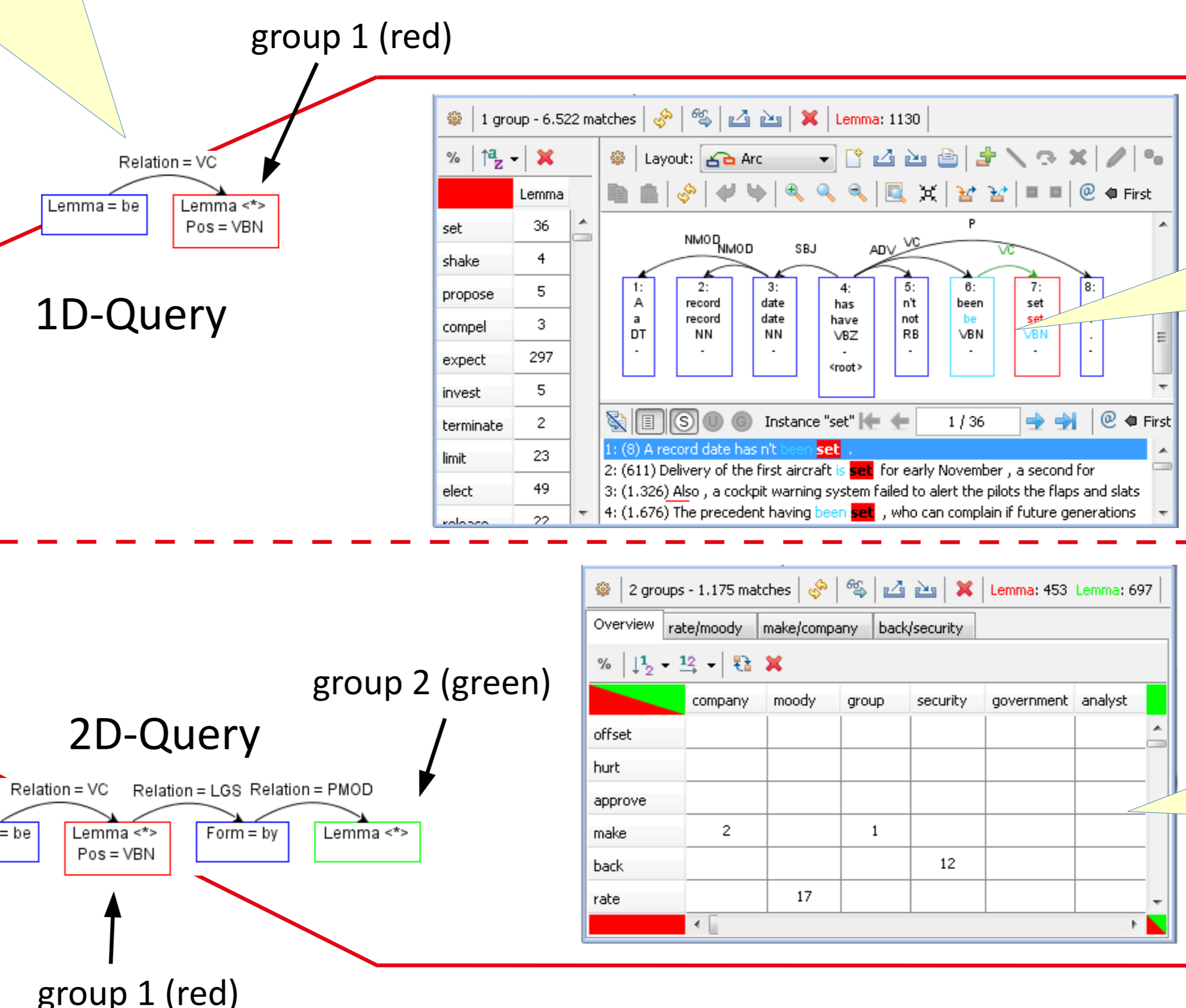
- Wide range of search operators
- Grouping operator for result aggregation
- Disjunction, negation, regular expressions, numerical operators and others
- Convert between graphical and textual query representation
- Can use parser output as base for query

Example:
Search graph matching passive constructions grouped by the lemma of the passivized verb



- Realtime visualization of search progress
- Manage multiple independent searches
- Search history for current session

- Choice between exhaustive and non-exhaustive search
- Multiple search parameters:
 - Search direction
 - Optional result size limit



Summary

- Interactive search and exploration tool for dependency treebanks
- Highly customizable user interface providing rich visualization features
- Supports various levels of user expertise
- Java-based, platform independent, requires no installation
- Portable design, rich plugin-based extensibility
- <http://www.ims.uni-stuttgart.de/data/icarus.html>



- Result highlighting for instances of query constraints
- Fully customizable graph visualization
- Easy navigation through results

Aggregated result visualization depending on the number of grouping operators (dimensions) for up to three groups (3D)

Tool Integration and Architecture

- Task focused user interfaces (tool specific, search and exploration)
- Extensible plugin architecture
 - Integrates with automatic processing tools (e.g. mate-tools [Bohnet, 2010])
 - Remote Tools (Webservices of the German CLARIN-D Initiative)
 - Utility Tools for various formats (CoNLL and TCF)
- Export graphs to various formats (*.png, *.svg and *.xml)