

DEV-NLQ

Direct Evaluation of Natural Language Queries

Paper: "A Demonstration of a Natural Language Query Interface to an Event-Based Semantic Web Triplestore"
11th Extended Semantic Web Conference (ESWC) 2014, Anissaras, Crete, Greece.

"Who stole a car in 1918 or 1920 in a borough of New York?"

↓ parser ↓

who (stole (a car) [(in (1918 or 1920), in (a (borough_of New_York)))])

↓ denotational semantics ↓

↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
 $\lambda... (\lambda... (\lambda... \lambda...) [(\lambda..., (\lambda... \lambda... \lambda...)), (\lambda..., (\lambda... (\lambda... \lambda...)))]) => \text{ANS}$
↑ ↑ ↑ ↑ ↑

TRIPLESTORE

$\lambda...$ are functional denotations of words based on an efficient version of Montague /Davidsonian Semantics.

The $\lambda... (\lambda... (\lambda... \lambda...) [(\lambda..., (\lambda... \lambda... \lambda...)), (\lambda..., (\lambda... (\lambda... \lambda...)))])$ above is an expression in the lambda calculus .

The lambda expressions are evaluated directly in the Haskell programming language., to give the **ANSWER**

Some functions (indicated by ↑ in the above) are defined in terms of triplestore retrieval operations.