# Ontology-based Architecture

Ricardo Usbeck, Axel-Cyrille Ngonga, Saaedeh Shekarpour, Christoph Lange, et many al.
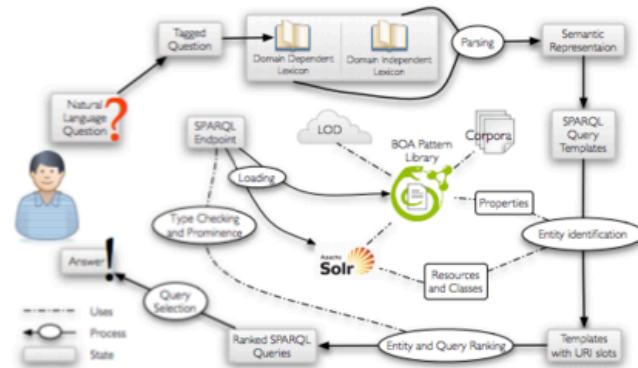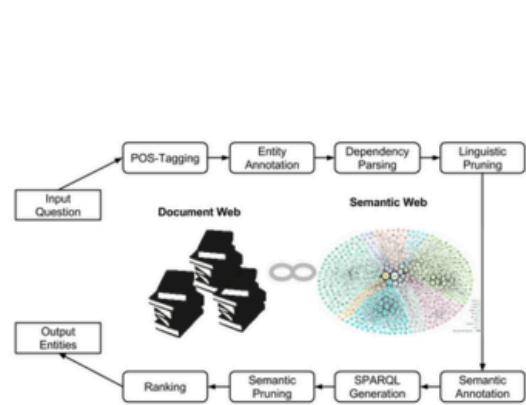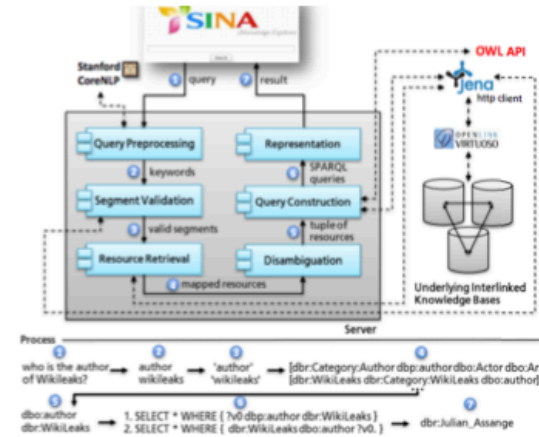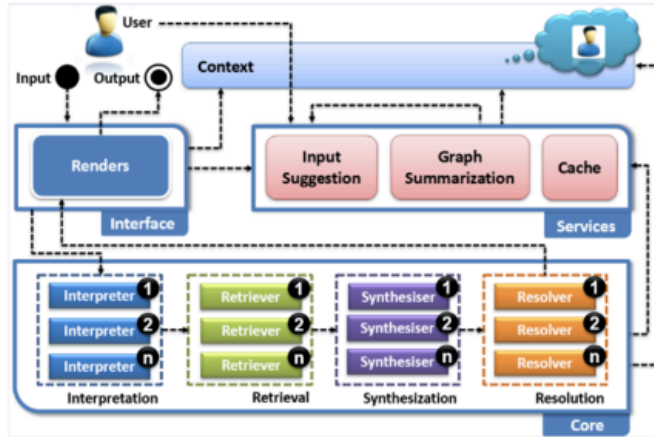University Leipzig, University Bonn

# Motivation



Figure 1: Overview of the template based SPARQL query generator.

# Goal

- **Granularity** (e.g., service for entity linking vs two services for entity recognition and disambiguation)
- **Interoperability, Reusability** Ontology to describe input and output
- **Scalability** (Load balancing via continuous life deployment)
- **Automatic building of pipelines (**Using the ontology to deploy a set of fully-interoperable microservices)
- **(Automatic benchmarking)** (Using high quality scientific benchmarks (QALD) various combined pipelines can be tested automatically and in parallel before deployment)
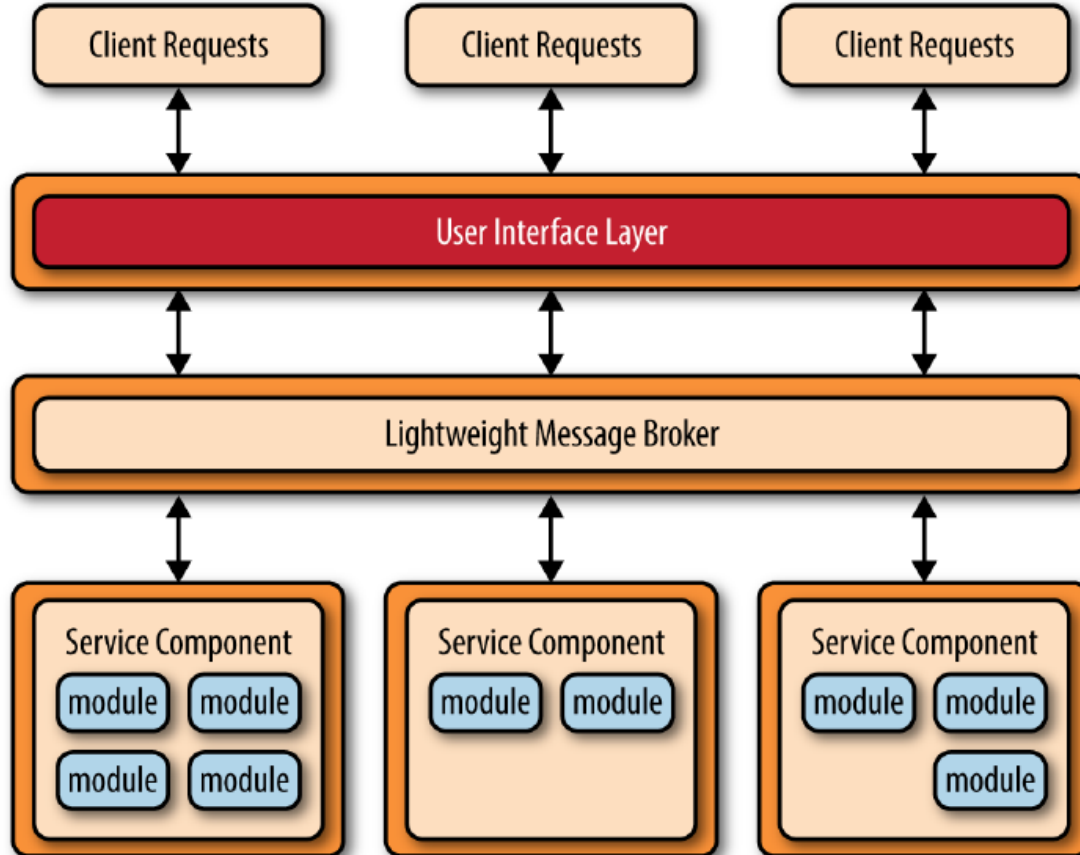
# Solutions

## 1. QA Ontology

Identify common QA pipeline components
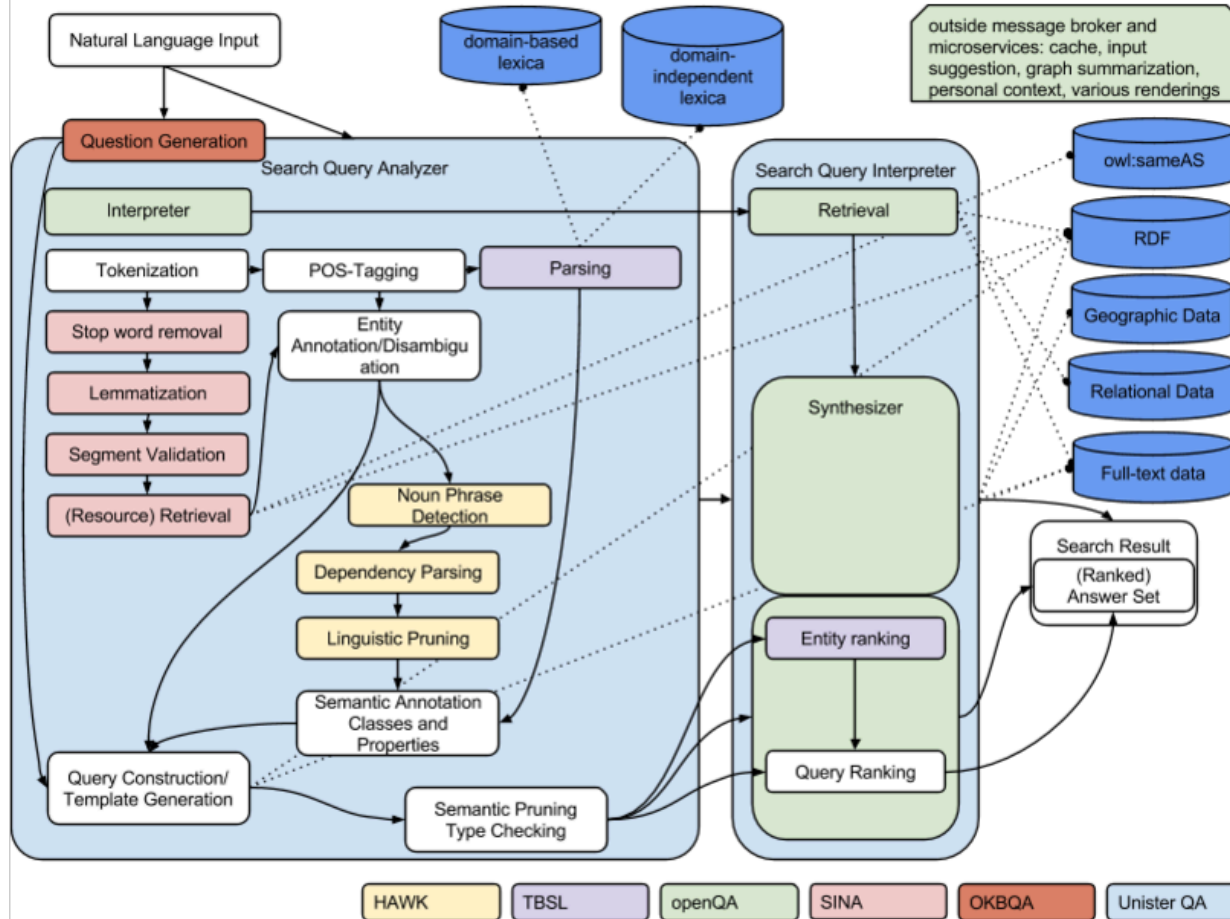TBSL, SINA, HAWK, OpenQA, OKBQA, Unister paper,…

## 2. Components

- Implement the microservice pipeline paradigm
- Describe their input and output according to QA ontology
- Communicating with message broker which are isolated from other components

# Architecture

# Combination of modules

# Questions?



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