Incremental Reasoning on RDFS
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**Evolving Data**

The Semantic Web enables to:
- describe knowledge from data
- leverage implicit knowledge through reasoning algorithms

The main limitations of current reasoning methods are:
- lack of scalability for large datasets
- inability to reason over knowledge from evolving data

We contribute to solving these problems by introducing Slider, an efficient incremental reasoner.

**Parallel and Scalable Execution:** Each inference rule is mapped to an independent module, receiving intended triples and later distributing them to other modules for further processing.

**Duplicates Limitation:** Vertical partitioning [1] and multiple indexing limit the production of duplicates and avoid unnecessary computation.

**Data Stream Support:** Slider can handle both dynamic triple streams and static triples sets by employing parallel architecture.

**Fragment’s Customization:** Slider natively support both RDFS [4] and ρdf [5] fragments, and can be extended to any other fragments.

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**ARCHITECTURAL OVERVIEW**

- **Input Manager**
- **Buffers**
- **Thread Pool**
- **Distributors**

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**REFERENCES**


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**SOURCE CODE AND DEMO**

The source code is available here: https://github.com/juleschevalier/slider

A demo can be found here: http://demo-satin.telecom-st-etienne.fr/slider/