# Ousía

## Extensible Semantic Markup Framework

Benjamin Paaßen, Andreas Stöckel

April 16th, 2015

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...but scarcely anyone uses it

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- ⊖ Very verbose
- ⊖ No concept of “annotations”
- ⊖ Non-extensible

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- ⊖ Hard to exchange styles between documents

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- ⊖ Turing-complete programming language

# Ousía – Extensible Semantic Markup Framework

*Ousía — The entirety of constant features, based on which objects can be defined.*

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- **Extensible:**
  Allow users to define their own ontologies and typesystems.
- **Markup:**
  Mark references to semantic concepts in text.
- **Framework:**
  Library providing access to the semantic graph

# Ousía – Pipeline

**INPUT**
Document & Descriptor Library

Document

**USER-PROVIDED DATA**
Collection of OSML or OSXML files

# Ousía – Pipeline

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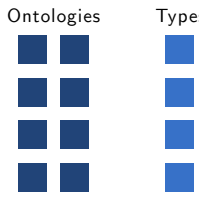
Document & Descriptor Library

Document

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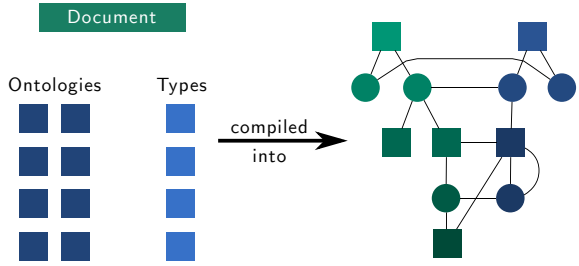
# Ousía – Pipeline

**INPUT**
Document & Descriptor Library

**INTERMEDIATE**
Semantic Graph Representation

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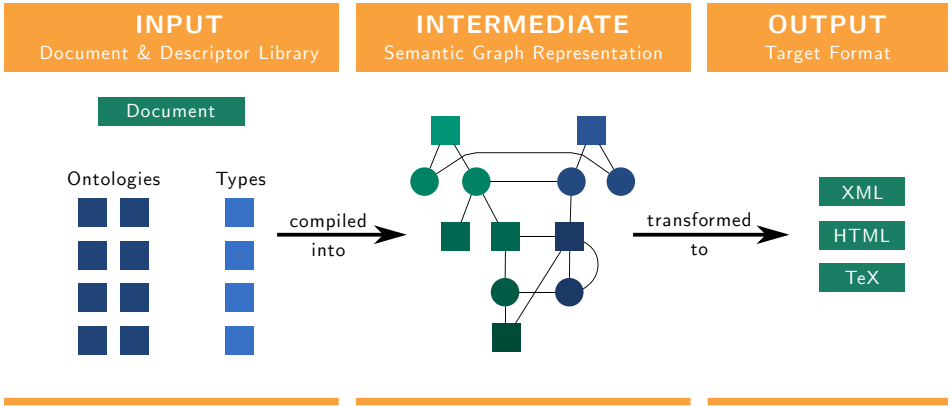
**OUSÍA FRAMEWORK**
C++ CLI application

# Ousía – Pipeline



# OSXML vs. OSML

## OSXML

```
<?xml version="1.0" ?>
<document>
  <import rel="ontology" src="book" />
  <import rel="ontology" src="poem" />
  <book>
    <heading>Collected Poems</heading>
      <meta>
        <author>Alfred Noyes</author>
        <year>1906</year>
      </meta>

      <chapter name="highwayman">
        <heading>The Highwayman</heading>
        <poem>
          <stanza>
            <line>The wind was a torrent of darkness
                  among the gusty trees,</line>
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\begin{document}
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# OSXML vs. OSML (Semantic Structure Interpolation)

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        <poem>
          <line>The wind was a <a:start:metaph/>
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# OSXML vs. OSML (User defineable syntax)

## OSML

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\part

The wind was a torrent of darkness among the gusty trees,
The moon was a ghostly galleon tossed upon cloudy seas,
The road was a ribbon of moonlight over the purple moor,
And the highwayman came riding-
    Riding-riding-
The highwayman came riding, up to the old inn-door.

He'd a French cocked-hat on his forehead, a bunch of lace at his chin,
A coat of the claret velvet, and breeches of brown doe-skin;
They fitted with never a wrinkle: his boots were up to the thigh!
And he rode with a jewelled twinkle,
    His pistol butts a-twinkle,
His rapier hilt a-twinkle, under the jewelled sky.
\end{poem}
```

# Result (via XSLT to HTML)

## The Highwayman

**by Alfred Noyes (1906)**

**PART I**

*I*

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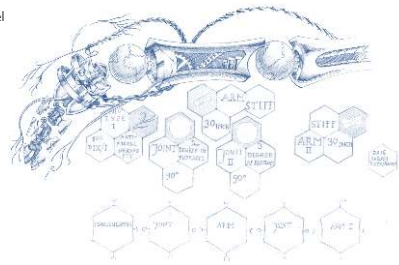
# IK 2015

- **Poster:**
  "Ousía – Extensible Semantic Markup Framework"
- **Talk:**
  "Meaningful Networks – Towards a Decentralized and Dynamic Semantic Web"

## Meaningful Networks

Towards a Decentralized and Dynamic Semantic Web

Benjamin Paaßen, Andreas Stöckel



Interdisciplinary College
March 6-13, 2015
Günne

# Ousía

## Extensible Semantic Markup Framework

Ousía ['uːziə] represents documents in purely semantic markup with user definable structure.

Documents are parsed into an universal intermediate representation, ready to be converted to any format using XSLT[1].

Download the Source Code
(pre-alpha)

[1] Sticking to XML and XSLT is not our plan. We intend to provide a scriptable output pipeline. But we're not quiet there yet.

http://ousia-framework.org/

# Demo

# Outlook

- Scriptable output pipeline
- Output independent style definitions
- Domain library
- Documentation
- Editor (GUI)

Thank you for your attention!

Questions?

# Attribution

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- Semantic Databases, © Sarah Rosenhahn
- *Kreisviadukt Brusio*, David Gubler, CC-BY-SA