Sumtiem soon
Temporal reasoning in the browser

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Notation3
is a language for reasoning with RDF

• is a superset of Turtle
• has been around for a while (15 years), but interest has recently revived
• specification being revised by the W3C Notation3 Community Group
• Brief introduction:
  https://notation3.org/
• Notation3 by example:
  https://github.com/eyereasoner/Notation3-By-Example
• Draft Community Group Report:
  https://w3c.github.io/N3/reports/20230703/
# A triple (same representation as Turtle)
:emma :attended :GraphHNR2023 .

# A rule with graph patterns
# in the premise and conclusion.
{ ?x :attended :GraphHNR2023 . } => { ?x a :CoolPerson . }

# A new triple inferred from everything above
:emma a :CoolPerson .
# A triple (same representation as Turtle)
:emma :hasAge 27 .

# A rule using a "built-in" N3 predicate.

# A new triple inferred from everything above
:emma a :Adult .
Notation3 reasoners
are what make the inferences happen

- **jen3** based on Apache Jena
  https://github.com/william-vw/jen3

- **eye** based on SWI-Prolog
  https://github.com/eyereasoner/eye

- **eye-js** (eye compiled to be usable in the browser with JavaScript)
  https://github.com/eyereasoner/eye-js
Nonnosus inscription (photo and drawing by F. Glaser)

https://carantana.at/en/exhibition/#iLightbox[image_carousel_3]/1
Here rests the servant of Christ, the deacon Nonnosus, who lived about 103 years. He died on September 2nd and was buried on July 20th at this place in the eleventh year of the indiction three years after the consulship of the most famous men Lampadius and Orestes.
Extended Date/Time Format (EDTF)
https://www.loc.gov/standards/datetime/ (ISO 8601-2)

1861-04-12/1865-05-09

Y-170000000

1619-08-XX

1619-08-20?

1865/..

[1667,1668,1670..1672]

{1960,1961-12}
Time Ontology in OWL (OWL-Time)
https://www.w3.org/TR/owl-time/

- April 1861
- January 1861
- January 1862
- January 1864
- 1865
- January 1866

Diagram: Time intervals and instants with labeled relationships:
- an Instant x with hasBeginning property
- an Interval i with hasEnd property
- an Interval j with during property
- an Instant e with inDateTime property
- an Instant b with inDateTime property

Properties and units:
- hasBeginning
- hasEnd
- during
- after
- before
- inDateTime

Example relationships:
- unitType: unitMonth
  - year: 1861
  - month: 4
- unitType: unitYear
  - year: 1865
EDTF Ontology

https://periodo.github.io/edtf-ontology/
https://github.com/periodo/edtf-ontology
EDTF Ontology
and Notation3 rules for translating EDTF strings to OWL-Time graphs

• Ontology
  https://periodo.github.io/edtf-ontology/

• Rules
  https://github.com/periodo/edtf-ontology
Activities —

Time

Finding consensus on the representation of historical time in structured data

See our Activity Charter here

Activity Co-ordinators

Ryan Shaw
Adam Rabinowitz

Get in touch: time@pelagios.org

https://pelagios.org/activities/time/
Ethics in Linked Data
Alexandra Provo
Kathleen Burlingham
R.M. Watson

Contents

Introduction & Acknowledgments
B.M. Watson, Kathleen Burlingham, & Alexandra Provo

Part I: Theories, Contexts, & (Infra)structures
The Ethics of Sustaining Linked Data Infrastructure
Dorothy Salo & Ruth Kitchin Tillman

Worlds in Conflict: A Dispute over Embedding Linked Data in Web Pages
Ryan Shaw

After Fedora: Linked Data and Ethical Design in the Digital Library
Kate Dohle

Triples and the Grammar of Control
Erik Rado & James Kalwara

Linked-Data and Transindividual Ethics: An Essay in the Politics of Technology
Sami Popowich

Part II: Ethical Considerations in the Face of Hegemonic and Institutional Forces
Indigenous Nationhood, Sovereignty and Linked Data: A Wikidata Case Study Examination of the Meis Nation
Stacy Allison-Cassin