\[ S = A \cdot b \cdot c \cdot d \cdot e \]

\[
\begin{align*}
\mathbb{P}(S) &= \mathbb{P}(A) \cdot \mathbb{P}(B) \cdot \mathbb{P}(C) \cdot \mathbb{P}(D) \cdot \mathbb{P}(E) \\
&= \mathbb{P}(A) \cdot \mathbb{P}(B) \cdot \mathbb{P}(C) \cdot \mathbb{P}(D) \cdot \mathbb{P}(E) \\
&= \mathbb{P}(A) \cdot \mathbb{P}(B) \cdot \mathbb{P}(C) \cdot \mathbb{P}(D) \cdot \mathbb{P}(E)
\end{align*}
\]

\[ t: \quad \mathbb{P} (S_t) \quad \mathbb{P} (S_t | S_{t+1}) \quad \mathbb{P} (S_{t+1}) \]

\[ t+1: \quad \mathbb{P} (S_{t+1} | S_t) \quad \mathbb{P} (S_t | S_{t+1}) \quad \mathbb{P} (S_{t+1}) \]

\[ ACO \]
K-means

\[ \text{IABBABCBB} \]
historical decisions

diverse instances

Oslo

probability and "group"

reduce complexity
Next step

Song → interface between the dynamic knowledge and the decision domain

Arne → subset of ontology for “train drivers”

Susana → implement ontology
Social rain ment

1. People
   (ii) fact

2. Destinations

3. Time

4. Weather

5. Relations
   (ii) family, business, social
   (i) factors

Rule

no rain
> 10 cm
< 15 cm
→ cycle
Future topics

- Preference ontology → review (scientific lit.)
- Context ontology
- Programming interface to ontologies → Part (A.19)
- OData / WebSockets
Future plans++

1. set of rules  2. rule  3. rule
   ⇒ person  ⇒ time & availability  ⇒ place
   drive

Combination of rules vs sequential rules
How to search for literature at UiO

- assume that you have a user account at UiO
- remember to register your publication in Cristin (old Frida)

Library sites

you have full access to all these sites if you have the UiO VPN up and running. Make sure:

- http://ieeexplore.ieee.org @ IEEE explorer
- http://www.springerlink.com/home/main.mpax @ Springer Link
- in case that you don’t see University of Oslo, close browser and open again
- http://www.sciencedirect.com @ ScienceDirect
- http://portal.acm.org @ ACM
- electronic books (ebooks): http://www.netlibrary.com - remember to have Cisco VPN up and to create an own account. MAC: need to activate "internal pdf reading" in case of Firefox. Safari works (and Automator: sort files, combine pdf generates one pdf output)
- you can also start with http://scholar.google.no

Nye tidsrørhefter kan leses på nett, her er oversikt over de fenske: http://www.ub.uio.no/mm/mft/periodika/myeetd.html

Persumboker til Akademika, UB har kjøpt tilgang til Springer e-books http://springerlink.metapress.com/books/???
Language=English&sortorder=asc&club= - [See more details on UiO eBooks -> UiOEbooks]

Set up VPN

- Latest information from UiO on VPN connectivity: http://www.unik.no/drift/english.html -> remotely, alternatively directly to UiO:
  https://www.unik.no/fjernbest/naturlift/utstyr.html
- vpn through browser. WebVPN-lysekamer https://vpn.uio.no

Category: HowTo
List of limitations in SWRL

number range

Alternatives

→ less than

greater than
<table>
<thead>
<tr>
<th><strong>Course</strong></th>
<th>UNIK4710, UNIK9710</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td>Running SWRL rules on your ontology</td>
</tr>
<tr>
<td><strong>Lecture date</strong></td>
<td>2012/03/16 09:15h</td>
</tr>
<tr>
<td><strong>Lecturer(s), (users)</strong></td>
<td>Joel Noll</td>
</tr>
<tr>
<td><strong>Objective</strong></td>
<td>Establish rules for your own scenario and get them implemented</td>
</tr>
<tr>
<td><strong>Learning outcomes</strong></td>
<td>Having joined this lecture, you will&lt;br&gt;✓ have experience in the formulation of rules&lt;br&gt;✓ have an idea what “Business Rules” are&lt;br&gt;✓ have tried to express your rules in Semantic Web Rule Language (SWRL)&lt;br&gt;✓ have seen the limitations of SWRL&lt;br&gt;✓ have run the rules on your ontology&lt;br&gt;✓ got the desired results. And if not, have understood why you got other results than expected&lt;br&gt;✓ have learned who to write results back into your ontology</td>
</tr>
<tr>
<td><strong>References (further info)</strong></td>
<td>References:&lt;br&gt;✓ Book. See 2012/02/17 and 2012/03/09 &quot;Other Info&quot;.</td>
</tr>
<tr>
<td><strong>Keywords</strong></td>
<td>SWRL, Rules, OWL</td>
</tr>
</tbody>
</table>

---

**Presentations**

ACO Algorithm Presentation by Sichao Song, Media:Ant.algorithrm.Song.pdf

Categories: UNIK4710 | UNIK9710
Example of business rules

BPMN 2.0 - Process Modeling with Signavio

The Business Process Modeling Notation (BPMN) is the most important modeling standard for Business Process Management.

BPMN 2.0 using Signavio

The Signavio Process Editor fully support the BPMN 2.0 standard. The intuitive user interface helps you to use BPMN 2.0 correctly.

- For beginners and professionals - you can choose which language set is appropriate for you
- Suggestion mechanism - fast modeling thanks to syntax aids
- Standardized XML interchange format - the XML format allows you to use diagrams for process execution
- Import of XPDL and Visio - migration of existing models made easy

Signavio is used by leading experts

camunda offers professional training on BPMN 2.0. camunda uses Signavio for their trainings.

Free 30-day trial

You can find more details about the Signavio Process Editor on the product pages. Register for the free 30-day trial.
Rule

Req

no SKAL must

+ should

NO

Get lateral

or qualification

No function

proach

(Propery)

Call is obsolete

hist