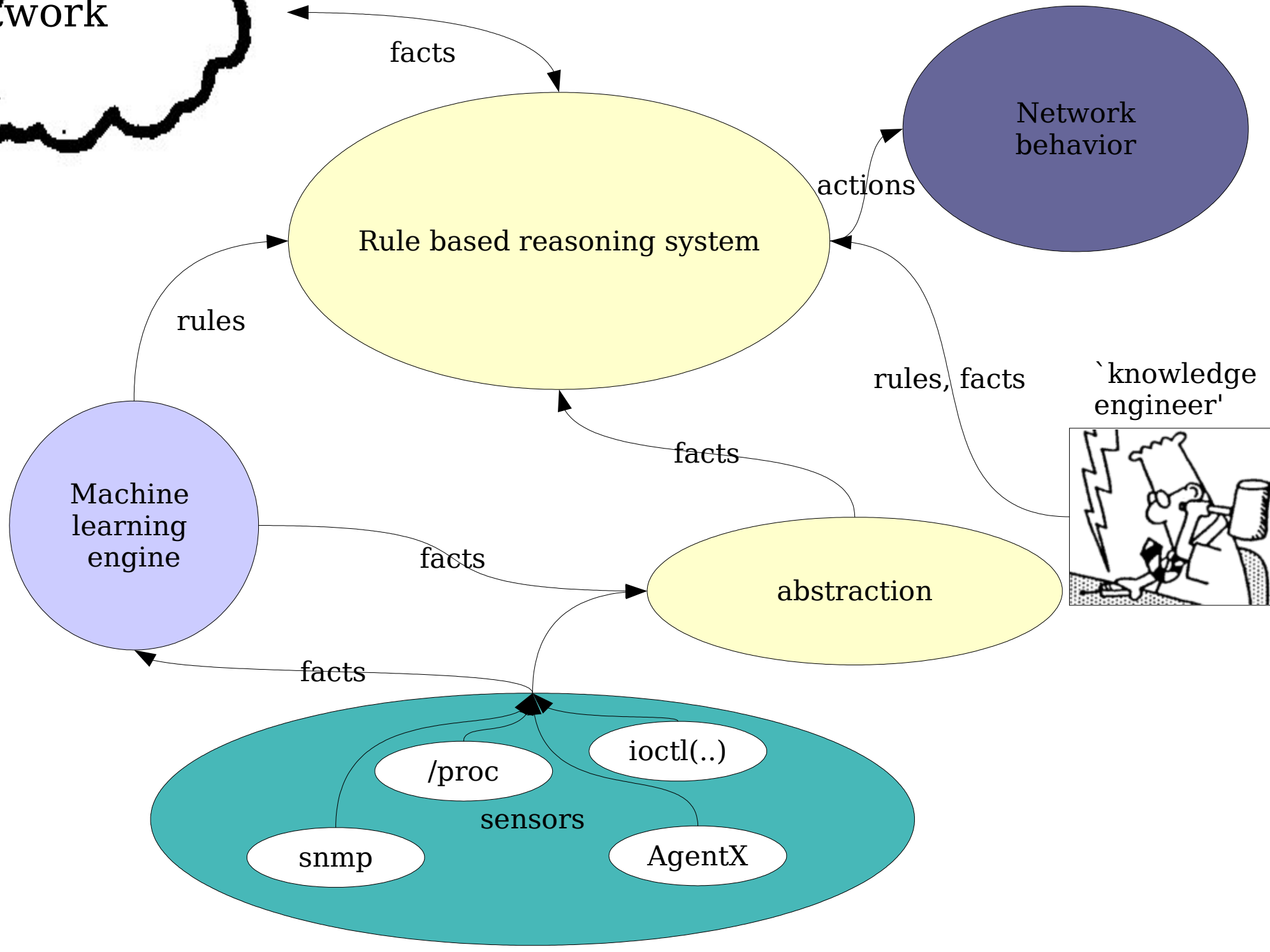


network



Rule based

If it rains the pavement gets wet.
It's raining.
-> the pavement is wet.

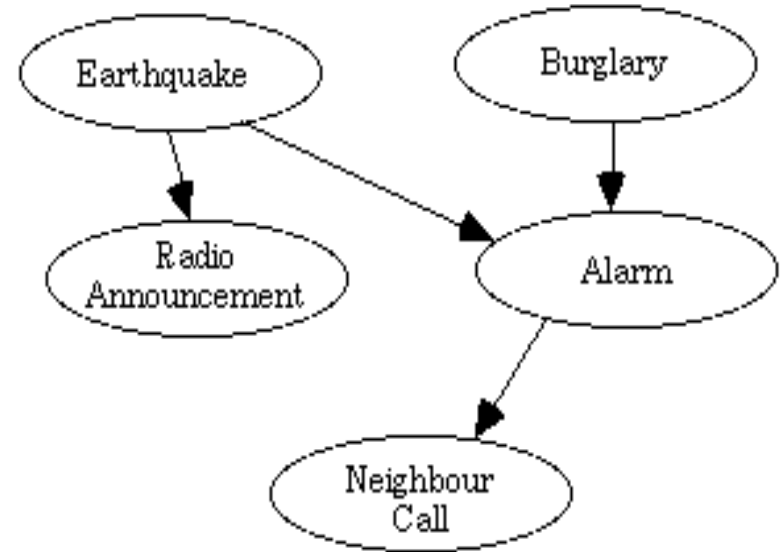
S -> aSb | CS | -
C -> a | -

```
path(Graph, A, Z):-  
    edge(Graph, A,Z).  
path(Graph, A, Z):-  
    edge(Graph, A, B),  
    path(Graph, B, Z).
```

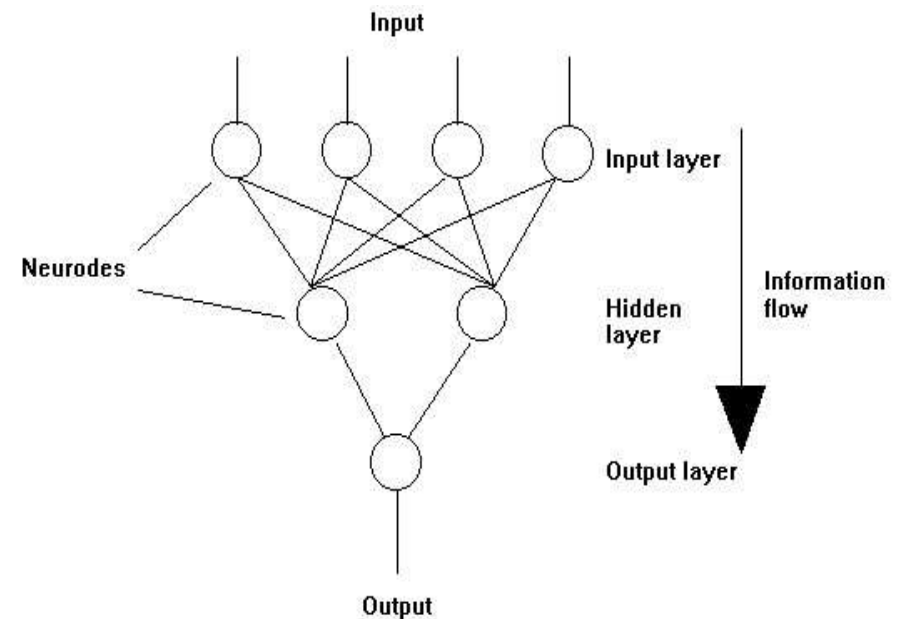
Model based

```
frame container ;  
    default purpose is storage.  
frame drum is a kind of container ;  
    default material is metal and  
    default weight is heavy.  
frame barrel is a kind of drum.
```

Probabilistic Reasoning

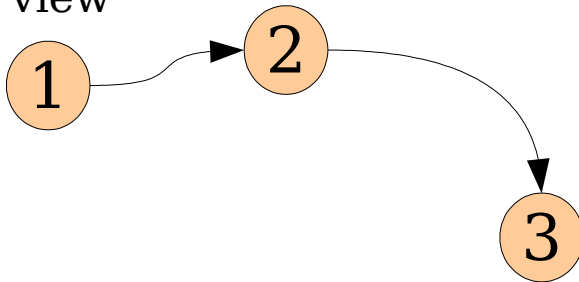


'pure' AI



Basic Prolog

graphical
view



program code

```
edge(route, node1, node2).  
edge(route, node2, node3).
```

```
path(Graph, A, Z):-  
    edge(Graph, A, Z).
```

```
path(Graph, A, Z):-  
    edge(Graph, A, B),  
    path(Graph, B, Z).
```

output

```
Welcome to SWI-Prolog (Multi-threaded, Version  
5.2.7)  
Copyright (c) 1990-2003 University of  
Amsterdam.  
SWI-Prolog comes with ABSOLUTELY NO WARRANTY.  
This is free software,  
and you are welcome to redistribute it under  
certain conditions.  
Please visit http://www.swi-prolog.org for  
details.  
  
For help, use ?- help(Topic). or ?- apropos  
(Word).  
  
?- consult(graph).  
% graph compiled 0.00 sec, 980 bytes  
  
Yes  
?- path(route,node1,node3).  
  
Yes  
?-
```

Knowledge Representation

Private Representation

```
name=eth0
linespeed=1000
ip=10.0.0.1

Section "Interface"
    Identifier "eth0"
    Option     "Linespeed"
"1000"
    Option     "IP"
"10.0.0.1"
EndSection
```

RDF/XML

```
<rdfs:Class rdf:ID="interface" rdfs:comment="a network interface"/>
<rdf:Property rdf:ID="ip_address">
    <rdfs:comment>an ipv4 address</rdfs:comment>
</rdf:Property>

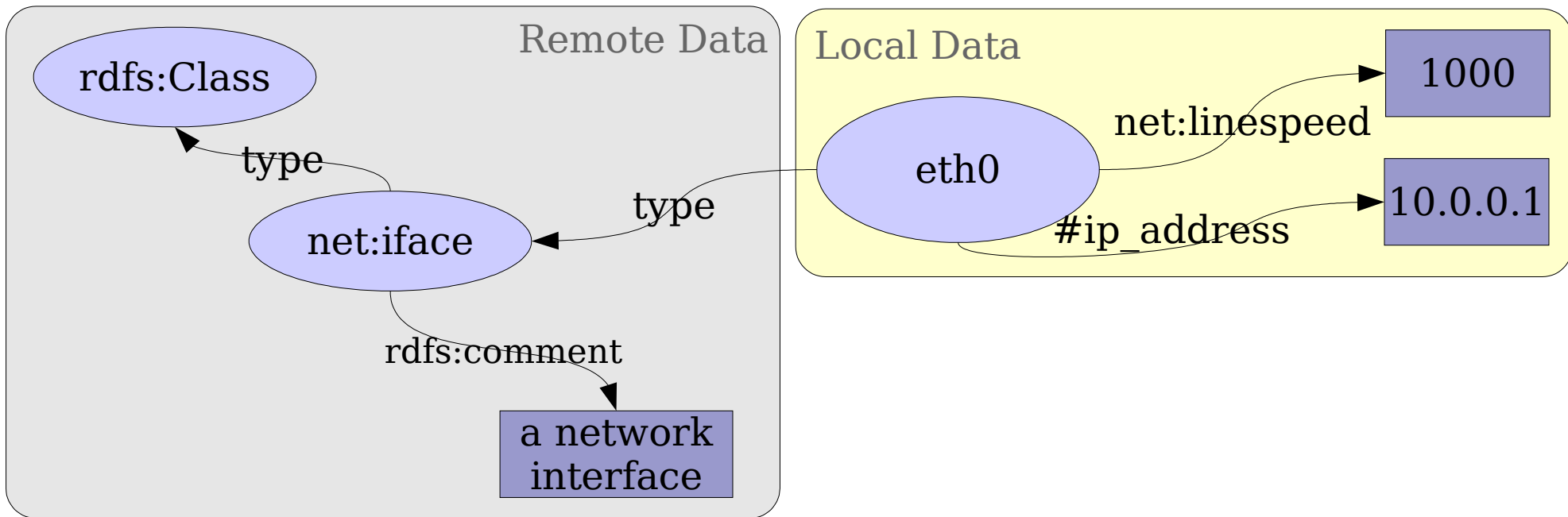
<net:interface rdf:ID="eth0">
    <ip_address>10.0.0.1</ip_address>
    <net:linespeed>1000</net:linespeed>
</net:interface>
```

Standardized Syntax

```
<?xml version="1.0" encoding="UTF-8"?>
<name>eth0</name>
<linespeed>1000</linespeed>
<ip>10.0.0.1</ip>

INSERT INTO "iface"
    ("name", "speed", "ip")
VALUES ("eth0", "1000", "10.0.0.1")
```

Resource Description Format



multiple datasources:

eth0 <=> <http://localhost/realtime#eth0>
net:iface <=> <http://localhost/network.rdf#iface>
rdfs:Class <=> <http://www.w3.org/2000/01/rdf-schema#Class>

resources and properties are defined, but not predefined

Sidebar

Tabs X

Search

Bookmarks

Slashdot



Slashdot: News
for nerds, stuff
that matters

[The Design Of](#)

- [The Google File System](#)

[FCC To Enforce](#)

- [Do Not Call List, Not FTC](#)

[India Blocks](#)

- [Yahoo Groups Over Political Content](#)

[AMD Moves](#)

- [Closer To Linux PDA](#)

[FBI](#)

- [Investigating Lamo Via Patriot Act Provision](#)

[Microsoft Sends](#)

- [Takedown](#)

[Notice To](#)

- [MSFreePC.com](#)

[Turn Your GBA](#)

- [Into A Game Console](#)

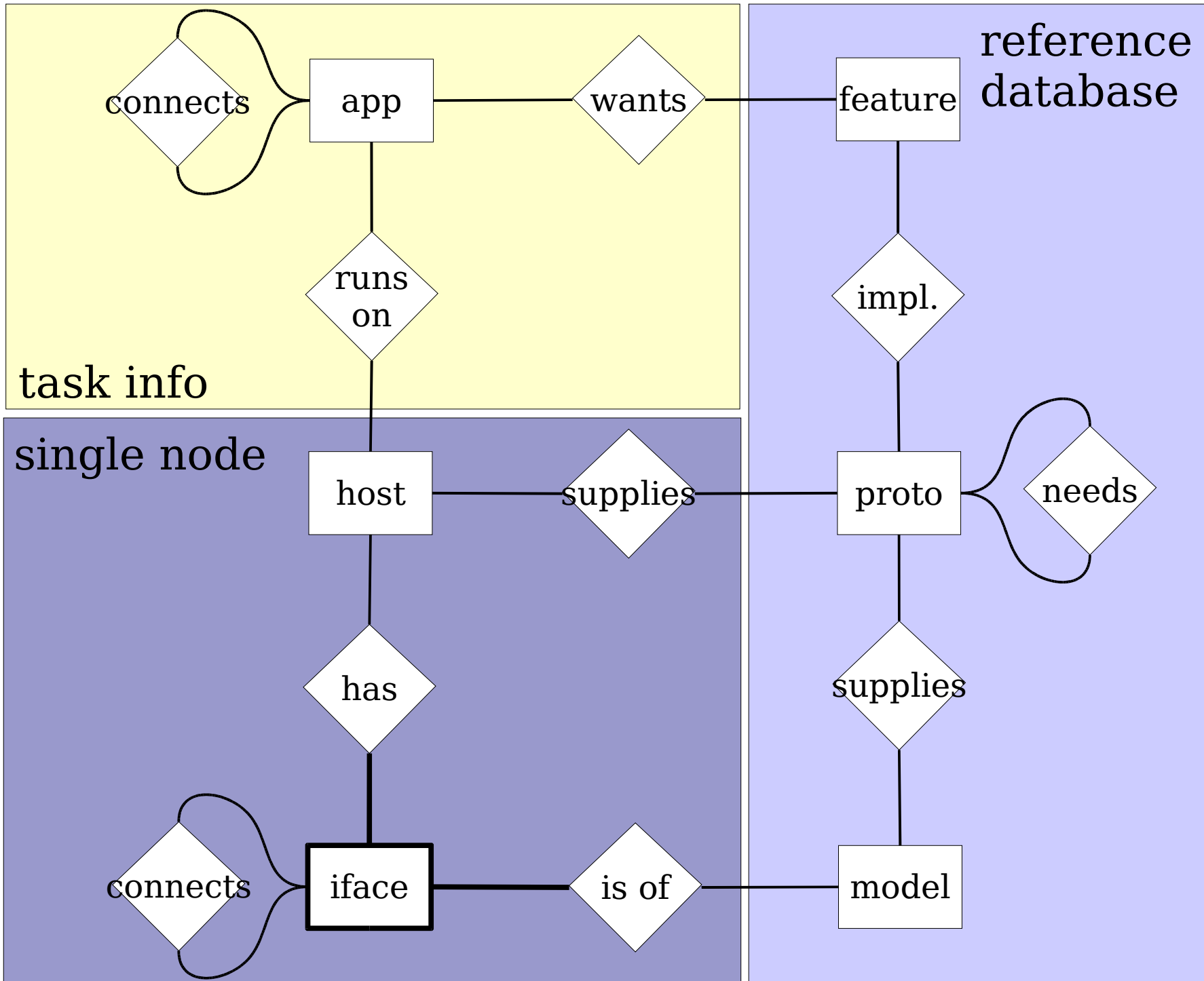
[Practical](#)

- [mod_perl](#)

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
- <rdf:RDF>
- <channelrdf:about "http://slashdot.org/">
  <title>Slashdot</title>
  <link>http://slashdot.org/</link>
  <description>News for nerds, stuff that matters</description>
  <dc:language>en-us</dc:language>
  <dc:rights>Copyright &copy; 1997-2001, OSDN</dc:rights>
  <dc:date>2003-09-29T23:13:11+00:00</dc:date>
  <dc:publisher>OSDN</dc:publisher>
  <dc:creator>pater@slashdot.org</dc:creator>
  <dc:subject>Technology</dc:subject>
  <syn:updatePeriod>hourly</syn:updatePeriod>
  <syn:updateFrequency>1</syn:updateFrequency>
  <syn:updateBase>1970-01-01T00:00+00:00</syn:updateBase>
  - <items>
    - <rdf:Seq>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/2227224"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/2040216"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/1930218"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/1946209"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/186254"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/1753206"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/1631204"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/18/1250216"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/1411225"/>
      <rdf:li rdf:resource "http://slashdot.org/article.pl?sid=03/09/29/147245"/>
    </rdf:Seq>
  </items>
  <image rdf:resource "http://images.slashdot.org/topics/topicslashdot.gif"/>
  <textinput rdf:resource "http://slashdot.org/search.pl"/>
</channel>
```

Preliminary Knowledgebase Design (ER)



LIVE??