Semantic Aquarium

Group: The Semantic 4
Motivation: Without Linked Data

I need an Aquarium!

Let's Consult some stores and select some fishes

Customer

Empty Aquarium
Motivation: With Linked Data

I Want an Aquarium!

The criteria are:

- Temperature
- Predator
- Food
- Ecosystem: Sea, lake, ...
- Dimension/Size

Semantic Aquarium

Compatibility check

Customer
How To answer these Questions

- I want Nemo!
- I want a fish that will not eat my Nemo
- Can I put Dolly with Nemo?
- I dont want to buy different kind of food for my fish
- I have a small Tank what about buying small fish?
- I love orange colour
- I do not like Bruce, he will just eat them all and maybe me also
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Semantic Aquarium Architecture

- User Interface
- Query API
- Inter-Linking Data
- DBpedia
- IMarine
- Shop DB
- JSP/Servlets
- JENA
- FedEx
- Virtuoso
- Knowledge Base
Inter-Linking Data 1/2

IMarine

SPARQL Query to extract common fish names

owl: sameAs

DB Pedia

SPARQL Query to extract RDFS labels of species belongs to fish Ontology
Inter-Linking Data 2/2

Shop DB

IMarine

Individual Fish

Ex: fishbase: Thunnus_albacares

tloCore: LX3_has_type

Fish x

Has_type

Thunnus Albacares

SameAquaCore: hasFood

SameAquaCore: haColour

Fake Food

„red“

SameAquaCore: hasSize

„red“
The Semantic Aquarium

Demo

Group: The semantic 4
Future Work

- Recommendation System based on user preferences and profiles
- Integrating with other datasets:
  - Plants, Food, ...
  - Music, clothes, ...
- FishBook: bringing fish enthousiasits together!
Thanks