Chapter 4: Data Quality Issues in Linked Open Data
Semantic Web Layer Cake

User interface and applications

Trust

Proof

Unifying logic

Ontologies: OWL

Rules: RIF/SWRL

Querying: SPARQL

Taxonomies: RDFS

Data interchange: RDF

Syntax: XML

Identifiers: URI

Character set: UNICODE

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Example of RDF

```
ex:Kaká
  ex:birthPlace
    ex:Portugal
      ex:capital
        rdfs:label
          "Lisbon"@en
    ex:Lisbon
      "1985-02-05"^^xsd:date
    rdf:type
      ex:SoccerPlayer
```
Example of RDF Schema
Example of a result set of a SPARQL query

<table>
<thead>
<tr>
<th>?name</th>
<th>?appearence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mario_Balottelli</td>
<td>33</td>
</tr>
<tr>
<td>Kakà</td>
<td>20</td>
</tr>
</tbody>
</table>
Ther 5-star rating system

Available on the Web (whatever format), but with an open licence

Available as machine-readable structured data (e.g., instead of image scan of a table)

As 2 plus non-proprietary format (e.g., CSV instead of excel)

All above plus use open standard from W3C (RDF and SPARQL) to identify things, so that people can point at your stuff

Available the above, plus: Link your data to other people’s data to provide context