Boca, Salsa, and Queso

*Spreadsheets, the Web, and the primacy of data*

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Required Background

- RDF
- Spreadsheets
- Major League Baseball
Boca – enterprise RDF server
Salsa – RDF + spreadsheets
Queso – RDF on the Web

All parts of the open-source IBM Semantic Layered Research Platform:

http://ibm-slrp.sf.net
The Big Picture

- Data is the center of the universe.
- Everything can share the data.
  - No format silos.
  - No user interface silos.
  - No application silos.
What is Boca?

- Boca is an enterprise Semantic Web store.
- Boca features:
  - Scalable RDF database that stores named graphs
  - Transactions, optimistic concurrency
  - Role-based access control
  - Revision tracking
  - Replication and real-time notification
What is Salsa?

- Salsa is a Boca client embedded within the OpenOffice Calc spreadsheet program
- Salsa is also an exploration into the question:

What happens when we join spreadsheets and Semantic Web technologies?
Salsa + Boca = ? (part 1)

- Serialize spreadsheets to a Boca RDF server
- Spreadsheets become...
  - Shared
  - Securable
  - Versioned
  - Queryable
  - Collaborative
**Demo: Collaborative Spreadsheets**

<table>
<thead>
<tr>
<th>Team</th>
<th>City</th>
<th>State</th>
<th>2006 Payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yankees</td>
<td>New York</td>
<td>NY</td>
<td>250,000,000</td>
</tr>
<tr>
<td>Red Sox</td>
<td>Boston</td>
<td>MA</td>
<td>120,099,824</td>
</tr>
<tr>
<td>Angels</td>
<td>Anaheim</td>
<td>CA</td>
<td>103,472,000</td>
</tr>
<tr>
<td>White Sox</td>
<td>Chicago</td>
<td>IL</td>
<td>102,750,667</td>
</tr>
<tr>
<td>Mets</td>
<td>New York</td>
<td>NY</td>
<td>101,084,963</td>
</tr>
<tr>
<td>Dodgers</td>
<td>Los Angeles</td>
<td>CA</td>
<td>98,447,187</td>
</tr>
<tr>
<td>Cubs</td>
<td>Chicago</td>
<td>IL</td>
<td>94,424,499</td>
</tr>
</tbody>
</table>

**Total Payroll: 194,685,200**
Make implicit relationships explicit

Nodes in the graph represent real-world things ("resources") rather than spreadsheet cells

Data is decoupled from layout
**Demo: Sharing Spreadsheet Data**

- **Table 1:**
  - **Team:** Yankees
  - **City:** New York
  - **State:** NY
  - **2006 Payroll:** 194,685,200

- **Table 2:**
  - **Wins:** Mets
  - **Losses:** 92
  - **City:** 70 New York
  - **Wins:** Yanks
  - **Losses:** 78
  - **City:** 84 New York
  - **Wins:** BoSox
  - **Losses:** 88
  - **City:** 74 Worcester
What is Queso?

- Salsa : spreadsheets :: Queso : Web
- Queso provides HTTP access to...
  - RDF graphs
  - SPARQL result sets
  - Boca update notifications (events)

- (Queso does Atom, too. Just not in this demo.)
Boca + Salsa + Queso = ?

- The big picture.

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The Big Picture

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  - No user interface silos.
  - No application silos.
Demo: Spreadsheet Data on the Web
Thanks

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