

'SAMP'ling your browser for the Semantic Web

Sébastien Derriere

Thomas Boch

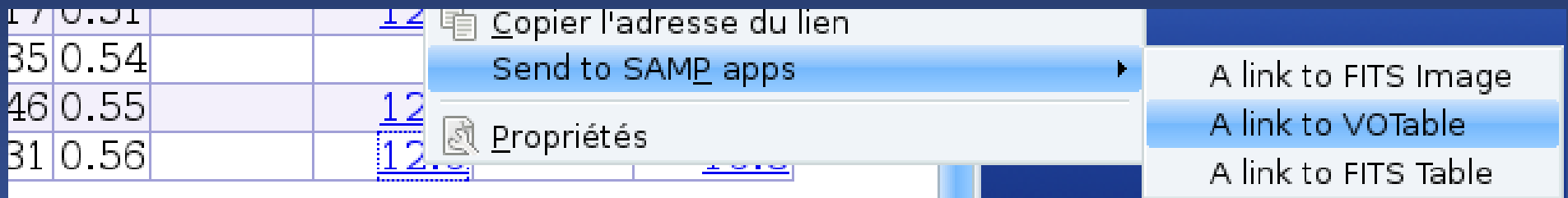


Browser use case

- In a web document, there is a link to a data file (FITS, VOTable...)
- **How to load the linked document into other applications?**
- Usual way:
 - browser: right-click -> Save Target as (or copy target link)
 - application: File > Load... browse to directory (paste link)
- With SAMP: `image.load.fits(URL)`

Firefox extension

- Written in JS + XUL
- Adds SAMP capabilities to Context menu
- Detects SAMP hub, XML-RPC endpoint
- Registers browser to the hub
- Sends SAMP message with parameters
- Unregisters from the hub



In the Semantic Web

- Semantic annotations can be embedded in Web documents: microformats, RDFa
- Already used for some specific purposes

```
<p class="contactinfo" about="http://example.org/staff/jo">  
  <span property="contact:fn">Jo Smith</span>.  
  <span property="contact:title">Web hacker</span>  
  at  
  <a rel="contact:org" href="http://example.org">  
    Example.org  
  </a>.  
  You can contact me  
  <a rel="contact:email" href="mailto:jo@example.org">  
    via email  
  </a>.  
</p>
```

Semantic browser extension

- Parse web document and search for semantic tags. For recognized tags:
 - Add elements (change DOM)
 - Change behaviour (add actions)
- Combine it with SAMP messaging
- **Astronomy-aware messaging browser**
 - interprets some astronomical parameters
 - sends information to other applications

Use case: **point there !**

<u>1</u>	02 40 01.1-01 36 45	<u>a</u>	<u>A370 Field 2</u>
<u>2</u>	14 49 28.2+26 07 57	<u>b</u>	<u>C1 1447+23</u>
<u>3</u>	00 26 35.6+17 09 43	<u>c</u>	<u>C1 0024+16</u>
<u>4</u>	09 43 02.6+46 58 57	<u>d</u>	<u>C1 0939+47</u>
<u>5</u>	09 43 02.5+46 56 07	<u>e</u>	<u>C1 0939+47 F2</u>
<u>6</u>	03 06 15.9+17 19 17	<u>f</u>	<u>C1 0303+17</u>

- samp.MType : coord.pointAt.sky
- samp.params :
 - ra=decimal degrees
 - dec=decimal degrees

Use case: **point there !**

- Add semantic annotations to "02 40 01.1-01 36 45"

```
<td xmlns:ivoa="http://ivoa.net/samp/1.11/"
    about="http://ivoa.net/samp/"
    property="ivoa:pos"
    content="coord.pointAt.sky">

    <span property="ivoa:pos.eq.ra"
        content="040.0046">
        02 40 01.1
    </span>
    <span property="ivoa:pos.eq.dec"
        content="-1.6125">
        -01 36 45
    </span>
</td>
```

Use case: **point there** !

- Detect semantic tags
 - add icon next to coordinates
 - add EventListener
 - coord.pointAt.sky SAMP message

1	✚ 02 40 01.1-01 36 45	a	A370 Field 2
2	✚ 14 49 28.2+26 07 57	b	Cl 1447+23
3	✚ 00 26 35.6+17 09 43	c	Cl 0024+16
4	✚ 09 43 02.6+46 58 57	d	Cl 0939+47
5	✚ 09 43 02.5+46 56 07	e	Cl 0939+47 F2
6	✚ 03 06 15.9+17 19 17	f	Cl 0303+17

Perspectives

- Current status : proof-of-concept
- Semantic tags : IVOA semantic group
 - which tags are useful?
 - how to write them?
- Firefox extension
 - experts in JS, XML-RPC to test with 2.x, 3.x...
- Other browsers
 - other extension mechanisms

