Microdata

INTRODUCTION

There are 3 ways to provide machine-readable content embedded in a classical Web document:HTML+RDFa, microformats and microdata. In this section, we will focus on microdata.

Adding microdata to Web pages helps search engines to better understand the pages' content, their topics, etc. The main purpose of microdata is Search Engine Optimization.

This information is not visible to humans: it is pure *semantic information*. Popular kinds of microdata are events, a person's profile, the description of an organization, the details of a recipe, a product description, a geographical location, etc.

QUICK EXAMPLE OF MICRODATA THAT DESCRIBES A PERSON:

```
<section itemscopeitemtype="http://schema.org/Person">
    <h1>Contact Information</h1>
    <dl>
      <dt>Name</dt>
      <dd itemprop="name">Michel Buffa</dd>
      <dt>Position</dt>
      <dd><span itemprop="jobTitle">
           Professor/Researcher/Scientist</span>for
          <span itemprop="affiliation">
              University of Côte d'Azur, France
          </span>
      </dd>
    </dl>
    <!-- SURFACE ADDRESS GOES HERE -->
    <h1>My different online public accounts</h1>
    <ul>
```

```
            <li><ahref="http://www.twitter.com/micbuffa"
                   itemprop="url">Twitter profile</a></li>
            <li><ahref="http://www.blogger.com/micbuffa"
                   itemprop="url">Michel Buffa's blog</a></li>
        </ul>
    </section>
```

We can also add another embedded data item in the middle, such as the person's address:

```
    ...
    </dl>
    <!-- SURFACE ADDRESS GOES HERE -->
    <dd itemprop="address" itemscope
       itemtype="http://schema.org/PostalAddress">
        <span itemprop="streetAddress">10promenade des
    anglais</span><br>
        <spanitemprop="addressLocality">Nice</span>,

      <span itemprop="addressRegion">Alpesmaritimes, France</span>
11.     <spanitemprop="postalCode">06410</span><br>
        <span itemprop="addressCountry"itemscope
             itemtype="http://schema.org/Country">
             <spanitemprop="name">France</span>
        </span>
    </dd>
    <h1>My different online publicaccounts</h1>
    ...
```

In the following sections, we will look more closely at the`itemprop`, `itemscope` and `itemtype` attributes.

DATA THAT CAN BE PROCESSED, ORGANIZED, STRUCTURED, OR PRESENTED IN A GIVEN CONTEXT

Different use cases:

- The browser, or a browser extension, may interpret the last example as an address and may propose to send it to a map application,
- A Web crawler may interpret this as an address and display it in its responses using a dedicated presentation layout,
- Some JavaScript code in the page can access this data,
- With other types of microdata, for events, for example, the browser may pop up a calendar application, etc.

Note: For advanced users, Microdata is very similar tomicroformats, which use HTML classes, or to RDFa, which doesn't validate in HTML4 or HTML5. Because RDFa was considered to be too hard for authors to write (Google has conducted research that finds that authors make 30% more mistakes with RDFa than with other formats), microdata is HTML5's answer to the need to embed semantics into html documents.

EXTERNAL RESOURCES

- W3C's HTML Microdata Working Group Note
- Very good Microdata paper from code{4}lib journal
- Microdata and the microdata DOM API, article from dev.opera.com
- Interesting blog post about Microdata by one sencha developer
- Chapter from Mark Pilgrim's book about microdata, very detailed introduction about semantic metadata in general, contains full examples with explanations about how to describe a Person, etc.
- The reference about popular HTML5 microdata vocabularies: http://www.schema.org (do not forget to visitthe full list of vocabularies), see also the schema.org blog for news and announcements

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KNOWLEDGE CHECK 1.5.1 (NOT GRADED)

What is the correct proposition to define a city?

- itemtype="http://schema.org/PostalAddress" and itemprop = "postalCode"
- itemtype="http://schema.org/Country" and itemprop = "name"
- itemtype="http://schema.org/PostalAddress" and itemprop = "addressLocality"
- itemtype="http://schema.org/Country" and itemprop = "addressRegion"