

# PB138 — XML Microformats

(C) 2019 Masaryk University --- Tomáš Pitner, Luděk Bártek, Adam Rambousek

# Introduction - Content

- What are microformats?
- Why to use microformats?
- How to replace microformats?
- Advantages of microformats to own markup.
- Disadvantages of microformats..
- Common used microformats
- Microformats design patterns.
- Resources on microformats.

## What are microformats?

- The way how to add simple markup into human readable information to allow computer processing.
  - acquiring data from documents
  - indexing
  - searching
  - storing
  - cross-referencing
- Microformats are elements of a semantic markup using a plain old semantic (X)HTML (POSH)
  - Why has been the HTML designed at CERN (Conseil Europeen pour la Recherche Nucleaire) v in the year 1991?

## Example of Microformat

```
<ol class='xoxo'>
  <li>Prvni bod
    <ol>
      <li>Podbod a</li>
      <li>Podbod b</li>
    </ol>
  </li>
  <li>Druhy bod
    <ol compact="compact">
      <li>Podbod c</li>
      <li>Podbod d</li>
    </ol>
  </li>
</ol>
```

# Why to use microformats?

Microformats combines some trends:

- next logical step in web-design and information architecture progress
- the manner how can people and organisations publish semantically rich content without dependency on centralized services
- "agreement", that the traditional meta data either failed or their adoption took too long, so there has been a need of a different solution.
  - microformats use the meta data. :-)
- Use of (X)HTML for data.

## How can be microformats replaced? (1)

- Including data in own formatting in a different namespace
  - XHTML + Voice Profile
  - (X)HTML + SVG
  - XLink
  - XHTML+RDF
  - ...

## How can be microformats replaced? (2)

- Advantages:
  - easy visualisation (direct support in browsers, using CSS for example),
  - independent on centralized services.
- Disadvantages:
  - depends on host markup,
  - may be more difficult to process on a computer.

## Standardized Microformats

- hCalendar - publishing events on the web
- hCard - publishing people, companies, organizations on the web
- rel-license - indicating licenses of a content embedded in (X)HTML, ...
- rel-nofollow - hypertext link should not be ranking by user agents
- rel-tag - allows adding user-defined tags to hyper links
- XFN - the Xhtml Friends Network - simple way of human relationships representation using

hyper links

- XMDP - (XHTML Meta Data Profiles) - simple XHTML-based format for defining HTML meta data profiles. Specification is documented at <http://gmpg.org/xmdp/>
- XOXO - microformat for embedding outlines into (X)HTML pages.

## Developed microformats

- adr - address annotations in documents
- geo - geographical coordinates annotation in documents
- hAtom - markup for content aggregation.
- hProduct - microformat for including information on products into (X)HTML pages.
- hRecipe - microformat for including informations on receipts into (X)HTML pages.
- hResume - microformat for including resume into (X)HTML pages.
- hReview - microformat for including reviews on products, services, etc. into (X)HTML pages.
- ... (for more see [Microformats Wiki](#))

## hCalendar - Introduction

- Simple, open, distributed microformat for annotation of calendars and events.
- Based on the standard iCalendar (RFC2445).
  - used for calendar synchronisation in organizers, mobile phones, PDAs, etc. with computer, for temporal based data exchange in between above mentioned devices, etc.
- hCalendar corresponds 1:1 to standard iCalendar

## Introduction (2)

- hCalendar is defined by the XMDP profile at URI <http://microformats.org/profile/hcalendar>
  - Link should be included in (X)HTML document using this microformat.

```
<head profile="http://microformats.org/profile/hcalendar">
```

```
<link rel="profile"
  href="http://microformats.org/profile/hcalendar">
```

This content uses

```
<a rel="profile"
  href="http://microformats.org/profile/hcalendar">
hCalendar</a>.
```

# Event Markup Example in iCalendar Format

```
BEGIN:VCALENDAR
BEGIN:VEVENT
UID:guid-1.host1.com
DTSTAMP:19980309T231000Z
DESCRIPTION:Project XYZ Review Meeting
SUMMARY:XYZ Project Review
DTSTART:19980312T133000Z
DTEND:19980312T143000Z
LOCATION:1CP Conference Room 4350
END:VEVENT
END:VCALENDAR
```

## Corresponding hCalendar Event Markup

```
<div class="vevent">
<h3 class="summary">XYZ Project Review</h3>
<p class="description">Project XYZ Review Meeting</p>
<p>To be held on
<abbr class="dtstart" title="1998-03-12T08:30:00-05:00">
12 March 1998 from 8:30am EST</abbr>
until
<abbr class="dtend" title="1998-03-12T09:30:00-05:00">
9:30am EST</abbr></p>
<p>Location: <span class="location">1CP Conference Room 4350</span></p>
<small>Booked by: <span class="uid">guid-1.host1.com</span> on
<abbr class="dtstamp" title="19980309T231000Z">
9 Mar 1998 6:00pm</abbr></small>
</div>
```

## Tools for hCalendar Creating and Publishing

- hCalendar Creator
- Midgard CMS
- Firefox Greasemonkey
- Event plugin for Windows Live! Writer
- ... (see hCalendar implementation)

## hCard - Introduction

- Simple, open, distributed format for publishing information about people, companies, etc.

- Corresponds 1:1 to vCard standard (RFC2426).
- (X)HTML document using hCard should have assigned corresponding profile:

```
<head profile="http://microformats.org/profile/hcard">
```

```
<link rel="profile"  
  href="http://microformats.org/profile/hcard">
```

This content uses

```
<a rel="profile"  
  href="http://microformats.org/profile/hcard">hCard</a>.
```

## vCard Example

```
BEGIN:VCARD  
VERSION:3.0  
N:Bartek;Ludek  
FN:Ludek Bartek  
URL:http://www.fi.muni.cz/~bar  
END:VCARD
```

## Corresponding hCard

```
<div class="vcard">  
  <a class="url" href="http://www.fi.muni.cz/~bar/">  
    <span class="fn n">  
      <span class="given-name">Ludek</span>  
      <span class="family-name">Bartek</span>  
    </span>  
  </a>  
</div>
```

## hCard Creation and Manipulation Tools

- hCard creator
- Wordpress Addressbook plugin

## XOXO - Introduction

- Simple format for including outlines and presentations in XHTML.
- Made up of the following XHTML modules:

- structure module (elements body, head, html, title)
- hypertext module (element a)
- list module (elements dl, dt, dd, ol, ul, li)
- meta information module (element meta)
- style sheet module (element style)
- style attribute module (attribute style)
- link module (element link)
- legacy module (attribute compact u ol a ul)

## Introduction (2)

- It is a good practice to assign following profile to a document using XOXO microformat:

```
<head profile="http://microformats.org/profile/xoxo">  
  
<link rel="profile"  
href="http://microformats.org/profile/xoxo">
```

## Sample XOXO Markup

```
<ol class='xoxo'>  
  <li>Subject 1  
    <ol>  
      <li>subpoint a</li>  
      <li>subpoint b</li>  
    </ol>  
  </li>  
  <li>Subject 2  
    <ol compact="compact">  
      <li>subpoint c</li>  
      <li>subpoint d</li>  
    </ol>  
  </li>
```

## Sample XOXO Markup (2)

```
<li>Subject 3
  <ol>
    <li>subpoint e</li>
  </ol>
</li>
</ol>
```

## Sample CSS for Example Visualization

```
ol.xoxo { list-style:decimal; }
ol.xoxo ol { list-style:lower-latin; }
ol[compact="compact"] { display:none; }
```

## Creating XOXO documents

- S5Easy - on-line slide show generation tool
- Slimey
- ...

## hResume - Description (1)

- Microformat for including resume in (X)HTML pages.
- Composed from following microformats:
  - hCard
  - hCalendar
  - rel-tag

## Description (2)

It is a good practice to add links to following profiles to document using hResume:

- hResume

```
<head profile="http://microformats.org/profile/hresume">
<link rel="profile"
  href="http://microformats.org/profile/hresume">
```

- hCard
- hCalendar



- eventually. geo, ...

Sample - see example from lecture.

## Microformats Design Patterns - Introduction

- Offers the vocabulary of commonly used markup across microformats.
- Basic design patterns:
  - abbr-design-pattern
  - class-design-pattern
  - datetime-design-pattern, date-design-pattern
  - class names defined across all design patterns
  - include-pattern
  - value-class-pattern
  - rel-design-pattern
  - atomic microformats
  - composed microformats

### Abbr-design-pattern

- Is used to make human-readable text machine-readable as well.
- Wraps the human-readable text into abbr element (it contains machine readable equivalent of particular value).

```
<abbr class="author" title="Danny Ayers">Danny</abbr>
```

- Not recommended for usage in documents to be accessed by programlisting readers
- we have a party in

```
<abbr class="dtstart" title="20070312T1700-06">  
  March 12, 2007 at 5 PM  
</abbr>
```

### Class-design-pattern

- The best matching (X)HTML element should be used.
- The semantics is assigned to the elements using the semantic classes.

```
<div class="vcard">
  <a class="url fn" href="http://www.fi.muni.cz/~bar">
    Ludek Bartek</a>,
  <span class="org">FI MU Brno</span>
</div>
```

## Datetime-design-pattern

- Used to make human readable time information machine readable as well.
- Human readable time is enclosed into an abbr element.
- Machine readable time is the value of attribute title in the format corresponding ISO-8601 standard.

```
<abbr class="dtstart" title="20051010T10:10:10-0100">
  10 o'clock on the 10th
</abbr>
```

## Atomic microformats

- The minimalistic solution of a particular problem.
- Composed from standard (X)HTML elements/attributes.
- Are the base for composed microformats.
- Often use either single class or rel attribute.
- Example of atomic microformats:
  - rel-license
  - XOXO
  - ...

## Composed Microformats

- Composed microformats consists from atomic microformats and/or standard (X)HTML elements.
- Are designed to be easily included in web pages.
- Often use combination of several class or rel attributes.
- Example of composed microformats:
  - hCalendar
  - hCard
  - hResume

◦ ...

## Resources

- [microformats.org](http://microformats.org)
- [What are microformats on xml.com](#)
- [Microformats in Context on xml.com](#)
- ...