

# Microformats

## Semantic annotations in HTML

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# HTML in the 90s

- HTML 3.2, HTML 4
- Tags for structuring documents  
`<h1>`, `<p>`, `<table>`, `<ul>`
- But many tags for visual markup only  
`<b>`, `<i>`, `<u>`, `<big>`, `<font>`, `<center>`

# HTML today

- Separation of content and presentation:
  - HTML documents contain only the author's intended **meaning**
  - Everything relevant to presentation is defined in separate CSS file(s)
- Some semantic tags  
`<em>`, `<strong>`, `<address>`
- Still the expressiveness of HTML markup in terms of semantics is very limited since it was originally intended for structuring documents

# Semantic Web

- Current web pages are designed to be read by people, not machines
- Vision of the *Semantic Web* (TBL 1999):

*I have a dream for the Web [in which computers] become capable of analyzing all the data on the Web the content, links, and transactions between people and computers.*

- Make documents better understandable for machines
- Bring the **data** on the web
- The W3C Semantic Web is growing slowly and is still ongoing research
- Standards emerge and disappear, with RDF/OWL being the most prominent standards for data representation right now

# Microformats

- Grassroots movement for easy semantic annotations, [www.microformats.org](http://www.microformats.org)
- Attach semantic to existing information contained in web pages
- Design principle: Favor the simplest solutions and focus attention on specific problems
- Seamless integration with HTML, no new tags, reuse of attributes (class, rel)
- Microformats are basically a set of certain defined values for the class and rel attributes
- Several use cases already covered

# hCard

- Annotate contact information
- hCard is derived from the vCard format (RFC 2426, 1998)
- vCard used in many applications dealing with contact information (.vcf files)

# hCalendar

- hCalendar is derived from the iCalendar format (RFC 2445, 1998)
- iCalendar is a data interchange format between PIMs, ...
- For annotating dates, events, meeting times, ...

# iCalendar Example

```
BEGIN:VCALENDAR
BEGIN:VEVENT
URL:http://www.cs.montana.edu/paxton/classes/germany/
DTSTART:20080519
DTEND:20070620
SUMMARY:Web Programming Course
LOCATION:University of Leipzig
END:VEVENT
END:VCALENDAR
```



# hCalendar Example

```
<div class="vevent">
  <a class="url"
  href="http://www.cs.montana.edu/paxton/classes/germany/">
  http://www.cs.montana.edu/paxton/classes/germany/</a>
  <span class="summary">Web Programming Course</span>:
  <abbr class="dtstart" title="20080519">19th May</abbr>-
  <abbr class="dtend" title="20080620">20th June</abbr>,
  at the <span class="location">University of Leipzig</span>
</div>
```

# More Microformats

- Geo coordinates
- Give semantics to links using the rel attribute (license, tags, nofollow)
- Proposed formats hResume, hReview, ...

# Why use Microformats

- Make your website better understandable by software agents and web browsers
- Automatic generation of Microformats by your software (web shop, blog, CMS)
- Install Operator Extension for Firefox
- Native Microformats support in browsers expected

# The end

Thank you for your attention.