



# XHTML & CSS

## *CASCADING STYLE SHEETS*

# What is XHTML?

- XHTML stands for Extensible Hypertext Markup Language
  - XHTML is aimed to replace HTML
  - XHTML is almost identical to HTML 4.01
  - XHTML is a stricter and cleaner version of HTML
- XML (Extensible Markup Language) is a markup language designed for describing *data*
  - XHTML is HTML redefined as an XML application
  - XHTML is a “bridge” between HTML and XML

# Nouns - SGML

- SGML
  - Standard Generalized Markup Language
  - ISO 8879:1986 Information processing -- Text and office systems
  - Tags don't need to quote by <>
  - Very complete and complex
  - The template for all markup languages we notice nowadays

# Nouns - SGML

<QUOTE TYPE="example">

typically something like <ITALICS>this</ITALICS>

</QUOTE>

# Nouns - XML

- XML
  - Extensible Markup Language
  - Reduced from SGML
  - 1998/02 W3C Release XML 1.0

# Nouns - XML

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE recipe PUBLIC "-//Happy-Monkey//DTD RecipeBook//EN"
"http://www.happy-monkey.net/recipebook/recipebook.dtd">

<recipe>

<title>Peanutbutter On A Spoon</title>

<ingredientlist>
  <ingredient>Peanutbutter</ingredient>
</ingredientlist>

<preparation>Stick a spoon in a jar of peanutbutter, scoop
and pull out a big glob of peanutbutter.</preparation>

</recipe>
```

# Nouns - XHTML

- XHTML
  - eXtensible HyperText Markup Language
  - An application of XML or SGML
  - Definition through DTD
  - Define from HTML 4.0
    - XHTML 1.0 Transitional
    - XHTML 1.0 Strict
    - XHTML 1.0 Frameset
    - XHTML 1.1

# Nouns - DTD

- DTD
  - Document Type Declaration
  - Definition to a XML or SGML document
    - Elements
    - Attribute
    - Entities
    - Comments



# The problem with HTML

- HTML started out as a way of way of describing the *structure* of documents, with tags to indicate headers, paragraphs, and the like
- Because people wanted to control the *appearance* of documents, HTML acquired tags to control fonts, alignment, etc.
- The result is a markup language that does both, but isn't very good at either

# HTML vs. XML

## XML looks a lot like HTML, but--

HTML uses a fixed set of tags

With XML you make up your own tags  
(and define what they mean in a separate  
document)

HTML is designed to display data to  
humans

XML is designed to describe data to  
computers

Browsers are very tolerant of errors  
in HTML

XML documents must be well-formed  
(syntactically correct)

All browsers can display HTML

Most modern browsers can display  
XML

# From HTML to XHTML

- XHTML elements must be properly nested
  - `<b><i>bold and italic</b></i>` is wrong
- XHTML documents must be well-formed

```
<html>
<head> ... </head>
<body> ... </body>
</html>
```
- Tag names must be in lowercase
- All XHTML elements must be closed
  - If an HTML tag is not a container, close it like this:  
`<br />`, `<hr />`, `<image src="smile.gif" />`
  - Note: Some browsers require a space before the /

# From HTML to XHTML, II

- Attribute names must also be in lower case
  - Example: `<table width="100%">`
- Attribute values must be quoted
  - Example: `<table width="100%">`
- Attribute minimization is forbidden
  - Example: `<frame noresize="noresize">`, cannot be abbreviated to `<frame noresize>`
- The **id** attribute replaces the **name** attribute
  - Wrong: ``
  - Right: ``
  - Best: ``

# DOCTYPE declaration, I

- Every XHTML document must begin with one of the **DOCTYPE** declarations (DTDs):
  - `<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">`
  - `<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">`
  - `<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">`

# DOCTYPE declaration, II

- The three main DTDs are as follows:
  - **Strict**
    - Use for really clean markup, with no display information (no font, color, or size information)
    - Use with CSS (Cascading Style Sheets) if you want to define how the document should look
  - **Transitional**
    - Use with standard HTML and/or with CSS
    - Allows deprecated HTML elements
  - **Frameset**
    - Use if your document uses HTML frames

# An XHTML Example

- ```
<!DOCTYPE html PUBLIC
"-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
  <head>
    <title>A simple document</title>
  </head>
  <body>
    <p>A simple paragraph.</p>
  </body>
</html>
```

# Tools

- Dave Raggett's HTML TIDY  
<http://www.w3.org/People/Raggett/tidy/>  
is a free UNIX tool for checking and cleaning up HTML pages
- W3C HTML Validation Tool  
<http://validator.w3.org/> is an HTML form for checking (but not fixing) HTML and XHTML documents





*Cascading Style Sheets*

CSS

# Style Sheet languages

- CSS
  - *Cascading Style Sheets*
- XSL-FO: XSL Formatting Objects
  - *XSL: Extensible Stylesheet Language*

# Comparison

Item \ Language	CSS	XSL-FO
Can be used with <b>HTML</b> ?	yes	?
Can be used with <b>XML</b> ?	yes	Yes
Transformation language?	<i>no</i>	Yes
Syntax	CSS	XML



# Cascading

- Cascading
  - Reader + inline + embedded + linked
- Conflicts
  - Reader > inline > embedded > linked

# Style Sheet and Rules

- style sheet
  - a collection of rules
- rule
  - selector declaration
  - selector { property : value; }

# Usages

- **Inline** (*Element Level*)
  - `<h1 style="color:red">`
- **Embedded** (*File Level*)
  - `<style type="text/css"> h1 {color:red} </style>`
- **Linked** (*interFile Level*)
  - `<link rel="stylesheet" href="style/main.css">`
  - `@import`
- Reader(browser) defined

# Containment in HTML

```
<html>  
<head>  
<link rel="stylesheet"  
      type="text/css"  
      href="http://style.com/cool.css"  
>
```

# Containment in HTML

```
<style type="text/css">  
@import url("advanced.css");  
h1 { color: blue }  
</style>  
</head>
```



# Containment in HTML

```
<body>
```

```
  <h1>headline is blue</h1>
```

```
  <p style="color: green">
```

```
    while the paragraph is green.
```

```
  </p>
```

```
</body>
```

```
</html>
```

# Containment in HTML

- Tag

```
h1 { color: blue }
```

- Class

```
.LargerClass { font-size: larger; color: green }
```

- ID

```
#uid { color: green }
```

# Containment in HTML

- Group
  - H1, H2 { COLOR: blue }
- Tag + Tag
  - TABLE TR { color: blue }
- Tag + Class
  - H1.LargerClass { FONT-SIZE: larger }
- Tag + ID
  - H1#uid { COLOR: green }

# Display *property*

- Block
  - `<div>` 、 `<p>`
- Inline
  - `<span>` 、 `<em>`
- list-item
  - `<li>`
- None

# Programmable

```
<p
```

```
  OnMouseOver=
```

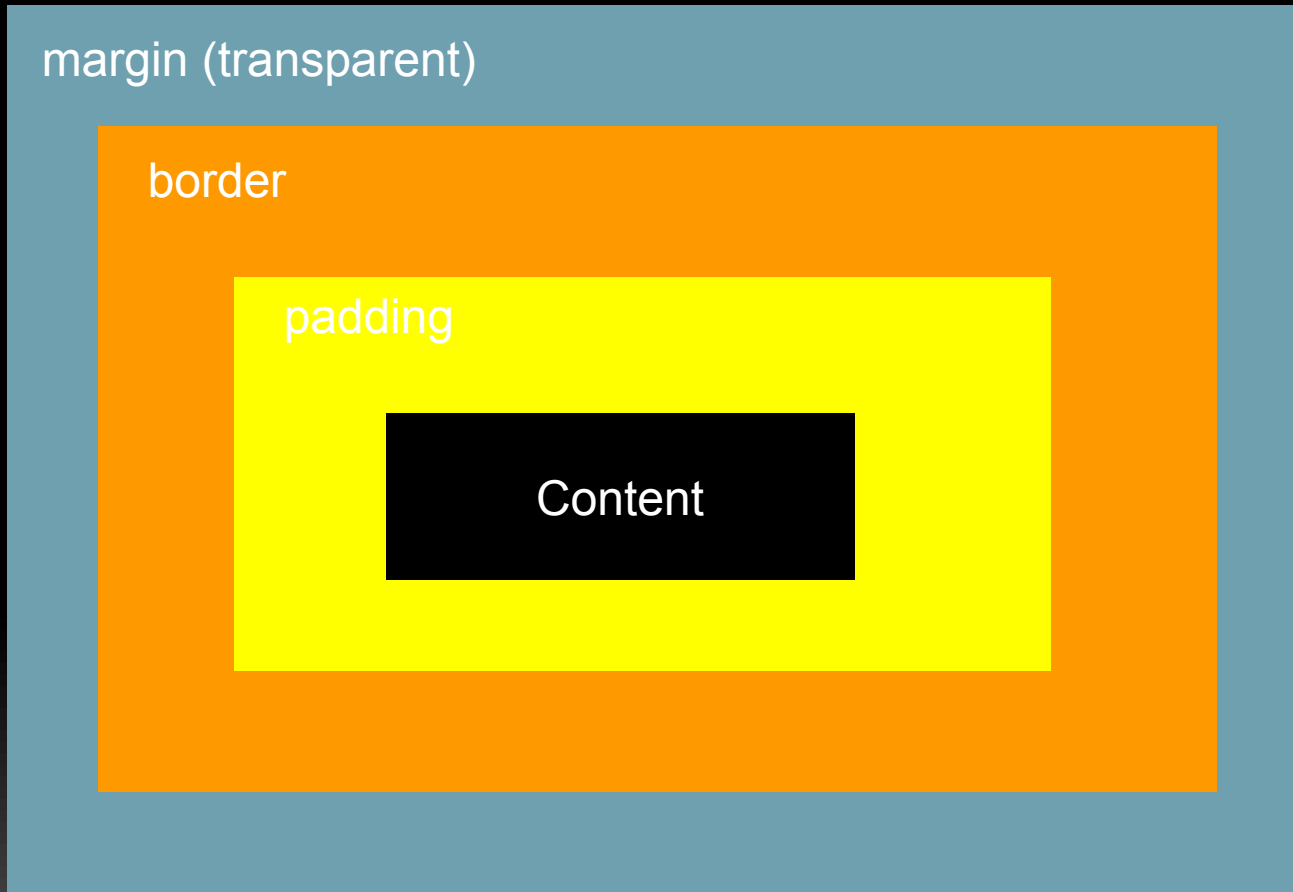
```
    " poweredBy.style.display='block' "
```

```
  OnMouseOut=
```

```
    " poweredBy.style.display='none' "
```

```
>
```

# Formatting Model



# Margin Example

```
#container {  
  margin-top:5px;  
  margin-left:10%;  
  margin-right:auto;  
  margin-bottom:20px;  
  border: 1px solid  
  000000;  
}
```

```
<div id="container">  
  Hello  
</div>
```



# Border

- border-style
- border-width
- border-color
- border-top-, border-left-, border-bottom-, border-right-
- border



# Padding Example

```
#container {  
  padding-top:15px;  
  padding-left:10px;  
  padding-right:30px;  
  padding-bottom:40px;  
  border: 1px solid  
  000000;  
}
```

```
<div id="container">
```

這是留白的例子。這裡對了上、下、左、右的留白空間都有設定。

```
</div>
```

這是留白的例子。這裡對了上、下、左、右的留白空間都有設定。

# Further Reading

- Microsoft MSDN Online
  - <http://www.microsoft.com/taiwan/msdn/>
- XML
  - [http://2tigers.net/xml\\_book/](http://2tigers.net/xml_book/)
- CSS
  - <http://css.1keydata.com/tw/>