HTML Frames

Agenda

• Advantages and disadvantages of frames
• FRAME template
• Defining rows and cols in a FRAMESET
• Common FRAME and FRAMESET attributes
• Nested frames
• Targeting a document to a named FRAME cell
Frame Advantages

- Certain parts of the interface (e.g., a TOC) are always on the screen
- Can avoid retyping common sections of multiple Web pages
- Consistent use across a large site sometimes simplifies user navigation
- A convenient way to mix text-oriented HTML with Java applets
- Image maps are more convenient if the map image remains on screen and only the results section changes

Frame Disadvantages

- The meaning of the “Back” and “Forward” buttons can be confusing
- Poorly designed frames can get the user lost
- Hard to find real URL of a page you want
  - Printing problems!
- Hard to bookmark "configuration"
- Some very old browsers do not support frames
- Security
  - Hackers can insert frame cells into your pages in some circumstances, perhaps stealing information intended for your site
Frame Template

```html
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<html>
<head>
<title>Document Title</title></head>

<frameset ...>
<!-- FRAME and Nested FRAMESET Entries -->
</noframes>
</body>
</noframes></frameset>
</html>
```

FRAMESET Attributes

- **COLS, ROWS**
  - A comma-separated list of pixel values, percentages, and weighted remainders
  - FRAMESET entries should *always* specify at least two rows or columns. Netscape problems if not!
  - Examples
    ```html
    <frameset rows="50,10%,*,2*">
      ...
    </frameset>
    <frameset cols="25%,*,*">
      ...
    </frameset>
    ```
FRAMESET ROWS, Example

```html
<FRAMESET ROWS="50,10%,*,2*">
  ...
</FRAMESET>
```

FRAMESET Attributes
(Continued)

- **FRAMEBORDER**
  - Indicates whether borders will be drawn *between* frame cells
  - YES or 1 specifies borders; NO or 0 specifies no border
  - Can be overridden by FRAMEBORDER settings in individual FRAME entries
  - Often used in conjunction with BORDER=0 and FRAMESPACING=0

- **BORDER (Netscape), FRAMESPACING (IE)**
  - Specify the thickness of the border between cells
  - Apply to outermost FRAMESET only

- **BORDERCOLOR**
  - Sets the color of the border between cell, using either a hex RGB value or color name
Frame Border, Examples

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**FRAME: Specifying Content of Frame Cells**

- **SRC**  
  - URL of the document to place in the frame cell
- **NAME**  
  - Supplies destination for TARGET attribute of hypertext links
- **FRAMEBORDER, BORDERCOLOR**
- **MARGINWIDTH, MARGINHEIGHT**  
  - Specifies the left/right and top/bottom cell margins, respectively
- **SCROLLING**  
  - Indicates whether cells should have scrollbars
- **NORESIZE**  
  - Disables the ability to resize the frame cells
Frame Example 2

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<html>
<head><title>Frame Example 2</title></head>
<frame set cols="55%,45%">
  <frameset rows="*,*,*">
    <frame src="Frame-Cell.html">
    <frame src="Frame-Cell.html">
    <frame src="Frame-Cell.html">
  </frameset>
  <frameset rows="*,*">
    <frame src="Frame-Cell.html">
    <frame src="Frame-Cell.html">
  </frameset>
</frameset>
<noframes>
  <body>
  Your browser does not support frames. Please see
  <a href="Frame-Cell.html">nonframes version</a>.
  </body>
</noframes>
</frameset>
</html>

Frame Example 2, Result
Targeting Frame Cells

• Specify the cell in which to place a page referenced by a hyperlink

• The NAME Attribute of FRAME
  <FRAME SRC="..." NAME="cellName">

• The TARGET Attribute of A HREF
  <A HREF="..." TARGET="cellName">

Targeting Example

**Introduction**

A new breakthrough in cold fusion technology!

A ripe opportunity for the lucky investor!

Accepted by the scientific community! Documented in *The Journal of Irreproducible Results*
Cold-Fusion.html

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<html>
<head>
  <title>Investing in Cold Fusion</title>
</head>
<frameset rows="75,*">
  <frame src="TOC.html" name="TOC" />
  <frame src="Introduction.html" name="Main" />
  <noframes>
    <body>
      This page requires Frames. For a non-Frames version, visit the introduction.
    </body>
  </noframes>
</frameset>
</html>

TOC.html

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
  <title>Table of Contents</title>
</head>
<body>
<table width="100%">
  <tr><th><a href="Introduction.html" target="Main">Introduction</a></th>
      <th><a href="Potential.html" target="Main">Potential</a></th>
      <th><a href="Investing.html" target="Main">Investing</a></th>
      <th><a href="References.html" target="Main">References</a></th></tr>
</table>
</body>
</html>
**Predefined Frame Names**

- **_blank**
  - Load document into a *new browser* window
- **_top**
  - Causes the linked document to take up the whole browser window
  - Document will not be contained in a frame cell
- **_parent**
  - Places document in the *immediate* FRAMESET parent
  - Same as _top if no nested frames
- **_self**
  - Place document in current cell
  - Only necessary to override a BASE entry
Summary

- Frames require a Frameset DOCTYPE for validation
- A FRAMESET can be divided either into columns or rows
  - To create both rows and columns use nested FRAMESETs
- By giving a FRAME a name, documents can be targeted to the named frame cell
  - `<FRAME … NAME="…">`
  - `<A HREF="…" TARGET="…">`
- There are four predefined frame names
  - _blank, _top, _parent, and _self