

Core Web Programming

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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

```
<!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>
      <!-- Stuff for non-Frames browsers -->
    </BODY>
  </NOFRAMES>
</FRAMESET>
</HTML>
```

FRAMESET Attributes

- The **rows** attribute defines the number of horizontal subspaces in a frameset. The **cols** attribute defines the number of vertical subspaces
 - Attributes are comma-separated list of pixel values, percentages, and weighted remainders
- Both attributes may be set simultaneously to create a grid.
- If the **rows** attribute is not set, each column extends the entire length of the page. If the **cols** attribute is not set, each row extends the entire width of the page. If neither attribute is set, the frame takes up exactly the size of the page.

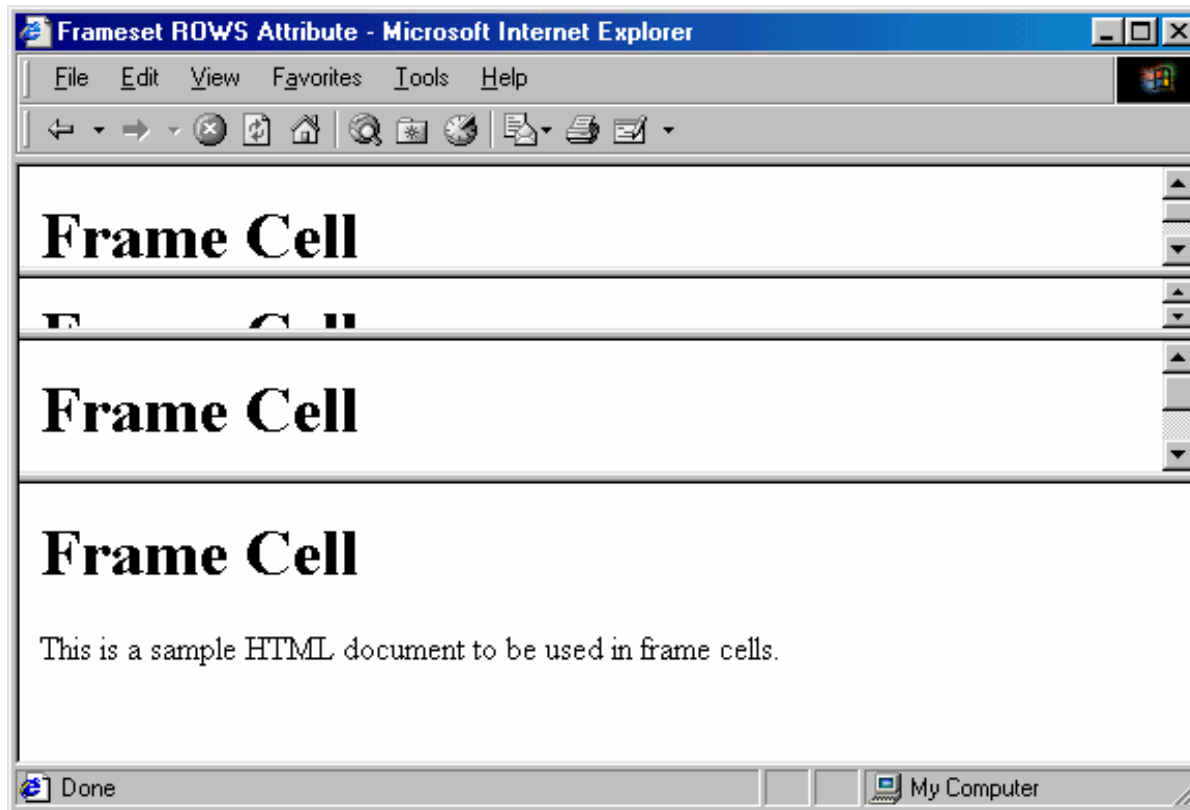
FRAMESET Attributes

- Frames are created left-to-right for columns and top-to-bottom for rows. When both attributes are specified, views are created left-to-right in the top row, left-to-right in the second row, etc.
- This divides the screen vertically in two (i.e., creates a top half and a bottom half).
 - `<FRAMESET rows="50%, 50%">`
- This example creates three columns: the second has a fixed width of 250 pixels (useful, for example, to hold an image with a known size). The first receives 25% of the remaining space and the third 75% of the remaining space.
 - `<FRAMESET cols="1*, 250, 3*">`

FRAMESET Attributes

- The next example creates a 2x3 grid of subspaces.
 - `<FRAMESET rows="30%,70%" cols="33%,34%,33%">`
- Suppose the browser window is currently 1000 pixels high. The first view is allotted 30% of the total height (300 pixels). The second view is specified to be exactly 400 pixels high. This leaves 300 pixels to be divided between the other two frames. The fourth frame's height is specified as "2*", so it is twice as high as the third frame, whose height is only "*" (equivalent to 1*). Therefore the third frame will be 100 pixels high and the fourth will be 200 pixels high.
 - `<FRAMESET rows="30%,400,*,2*">`
- Absolute lengths that do not sum to 100% of the real available space should be adjusted by the user agent.
 - When underspecified, the remaining space should be allotted proportionally to each view.
 - When overspecified, each view should be reduced according to its specified proportion of the total space.

FRAMESET ROWS, Example



```
<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

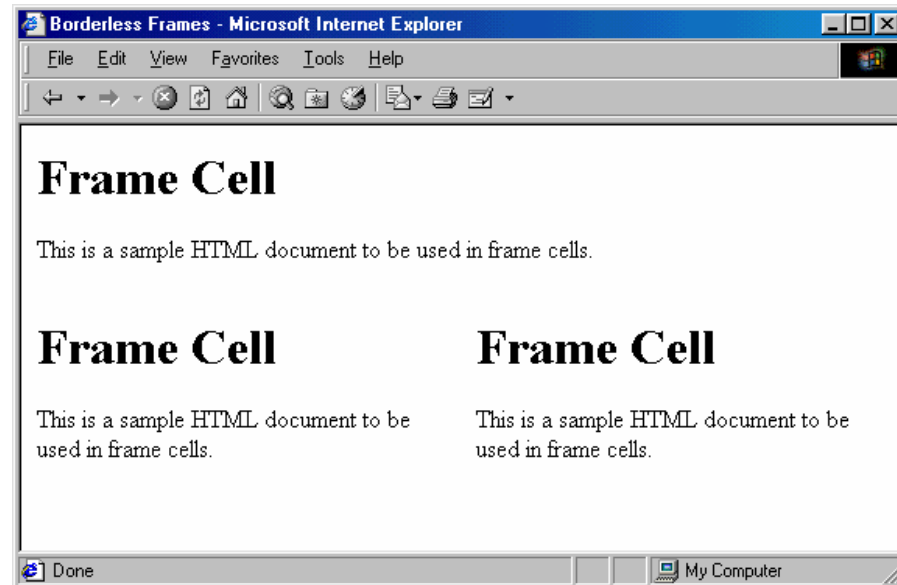
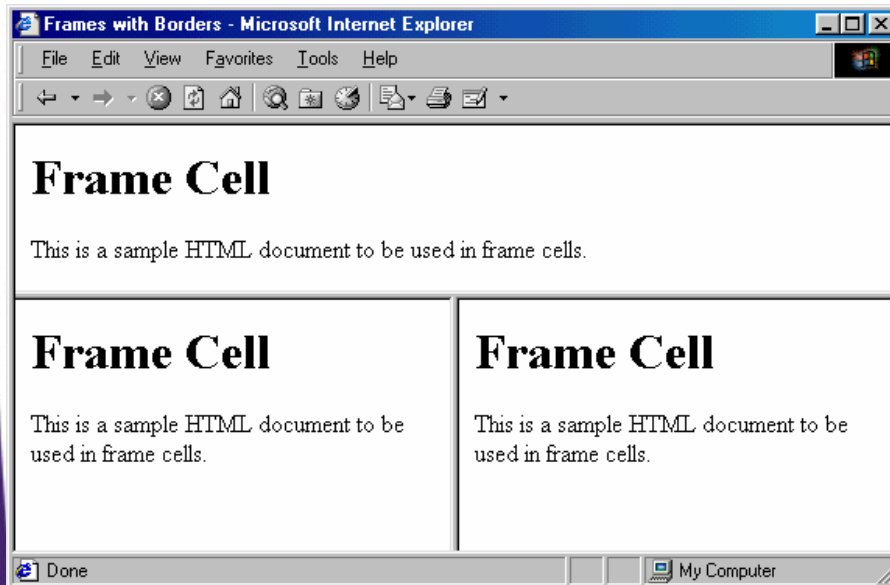
- **BORDER (Netscape), FRAMESPACING (IE)**

- 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



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
- **NORESIZ**
 - Disables the ability to resize the frame cells

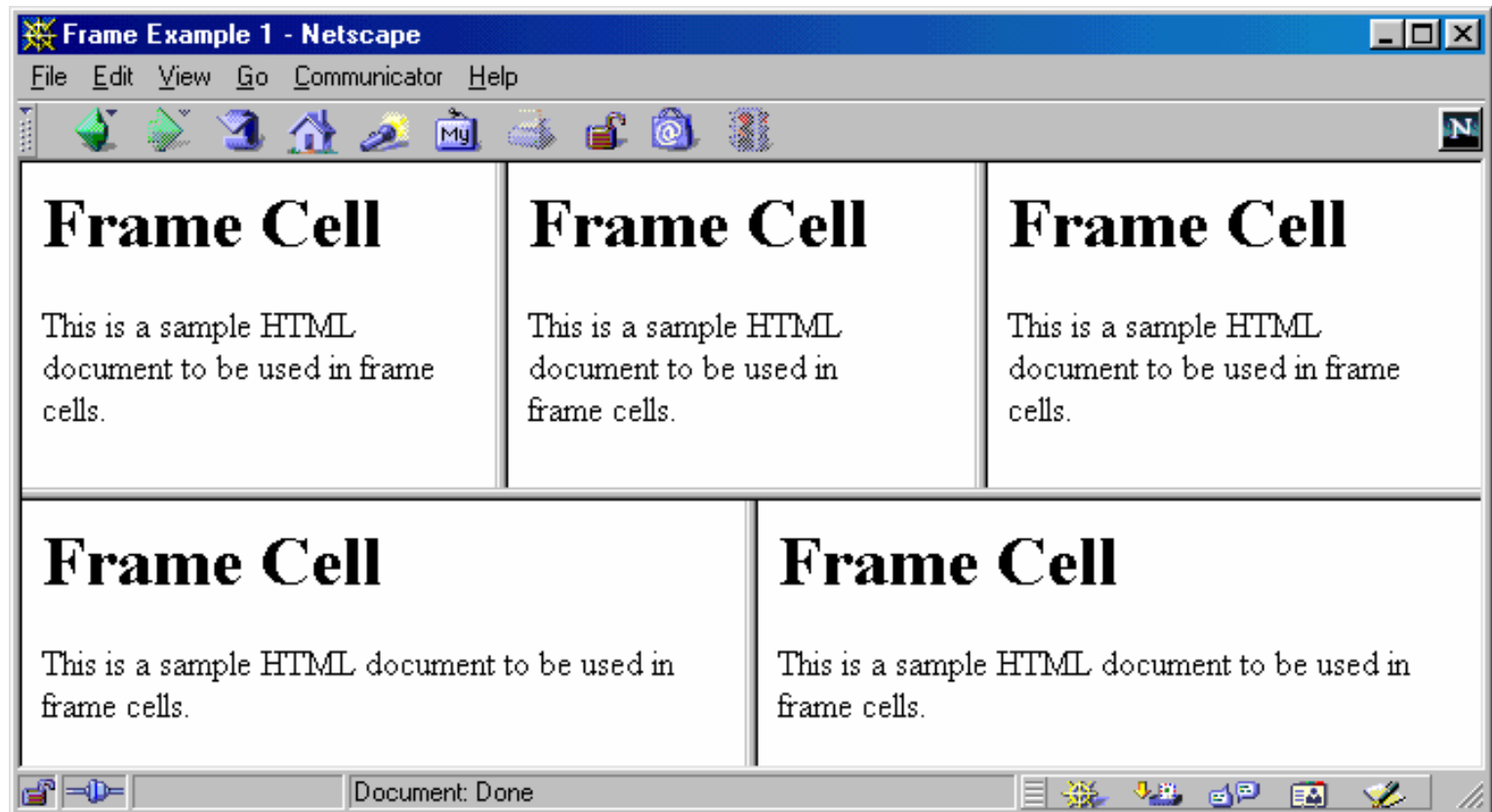
Frame Example 1

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<HTML>
<HEAD><TITLE>Frame Example 1</TITLE></HEAD>
<FRAMESET ROWS="55%,45%">
  <FRAMESET COLS="*,*,*">
    <FRAME SRC="Frame-Cell.html">
    <FRAME SRC="Frame-Cell.html">
    <FRAME SRC="Frame-Cell.html">
  </FRAMESET>

  <FRAMESET COLS="*,*">
    <FRAME SRC="Frame-Cell.html">
    <FRAME SRC="Frame-Cell.html">
  </FRAMESET>

<NOFRAMES>
  <BODY>
    Your browser does not support frames. Please see
    <A HREF="Frame-Cell.html">non-frames version</A>.
  </BODY>
</NOFRAMES>
</FRAMESET>
</HTML>
```

Frame Example 1, Result



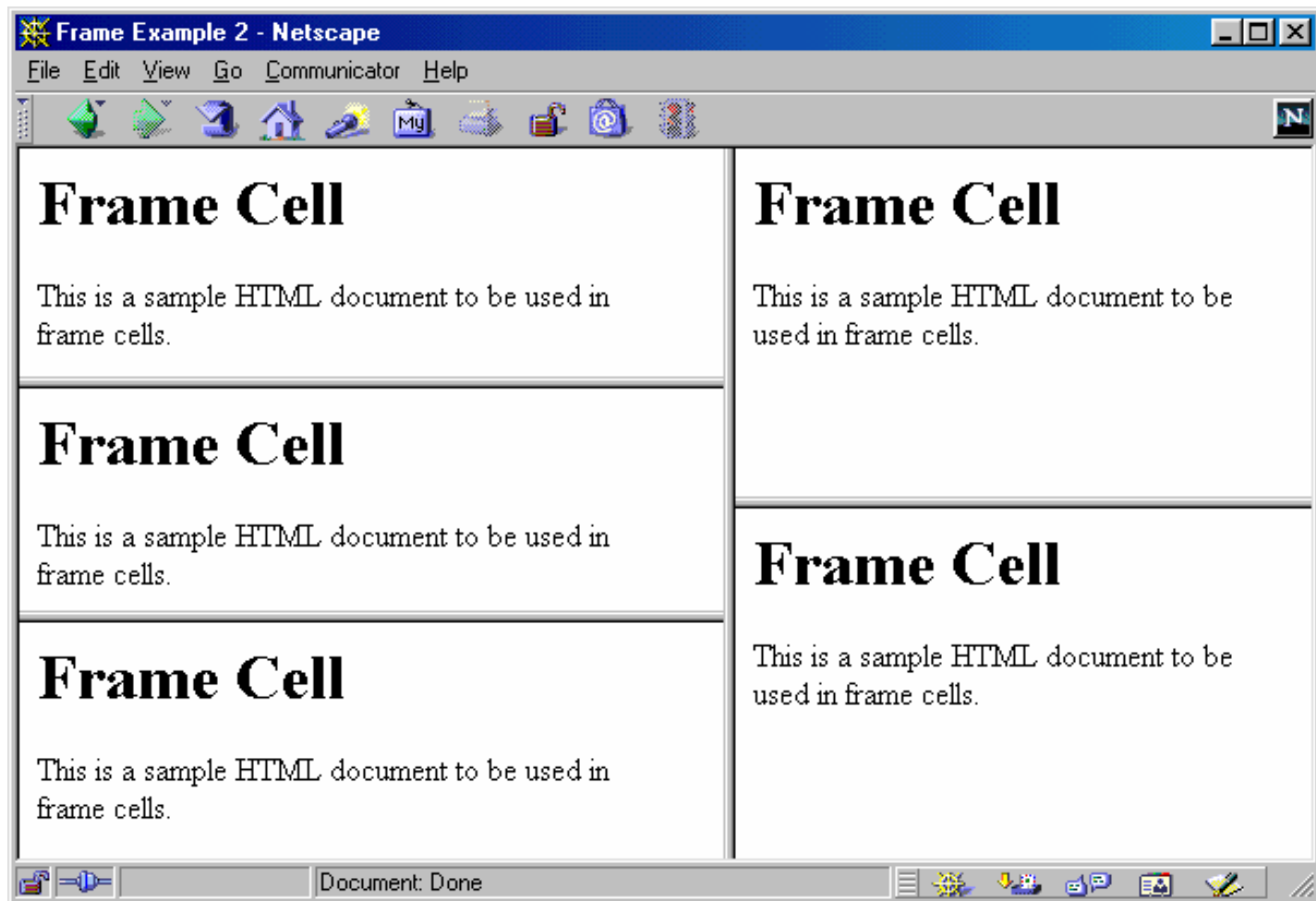
Frame Example 2

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Frameset//EN">
<HTML>
<HEAD><TITLE>Frame Example 2</TITLE></HEAD>

<FRAMESET COLS="55%,45%">
  <FRAMESET ROWS="*,*,*">
    <FRAME SRC="Frame-Cell.html">
    <FRAME SRC="Frame-Cell.html">
    <FRAME SRC="Frame-Cell.html">
  </FRAMESET>

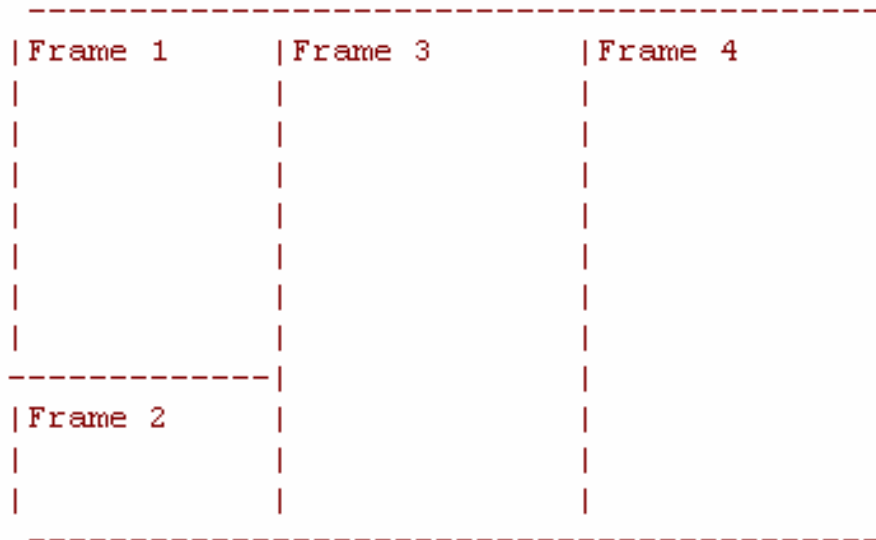
  <FRAMESET ROWS="*,*">
    <FRAME SRC="Frame-Cell.html">
    <FRAME SRC="Frame-Cell.html">
  </FRAMESET>
</NOFRAMES>
  <BODY>
    Your browser does not support frames. Please see
    <A HREF="Frame-Cell.html">nonframes version</A>.
  </BODY>
</NOFRAMES>
</FRAMESET>
</HTML>
```

Frame Example 2, Result



Frame Example 3

```
<FRAMESET cols="33%,33%,33%">  
  <FRAMESET rows="*,200">  
    <FRAME src="contents_of_frame1.html">  
      <FRAME src="contents_of_frame2.gif">  
  </FRAMESET>  
  <FRAME src="contents_of_frame3.html">  
  <FRAME src="contents_of_frame4.html">  
</FRAMESET>
```



Targeting Frame Cells

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

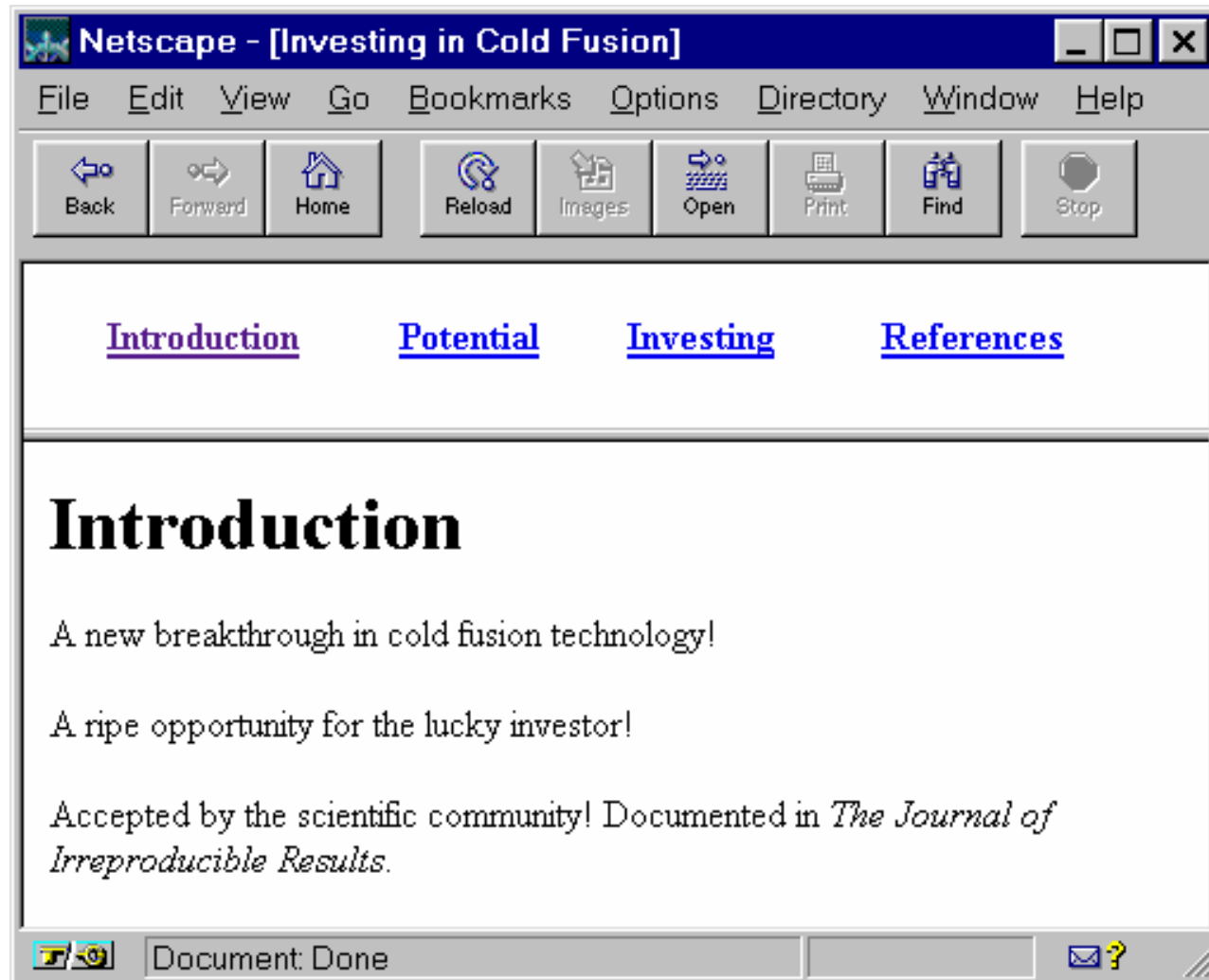
- The NAME Attribute of FRAME

```
<FRAME SRC="..." NAME="cellName">
```

- The TARGET Attribute of A HREF

```
<A HREF="..." TARGET="cellName">
```

Targeting Example



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,
      <A HREF="Introduction.html">the introduction</A>.
    </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>
```

Targeting Example, Results

