Designing for the Mobile Web

When there is a desktop version of a website, there are 2 options that a developer might take:

Option One: Transcoding (do nothing):
Procrustes in Greek mythology who forced people to fit in his iron bed. If a person was too tall, he would cut their feet. If they were too short, he stretched them until their body reach the bed post to the headboard.

A website that does not get optimized for mobile devices and is opened on a mobile device, goes through the process of “procrustesing”. Many mobile carriers put desktop websites through a process of reformattting to make the pages display better on a mobile device. This process is called Transcoding.

Transcoding generally involves:
- Stripping any video or multimedia
- Shrinking photos
- Breaking large web pages into a series of smaller pages that link together. These smaller sized pages load better over a low bandwidth connection.

Exercise: To see how transcoding works:
- Select a desktop website and
- Enter the following http://google.com/gwt/n?u=http://www.tsu.edu
- Comment on what you see.
Option 2: Directing Users to an alternate page

If we do not want Google or other transcoders to automatically reformat our website, we can direct users to an alternate page by using the following tag in the Head area of a Web page:

```html
<link rel = “alternate” media= “handheld” href=”m.page.html”>
```

This will cause Google and other web servers to redirect traffic coming from mobile devices to the mobile version of your website.

Option 3: Picking a strategy for different devices

As of 2010, there were 8000 kinds of mobile phones and other handheld devices in the world.
- Create a few categories or profiles of devices based on screen size, JavaScript support.
- Create a few versions of the site optimized for each category

Designing for different devices:
- Content adaptation
- Creating different versions of a site
  - Profile 1: High end touch screen phones – Based on operating systems, screen resolution, languages support and HTML5.
  - Profile 2: Low end device profile – leave out JavaScript, limit or remove video, page markup with XHTML or lower.
    a. Tiny screens, 132 pixels or less
    b. small screens 132-240 pix
    c. Medium screens 240-320

When we opt to create multiple mobile versions, one can decide how specialized we want those versions to be:

Broad categories: Create just 3 or 4 versions optimized for each main cellphone categories_: smartphones, touch phones, etc..
Specialized versions: adapting mobile versions to features of the phone, such as size of screen, multi media capabilities.
Key Consideration in Optimizing Mobile Web Site Design

- Urgent need for information
- Limited real estate
- Low bandwidth
- Interface limitations
- Limited processing power and memory
- Distracted users

Class work
Designing a simple webpage:

```html
<!DOCTYPE html PUBLIC "-//WAPFORUM//DTD XHTML Mobile 1.0//EN" "http://www.wapforum.org/DTD/xhtml-mobile10.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>Lakeland Reeds Bed and Breakfast</title>
<meta name="HandheldFriendly" content="true">
</head>
<body>
<h1>Lakeland Reeds Bed and Breakfast</h1>
<p>A country gateway perfect for fishing, boating, biking and or just watching the day go by.</p>
<p>Philip Blaine, Proprietor</p>
<p>45 March Grass Ln.</p>
<p>Marble, MN 55764</p>
<p><a href="tel:218-555-5234">(218) 555-5234</a></p>
</body>
</html>
```
Adding links to webpages:
Hyperlinks are of different kinds:
- Links within a Web page
- Links to another Web page on the same Web site
- Links to another Web site
- E-mail links.

**Linking within a Web page:**
Links within a Web page allow visitors to move quickly from one section of the page to another. This is important in large web pages. The visitor can view the sections that are of interest to them without having to scroll the entire document.

**Linking to another page within the same Web site:**
This connects a Web page to another page within the same Web site. This kind of link is frequently used because a Web site usually consists of multiple pages.

**Linking to another web site:**
A most important feature of the Web is the capability of linking one Web site to another. Web designers use this technique to link their website to other websites containing information on topic relevant to their own web site.

**Linking email:**
A well-designed Web site always provides a way for visitors to contact the Web developer. An easy way to do this is by providing an email link somewhere on the web site home page.

**The Anchor Tag:**
The tag pair that defines a link is called the anchor tag, because it is used to create anchors for links within the same page. It looks like:

```html
<a href=“web page name or location”> Link descriptive text </a>
```

1. `<a>` is the opening tag for the link and `</a>` is the closing tag for the link.
2. HREF: (Hypertext REFeRence) indicates the name or URL of the file to which the link points.
3. The name of web page to which we want to link follows the = and is written in double quotes “...”.
4. Link descriptive text are the clickable word(s) and should describe the link’s content.

For example:

`<a href = "Example_Link.htm"> Link Descriptive Text </a>`

**Absolute Link and Relative Links:**

HTML allows you to format target addresses for links in two different ways.
An absolute link includes the page’s full Web site location and directory information.
Absolute links are most useful to reference a specific page on a different Web site.
Sample absolute link might read:

`<a href="http://www.tsu.edu/Administration/Human_Resources/">`

This path provides the browser exact instructions of how to reach the page- including the URL, directory and the Web document name.
A relative link includes only information about the target page’s location relative to the current Web page.
A link to another path in the same directory as the current one might read

`<a href = “MyFirstWeb.htm”>`

This link doesn’t contain URL or subdirectory information, just a filename.

- Relative links make it easy to reference other pages in your Web site without needing to type the entire path to each page.
- In addition, relative links ensure that link information within your site remains valid even if the pages are moved.

**Before formatting a link, it is important to think about which link format is more appropriate.**
Customizing colors in links:

Unless otherwise stated in the `<body>`, the colors of text links use browser dependent defaults, throughout the Web page. The format of the tag is used to change normal, visited and active link colors from the default is: `<body link= "color" vlink= "color" alink= "color">` where color is a designated color code.

<table>
<thead>
<tr>
<th>ATTRIBUTE</th>
<th>FUNCTION</th>
</tr>
</thead>
</table>
| link      | • Link color, without mouse over it or before having been visited.  
           | • Controls the color of a normal link that has not been clicked.  
           | • Default color is usually is blue |
| vlink     | • Visited link  
           | • Controls the color of a link that has been visited  
           | • Default color usually is green or purple |
| alink     | • Active link  
           | • Controls the color of a link on which a mouse has been pressed but not clicked  
           | • Default color usually green or red |

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\(<BODY LINK = "color" VLINK= "color" ALINK= "color"/>\)

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| ALINK   | • Active link  
|         | • Controls the color of a link on which a mouse has been pressed but not clicked  
|         | • Default color usually green or red  

If you are linking to a page on a separate website, you need to type in the full and complete URL (that's the web address) with quotes as the HREF value, like this:

```
<a href="http://www.example.com/index.html"> </a>
```

The text link is now almost complete, but it needs one more piece to finish it off.

A text link requires some text to appear on the webpage for visitors to click on. Enter the text between the Opening and Closing anchor tags, (for testing purposes try using http://www.tsu.edu in the HREF) like this:

```
<a href="http://www.tsu.edu">Click this link</a>
```

The code above will give you this result:

Click this link

**Creating Email Links**

**How can I make an email link?**
An email link that automatically opens the visitors email program and correctly addresses a new email, requires a slightly different format when entering the HREF value. This new value is called the mailto: value. The first step to creating an email link is to set up a standard anchor tag with a HREF, like this:

```html
<a href="mailto:">Send me email</a>
```

Now add the email address that you want the email to be sent to, into the mailto: value, like this:

```html
<a href="mailto:ghemri_lx@tsu.edu">Send me email</a>
```

Creating Image Links

**How can I make an image a clickable link?**
Images, just like snippets of text, can be made clickable links quite easily. Once you have completed the coding for your image tag, you will need to create a link by wrapping an anchor tag around the image, like this:

```html
<a href="http://www.example.com">
  <img src="graphic.gif" width="50" height="50" alt="Click here to learn more about cats" border="0">
</a>
```

In the above example, the image tag is embedded in the link (anchor) tag, and it is now a fully clickable image link.