

Art 382: Introduction to Interactive Media

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Lecture 4

Schedule

- Take Roll
- Assignment A is due Tuesday after next.
- Festivals: why, how, which
- More HTML
 - tables, image maps
- Intro to interface design
- Flash: libraries, symbols, bitmaps, tracing

Assignment A

- Rubric is online; questions?
- Make sure you use the rubric; it really is the form I fill out to assign your grade.
 - I strive to be super-duper predictable
- I'll spend some time next Thursday looking at any project anyone wants to bring in.

Festivals

- A way of finding out what's current
 - People, practices, valuations
- A reputation builder
- Resume lines are useful, esp. early career
- FlashInTheCan, Flash on the Beach, FlashBelt, others.
- Please look for some; please share.
- Group project in your future about this!

HTML review

- `<tags>` and their `</closers>`
- use of EditText -- no rulers!
- code/test/code/test loop
 - "iterative development"
- use of copy and paste in code
- new tags!

font-setting tags

- "Deprecated" by W3C as of HTML 2
- Still works; heck with them. Alternatives are 10x more complicated
-
 - smaller "size" values give bigger fonts
 - fonts look different in every browser
 - font's presence on every viewer's computer not guaranteed
 - if the font isn't there, the browser will substitute something else in-- something crappy!

Setting font size and color

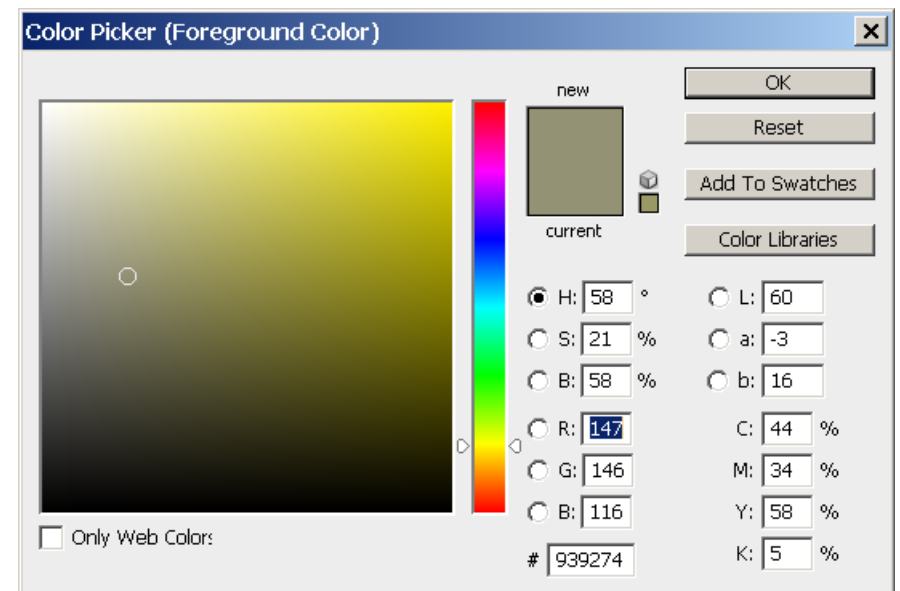
- ` words here `
- `COLOR="#FF0000"` sets the color
 - that FF0000 thing is a number

hexadecimal notation

- you're used to counting in base-10
 - 0,1,2,3,4,5,6,7,8,9, --- ? 10, 11, 12
 - this is "decimal" notation; "deci" means ten
- #FF0000 is a number in base-16
 - 0,1,2,3,4,5,6,7,8,9,a,b,c,d,e,f,10,11,..1a,1b,...
 - each digit goes from 0-15 (0-f)
 - two digits can hold 0-255 (0-ff)
 - that's one byte! nice for computers
 - FF0000 holds 3 bytes, one each for R,G,&B

color picker tutorial

- r, g, and b entries vary from 0-255
 - (one byte per color, 8 bits per byte, 24 bits total)
- the box with the "#" is the hex translation
- 3 numbers in one box
 - r, g, b



How to pick apart an RGB color

- given a #F69B31, how do you tell what color it is?
- if r, g, and b are the same, that's a grey.
 - so, subtract lowest number from other 2
 - that makes the color saturated
- if r is the highest, it's reddish
 - b is highest, blueish, g highest
- if r and g are equal, that's yellow
 - r and b, purple, g and b, teal

web-safe colors

- it used to be that not all browsers could make all 24-bit colors
- there were "web-safe" colors that all monitors could make
 - web designers would stick with those
- not the case any more
- use whatever you like
 - yay.

Advanced <body>

- `<body text="000000" bgcolor="FFFFFF" link="663366" vlink="666633">`
- sets text color to black, background to white, link colors to washed-out purple and orange
-

`<center></center>`

- tells the browser to center your content
- put your centerable content inside
- default is left-justification

```
<title>A Title!</title>
```

- goes in the head!
- lets you set the text in the title bar

<meta>

- goes in the head
- lets you describe your content
 - to google and their friends
- makes your page ranking go up
 - <META name="description" content="Neal McDonald's home page">
 - <META name="keywords" content="workly.com Neal McDonald home">

more meta

- `<meta http-equiv="Content-Type"
content="text/html; charset=ISO-8859-1"
>`

<pre></pre>

- Pre-formatted text
- Causes the browser to look at tabs, spaces, line returns
- helpful for blocks of text
- can make resizing screwy
- I generally don't use.

comments

- <--! put lots of words here -->
- comments are parts of a program written just for people
 - terribly important; even if you are the only reader
 - 90% of coding is maintenance
 - fixing existing stuff or adapting it to new use
- special markers tell the computer to skip them

<table></table>

- Arranges content into rows and columns
- Tables can contain tables
- Best to work from examples; gets complex!
 - http://www.w3schools.com/html/html_tables.asp
- Invaluable for page layout

table rows and columns

- usual order:
 - `<table (formatting info)>`
 - `<row (formatting)><cells (formatting)></row>`
 - `<row><cells></row>`
 - `</table>`
- `<tr></tr>` : rows
- `<td></td>` : cells (why "d"? dunno)
- `<th></th>` : headings (rows or columns)

table arguments

- `<table border="6">`
 - 6-pixel-wide line around cells
 - saves legibility for big tables w/ many rows
- `<td size="30%">`
 - this cell takes up 30% of the table's width
- `<tr style="height: 60px;">`
 - this row is 60 pixels high
- `<table width="100%" height="100%" >`
 - take up the whole page!

tables get complicated

- cells in tables can contain tables
- work from working examples
- save several versions of your page, so that if you completely screw it up, you can go back!

backgrounds

- `<body background="/images/image_name.gif">`
- deprecated: use CSS way instead
 - still works, though!
- next week: CSS

palette cleanser

- a little low-stakes talk about user interfaces

User Interface (UI) Design

- Present, but not emphasized in assignment A
- Interface design is a form of product design
 - Also, it is a type of engineering
 - Software engineering
- The interface bridges the gap between what the user expects and what the product does.

Expectations

- UI being a kind of engineering was not what I expected
 - I expected something more designy; rules of composition, "use buttons with X" kinds of things
- To design a UI is to be a software engineer
 - same tools used to build any large software

Definitions

- An interface is the part of an object that allows a person to use the object
- Examples
 - handle of a hammer
 - mouse, keyboard, windows and buttons
 - the menus and buttons in a program
- Object \Leftrightarrow Interface \Leftrightarrow User

Concerns

- A good interface allows the user to get to all the uses of its object
 - all the functions of the program
 - all the pages on a site
- A good interface helps the user know what the object can do
- A good interface prevents the user from making mistakes

Applications

- Web site design
 - make a set of pages that exposes all content
- Product design
 - make a set of buttons and modes that exposes all functionality
- Front-end design for games
 - designing menus to set options
- Game control design

Flash content

- library
- symbols
- bitmaps

the Library

- Flash is used to put vector animation online
- Animations heavily reuse images across many frames
- The library stores objects that will be used multiple times
 - only stores it once! reduces file size = <\$\$
- Flash wants you to re-use everything
 - so does your employer! \$\$!

Symbols

- Images in the Library are called "Symbols"
- Life Cycle of a Symbol
 - Make a drawing in Flash
 - Convert it to a symbol
 - Drag copies of the symbol ("instances") to the stage
 - Tweak the symbol, change all the instances
- Let's make a symbol

editing stage vs symbol

- open the library
- make a drawing
- convert it to a symbol (F8)
- rename the symbol
- make 4 copies
- double-click a copy
- edit the copy
- go back to the stage
- break apart and edit a symbol

the Library is central to Flash

- Libraries are used to control what the Flash file contains
 - fonts
 - sounds
 - code
 - animations
- More efficient than any kind of automatic compression
 - if you're smart!
 - MIDI vs MP3

bitmaps

- pixel-based images
- certainly available
 - not vector! Flash doesn't like
 - flash wants you to convert bimages
 - an art in itself
- import an image to the stage and use
 - main menu-> modify -> bitmap -> trace ...

brush tool and pencil tool

- allows free sketching
- modeled after Photoshop's pencil and brush
- however! Flash wants vector
 - flash modifies the results of brush and pencil use
 - smoothing
 - simplification

drawing preferences

- edit -> preferences -> drawing
- allows some control over stroke simplification
- use brush tool with lots of smoothing or less
- the smoother it is, the smaller the data, the cheaper the internet host's bill

play with the pencil tool

- note difference between the mark while you're drawing and immediately after you let go.
- note options visible only when the tool is selected

play with the brush

- note peekaboo options for the brush
- note "paint inside" option
 - select a region (double-click on something)
 - paints only in that region's fill
 - can break the region up
- I'm looking for ways to define new brushes