

The *Art* of Interface Design

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Inter-related Components of Interface Design

- Task analysis and user testing
- Software engineering
- Functional analysis
- **Aesthetic appeal**
- Etc.

Looking Good—Then & Now 1

- Some issues same as traditional design
 - Overall composition (leading the eye, creating balance, etc.)
 - Use of shape/form
 - Affordance: buttons, sliders, levers, arrows, etc
 - Use of color (not having too many different colors, using color to code features, etc.)

Looking Good—Then & Now 2

- Graphic Arts and Design
 - People study years to learn this formally
 - There are many full-time jobs performing just this function
 - Characteristics
 - Challenging task
 - Important factor for success of project
 - Takes significant project time to do well



Looking Good—Then & Now 3

- Some issues unique to digital media
 - Interaction
 - Principles not fully established yet
 - Animation
 - Content may change over time
 - Motion is tricky
 - Integration of different (multi-) media
 - E.g., text, image, sound elements
 - Gives rise to more complex design issues



Looking Good—Then & Now 4

- Issues unique to digital media (cont)
 - Need to structure much information, e.g.
 - Design hierarchy
 - Navigation aids
 - Ever-changing tools, usage platforms
 - Including new immersive spaces




Some Traditional Design Concerns in Digital Media 1

- These and other issues present new aesthetic design challenges
- Aligning elements
- Grouping elements appropriately for dialog boxes or screen design
- Designing clear, associative icons




Some Traditional Design Concerns in Digital Media 2

- Using type of screen
- Use of color
 - Do not over-use it
 - Consistent, thematic use
 - Tasteful, aesthetic balance
 - Appropriate to target audience
 - Business/professional group
 - Young children, etc ...




Some Traditional Design Concerns in Digital Media 3

- Appropriate and consistent style
- Traditional design strategies, e.g., using
 - small multiples
 - layering
 - narrative
 - metaphor




Some Traditional Design Concerns in Digital Media 4

- Clean designs
 - Reducing clutter and visual noise
- At RISD designers take a full year of *typography*, e.g.
 - Stuff is not trivial
 - Painfully bad designs by unskilled purveyors abound!



An Example 1

- I asked a student to recreate some of our java color applets in Director (as shockwave files), and
 - Told him to make them look the same as the original ones
- He decided to add a bit of his own design to them
 - Results were very disappointing

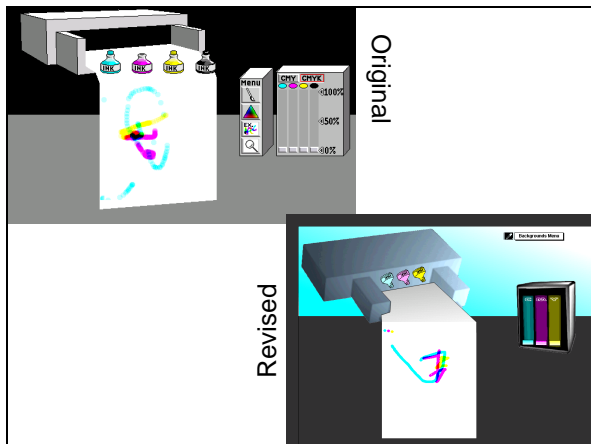
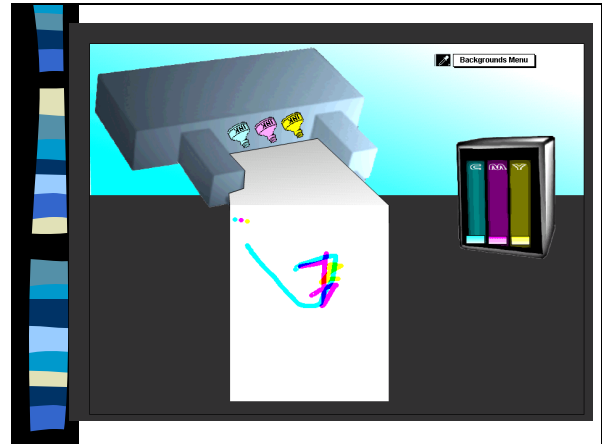
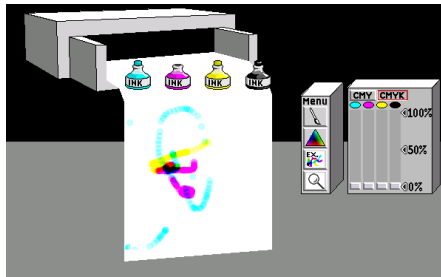


An Example 2

- It's interesting because
 - Functionality is exactly the same
 - Change in only in aesthetics
 - Much less pleasurable to use new the applets
 - (Student flunks out...)

Older, Java version

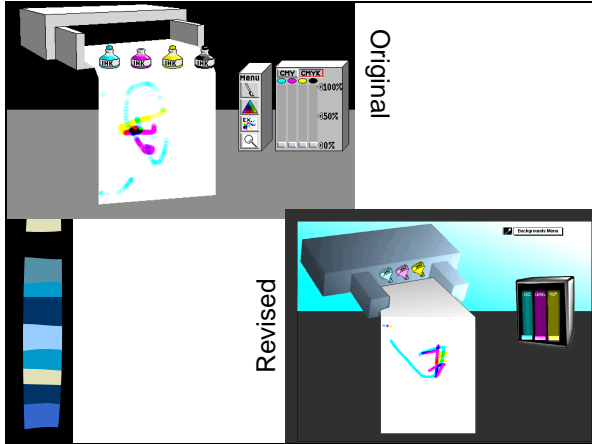
- Not perfect but
 - Nice feeling
 - Important because the concept being taught is pretty simple



What Changed?

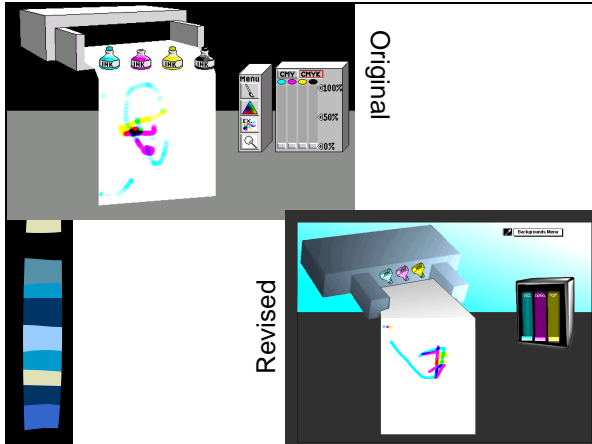
1

- Important aesthetic differences
 - Variations subtle
 - Change pleasure of using applet
- New version too big
 - Poor use of screen real estate
 - Program hogs up too much screen



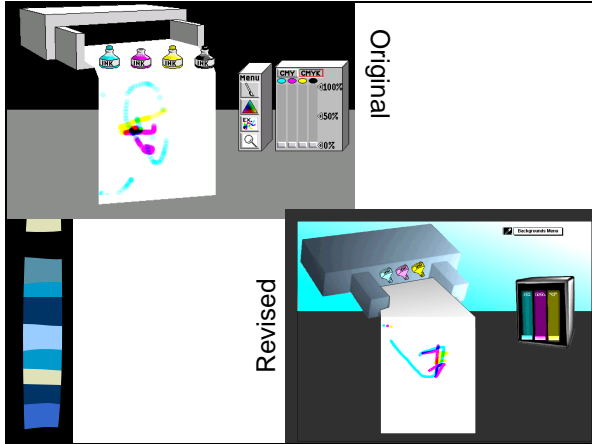
What Changed? 2

- Color use
 - greenish background color behind printer
 - Unpleasant, distracting background
 - Totally irrelevant color choice
- Also, too much black
 - Lost nice use of gray in the original



What Changed? 3

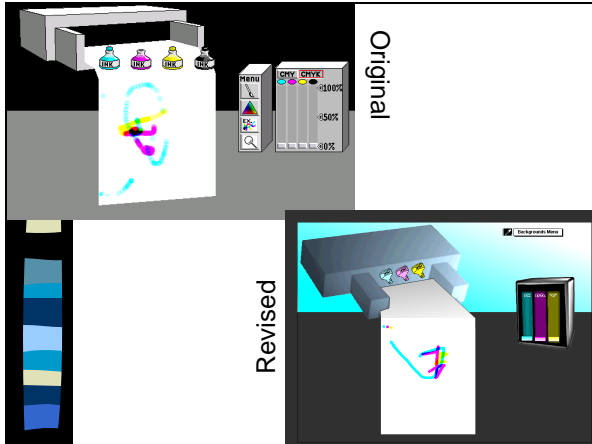
- Printer doesn't look realistic or diagrammatic—
 - just like a bad 3D model,
- Ink bottles not properly anti-aliased



What Changed?

4

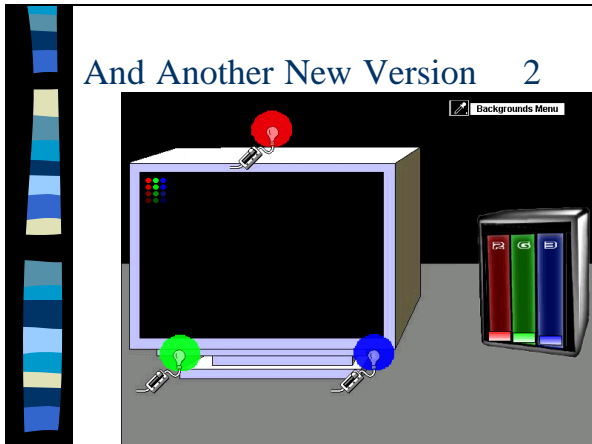
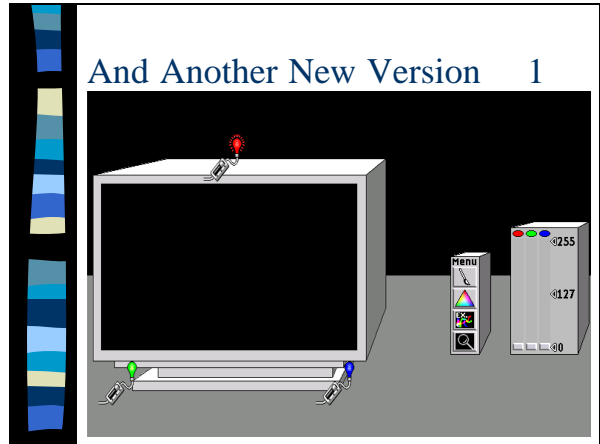
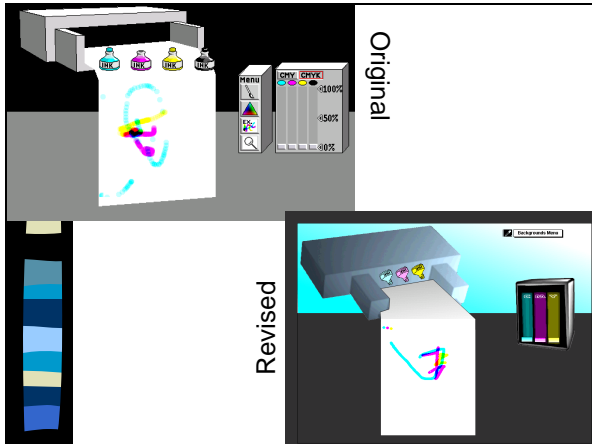
- Many problems with perspective
 - Ink bottle position
 - Printer position
 - paper position
 - “Case” for sliders
- Gradient banding is annoying



What Changed?

5

- Sliders
 - Look like binders not sliders
 - Application of gradient makes the colors too black
 - Unattractive font for CMY letters
 - Different treatment of slider case and printer
 - inconsistent style is distracting
- Undesirable effects of black outline on paper
 - Makes it separate from printer
 - Seems to be floating above it



What's Wrong? 1

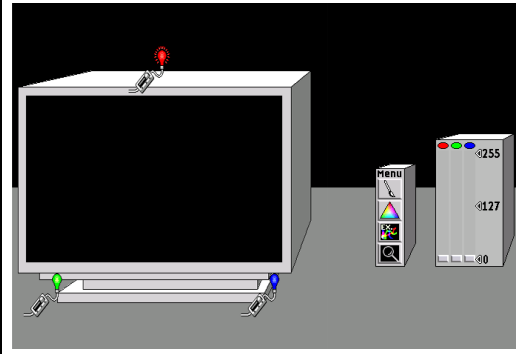
- This one looked better because
 - Used more of the original design
 - Original was a nice one,
- Now his two applets don't look alike,
 - Bad choice for a series of related applets
 - Violates consistency

What's Wrong?

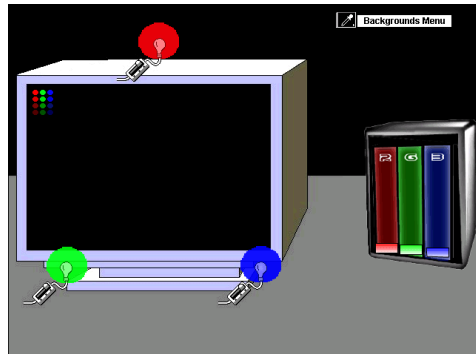
2

- Lights are lit up differently
 - Subtle but makes a big difference
- Purple around the edge of the monitor
 - Bad choice since it's a color apple
 - Contrasting color affects color perception
 - Alters how we see the subject matter


And Another New Version 1



And Another New Version 2



Conclusions




Everything Must Work Together 1

- If you do not understand the client's needs, it doesn't matter how beautiful the interface looks.
- An aesthetically good interface must work with good overall design
- UI work often done in teams with programmers, cognitive scientists, artistic designers, and business people




Everything Must Work Together 2

- Design the aesthetics, like everything else in the interface
- Give aesthetics time and thought
- Be tasteful in design
- Seek compatible help on aesthetics, if not your strength



Resources

- Information Design: Edward Tufte's book
- Multimedia Design: Designing Visual Interface (Mullet/Sano), Design Multimedia (Lopuck)
- Web Design: Lisa Weinman's and David Siegel's books



Resources

- Magazines: Print, How To (these are graphic design magazines that now address many digital design issues)
- Information Visualization (Ware) [some "science of graphic design"]

The End



UI Aesthetics