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   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   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…)

Slide 1:
Older, Java version
- Not perfect but
  - Nice feeling
  - Important because the concept being taught is pretty simple

Slide 3:
Original

Revised

Slide 4:
What Changed? 1
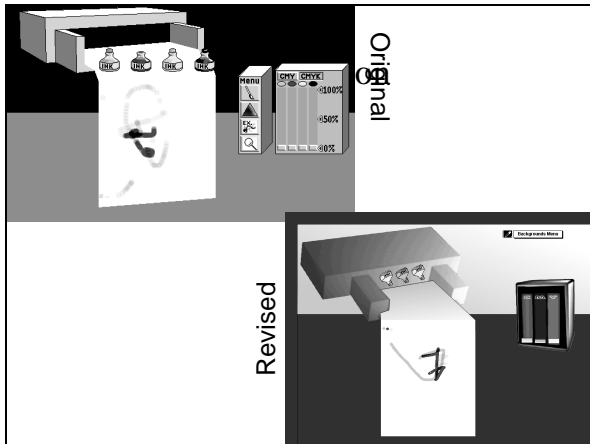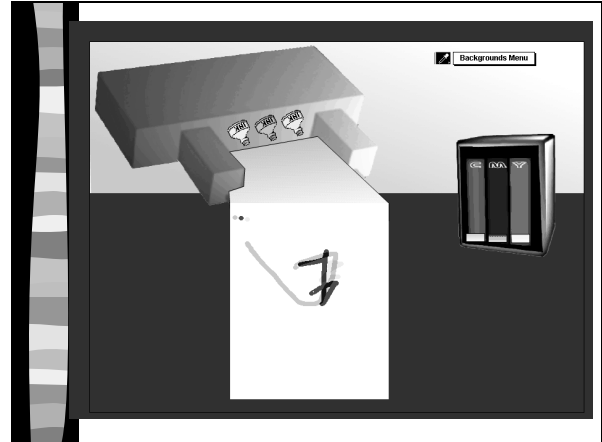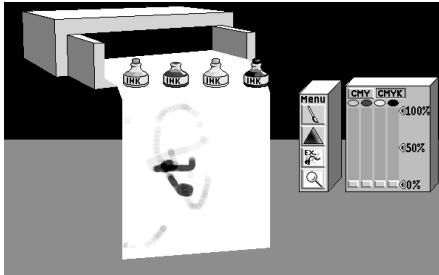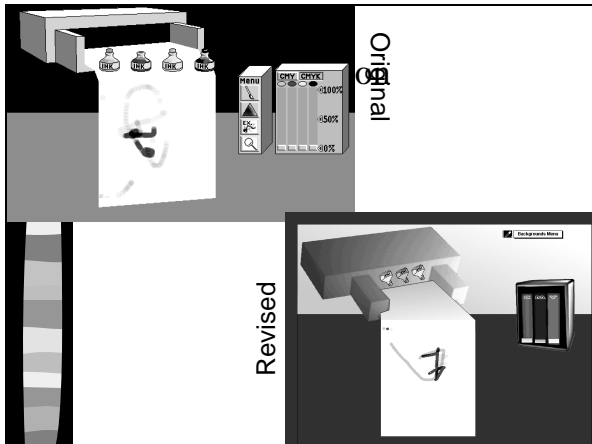
What Changed?

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
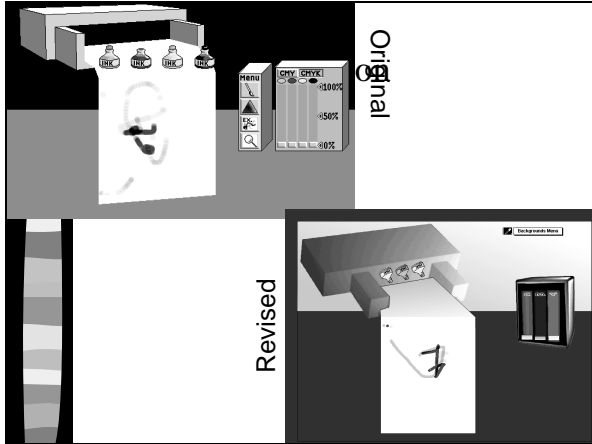
What Changed? 2

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
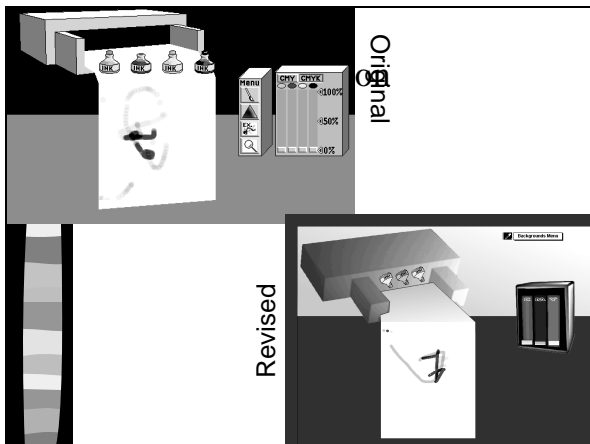

What Changed? 3

3

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

Original

Revised
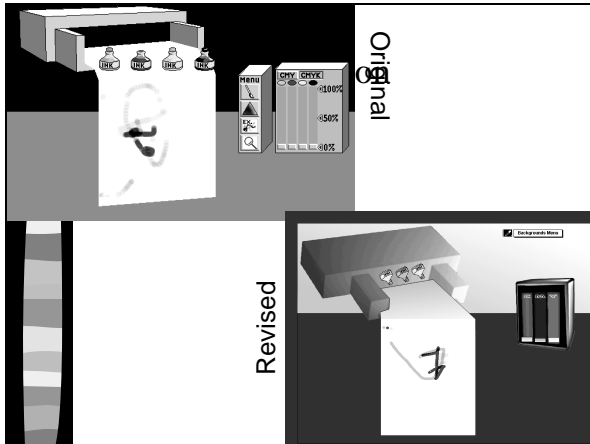
What Changed?   4   4
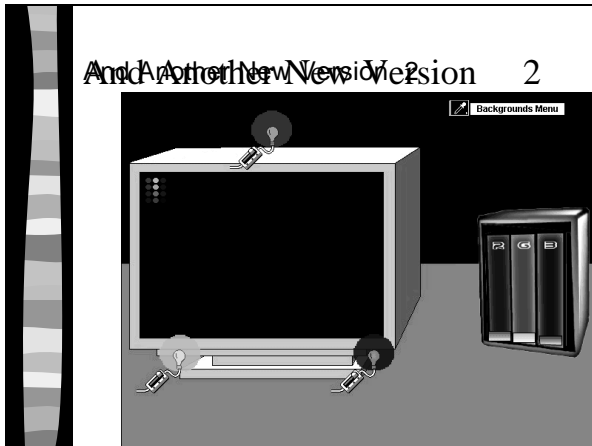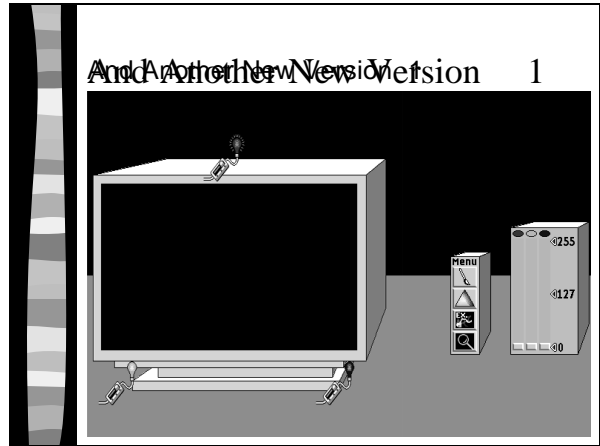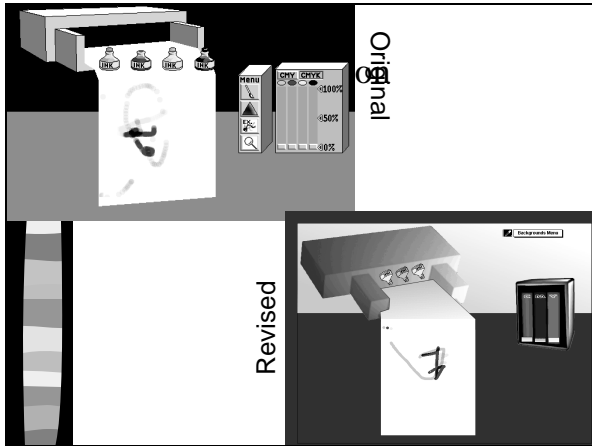
- Many problems with perspective
  - Ink bottle position
  - Printer position
  - paper position
  - "Case" for sliders
- Gradient banding is annoying

Original

Revised

What Changed?   5   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

Original

Revised

Backgrounds Menu

And Another New Version   1

255
127
0

And Another New Version   2

Backgrounds Menu

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
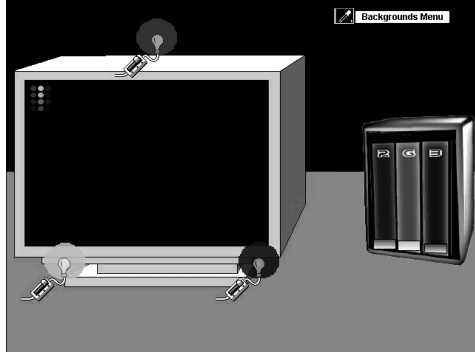
What's Wrong? 2   2

- 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
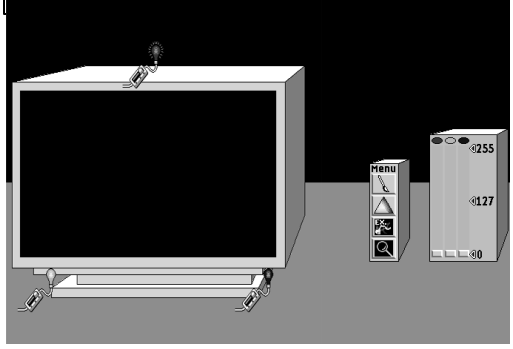
And Another New Version   2

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 aethestics 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