

Advanced Programming Techniques

UI Considerations

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User interface design

“The interface is the product.”

–Jef Raskin, originator of the Apple Macintosh

“A user interface is well designed when the program behaves exactly how the user thought it would”

–Joel Spolsky in “User Interface Design for Programmers”

Uniformity

- ❖ Uniformity within product
- ❖ Uniformity across products
 - ❖ similar items have their standard places, e.g.
File / Edit / View / Help
OK / Cancel
 - ❖ platform / local look and feel
 - ❖ visual conventions



Legibility



- ❖ Not everyone has 20/20 vision
- ❖ Some people are color-blind
- ❖ Women distinguish subtle color differences better (src)
- ❖ Some fonts are more legible than others
 - ❖ One heuristic: project sans-serif, print serif.
- ❖ Don't assume a screen size
 - ❖ Reactive layouts help with this!



Oops!



Ease and Flexibility of Use

- ❖ Pick good defaults, but let a user change them

- ❖ Don't go too deep into menus

- ❖ Don't let menus drop offscreen

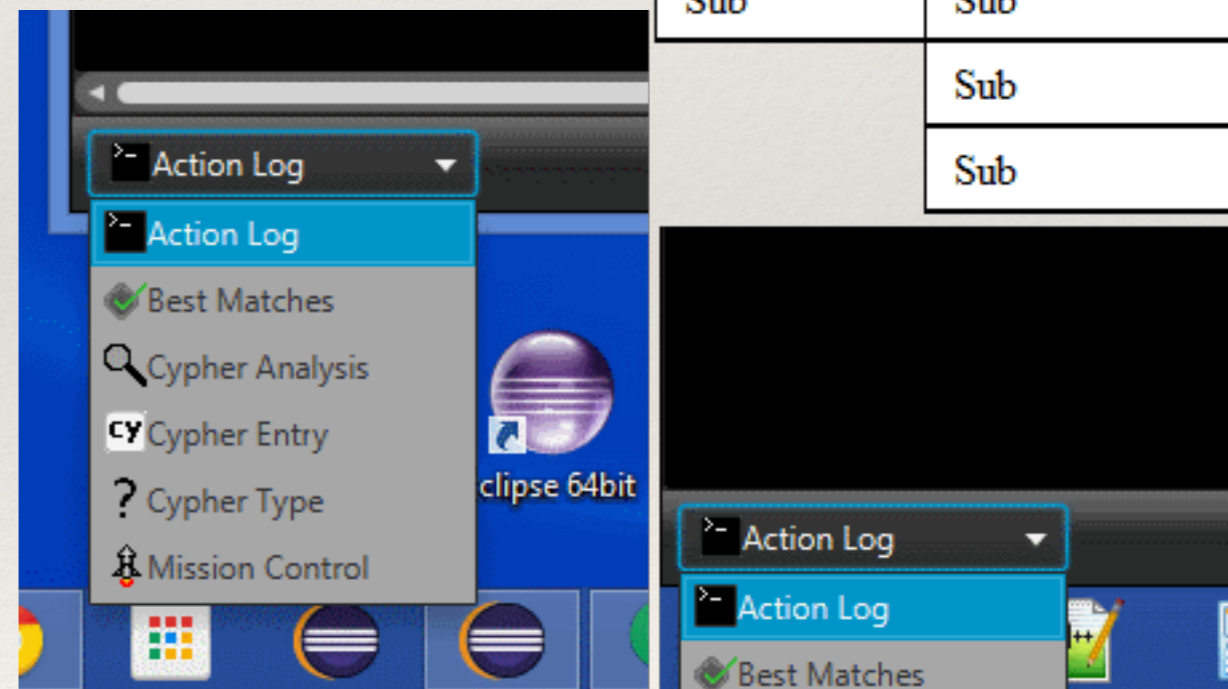
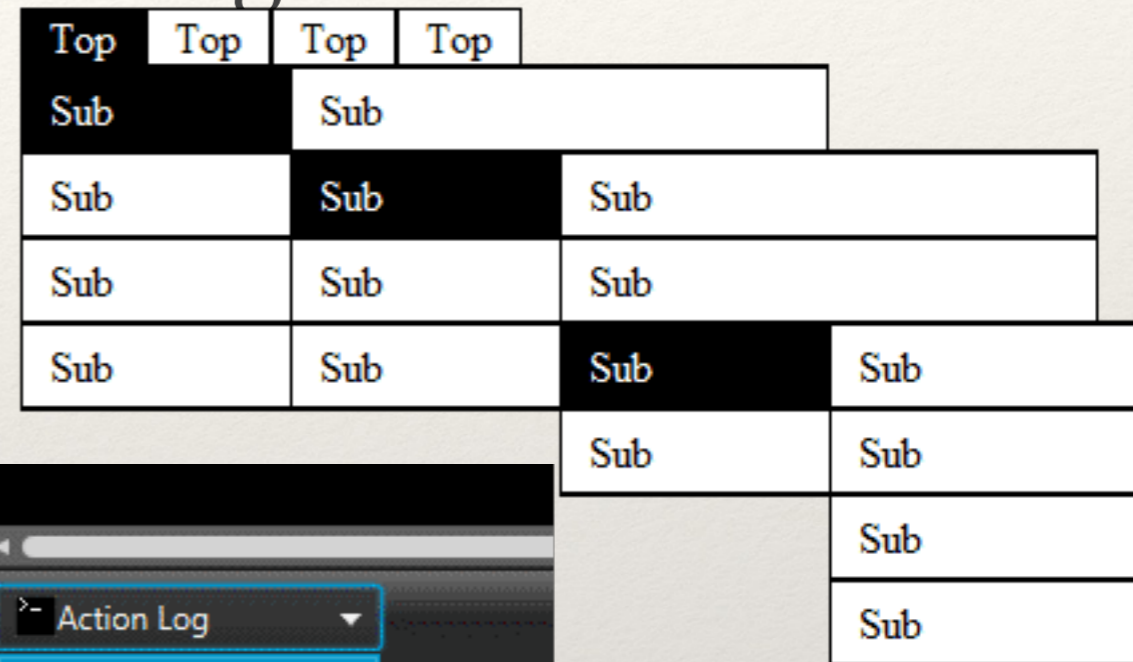
- ❖ Remember useful information

 - ❖ previous entries

 - ❖ location in filesystem

- ❖ Provide text alternatives

 - ❖ type a path rather than file-tree dialog



Test Usability Early and Often

- ❖ Figure out small set of important tasks
- ❖ Make scenarios that tell users to perform the tasks
 - ❖ but not how to do it!
- ❖ Screen-capture and / or have user narrate their use
 - ❖ completely unaided
 - ❖ with a description of how you'd do it



When you don't consider UI ...
(and/or don't do enough testing)

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Institution	<input type="text" value="Princeton University"/>	***
Department	<input type="text" value="Computer Science"/>	
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The following error(s) occurred:

- undefined is required.
- undefined is required.
- undefined is required.

OK

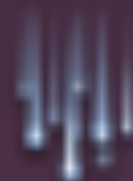
If the above information is incorrect, please update it by correcting the information in the fields and clicking the "Update Information" button below. We ask for this information in case future correspondance is necessary. We appreciate your willingness to help in this important process.

<input type="button" value="Update Information"/>	<input type="button" value="Reset"/>
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H: NaN°

L: NaN°

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Microsoft Visual Studio



Catastrophic failure (Exception from HRESULT: 0x8000FFFF (E_UNEXPECTED))

OK

« **CNN.com Homepage**

CNN Video

 **Live
Video**

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General Error

**Hold your clicks a moment
please...**

**Flickr has the hiccups. We're
looking into the problem right now.**



Acrobat Reader 5.0 is not currently configured to be the default application for PDF files.

Would you like to make PDF files open with Acrobat Reader 5.0 instead of Acrobat Reader 5.0?

Do not show this message again

No

Yes



I SAW A BRIGHT LIGHT AND WENT TOWARDS IT. SUDDENLY, WORDS APPEARED: "ARE YOU SURE YOU WANT TO SHUT DOWN NOW?" I CHOSE "CANCEL" AND HERE I AM.

rhymeswithorange.com
HILARY B. PRICE 7-26

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2

3

Oh right, one more thing ...

You might have noticed, not everyone is in the {class,University,US,world} speaks {English, American English, American English with an upper-class northeastern dialect}, uses the US dollar, with comma thousands separators and a decimal point ...

A light blue world map is centered in the background of the slide. The map shows the outlines of continents and oceans in a slightly darker shade of blue.

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@shiota

Slides

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