



Announcements

Monday labs cannot be held due to a scheduling conflict -- go to Tuesday's

- * There are four Tuesday labs:
8:30, 9:30, 1:30, 2:30
- * The term's calendar is posted including Midterm dates; it's subject to change
- * RGB Yellow = Full, Full, Zero intensity

Final comment on generalizing

1



What the Digerati Know

Other people can teach you computer applications or you can figure them out for yourself

2



Learning New Tools

How do we learn to use new tools?

- Be taught to use them -- car, bicycle
- Reading the owner's manual -- chain saw
- Figure them out ourselves -- CD player

3



Learning New Tools

How do we learn to use new tools?

- Be taught to use them -- car, bicycle
- Reading the owner's manual -- chain saw
- Figure them out ourselves -- CD player
- Software designers wanting you to learn their tool ASAP, try for 'intuitive'
 - Consistent Interfaces -- build on experience
 - Suggestive icons -- bypass terminology
 - Metaphors -- exploit analogous reasoning

4



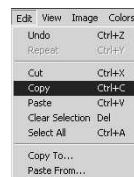
A New Application

Find:
consistent interface
icons
metaphor



Standard Functionality

Most applications have File and Edit



6



What does 'New' Mean?

'New' means create a 'blank instance'
 To understand 'blank instance' know that information has properties as well as content which are all stored in a structure with a place for everything

A 'blank instance' is simply the structure without any of the content

7



"Click Around"

Software designers use standard ideas to make applications intuitive

- To learn a new application, check it out by clicking around
 - * Take a minute to ...
 - Look under all menus to see operations
 - Follow the "... " for menu operations
 - Try to recognize what the icons mean

Clicking around is exploration

8



"Blazing Away"

Learn an application fast by trying it

- Beginning with a new instance, assertively try menu items
 - * *Expect to fail* and make a mess
 - * Exit the application, and if you are asked "Save?" reply "No"
 - * Try repeatedly until becoming familiar

If you are trying to achieve some goal, keep your eyes on the prize

9



To Learn A New Tool

Software systems build on a consistent interface, standard metaphors, etc.

- * Expect to teach yourself applications
- * Do so by familiarizing yourself with the features ... "Clicking Around"
- * Assertively try out the features, "Blaze Away," watching what they do
 - Be efficient – stay focused, don't type a lot when you expect to exit

If all else fails ...

10



Mac or PC???

Arguments about which is better, Mac or PC, create only heat, no light

- * They are more alike than different
- * Any Fluent person can use both

11



Differences & Similarities

Different vendors will produce similar software for the same task

- Superficially, the GUIs use similar features
- Fundamentally, the task largely determines how the software must work ... they *must* be similar

12



Placeholder Technique

The Problem: Eliminate single instances of a string without removing doubles

```
Roses are red,
Violets are blue,
Bunching is good,
But doesn't rhyme!
```

Intended ↗

19



Placeholder Technique

The Problem: Eliminate single instances of a string without removing doubles

```
Roses are red,
Violets are blue,
Bunching is good,
But doesn't rhyme!
```

Intended ↗

Trashed by extra line breaks →

```
Roses are
red,
Violets are
blue,
Bunching is
good,
But doesn't
rhyme!
```



Thinking of the Input

Roses are ↵red↵Violets are ↵blue↵...

- Deleting the single ↵ deletes them all!

21



Thinking of the Input

Roses are ↵red↵Violets are ↵blue↵...

- Deleting the single ↵ deletes them all!
- Placeholder technique ...
 - Substitute a placeholder for the longer string ↵↵ ↵ #
 - Yielding

Roses are ↵red#Violets are ↵blue#...

- Next, delete the shorter string ↵↵ ↵ ε
- Yielding

Roses are red#Violets are blue#...

22



Placeholder Replaced

- Finally, replace the placeholder with the original long string # ↵↵
- Yielding

Roses are red↵Violets are blue↵...

- The intended result

- Summarizing the placeholder

longstring ↵ placeholder

shortstring ↵ ε

placeholder ↵ longstring

23



Summarizing

Humans must learn to use tools

- Software designers want you to learn easily
- SW uses consistent interface, metaphors, ...
- * Teach yourself applications by "Clicking Around," and "Blaze Away"
- * SW for a task must share core features
- * Learn app.s independently of vendor

Placeholder technique is effective for fixing text

24