



Test Your Tech

Blazing away is:

- A. The BBC drama about Charles Dickens.
- B. Learning a new software program without reading the manual.
- C. A fire burning out of control.



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Announcements

- Due Monday before noon:
 - * Lab 2—Directories
 - * HW 1
 - It's not a quiz
 - We just used Catalyst's Web Q tool to allow you to answer the homework questions online
- For lecture Monday, read chapter 3 of *Fluency*



Video

- Fitness: Skills, Concepts and Capabilities (5:38)
 - * <http://uweoconnect.extn.washington.edu/fitnessskillsconceptscapabilitiesds/fit7/>



What the Digerati Know

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



Learning New Tools

How do we learn to use new tools?

- Reading the owner's manual -- chain saw
- Be taught in their use -- car, bicycle
- Figure them out ourselves -- iPod



Learning New Tools

How do we learn to use new tools?

- Reading the owner's manual -- chain saw
- Be taught in their use -- car, bicycle
- Figure them out ourselves -- iPod
- 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



Standard Functionality

Most applications have **File** and **Edit**

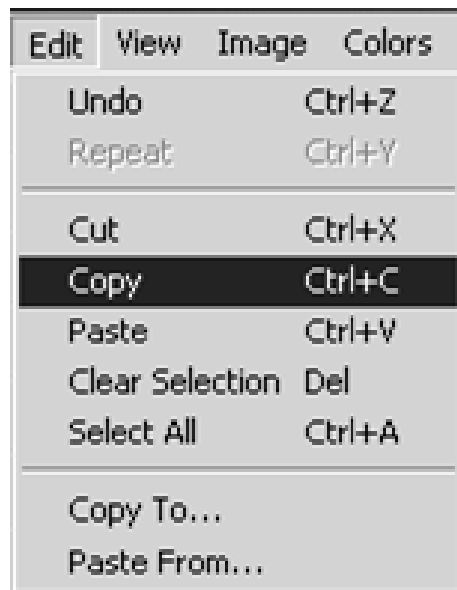
Edit	View	Image	Colors
Undo			Ctrl+Z
Repeat			Ctrl+Y
Cut			Ctrl+X
Copy			Ctrl+C
Paste			Ctrl+V
Clear Selection			Del
Select All			Ctrl+A
Copy To...			
Paste From...			

File	Edit	View	Image	Colors	Help
New					Ctrl+N
Open...					Ctrl+O
Save					Ctrl+S
Save As...					
Print Preview					
Page Setup...					
Print...					Ctrl+P
Send...					
Set As Wallpaper (Tiled)					
Set As Wallpaper (Centered)					
1 World3					
2 AWA					
3 C:\WINNT\Gone Fishing					
4 C:\WINNT\Coffee Bean					
Exit					Alt+F4



Standard Functionality

Most applications
have **File** and **Edit**



Impress your friends with your knowledge of Japanese



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 table with a place for everything

Document: Date created, date modified, creator, fonts, content, diagrams, pictures, tables, ...

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



Example

- Checkbook register
 - * A blank line is a new instance
 - * Same structure
 - Column headings: date, payee, reconciled, withdrawal, deposit, balance
 - Data types for each column: date, text, y/n, currency, currency, currency

DATE	PAYEE	Rec	WD	DEP	BAL
12/31/07	Rentals R Us		750.00		1235.00
1/1/08	BIG S Season Pass		499.00		736.00



"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

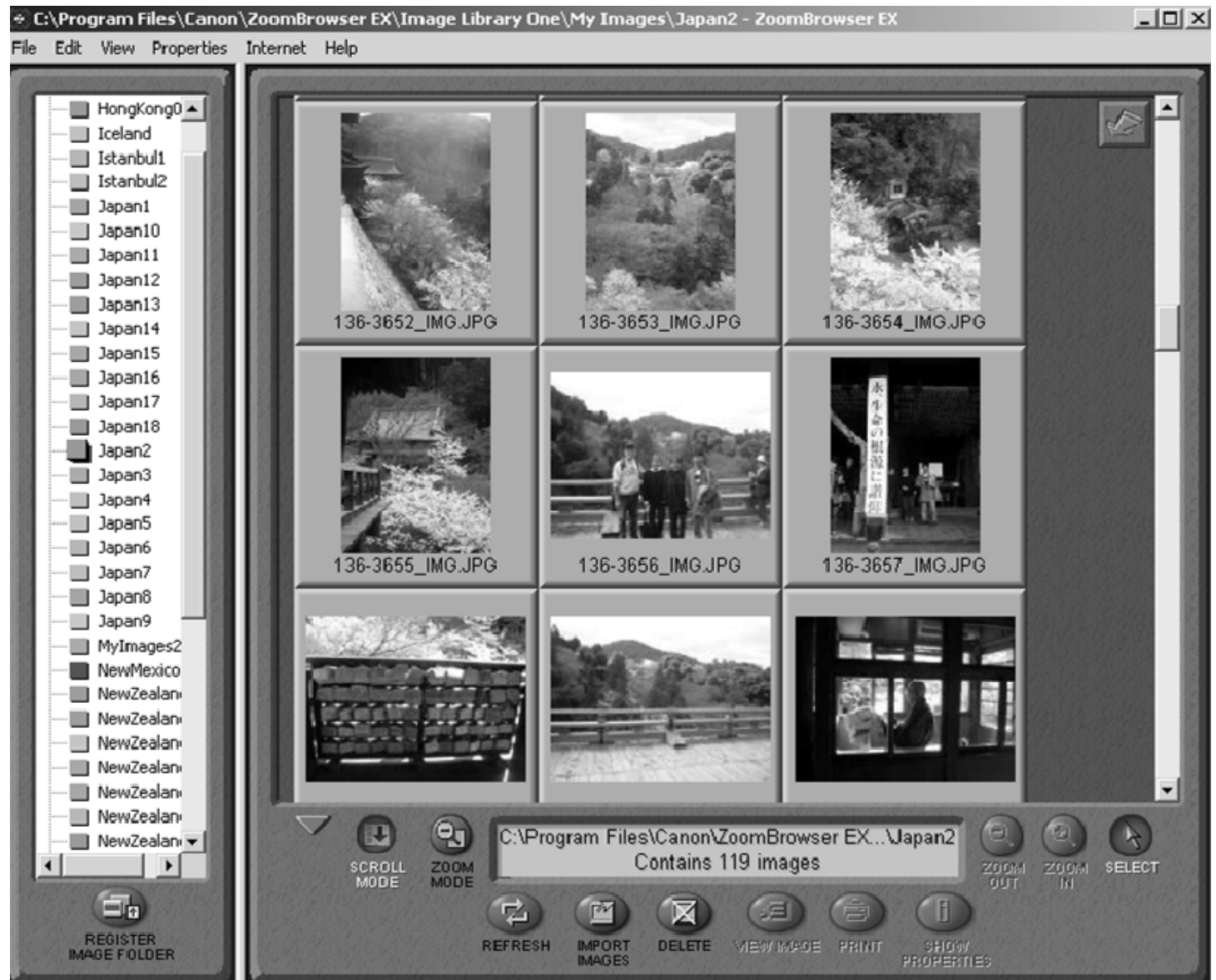


A New Application

Find:

- consistent interface
- icons
- metaphor







Metaphors

Net Point Video: Metaphors

<http://uweoconnect.extn.washington.edu/metaphorsdslfit7/>



"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



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 ...



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



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
- Implications ...
 - Know one word processor, learn others fast
 - SW differences: mostly glitz, convenience
 - Don't accept lousy ... switch to other SW



Mac or PC???

Which is better—Mac or PC?

- Arguments create only heat, no light
 - * They are more alike than different
 - * Any Fluent person can use both

Homework 2: Find a Macintosh computer on campus, e.g. MGH 1st floor or OUGL labs. Try out the Mac and see what you find familiar and what is different. Locate the browser, and check the class web page. Hand in a list *describing* in a sentence or two five features you find different, and five that are the same.

Due: Before 5pm on Friday, January 18, 2008



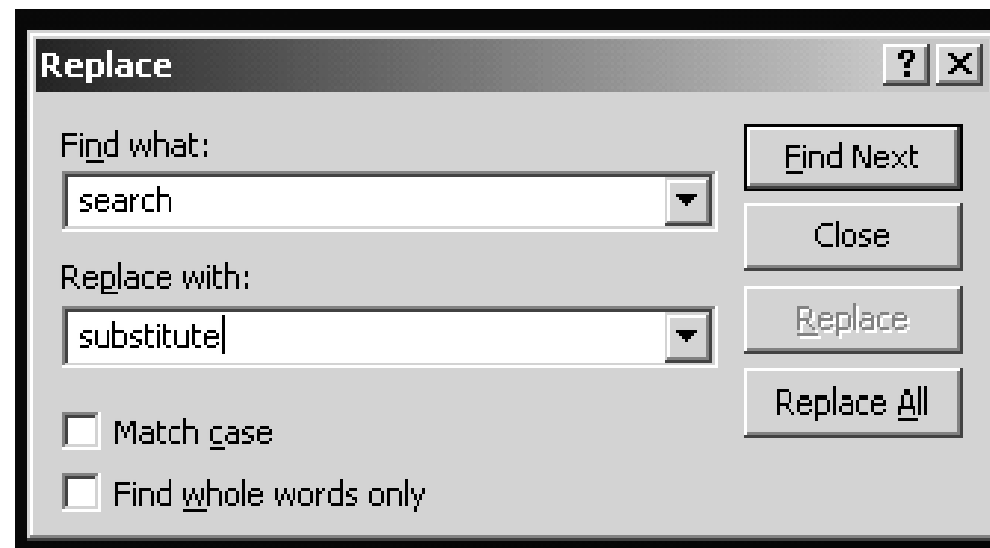
Another Implication

If SW is similar at its core, computations can be taught without learning a specific vendor's SW ...



Replacement

Two strings are required: search string
and substitution string



- Adopt a notation: **search * substitute**



Notation Example

Illustrating the use of the notation

- * Using the replacement `Clinton * Bush`

The sentence

`"At the White House President Clinton said ..."`

Becomes

`"At the White House President Bush said ..."`

- * It's easy to express substitutions

`Gore * Cheney / Albright * Powell / Socks * Buddy`

To show deletion use epsilon, ϵ , as in: `word * ϵ`



Placeholder Technique

A common problem ... copying text off web often trashes the line breaks

```
Roses are red
Violets are blue
Searching is fun
But doesn't rhyme
```

Intended

Trashed by extra line breaks

```
Roses are
red
Violets are
blue
Searching is
fun
But doesn't
rhyme
```



Placeholder Technique

Formatting is performed by special (non printing) characters ...

```
Roses are red↵  
↵  
Violets are blue↵  
↵  
Searching is fun↵  
↵  
But doesn't rhyme↵
```

Intended ↗

Trashed by extra line breaks →

```
Roses are ↵  
red↵  
↵  
Violets are ↵  
blue↵  
↵  
Searching is ↵  
fun↵  
↵  
But doesn't ↵  
rhyme ↵
```



Placeholder Technique

Roses are ↵red↵↵Violets are ↵blue↵↵...

- Deleting the single ↵ deletes them all!

```
Roses are ↵  
red↵  
↵  
Violets are ↵  
blue↵  
↵  
Searching is ↵  
fun↵  
↵  
But doesn't ↵  
rhyme ↵
```



```
Roses are redViolets  
are blueSearching is  
funBut doesn't rhyme
```



Thinking of the Input

Roses are ↵red↵↵Violets are ↵blue↵↵...

- Placeholder technique ...

Step 1. Substitute a placeholder for the longer string

↵↵ x #

Yielding

Roses are ↵red#Violets are ↵blue#...

Step 2. Next, delete the shorter string

↵ x ϵ

Yielding

Roses are red#Violets are blue#...



Placeholder Replaced

Step 3. 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*



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



For Monday

- Lab 2, HW1 are due before noon
- Read Chapter 3 of *Fluency*
- Review for next week's pop quiz



Next Week

- Pop quiz next week in Lab
 - * Online like the last one
 - * Ten questions
 - True/False
 - Multiple Choice



Next Week

- Review
 - * Study questions at end of each chapter
 - * Study answers to odd-numbered questions in back of book
 - * Lecture notes
 - * Videocasts of lectures
 - * Flash cards



Next Week

- Have a good weekend!