



What the Digerati Know

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

© Copyright L. Spauld, 2008

1



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 -- CD player

2



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 -- 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

3



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...					Ctrl+P
Print...					
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

4



Standard Functionality

Most applications
have File and Edit

The screenshot shows a window titled 'ELECOM UC-T Series' with a menu bar in Japanese: ファイル (File), 編集 (Edit), 接続 (View), ウィンドウ (Image), 表示 (Colors), ヘルプ (Help). The 'Edit' menu is open, showing options like 元に戻す (Undo), 繰り返す (Repeat), 切り取り (Cut), コピー (Copy), 貼り付け (Paste), 選択をクリア (Clear Selection), and すべてを選択 (Select All). A file explorer window is also visible in the background.

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

5



"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

7



A New Application

Find:
consistent
interface
icons
metaphor



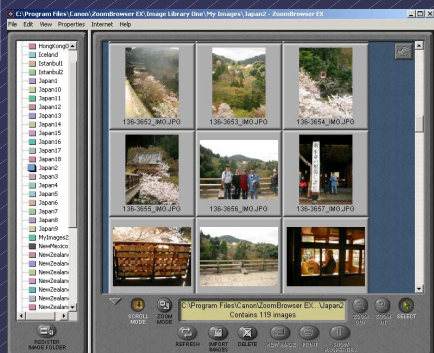
"Blazing Away"

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

10



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 ...

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

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

<pre>Roses are red Violets are blue Searching is fun But doesn't rhyme</pre>	<pre>Roses are red Violets are blue Searching is fun But doesn't rhyme</pre>
--	--

Intended \leftarrow ↑
Trashed by extra line breaks \rightarrow

19



Placeholder Technique

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

<pre>Roses are red.␣ ␣ Violets are blue.␣ ␣ Searching is fun.␣ ␣ But doesn't rhyme.␣</pre>	<pre>Roses are ␣ red.␣ ␣ Violets are ␣ blue.␣ ␣ Searching is ␣ fun.␣ ␣ But doesn't ␣ rhyme ␣</pre>
--	--

Intended \leftarrow ↑
Trashed by extra line breaks \rightarrow



Placeholder Technique

Roses are ␣red.␣Violets are ␣blue.␣...

- Deleting the single ␣ deletes them all!

<pre>Roses are ␣ red.␣ ␣ Violets are ␣ blue.␣ ␣ Searching is ␣ fun.␣ ␣ But doesn't ␣ rhyme ␣</pre>	<pre>Roses are redViolets are blueSearching is funBut doesn't rhyme</pre>
--	---

21



Thinking of the Input

Roses are ␣red.␣Violets are ␣blue.␣...

- Placeholder technique ...
 - Step 1. Substitute a placeholder for the longer string
␣␣ ← #
Yielding

Roses are ␣red#Violets are ␣blue#...

- Step 2. Next, delete the shorter string
␣␣ ← ε
Yielding

Roses are red#Violets are blue#...

22



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

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