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

Standard Functionality

Most applications have File and Edit

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

A ‘blank instance’ is simply the structure without any of the content
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.

Find a new application.

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???

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

Assignment 2: Find a Macintosh computer on campus, e.g. MGH 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 Class Monday 12 January 2004

Another Implication

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

Another Implication

If SW is similar at its core, computations can be taught without learning a specific vendor’s SW … consider text searching and replacement

Article 1. All human beings are born free and equal …

Replacement

Two strings are required: search string and substitution string

- Adopt a notation: \texttt{search} \texttt{\rightarrow} \texttt{substitute}

Notation Example

Illustrating the use of the notation

- Using the replacement \texttt{Clinton} \texttt{\rightarrow} \texttt{Bush}

The sentence

\texttt{“At the White House President Clinton said …”}

Becomes

\texttt{“At the White House President Bush said …”}

- It’s easy to express substitutions

Core \texttt{Cheney / Albright} \texttt{Powell} \texttt{Socks} \texttt{Buddy}

To show deletion use epsilon, \texttt{\epsilon}, as in: word \texttt{\rightarrow} \texttt{\epsilon}. 
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

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

Placeholder Technique

• Deleting the single \ makes them all

Step 1. Substitute a placeholder for the longer string

Yielding
Roses are red\Vi o l e t s  a r e  b l u e\Searching is fun\But doesn’t rhyme\J

Step 2. Next, delete the shorter string

Yielding
Roses are red\Violets are blue\...

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

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