GUI Bloopers

Interaction Bloopers

Interaction Bloopers

- More important than GUI control, navigation, text, and graphic design/layout bloopers:
  - Larger in scope, often generalizations of specific look-and-feel bloopers
  - Harder to identify
  - Harder to avoid
    - Often a result of decisions made in the bowels of implementation
  - Harder to correct

Blooper 40: Exposing implementation to users

- Users should not be subjected to internal implementation details when they are contrary to their working model
- Examples:
  - Speed in a game a setting from 1 to 10
    - Expect 10 to be fast and 1 to be slow, but it was the opposite
    - Delay loop for the setting's number of times
  - Limits on data sizes to "weird" numbers
    - 16, 32, 64, 128, etc.
    - Most people would prefer 10, 100, 1000, etc.
- Design for the convenience of users, not developers

Blooper 40 Example

- X values of graphs convenient for developers (intervals of max/10) but not for users
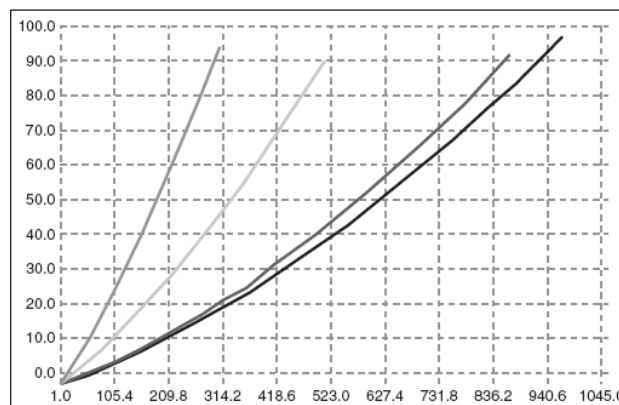
Forcing users to think like a programmer

- Prototype web application had dialog boxes for each function
  - Drop-down menu appeared in several dialogs
  - Changing menu in one dialog changed it in all others
- Why?
  - Programmer thought it more efficient to have one menu and a reference to it from every place it was needed (multiple dialogs)
  - Behavior probably didn't match users expectations

Avoiding Blooper 40

- Focus the user interface strictly on the tasks
  - Design the UI according to a conceptual model that includes only objects, actions, and attributes from the app's target tasks
- Design for the convenience of users, not developers
  - Requires extra work for the developers, but hopefully they take pride in making software that is easy to use!

Blooper 41: Needless restrictions

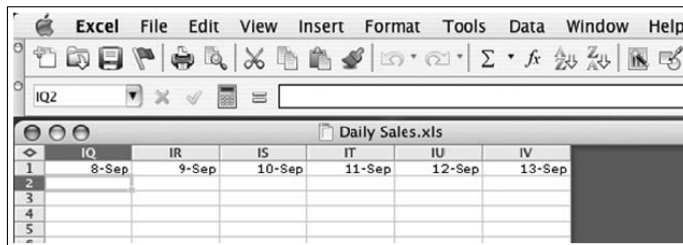- Needless restrictions, like unnatural actions, are hard to learn, easy to forget, and annoying

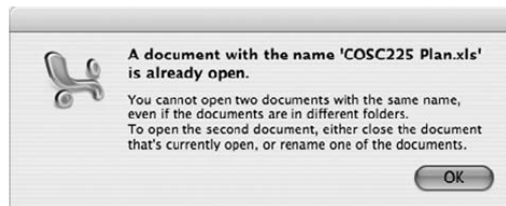"What do you mean Rumpelstiltskin is too long for a password?!"

Why is Rumpelstiltskin too long? Probably some arbitrary database limitation, perhaps set to 10 characters.

More common limitations would be some power of 2; e.g. 32 or 64 char limit

Blooper 41 Examples

Microsoft Excel: 256-column limit is artificial and prevents creation of useful spreadsheets.

A document with the name 'COSC225 Plan.xls' is already open.

You cannot open two documents with the same name, even if the documents are in different folders.
To open the second document, either close the document that's currently open, or rename one of the documents.

OK

Microsoft Excel: blocks opening two files with same name.

Blooper 41 Example

Macintosh DVD player (OS X): region code can be changed only five times.

This limitation is due to motion picture studio actions, but it is perplexing limitation to an end user.

Avoiding Blooper 41

- Don't impose numerical limits, if possible
  - Use dynamic allocation of storage
- Use powers of 10 not powers of 2

MacOS X: higher "number of colors" options expressed as powers of 10.

Blooper 42: Confusable Concepts

- One way an app's conceptual model can be confusing is to include concepts that overlap in meaning or function
- E.g. website that allows people to look for a home by: (a) town (b) location on a map
  - Users had to choose one or the other but users missed the artificial distinction since both are "by location"
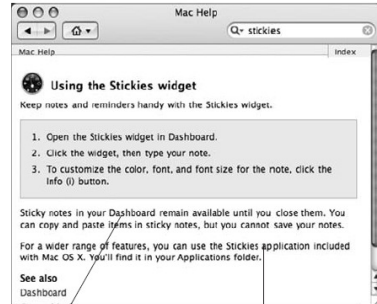
Blooper 42 Example

Apple .Mac.com online service: two different "home" pages.

Blooper 42 Example

MacOS X: two different stickies implementations. (A) On Dashboard. (B) On Desktop.

Avoiding Blooper 42

- Avoid overlapping concepts
  - Think carefully about the conceptual model presented by your product
  - Clearly distinct? Overlaps? Users likely to confuse them?
- Consider if a new implementation of an existing function is really needed
  - If so, use a different name, remove the old one, or blend the two so they work together

Blooper 43 : Asking users for unneeded data

- This is a sure way to annoy users
- Variations:
  - We forgot, tell us again
  - Unnecessary questions
  - Requiring data that should be optional
  - Requiring repeated logins in a session

Blooper 43 Example

Travelocity.com: requires user to disambiguate airports every time the FareWatcher is updated.

Blooper 43 Example

To contact your Representative:

1. Select your location from list below:
   Alphabetical list of states and territories

2. Enter your ZIP code and your 4-digit ZIP code extension.
   94112 - [   ]

3. Click the "Contact My Representative" button.
   Contact My Representative

No State was selected.
Please use your web browser's **BACK** capability to return to the Write Your Representative home page to select your State.

A

★ ★ ★ ★ ★
UNITED STATES
HOUSE OF REPRESENTATIVES
★ ★ ★ ★ ★

Find Your Representative
by ZIP [   ] (+4) [   ] Go

B

House.gov. (A) Write Representative page requires state and zip code. (B) Home page needs only zip code.

Blooper 43 Example

33. List the names of **all of the employers** you worked for in the last 18 months, the dates you worked for each employer, the wages you earned from each, and how you were paid. Please also indicate the employer you worked for longest by selecting the radio button next to that employer. Help

	Employer Name Help	From Date (mm/dd/yyyy)	To Date (mm/dd/yyyy)	Earnings	How Paid

34. Regarding the employer in question 33 that you indicated you worked for the longest, please answer the following:
    34a. How long did you work for that employer?   Years [   ] Months [   ]

EDD.CA.gov: form asks user for data that could be deduced.

Blooper 43 Example

Agilent.com: demanding more data than needed. Comment form requires country needlessly.

Blooper 43 Example

United.com: mileage summary page requires already logged-in user to login again.

Avoiding Blooper 43

- Make it a high priority NOT to require users to enter data repeatedly.
  - Ask only for data you really need
  - Stick to the current transaction
  - Don't make any data "required" unless you really can't proceed without it
  - Don't require data some customers won't have
  - Deduce as much as you can from information given to you instead of adding additional fields

Blooper 44: Asking users for random seeds

- Programs shouldn't ask the user to seed the random number generator
  - One exception: generating secure keys (require lots of random typing, mouse motion, etc.)
- Meaningless to most users
- People don't give good random numbers
- Avoiding the blooper: Incorporate random intervals/timers, if date/time not good enough, something like random.org

Blooper 45 : Pointless choice

- A second special case of requiring users to enter unnecessary data is presenting data with unnecessary choices
  - No difference between choices
  - Users don't know which to pick
  - Obvious answer
  - False choice

Blooper 45 Example

Selection.co.nz: search for "rosecroft" B&B in "christchurch" yields two locations that are both the city of Christchurch, plus two irrelevant locations.

Selection.co.nz is a B&B search engine

Blooper 45 Example

Download Sibelius **Scorch**

Step 2 of 3: Choose your download site

Now choose the download site for Scorch you and click **Download** (if you don't have any preference, choose one of the HTTP sites). Installation instructions will appear when the download begins.

○ HTTP 1   ○ FTP 1
○ HTTP 2

(Download)

Sibelius.com: users have no basis for choosing between download servers.

Blooper 45 Example

From	To
sfo	auckland

A

Flights Search »» Select »» Review »» Purchase

There are multiple airports in the city you entered. Please select a specifc airport from the list below or select the city name to expand your search. Back to Flights Search

To: You entered "auckland"

Select	City/Airport name	City/Airport code	City	State/ Country
●	Oakland International Airport	OAK	Oakland	CA United States
○	San Francisco International Airport	SFO	San Francisco	CA United States
○	San Jose International Airport	SJC	San Jose	CA United States
○	Auckland Airport	AKL	Auckland	New Zealand

Select »»

B

United.com: search for flights from SFO to Auckland results in needless choice.

Blooper 45 Example

United.com: search for flights from SFO to Denver results in needless "choice" of one.

Blooper 45 Example

Selection.co.nz: search for "rosecroft" B&B in "christchurch" yields choice of four locations in which no B&Bs were found.

Blooper 45 Example

AA.com: search for flights from SFO to Houston displays pointless extra choice in which some options don't actually exist.

Avoiding Blooper 45

- If the choice makes no difference, don't offer it
  - How do you know? Test it!
  - Watch people using your software
- If users won't understand the question, don't ask
- If there is an obvious option, choose it
- Don't offer false choices

Blooper 46: Hard to remember ID

- The most obvious way to burden users' memory is to require authentication identification they cannot remember
  - Assigned, non-changeable passwords
  - Unreasonable password restrictions

Instruction:

Change your PIN to a number that is easy for you to remember. A PIN can be 6-10 digits and cannot start with 0. Your PIN must be numeric.

New PIN:

Confirm New PIN:

Remember: Please write down your PIN.

Client Web application: restrictions prevent users from devising easy-to-remember PIN.

Blooper 46 Example

- Security questions that don't work

User ID: * [ ] 4 - 40 characters
Password: * [ ] 6 - 32 characters
Confirm Password: * [ ]
Security Question: ✓ Select a security question...
Your Answer: What was the name of your first pet?
What was the name of your childhood best friend?
Who was your childhood hero?
What was the name of your elementary school?
What is your father's middle name?
What city were you born in?
What was your high school mascot?

Intuit.com: limited security questions—user may have no unique, memorable answer for any.

Answers to these questions may also be easy to get!

Avoiding Blooper 46

- Let users devise their own user names, passwords, and PINs
  - Good option for uniqueness is to use an email address as a username
- Don't impose arbitrary and unnecessary restrictions on the password or PIN
  - Complex passwords not necessarily secure as people must then write them down
- Allow user to change their password and PIN
- Reset password option to registered email address
- If you use challenge questions, provide a good selection and an option for users to specify their own question

Blooper 47 : Mission Impossible Instructions

- Instructions that go away too soon

Microsoft Word

The spelling check is complete. Text set to (no proofing) was skipped. To find (no proofing) text, click Edit/Replace, click More, click Format, click Language and choose (no proofing).

OK
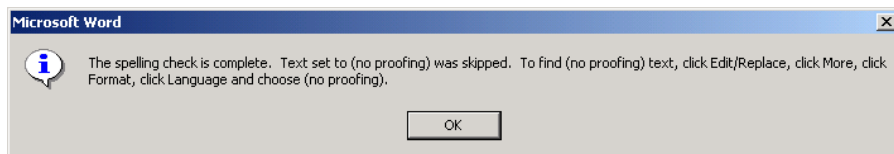
- Detailed instructions should remain on the screen while the user is carrying them out
  - Latest Office apps display help in right hand pane

Blooper 47 Example

National Geographic Trip Planner Deluxe Special Edition

Entries can be added to the Notebook from the map or the Guidebook or the Guidebook Search Results.
1. From the map: Right-click on the map, select "Create a New Place" then select "Add to Notebook", provide the information you want to save and select "OK".
2. From the Guidebook: Right-click on an entry in the Lodgings/Restaurants/Attractions List and select "Add to Notebook", or select the "Add to Notebook" button to add the highlighted entry.
3. From the Guidebook Search Results: Right-click on an entry and select "Add to Notebook", or select the "Add to Notebook" button to add the highlighted entry.

OK

National Geographic Trip Planner: three options, each with several steps.

Avoiding Blooper 47

- Provide a wizard
  - Multipage dialog box to complete each step
- Keep instructions up
  - In separate pane or window

Blooper 48: Unnecessary or poorly marked modes

- If your software has modes, users may not know which mode they are in and enter a command meant for the inactive mode
- Examples:
  - Try to drag a rectangle to select objects but end up drawing a line instead
  - Printer outputs in landscape instead of portrait

Earthlink WebMail: effect of "Go" button depends on action set by menu.
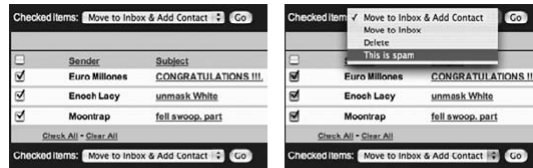
Less harmful modes : modal dialog boxes

- Modal dialog boxes block users from interacting with other windows while the dialog is active
  - Modal because the computer goes into a mode where only input to the dialog box is accepted
- Necessary when:
  - Serious problem requiring the user's attention
  - Other changes are not allowed while the dialog box is displayed
- Mode error with a modal dialog is just a beep if the user tries to click on something else

Many harmless modes

- Word is teeming with modes
  - View: Normal, outline, page layout
  - Auto correct: on, off
  - Insert or overwrite text
  - Auto save: on, off
  - Smart cut-and-paste: on, off
  - Etc.
- Most of these modes don't cause errors because they are rarely changed from defaults
  - Many users may not even know of these modes

Toasters have modes

- The "darkness" control on a toaster is a mode that sometimes results in burnt toast when the last time you put in a frozen waffle
- How could you make a modeless toaster?

Avoiding Blooper 48

- Remove or minimize mode settings
  - E.g. for a photo application instead of a mode for "browse" and a mode for "edit" there might be separate windows for each
- Minimize the use of modal dialog boxes unless it is crucial the users not interact with things on the display
- Make modes visible and difficult to miss

Blooper 49: Unexpected Rearrangement of Display

- What if the OS constantly rearranged your icons for you?
- Software sometimes rearranges when the user does not expect it
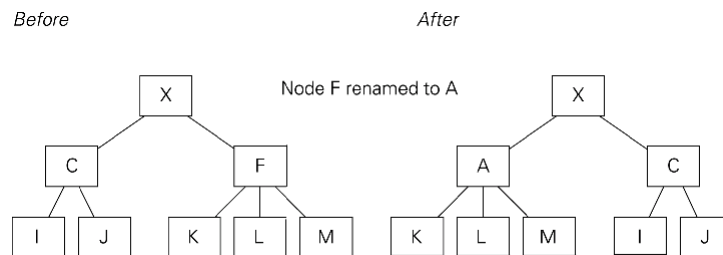
Blooper 49 Example

- Automatic re-scaling of a graph can be misleading
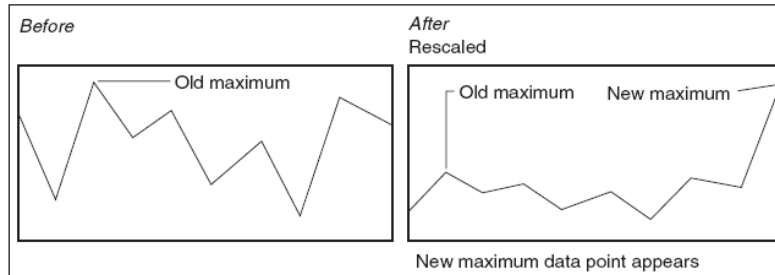
Graph rescales vertical axis automatically when data points arrive or depart.

Blooper 49 Example

- Moving Controls
  - Windows are moved or resized by the software
  - The cursor suddenly jumps to a new position
  - Tab rows swap places when users click on a tab in a back row
  - Menu commands appear and disappear, often mysteriously

Blooper 49 Example

Messages.Yahoo.com (2000): position of "Previous" and "Next" links changes between pages.

Messages.Yahoo.com (2006): position of "Previous" and "Next" links is always the same.

Avoiding Blooper 49

- The screen belongs to the user
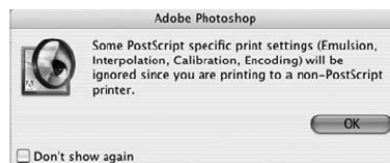- Preserve display inertia

Blooper 50: Dialog Boxes that Trap Users

- Dialog boxes sometimes provide no way out other than a direction that users don't want to go.
  - No cancel
  - All paths are wrong
  - Required button is inactive
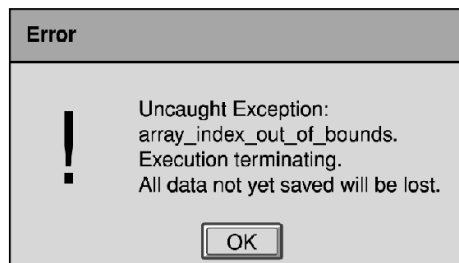 - Unclear choices
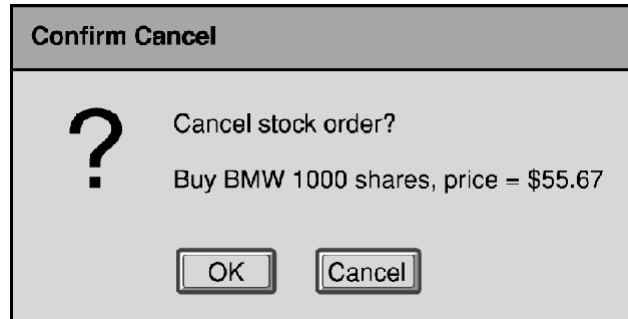 - No, not OK

Blooper 50 Example

- No Cancel

Adobe PhotoShop: Print setting warning provides no "Cancel."
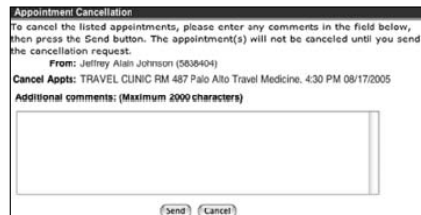
- No, Not OK!

Dialog Box Traps

- Unclear meaning behind cancel

Confirm Cancel

? Cancel stock order?

Buy BMW 1000 shares, price = $55.67

[OK]   [Cancel]

Unclear Choices

Confirm Application Change

Skype has been updated. Do you want to allow the new version to access the same keychain items (such as passwords) as the previous version?

This change is permanent and affects all keychain items used by Skype.

▶ Details

(?)   (Don't Change)   (Change All)

Skype: confusing dialog box—question and buttons use different terms.

Appointment Cancellation

To cancel the listed appointments, please enter any comments in the field below, then press the Send button. The appointment(s) will not be canceled until you send the cancellation request.

From: Jeffrey Alain Johnson (5838404)

Cancel Appts: TRAVEL CLINIC RM 487 Palo Alto Travel Medicine, 4:30 PM 08/17/2005

Additional comments: (Maximum 2000 characters)
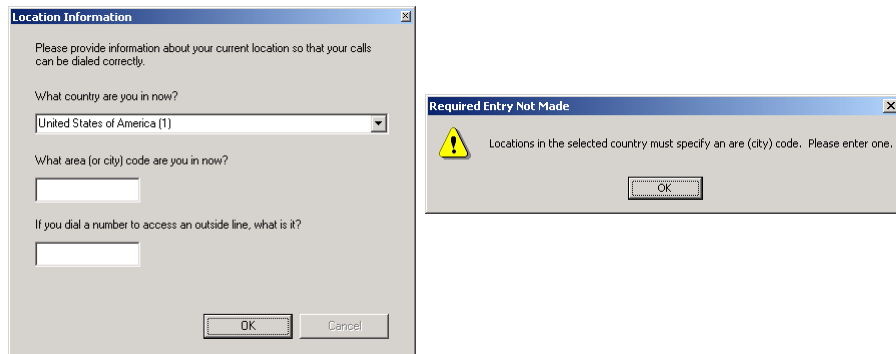
(Send) (Cancel)

A

Cancel dialog: "Send" cancels and "Cancel" cancels cancellation.

Dialog Box Traps

- Forced to enter data! Cancel disabled?

Wrong paths in the dialog box

Apple MacOS X: printer "Out of Paper" warning provides no way to load paper and continue.


Required button is inactive

Apple iPhoto: Problem Report window's "Send to Apple" button stays inactive.

Avoiding Blooper 50

- Provide users with alternatives so they don't feel trapped
- Analyze goals users could have when the dialog box appears so you can provide the right options
- Test dialog boxes with users
- Don't use "OK" for bad messages
  - "Acknowledged", "Understood", "Sigh…not again"

Blooper 51: Ok and Cancel do the same thing

- OK should mean "Yes do this" and Cancel should mean "No, I don't want to do this"
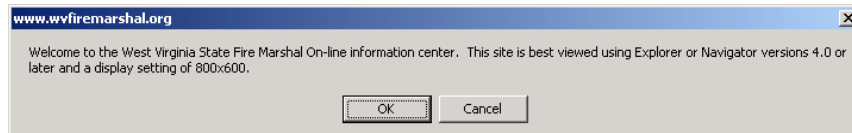
- Other variations where cancel doesn't cancel
  - E.g. action already done and software doesn't support undoing it

Avoiding Blooper 51

- Changes should not be applied until the user clicks "OK"

- Upon clicking "cancel" the app should be exactly as it was when the dialog box was opened or the user last clicked "apply"