

Pattern: UI Window Modality

- Problem:** Find an effective way to expose bugs of the UI window modality type.
- Context:** Depending on user decision and tasks, task windows, sub-task windows and dialog (error) windows appear. These windows are either non-modal or full application modal. While performing different tasks, users navigate from one task window to another or to a dialog message window. It is often desirable to check for the user's ability to interact with other parts of program until the user has acknowledged the dialog or a sub-task window that is launched from a task window.
- Forces:**
1. It's difficult to know beforehand which set of windows is modal/non-modal. Some task windows are purposely made modal or non-modal, and it's very difficult to distinguish between them.
 2. One of the qualities of a good tester is to motivate the developers to fix his bug. Window modality errors may be dismissed as simple and developers may wait till last moment to fix them or leave them unfixed. To make this issue look more general and serious, testers have to conduct follow-up testing (creating real-life end-user scenarios) and try to fail the software or make it behave in an unintended manner. This would bind the software management to fix them.
- Solution:** Test for UI Window Modality. Navigate from one task window to another. Force sub-task windows and dialogs to appear from task windows. Check, whether task windows that force error dialogs to open or launch sub-task windows, can be accessed and closed without closing the later. Test if an application can be closed, without closing its task windows. Check, to see if it is possible to open the same task window more than once from the main application or from other parent task windows. Check to see that if a window is made non-modal, then
1. Does software fail (follow up testing)?
 2. Does it make it difficult for the end-user to use it with ease?
 3. Does it create confusion among users?

Examples

One: TI InterActive 1.0

1. Start TI InterActive 1.0.
2. From the 'Tools' pull-down menu select 'Web Browser'
3. TI Web Browser opens
4. In the TI Web Browser, from the 'Favorites' pull-down menu select 'Add to Favorites...'
5. The 'Add Favorite' window opens
6. Leaving aside the 'Add Favorite' window (without closing this window), close the TI Web Browser
7. The 'Add Favorite' window is still open, even though the browser is closed
8. Close the 'Add Favorite' window, by clicking on the 'Close' button (top right corner of the window)
9. TI InterActive 1.0 crashes

Fix: In the subsequent release, the 'Add Favorite' window was made full application modal and the whole problem was solved

Two: Adobe Acrobat Reader 4.0

1. Start Adobe Acrobat Reader 4.0(Open a .pdf file for reading)
2. From the 'File' pull-down menu select 'Print...'
3. The 'Print' window opens up
4. In the 'Print Range' section, click on the 'Pages from' option button
5. Enter an invalid page number in the 'to:' edit box. (For e.g., if a .pdf file contains 84 pages, then as soon as the 'Pages' option is clicked, by default it displays that it will print from 1 to 84. So 85 is an invalid page number)
6. The 'Acrobat Reader' error message window appears stating "There is no page numbered '85' in this document"
7. Leaving aside this error message window, click any where in the 'Print' window. The 'Print' window gets the focus and the 'Acrobat Reader' error message window disappears in the background
8. In the 'Print' window, click on the 'Cancel' button
9. Back in the main window, the software does not allow the user to perform any tasks

Work around: The 'Acrobat Reader' error message window is still open. Even though the 'Print' window is closed, the error message window generated from it is still open. Close the 'Acrobat Reader' error message window. The software now allows the user to go ahead with his tasks

Three: Microsoft Internet Explorer 6.00.2403.0000

1. Start Microsoft Internet Explorer (IE) 6.00.2403.0000
2. In the 'Address Bar' type in the address - <http://www.audiogalaxy.com/user/home.php?> and hit the 'Enter' key. Wait till the page is completely downloaded (the 'Status bar' displays 'Done')
3. From the 'Tools' pull-down menu select 'Internet Options...'
4. In the 'Internet Options' window click on the 'Programs' tab.
5. In the 'Internet programs' section, select 'Outlook Express' in the 'E-mail:' combo box (as the default email service)
6. Click on the 'OK' button.
7. In the main IE window, from the 'Tools' pull-down menu select 'Mails and News' and in the 'Mails and News' sub-menu, select 'Send Page...'
8. 'Send Mail' dialog window appears stating, "The current document type can not be sent as mail. Would you like to send a Shortcut instead?"
9. Click on the 'Yes' button
10. The same 'Send Mail' dialog window appears again, stating, "The current document type can not be sent as mail. Would you like to send a Shortcut instead?"
11. Click on the 'Yes' button.
12. Microsoft Outlook Express 5(6.00.2403.0000(IEBLD.001113-0312)) window opens.

13. Click on the IE window. The IE window has the focus now and the Outlook Express is in the background
14. In the main IE window, from the 'Tools' pull-down menu select 'Mails and News' and in the 'Mails and News' sub-menu, select 'Send Page...'
15. 'Send Mail' dialog window appears stating, "The current document type can not be sent as mail. Would you like to send a Shortcut instead?"
16. Leaving aside this dialog window, repeat Step 14.
17. The error message dialog in Step 15 appears again. (Now there are two dialogs of the same type)
18. Click on the 'No' button of the second dialog window (the dialog disappears)
19. Now, click on the 'No' button of the first dialog window
20. Now bring the already open Outlook Express to focus, to send the page.
21. Both Microsoft Internet Explorer 6.00.2403.0000 and Microsoft Outlook Express 5(6.00.2403.0000(IEBLD.001113-0312)) crash.

Conclusion: Once known, that the 'Send Mail' window is non-modal, a simple follow up test is conducted, to make the application crash and hence make it more credible and serious.

Four: Microsoft Internet Explorer 6.00.2403.0000

1. Start Microsoft Internet Explorer (IE) 6.00.2403.0000. It opens with the home page
2. From the 'File' pull-down select 'Print...'
3. The 'Print' window appears
4. Leave aside this 'Print' window, and returning back to the main IE window, repeat Step 2
5. A new 'Print' window appears (Now there are two 'Print' windows)

Conclusion: Any number of 'Print' windows can be opened this way. Even though there are many 'Print' windows open, each of them, carry out the function they are intended to complete properly. But it is still a minor bug. If the developers don't think it is a serious bug, then some follow-up testing could be conducted to motivate the developers to look into this issue more seriously.

Five: Rational Rose Enterprise Edition - Rational Rose 2000e. Release Version: 2000.02.10

1. Start Rational Rose Enterprise Edition (Rational Rose or simply Rose)
2. Rose main window appears along with the 'Create New Model' window(this window will not appear if prior to this, the "Don't show this dialog in the future" checkbox was checked)
3. In the 'Create New Model' window click on the 'Cancel' button.
4. From the 'Tools' pull-down menu select 'Options...'
5. In the 'Options' window click on the 'Diagram' tab.
6. In the 'Grid' section of 'Diagrams', change the grid size in the 'Grid size:' edit box to 350 and click on the 'OK' button.
7. The 'Grid Size' message window appears stating "Invalid grid size. Valid values for grid size are between 1 and 300"
8. Leave aside this message window and return back to the 'Options' window. The 'Grid Size' window gets behind the 'Options' window. The 'Options' window has the focus now.
9. In the 'Grid size:' edit box change the grid size to 300.
10. Click on the 'OK' button (or any other button, try even closing the 'Options' window). Although navigation between tabs is possible, none of the buttons work. The user cannot do any thing.

Probable fix/Conclusion: The 'Grid Size:' window is still open. Close it and the user can go on with his stipulated tasks.