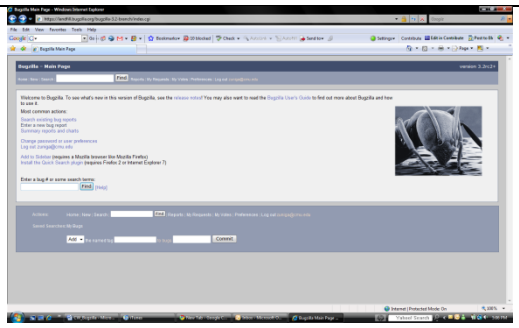
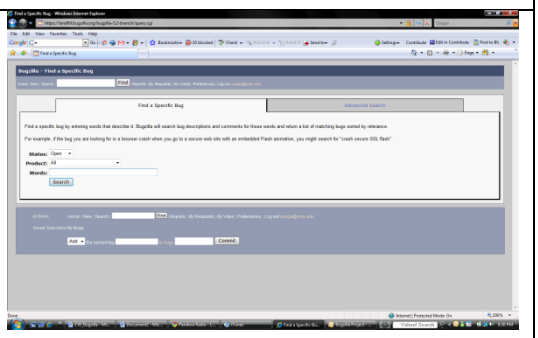
Task 1: Searching for Duplicates

State 01:		State 02:
	→	

Step 01. Click 'Search existing bug reports

1. *Will users be trying to produce whatever effect the action has?*

No, the user will not actually know that they need to search.

2. *Will users see the control (button, menu, switch, etc.) for the action?*

   Yes, the user will be able to easily identify the link.

3. *Once users find the control, will they recognize that it produces the effect they want?*

No, there are other search fields available on the main screen which distract from finding the control. Because of the multiple controls on this page it is not immediately evident that another search function will yield the results the user wants.

4. *After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?*

Yes, the system prompts the user to enter search terms and offers examples for how to proceed.

No. ***BZ- CW-01***	**Problem/Good Aspect:** Problem

Name:

Multiple search fields / links on home page

Evidence:

Task Step: Step #1; Click 'Search existing bug reports'

Cognitive Walkthrough Question: *Once users find the control, will they recognize that it produces the effect they want?*

Explanation:

The user is aware of the other search options available from the home page, and once this is found may not understand whether it is the correct search to be using. **It is important to note that the 'Search existing bug reports' was selected because it contained the options necessary to search closed, new, and assigned bugs.

Severity or Benefit:

Rating: 2; medium

Justification (Frequency, Impact, Persistence):

Frequency: Medium; This problem is common for newer and first time users searching for bugs. They may be unaware of the advanced search feature. Most users will use the advanced search feature, because they are likely to search for all bugs which exist in the system which meet the criteria.

Impact: Low; The impact to the search task is high, because they may not find duplicates. However, a user will not be discouraged from submitting a bug if they cannot search for it. Users may not waste much time trying to find bugs using the search feature.

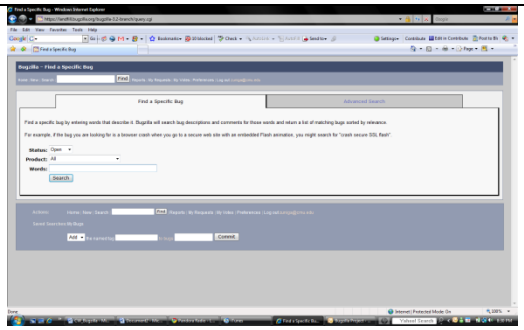
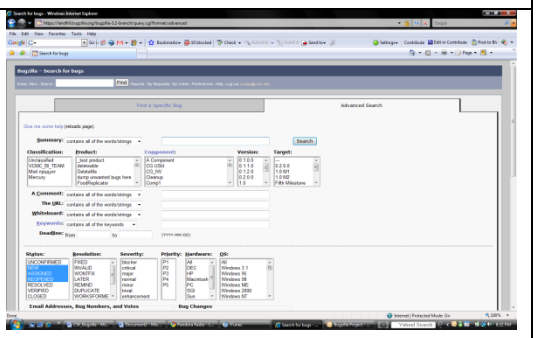
Persistence: Low; Once the user is aware of which search feature to use, this problem no longer persists.

How these factors are weighted and why: The frequency is weighted highest, as our focus addresses the involvement of new users to Bugzilla. The impact and persistence are weighted lower because they do not stop the user from going on to the bug submission task.

Possible solution:

Replace the search link in the center of the home page with and advanced search link to the right of the search button on the title bar.

Possible trade-offs: 16 pixels of vertical space will be reclaimed and 30 pixels of vertical space to the right of the button will now be utilized for the new link.
Relationships: N/A

State 02:		State 03:
	→	

Step 02. Click ‘Advanced Search’ tab.

5. *Will users be trying to produce whatever effect the action has?*

No, because the user assumes that the default search is acceptable to accomplish their task.

6. *Will users see the control (button, menu, switch, etc.) for the action?*

Yes, the highlighted tab is highlighted and the other tab is clearly visible. The user is familiar with tabbed systems and will therefore perceive the second tab.

SIDE ISSUE: The Tabs are not required and are not consistent with the other parts of the system. Tabs are not commonly used in Bugzilla (except preferences). The standard for advanced search is to provide an “advanced search” link right next to the search button to either expand further search options or take the user to an advanced search page without losing already entered parameters/search terms.

7. *Once users find the control, will they recognize that it produces the effect they want?*

Yes, “advanced search” matches the user’s expectations for a search with adjustable parameters, as it is a commonly used term for parameterized searches across a variety of other systems.

8. *After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?*

Yes, the user has received sufficient feedback to know that they are in advanced search.

No. ***BZ-CW-02***	**Problem/Good Aspect:** Problem

Name:

User is unlikely to employ advanced search to find specific bug

Evidence:

Task Step: Step 2 – Click on Advanced Search Tab

Cognitive Walkthrough Question: Q1 - Will users be trying to produce whatever effect the action has?

Explanation:

The user assumes that the default search is acceptable to accomplish their task. There is no apparent reason why a user would want to use the advanced search; he is unable to see the need to employ other features than basic keyword search and might therefore not find relevant information in a large bug database.

Severity or Benefit:

Rating: 2; minor usability issue

Justification (Frequency, Impact, Persistence):

Frequency: High; Common, most new users will not employ the advanced search feature.

Impact: Low; Easy to overcome, once the initial search leads to no or too many results the user is likely to consider using the advanced search.

Persistence: Low, The problem is one-time, once the user knows that the advanced search will enable him doing a finer grained search he will turn towards it again.

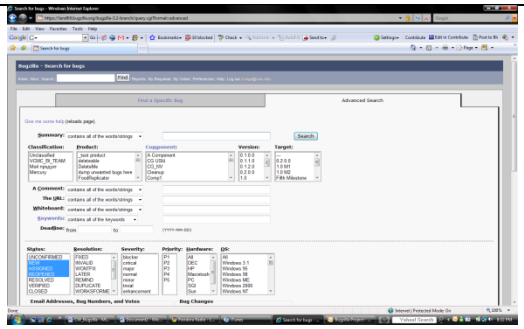
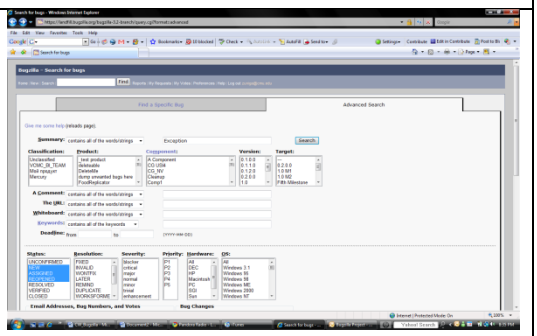
How these factors are weighted and why: Since the impact and persistence of this problem are not severe but the issue is common and wastes at least some of the user's time this is a minor problem.

Possible solution:

Introduce a warning at the basic search, e.g. that there are more than 1000 bugs in the system and the result set might be huge.

Search for duplicates automatically while the user enters a new bug into the system.

Possible trade-offs: There are no apparent tradeoffs for the first solution. The second solution requires development time and a certain amount of intelligent reasoning by the system which might be expensive to implement.
Relationships: N/A

State 03:		State 04:
	→	

Step 03. Click in the search keyword box and type “Exception”.

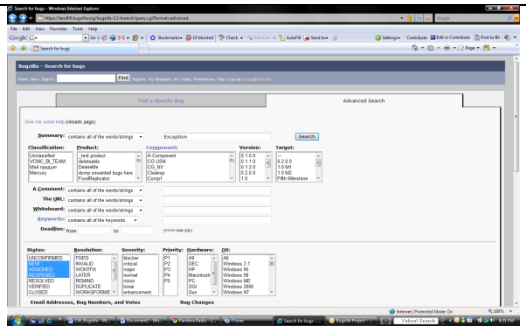
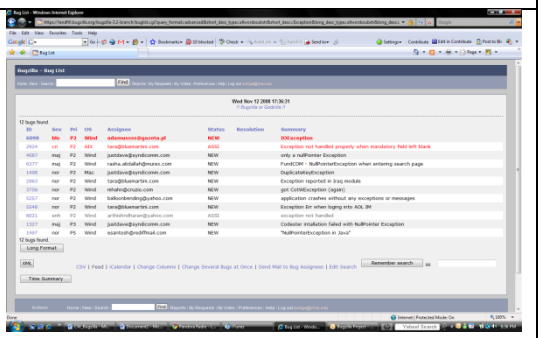
9. Will users be trying to produce whatever effect the action has?
Yes, the user wants to type in the keywords for his search.

10. Will users see the control (button, menu, switch, etc.) for the action?
Yes, the search terms field is located next to the search button.

SIDE ISSUE: There is no label that indicates that the field is used to enter keywords. The dropdown box and the free text field are not associated with the “summary” label.

11. Once users find the control, will they recognize that it produces the effect they want?
Yes, the user is able to enter keyword in this field.

12. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?
Yes, the user sees his keywords in the field.

State 04:		State 05:
	→	

Step 04. Click ‘Search’ (Assumption: The user ensures that only New, Assigned and Reopened bugs are included in his search query)

13. Will users be trying to produce whatever effect the action has?

Yes, the user wants to see which bugs in the system match the keywords which he has chosen in the previous step.

14. Will users see the control (button, menu, switch, etc.) for the action?

Yes, the search button is collocated with the keywords field and is the only button available on this section of the page.

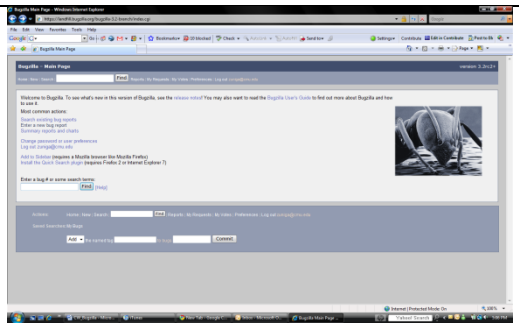
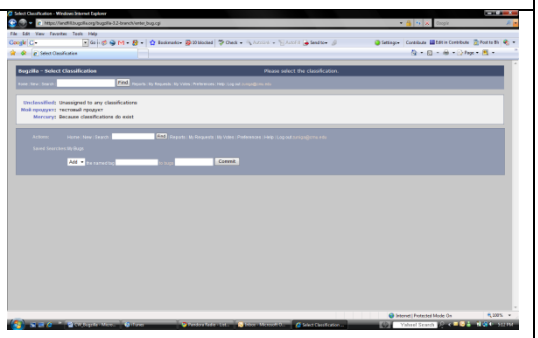
15. Once users find the control, will they recognize that it produces the effect they want?

Yes, search button clearly matches the expected action of returning a result set (i.e. google).

16. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes, the user will recognize the result set as a list of bugs in the system that matches his search term.

Task 2: Submitting a Bug

State 01:		State 02:
	→	

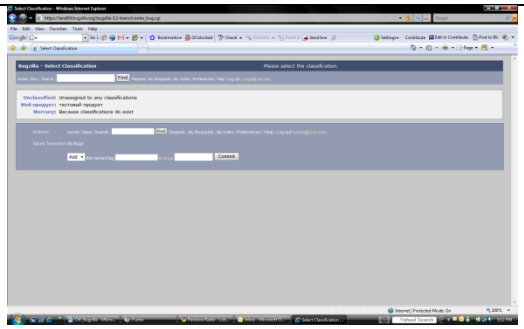
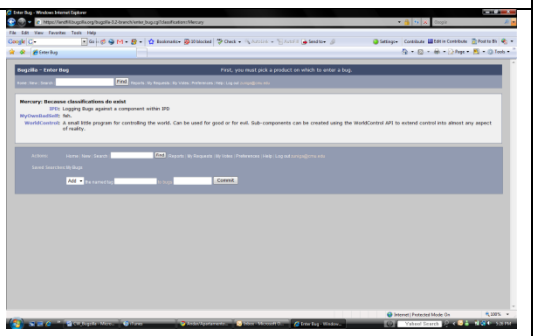
Step 01. Click New

17. Will users be trying to produce whatever effect the action has?
Yes. The user wants to let someone know about the new bug he found.

18. Will users see the control (button, menu, switch, etc.) for the action?
Yes the 'New' link is clearly visible and user would see it.

19. Once users find the control, will they recognize that it produces the effect they want?
Yes the link is located on the global navigation bar of the website which generally contains links to other pages of the website. Also the link becomes underlined as one hovers over it confirming it is a link widget. The label of the link also contains the keyword 'New' which is in line with the user's intent of submitting the bug and hence user would identify it when he sees it.

20. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?
Yes, the user will understand he is being asked to specify what software package they are using.

State 02:		State 03:
	→	

Step 02. Click ‘Mercury’

21. Will users be trying to produce whatever effect the action has?

Yes, once at this stage user would know that they have to select a classification to get the options of product they want the problem to be report on and hence will select “Mercury”

22. Will users see the control (button, menu, switch, etc.) for the action?

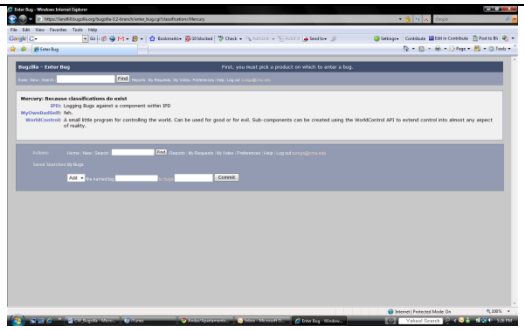
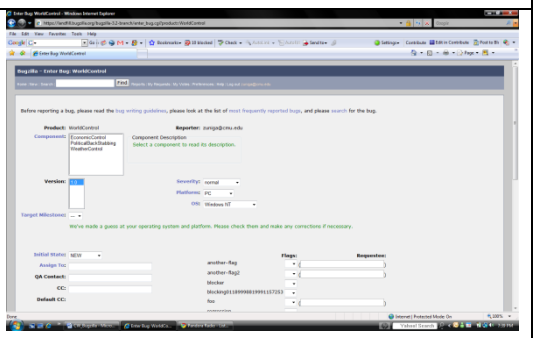
Yes the option is visible and clear.

23. Once users find the control, will they recognize that it produces the effect they want?

Yes, the as the widget looks like a link and the description against it would help the user to associate the product under this classification.

24. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes once the action is taken the user will understand the feedback as by now the user is expecting the desired product with problem in the next page and would identify it by looking at it.

State 03:		State 04:
	→	

Step 03. Click ‘World Control’

25. Will users be trying to produce whatever effect the action has?

Yes, from prior experience user would know that selecting the product to report the bug on is part of the bug submission process and treat this action as a progress towards the goal.

26. Will users see the control (button, menu, switch, etc.) for the action?

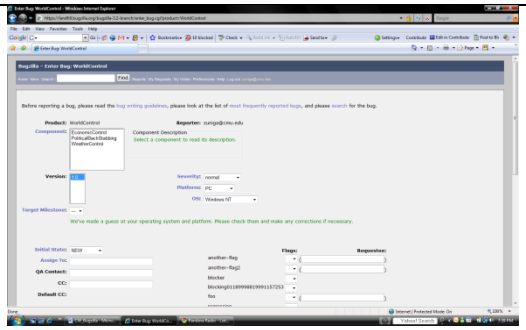
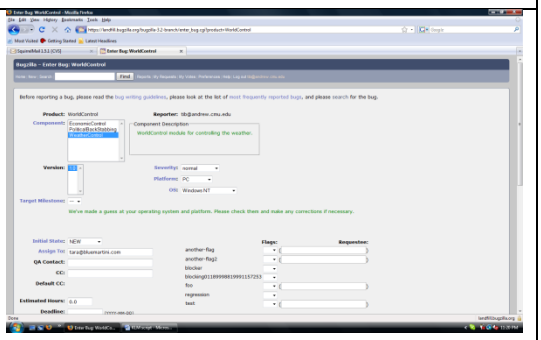
Yes the user would see the control as it is visible and clear.

27. Once users find the control, will they recognize that it produces the effect they want?

Yes the user would recognize the control as the label matches with the product name and has a description to confirm that it is the label the user is looking for. It is also consistent with look and feel of a link widget and seems clickable.

28. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes, as the new page has form fields as expected by the user and the page title “Bugzilla – Enter Bug: WorldControl” provides sufficient cues to support the user’s intent of submitting the bug.

State 04:		State 05:
	→	

Step 04. Select ‘Weather Control’ from list

29. Will users be trying to produce whatever effect the action has?

Yes, as this step is supporting the user’s intent to be more specific with the location of the problem in the product and user expects this step as a progress towards the goal.

30. Will users see the control (button, menu, switch, etc.) for the action?

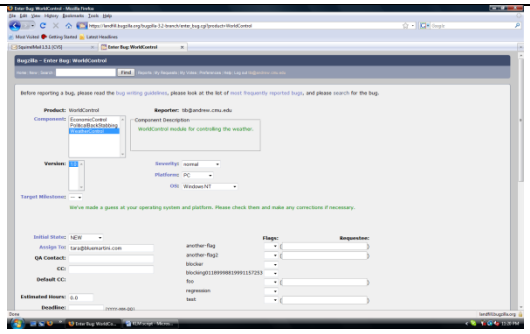
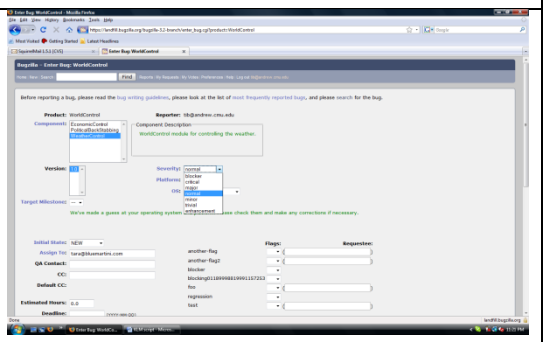
Yes the component “Weather Control” is clearly visible in the list.

31. Once users find the control, will they recognize that it produces the effect they want?

Yes as “Weather Control“looks like one of the listed items in the Component list. **Assumption: user is familiar with list items.** On clicking the specific list item “Weather Control” it gets highlighted and Component description on the right shows the description of the control confirming that the system has registered the selection.

32. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes the system provides a feedback if changing the text on component description to confirm that the system has registered the act of selection and confirms to the user what has been selected by describing the component selected.

State 05:		State 06:
	→	

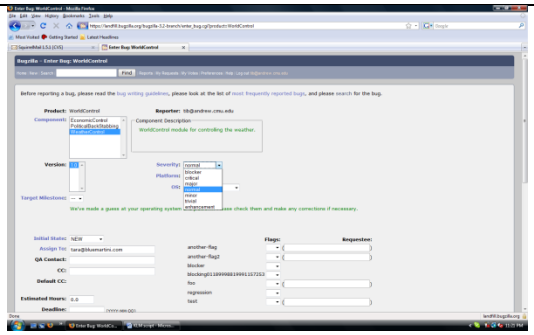
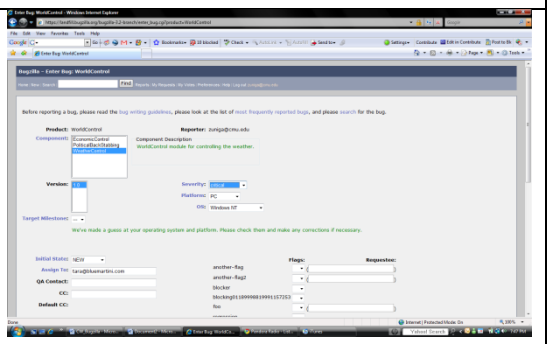
Step 05. Click the arrow on the severity drop down menu

33. Will users be trying to produce whatever effect the action has?
Yes, the user will understand in a general way what severity is and will be able to provide an answer.

34. Will users see the control (button, menu, switch, etc.) for the action?
Yes, the menu arrow pointing down in clearly visible.

35. Once users find the control, will they recognize that it produces the effect they want?
Yes, as user expects multiple severity options and the widget seems consistent with user prior experience with other pull down lists.

36. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?
Yes, on clicking the arrow the pull down list shows up and shows multiple options to aptly describe the severity of the problem as expected by the user.

State 06:		State 07:
	→	

Step 06. Select ‘critical’ from the menu

37. Will users be trying to produce whatever effect the action has?

Yes. The user is attempting to set the severity of the issue to critical and selecting it from the drop down menu achieves this goal.

38. Will users see the control (button, menu, switch, etc.) for the action?

Yes, the option is clearly visible and is part of a drop down list so therefore appears clickable. The user understands drop down lists because they are an experienced computer user.

39. Once users find the control, will they recognize that it produces the effect they want?

No. The user may not be able to identify their issue as “critical”. There may be multiple choices within the list that the user would consider for their issue.

40. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes. The user will understand that they have selected a severity and the form has accepted it because the drop down disappears and the selected option is now shown as the only severity.

No. ***BZ- CW-04***	**Problem/Good Aspect:** Problem

Name: Severity choices unclear

Evidence:

Task Step: Task 2, Step 6

Cognitive Walkthrough Question: 3. Once the users find the control, will they recognize that it produces the effect that they want?

Explanation:

The user may not be able to identify their issue as "critical". There may be multiple choices within the list that the user would consider for their issue. While the user will probably understand the ordering of the severities, it is not obvious how to choose which severity is correct. Should it be severity to the user? To the developer who will fix it? To the company?

Severity or Benefit:

Rating: 2 – minor usability issue

Justification (Frequency, Impact, Persistence):

Frequency: High; Every user will be asked to fill in a severity. It is not a 4 though because it is optional.

Impact: Medium; Actually understanding the question could be difficult, even with the help page. The user, however, can simply ignore it if they can't figure it out.

Persistence: Low; Once the user understands severity, they will be able to answer this question. It might only be a problem again if they use a different company's system that has a different interpretation of severity.

How these factors are weighted and why:

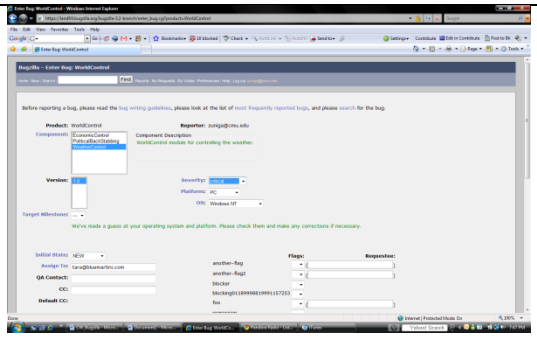
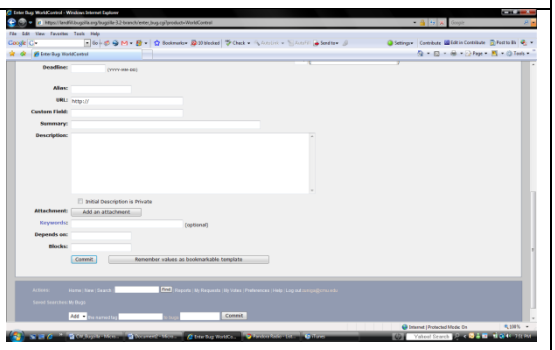
Although the frequency is high, the impact and persistence are low enough that it will not significantly affect the user's experience with the tool (they will probably not abandon the tool). Since it will have an impact and the user that may be difficult to overcome, severity is weighted towards impact.

Possible solution:

Provide clarifying text next to the drop down that describes the criteria for each severity choice.

Possible trade-offs:

Companies using Bugzilla may have different ways they want to use severity, so this text would have to be customizable. Also, some companies may want multiple descriptions of each level (one that a user would understand, one for a developer, a tester, etc) so this solution might not be flexible enough.
Relationships: None.

State 07:		State 08:
	→	

Step 07. Scroll down to the bottom of the form, using the mouse wheel.

41. Will users be trying to produce whatever effect the action has?

Yes. The user is trying to see the fields that exist at the bottom of the page, which scrolling down will accomplish.

42. Will users see the control (button, menu, switch, etc.) for the action?

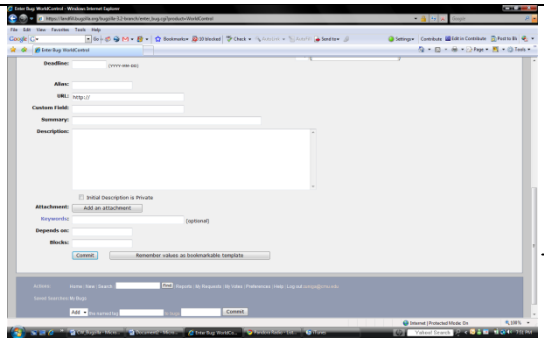
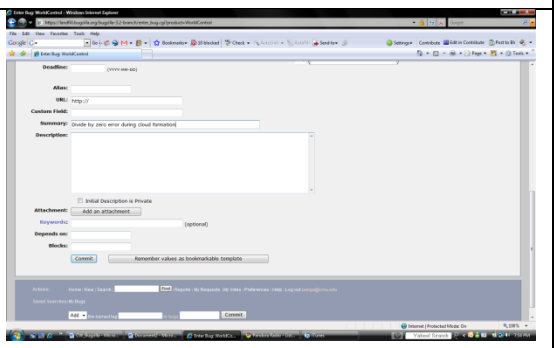
Yes. The scrollbar is clearly visible and clickable. However, the user will not click the scrollbar, they will use the scroll wheel on the mouse. This control is also visible and the user's experience with computers will inform them that the wheel can be used to control the scrollbar. (A1: Assumption that user knows how to use the scroll wheel of a mouse in web forms)

43. Once users find the control, will they recognize that it produces the effect they want?

Yes. The scrollbar clearly indicates that there is more of the page that can be displayed.

44. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes. The user will see that they are at the bottom of the page and can see all other fields available on the form.

State 08:		State 09:
	→	

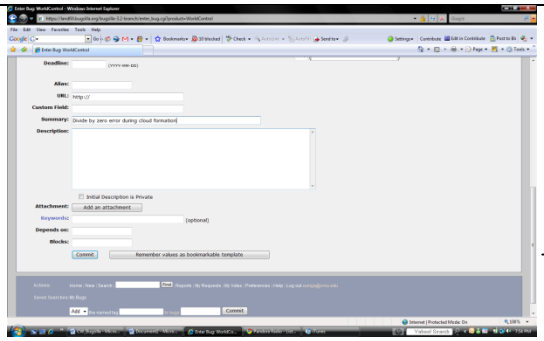
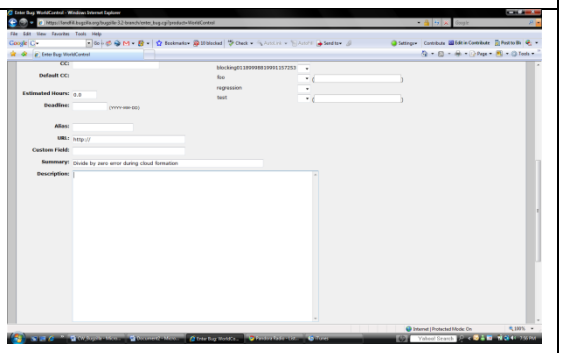
Step 08. Click in 'Summary' text box and type "Divide by zero error during cloud formation."

45. Will users be trying to produce whatever effect the action has?
Yes. The user is trying to give a concise title to the issue they are submitting.

46. Will users see the control (button, menu, switch, etc.) for the action?
Yes. The text box is clearly visible and appears able to accept text that is typed into it.

47. Once users find the control, will they recognize that it produces the effect they want?
Yes. The user will understand the label "Summary" and will see that the text box is a single line, indicating that they should enter a short summary of the issue in this box.

48. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?
Yes. The user will see that that the box has accepted the text they entered.

State 09:		State 10:
	→	

Step 09. Tab to ‘Description’ field

49. Will users be trying to produce whatever effect the action has?

Yes. The user is attempting to enter a description of the issue. In order to do this, the user must be able to type into the Description field, which this step accomplishes.

50. Will users see the control (button, menu, switch, etc.) for the action?

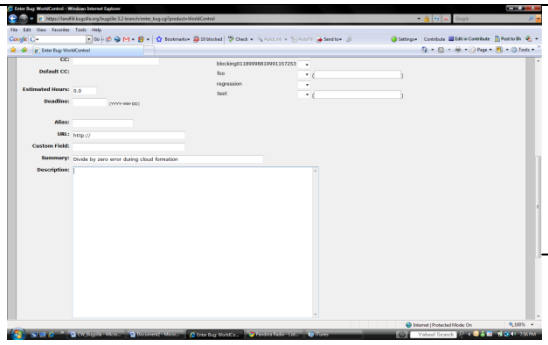
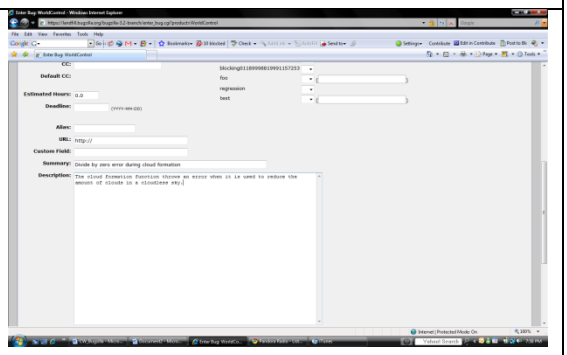
Yes. The user will see the description text box because it is clearly visible and clearly able to accept text. The user will know that they can tab into the text box from the previous text box because of their experience with web forms. (A2: Assumption that user knows basic keyboard shortcuts for web form navigation)

51. Once users find the control, will they recognize that it produces the effect they want?

Yes. The label of the text box will be easily understood by the user.

52. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes. The user will see that the cursor is in the Description field and that they are now able to type there.

State 10:		State 11:
	→	

Step 10. Type: “The cloud formation function throws an error when it is used to reduce the amount of clouds in a cloudless sky.” in the ‘Description’ field.

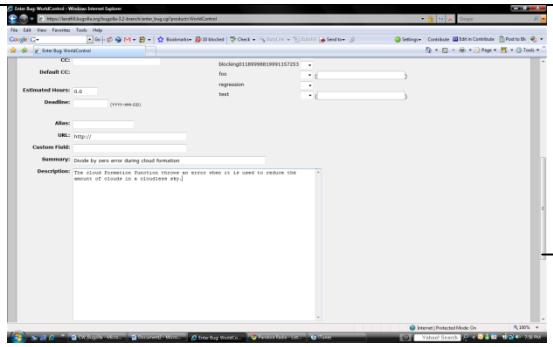
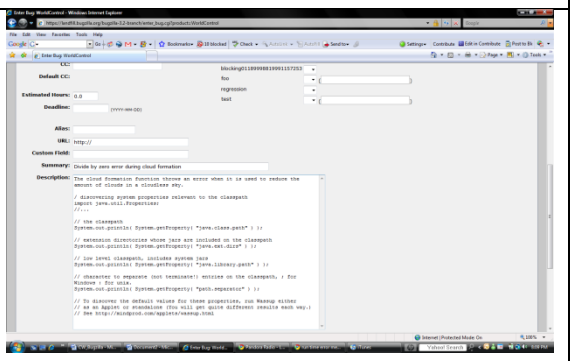
53. *Will users be trying to produce whatever effect the action has?*
    Yes. The user is attempting to enter a description of the issue.

54. *Will users see the control (button, menu, switch, etc.) for the action?*
    Yes. The user will see the description text box because it is clearly visible and clearly able to accept text.

55. *Once users find the control, will they recognize that it produces the effect they want?*
    Yes. Due to the size of the text box, and the label “Description” the use will be able to recognize that this is the correct field for writing a longer description of their issue.

    Design Idea: Assist the user in what they ought to enter to increase the quality of the information being entered. For example give the user an example.

56. *After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?*
    Yes. The user will see that that the box has accepted the text they entered.

State 11:		State 12:
		

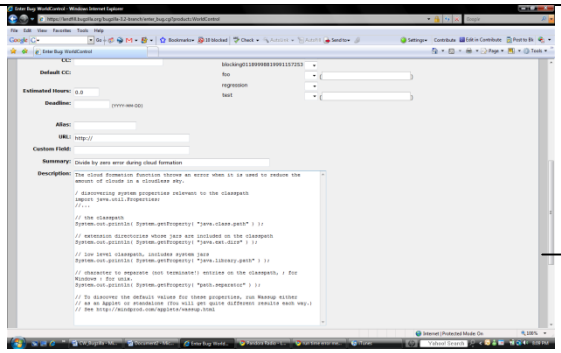
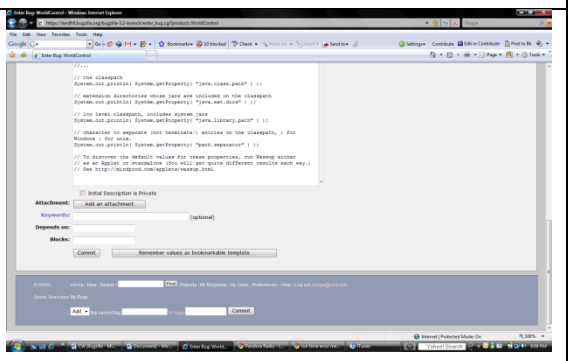
Step 11. Hit enter twice and type ‘Ctrl-V’ to paste items from clipboard to the field.

57. Will users be trying to produce whatever effect the action has?
Yes. This step is a continuation of step 10. The user is still trying to give as much information that he has at hand to someone in the description.

58. Will users see the control (button, menu, switch, etc.) for the action?
Yes. They are already typing in the textbox in question.

59. Once users find the control, will they recognize that it produces the effect they want?
Yes. The user will understand how to copy and paste text from previous experience with the web and browsers. (A2)

60. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?
Yes. The user will see that that the box has accepted the text they entered.

State 12:		State 13:
		

Step 12. Scroll down to the bottom of the form, using the mouse wheel.

61. Will users be trying to produce whatever effect the action has?

Yes. The user is trying to see the anything else that exist at the bottom of the page, which scrolling down will accomplish.

62. Will users see the control (button, menu, switch, etc.) for the action?

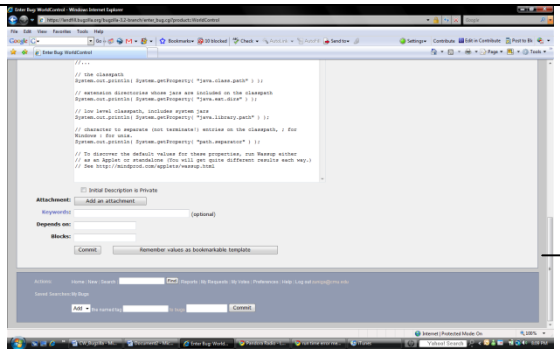
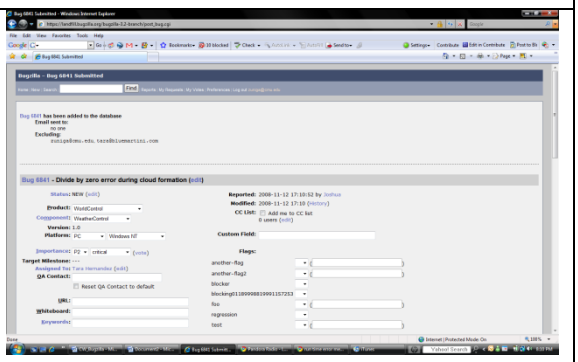
Yes. The scrollbar is clearly visible and clickable. However, the user will not click the scrollbar, they will use the scroll wheel on the mouse. This control is also visible and the user's experience with computers will inform them that the wheel can be used to control the scrollbar. (A1: Assumption that user knows how to use the scroll wheel of a mouse in web forms)

63. Once users find the control, will they recognize that it produces the effect they want?

Yes. The scrollbar clearly indicates that there is more of the page that can be displayed.

64. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes. The user will see that they are at the bottom of the page and can see all other fields available on the form.

State 13:		State 14:
		

Step 13. Click Commit

65. Will users be trying to produce whatever effect the action has?

Yes. This step accomplishes the end state that the user wants, and commits the bug report to the repository.

66. Will users see the control (button, menu, switch, etc.) for the action?

Yes. The button is clearly visible, and in a reasonable place to be found.

67. Once users find the control, will they recognize that it produces the effect they want?

Yes. The button is located at the bottom of the form, this combined with the word “Commit”, will indicate that this button will end the bug submission process and send the form for someone else to look at.

Side Issue: Commit isn’t a very obvious term and it leans heavily on its placement at the bottom of the form to get its message across.

68. After the action is taken, will users understand the feedback they get, so they can go on to the next action with confidence?

Yes. There is a clear message that states that the bug has been added to the database, with enough information taken from the form that it is clearly customized.