

Participant A Transcription

Overview

What worked very well:

- Metadata modal worked very well - tester always selected the right option.
- Keyboard worked well - the end-result was always perfect. Sometimes random buttons were pressed or double letters were present, but they could be removed with ease. When the user got too confident, she started leaving keys before selection, but it was noticed and corrected.
- Zoom seemed to work well.

So-so:

- The user was really confidently looking inside different menus - moving from one menu another, but did not understand that after selecting an option from the menu, eyes should be brought away from the menu to close it. The problem of closing the menus was a recurring problem.
- Although the keyboard results were perfect the user complained that she had to check and glance the result after key presses to ensure correctness.

Problems:

- Head moving - The tester started intuitively moving her head when eyes did not work as expected. After explaining that the best tracing happens when eyes are at the same position as the calibration was done, the tester stopped moving her head.
- Type of the map - The biggest problem during navigation was not the control but the type of the map (Orthophoto).
- Declining calibration accuracy - In the beginning tester sometimes had problems activating buttons but that was of no account. Later in the test - in the last two tasks problem of activating buttons got worse. This kept the tester from making progress.
- Confusion about the logic of menus? - In the first task, the tester got confused when she inadvertently opened navigation menu while choosing layer. That stopped her from selecting the tool. After reading the instructions again, she continued.
- Insufficient feedback from button press - She seemed to be unsure if the button was really pressed (used Place multiple times)
- Using the arrows on Fixation Menu is problematic - the buttons don't work well, every time the fixation leaves the button, the selection time is reset.
- The user overused the arrow buttons by always trying to nudge the Fixation Menu towards the next point. She did not realize she could just look at the general direction of the next point.
- Tested did try to use this method when there were no arrow buttons, but sometimes the target was inside the Fixation Menu area. In that case the tester did not realize why does not the Fixation Menu go to the new point. Even when explained, the tester soon fell back to the old habit.
- She was afraid of removing eyes from screen because things would disappear.
- Complained of tired eyes in the end.

- Problems with panning caused by Fixation Menu covering the pan areas.

Times:

- Calibration, introduction, 4 minutes.
- Task 1 - 6:54
- Task 2 - 4:47
- Task 3 - 3:13
- Task 4 - 6:47
- Task 5 - 8:44
- Task 6 - 5:02
- Task 7 - 8:31

Task results

1. Although it took a lot of time, the tester reached the goal.
2. Tester got confused and had to refer to the instructions in the middle of the task, but managed to reach the goal.
3. Tester had to refer to the instructions, but overall the task was well done - reached the goal.
4. The user spent a lot of time nudging the Fixation Menu, but reached the goal nonetheless.
5. The tester failed to digitize the building correctly - she missed the 2nd and 3rd corner, because she was sure she pressed the Place button. Same as with previous task - she did overuse the nudging of Fixation Menu.
6. The accuracy of calibration had fallen below usability levels - the tester really struggled to use some buttons but reached the goal.
7. Same as previous.

Full Transcript

Introduction

00:20 - calibration start

01:05 - calibration complete

01:22 - calibration test

01:49 - Tobii game start

02:06 - Tester looks around with eyes - panning works well.

02:23 - I make a hint about space bar - the tester starts using it to destroy asteroids.

02:35 - Tester experiences problems with aiming or panning, and intuitively starts turning her head to compensate.

02:42 - I make a hint that remaining in the center with the head and using eyes yields best tracking and that turning the head is not effective.

The user continues destroying the asteroids in a very fast pace.

03:15 - Game stops unexpectedly, I decide to continue with testing.

03:35 - Present the introductory page

04:10 - I reiterate the points on the page

Task1

04:34 - I present the first task paper and open the application

05:20 - "How does closing work - with a blink?" - "Try out and see what happens"

05:24 - Start

05:24 - Tester immediately starts looking for user "Mati"

05:27 - "Mati" is chosen - tester continues to look at the "Mati", understands that she has chosen it, but the menu keeps on being open. "I'm blinking eyes"

05:41 - Tester finds Close button and uses it - "aaah, there's a close button"

05:45 - Tester starts looking for Tallinn, Raekoja plats.

Tries to pan to north - successfully.

Tries to zoom - successfully.

Does not know where she is on the map - looks at southern part of the Tallinn city. Starts zooming out.

Zooms back in, but again in the southern part of Tallinn, not into the center.

07:10 - admits it's difficult to find Tallinn with orthographic map (without names and roads).

07:16 I make a hint that the target is in the north.

User keeps zooming in, but actually wants to go north.

Goes north successfully but zoomed way too in.

08:33 - Zooms out successfully a bit, continues moving north looking for sea.

09:00 - Zooms out furthermore.

09:10 - Tries to zoom out, but can not - tries to aim for the minus button, but it does not get activated, nothing happens.

09:40 - Gives up - starts moving north.

09:45 - Tries again to zoom out.

09:49 - Opens Tool menu inadvertently and looks immediately away, closing it.
9:54 - Tries to zoom out - tries zooming in - it worked! - now zooms out fully.
10:20 - I show the location of the old town, user successfully starts zooming and panning towards it.
10:43 - Tries to move to the right, but the Fixation Menu covers the panning button.
11:00 - Old town is in the right upper corner.
11:30 - inadvertently moves to the left, recovers immediately.
11:56 - arrives at Raekoja plats and centers it perfectly, tries to make sure, it is the destination.
12:15 - checks the Task paper whether she has to do anything else.
12:17 - Done!

Discussion:

I asked about moving her head. She said she started doing it when using eyes did not work.

Did it help? - "no, but it's instinctive"

The hardest part for the tester was using the orthophoto map to navigate - no lines, no names.

I show her the eye indicator, and tell that it indicates if something is wrong, and reiterate, that the tester should keep her head in the center.

Task 1 times

Choosing username:	00:17
Navigating to Raekoja plats:	06:32
Total:	06:49

Task 2

13:32 - I present the Task 2 paper.
15:01 - Start
15:05 - Immediately zooms out multiple steps to see Tallinn - successfully.
15:09 - The airport is visible in the right corner.
15:15 - Looks for the airport on the image - does not find it.
15:23 - I show the airport to her - she starts inspecting it.
15:33 - I tell her to go towards the building.
15:36 - She zooms in. Successfully into the right place.
15:49 - She wants to add a point.
15:53 - She decided on the airplane she wanted to mark, and immediately started looking for Points layer in the menu.
15:56 - She opens the Layers Menu, sees the options, but is confused and asks where the Layers Menu is.
16:00 - She opens the Navigation Menu - understands it is not the right place.
16:04 - She opens the Tools menu, understands it is not the right place either.
16:08 - She opens the Layers menu again, selects Lines and selects Points again. She wanted something to happen upon selection of the right layer, so she keeps inspecting the Navigation Menu and the Layers Menu. The tester selects Points multiple times again. "I dont see the Layers"
16:28 - Starts recalibration inadvertently. I close it. Starts user selection, I close it.

16:42 - Looks at Points again, confusion continues. Looks around the menus, but does not look at Tools, reselects Points, looks at the map, closes the Navigation Menu.
17:40 - Reads the paper again - understands she has to go into the Tools Menu to select the tool.
17:44 - Opens the Tools Menu and selects the Add Point tool.
17:50 - Looks at the map and starts nudging the Fixation Menu towards the aeroplane. The process is a bit slow - sometimes the arrows don't work, but she reaches the aeroplane at 18:34.
18:35 - Place, does it multiple times.
18:43 - Fixation Menu closes - "What should I do now?" she wants to edit the metadata.
18:47 - Looks at the plane - Fixation Menu opens. he replaces the point.
18:50 - She saves the result - metadata menu opens.
18:53 - She starts editing Type field.
18:55 - The tester asks what she had to write - I answer, she types "p", i remind that it had to be with a capital letter, so she uses shift to type "P"- result "pPP".
19:07 - She realizes she can look at the result - and immediately starts deleting it.
19:13 - Once finished with writing "P,a", she starts getting quicker than keyboard and she leaves button "n" and "e" before they activate.
19:22 - Realizes the mistake and understands the problem - retypes "n" and "e" continues with space and "1".
19:37 - Word is complete.
19:39 - Enter.
19:44 - Save.
19:48 - Done

Discussion:

She told that moving the Fixation Menu was slow.

The Layers Menu was confusing - she thought that the Navigation Menu opened because of the selection in Layers Menu - and that's why she started looking the "Add point" from the Navigation Menu.

I explain, that it was opened by accidentally looking at the Navigation Menu button - she immediately understands, and tries out closing and opening all the three menus (I think she looks confident using those three).

Task 2 times

Navigation to Airfield:	00:35
Placing the point:	03:01
Editing metadata:	00:59 (of which typing 00:44)
Total:	04:35

Task 3

21:41 - I present the Task 3 paper.
23:02 - Start
23:09 - Looks at her plane
23:12 - Looks at the Tools Menu
23:16 - Chooses Select Feature
23:22 - Starts looking at the plane - Fixation Menu opens, tries to select it, but the Fixation Menu center was not over the aeroplane.

23:26 - The tester starts moving the Fixation Menu towards the aeroplane - it works, but is slow.
23:59 - The menu center reaches aeroplane, immediately uses Select - successfully selecting the plane.
24:02 - Opens the Metadata Menu from Edit.
24:07 - Opens Type field from metadata.
24:12 - Deletes "1".
24:15 - Adds "2".
24:17 - Enter
24:22 - Save. Now she understands she also had to move the thing, starts to think how to do that.
24:34 - Opens the Tools Menu and chooses Select.
24:39 - Starts selecting the plane moving the Menu over it.
24:56 - Selects the plane successfully, but now looks at the paper to remind how to move the point.
25:17 - Opens the Tools Menu and selects Move Point tool multiple times.
25:23 - Starts moving the point - it moves slowly.
25:53 - The point is over the plane now.
25:58 - Wants to save - looks at Edit and looks at Save.
26:02 - Opens Metadata Edit Modal from the Edit Menu, trying to close the Metadata Menu.
26:04 - Saves the metadata, also saving the point, but does not realize this immediately.
26:15 - Done (Understands that save was successful)

Discussion:

She realized in the middle of the test that she had to move the point first and then change the metadata, but she was distracted by the "pop-up" of the metadata menu and started filling out metadata first.

She also wanted to close the Metadata Menu but did not find a way to do it - it was getting on the way when she was trying to move the point. Wonders if Discard would close it.

Task 3 times

Task 4

28:04 - I present the Task 4 paper.
28:58 - Start. The tester immediately starts panning to south and zooming out to get a more general view.
29:16 - Zooms in (inadvertently in my opinion) but recovers by zooming out immediately. Continues panning to get a better view.
30:00 - Without choosing a tool she tries to position the Fixation Menu on the road but it does not go where she wants it to go. The biggest problem is that she sometimes tries to hit a place that is within the current position of the Fixation Menu - the Fixation Menu does not disappear and stays in the same place.
30:14 - I remind her, that she has to start the line from the aeroplane.
30:24 - Now she understands the task, hits the plane with a Fixation Menu, but there is no tool to place the line.
30:33 - Chooses the right layer.

30:39 - Chooses Add Line.
30:50 - Places the Fixation Menu and starts moving it over the plane.
31:05 - Succeeds in moving the Fixation Menu over the plane.
31:10 - Place. I tell her that there is a bug at the moment so she can not see the point, but she can just continue.
31:27 - She understands and continues.
31:34 - Place - success, but now instead of placing a new Fixation Menu she tries to move the existing point by using the arrow buttons. She realizes that this does not take the point with it so she places a third point. She continues to nudge the Fixation Menu towards her fourth point, but it takes a long time - she does not try to replace the new menu, by closing it and looking at the next position.
33:27 - Place fourth. Now she is on the long stretch of road, but she does not use the possibility just to look at the last point. Instead she tries to nudge the Fixation Menu. This process is slow.
Even when the Fixation Menu disappears, she looks at the same point until it reappears, and she continues to nudge.
34:21 - I tell her that the arrows are for "fine tuning", she reacts by trying to use the correct method of just looking at the next point.
34:45 - The last point is placed.
35:02 - Refers to the Task paper to see what she had to do next.
35:12 - Saves, the Metadata Modal appears.
35:19 - Opens the Type. Types some wrong characters but corrects immediately. Asks what she had to type, and types it without checking the result.
35:40 - Enter.
35:41 - Save.
35:45 - Done

Discussion

She says that she should have used the right method from the beginning - and just look at the points, not nudge the menu. She explains that she initially tried, but it disappeared when she glanced away for a second, and so she assumed it was not possible. I explained, how the line could be made with 5 glances and Places. She agrees.

Task 4 times

Drawing:	06:14 seconds
Metadata:	00:31(typing 00:21)
Total:	06:45

Task 5

37:18 - I present the task 5 paper.
38:08 - Start
38:13 - Chooses Polygons layer.
38:20 - Moves towards the airport building but leaves in the left edge of the screen and zooms out.
38:31 - Chooses Add Polygon tool.

38:40 - Places the Fixation Menu near the building and starts moving it towards the corner. The buttons don't work well - probably because the tracking is not that good in the corner of the screen.

39:25 - Places the point. Although she does not see the point, she proceeds, because she thinks the point stays hidden because of the bug mentioned earlier.

39:49 - The tester scrolls even more to the south and places a new Fixation Menu near the building. She says that she should have moved the map instead of the Fixation Menu to get to the other corner of the building (but this is not possible!).

40:13 - Looks at Place but fails to activate it - no point appears, but she continues to draw (thinking it is a bug?).

40:37 - Same thing happens but she does not realize the problem.

41:05 - She places the fourth point, now successfully, and realizes the problem - I tell her not to worry and that she can just continue with the rest of the points.

41:25 - For some reason she scrolls even more to the right, moving most of the building out of the view. This places the next point at about the same location the last one was at. I assume she imagines that the menu "stays" at the point where it disappeared so she has to move the map instead.

41:39 - Moving the Fixation Menu is really slow - it disappears and reappears, the move buttons work intermittently.

42:10 - Place. She continues moving the same Fixation Menu towards the next point - arrow buttons still work faultily.

43:07 - Place. She then pans to the left to see the next point and tries to move the Fixation Menu over it, but the move buttons don't react at all.

44:13 - She wonders if it is because she is over the polygon with her Fixation Menu.

45:02 - She luckily places the Fixation Menu exactly at the right spot but she does not realize it until I tell her so.

45:10 - Place and then she continues nudging the Fixation Menu towards the last location.

45:32 - The Fixation Menu disappears and reappears soon closer to the final point

46:00 - Place

46:08 - Save. She asks what she had to do - I remind her that "Maakasutus" has to be set to "Airport"

46:15 - She opens "Maakasutus" and starts typing, accidentally types "AA", but corrects immediately.

46:30 - She mentions that the shift button does not go off after first character is pressed.

46:45 - Enter

46:47 - Save

46:52 - Done

Discussion

"What was the easiest and what was the most difficult?" "Using arrows was the most difficult, also understanding when the point is really placed." She thought that she pressed the Place. "How did you like the Keyboard and Metadata Menu?" It was OK, but slow - you have to check the result after pressing. The keyboard should have buttons that are visibly pressed. Although I saw it go green. The button goes green on fixation and also on selection, it should be a pressing animation instead."

"Does the green text on hover distract you?" "No, but the selection/activation should be more distinctive."

Task 5 times

Drawing: 08:00
Metadata: 00:44 (typing 00:30)
Total: 08:44

Task 6

50:16 - I present the Task 6 paper.

51:03 - She is confused and wonders if she should choose Points layer to remove points or Polygons layer to remove points from a polygon. She decides to choose the Polygons layer.

51:11 - Start

51:14 - She wants to choose Polygon from the Points (!) menu, the calibration has wore off - she is unable to select it. She tries it for a second time and succeeds.

51:29 - She opens the Tools Menu, it closes, she opens it again, then decides to cancel it and choose Points from the Layer Menu, because there is no Move Points option available.

51:46 - Chooses Points.

51:54 - Realizes that she still does not have Move Points option available in the Tools Menu. Looks at the Layers Menu, then in the Tools Menu again.

52:19, -The tester tries to choose Polygons again but has difficulties selecting it.

52:54 - I try to adjust the position of the computer.

53:00 - She chooses polygons and looks at the Tools Menu, only to see that there is no option she is looking for

53:08 - I tell she first has to use Select Feature tool.

53:17 - She takes the right tool.

53:30 - Selects the feature, immediately looks at the Tools Menu and tries to choose Remove Point tool. She is unable to choose as the menu disappears before, so she retries multiple times.

53:49 - Remove Point is selected.

54:00 - She looks at the point - menu appears, but she is unable to select the Delete icon. Fixation Menu disappears

54:20 - Presses Save, understands it was not the right choice.

54:28 - Understands that the feature is not active any more, tries to reactivate, but the eye tracking quality is bad.

54:36 - I suggest correcting her posture, because the indicator is red, she does so and then tries to continue.

54:54 - She chooses the Select Feature tool.

55:02 - Selects feature.

55:09 - Chooses the Remove Point tool. When the tool is selected, she continues to stare at it, waiting the menu to close, chooses Select feature and then again Remove Point. (This indicates she does not know that the menu closes when she looks away from it.)

55:20 - Menu disappears.

55:25 - The Fixation Menu appears at the right point and she deletes the point successfully.

55:50 - The Fixation Menu appears at the right point and she manages to hit the Delete button after a short struggle.

56:13 Save.

Discussion

None

Task 6 times

Total: 05:57

Task 7

56:30 - I present the Task 7 paper and explain it.

56:59 - Start

57:07 - She wants to use the Select Feature tool, opens the menu and tries to select it, but fails - she also does not notice she did not do it.

57:47 - She tries again to select the tool - this time successfully. The tester continues to select the feature, but struggles to hit the Select button. She tries to move the Fixation Menu and select the Select button.

58:39 - Moves away from computer for a second when the Fixation Menu disappears. Tries again, struggles to hit the Select button.

59:02 - I suggest watching at different parts of the Select button. The struggle continues using the arrow buttons.

60:00 - The Fixation Menu is over the feature again. Again disappears, appears in the wrong place, appears in the right place - the Select button does not work.

60:44 - The selection succeeds, when she looked at the side of the button (calibration problem).

60:57 - Selects Remove feature from the Tool Menu. The menu does not disappear (she does not move gaze out of the menu) so she is confused and continues to reactivate the selection.

61:10 - The menu disappears and she continues.

61:25 - She deletes the feature successfully.

61:43 - She starts removing the line by selecting the Lines layer.

61:58 - Selects Select Feature tool. She gets confused as the menu does not disappear.

62:16 - Selects the line successfully, chooses Remove feature, same confusion.

62:40 - Removed successfully, continues with the point. But forgets to choose Select tool initially. Does not understand why no right buttons appear. She tries zooming, but that does not help. Tries to point exactly on the plane, but still no buttons.

63:51 - She realizes the error and then struggles for 5 times with the menu.

64:53 - Finally manages selecting the right tool. The tester continues with aligning the Fixation Menu, selects, removes the feature.

65:30 - Done

Discussion

Task 7 Times

Total 09:00

Conclusion?

When the UI does not work as expected, she tried staring more intensely and it is tiring, or squinting or anything. - all of this forced looking is tiring.

User is forced to look in two things.

She was afraid of removing eyes from screen because things would disappear.

She tried using eye blink but said it did not work (guess).