

I7: Interactive Heuristic Evaluation

Overview

Interactive is an interface designed to explain the good design factors and practices which we supposedly take for granted every day by highlighting poor design choices and giving an explanation for why they are bad. The project itself was designed to be a web application and loaded fine when opened.

Below is my heuristic evaluation of the interface as well as the problems I discovered while using it to complete the given tasks. The main issues brought up later in the evaluation revolve around identifying what is an error and what is part of the interface and the functionality of the application.

Heuristic Evaluation

Simple and Natural Dialogue

While the interface is meant to have some poor design decisions incorporated into it, the simplistic nature of the overall interface helps to narrow down the attention to what the team wants to get out of it. If the interface was overly complicated, it would be harder to distinguish the intentional poor design choices to that which are explicitly put in as the functionality of the site. Overall I think the design is simple enough to not distract the user from the intended goal while giving enough direction and explanation on how to use it just based off of design and layout.

Speak the User's Language

This is probably one of the stronger points that Interactive possess. Since it was designed after MS Paint, it inherently has an “easy to understand” quality which helps to set the user up for what *they* would expect the interface to do. I believe that choice was done well since it helps create the dichotomy of what the user expects vs. what the interface intentionally does wrong to help create a more compelling point.

Minimize User Memory Load

This heuristic was difficult to gauge since the interface in itself is meant to have poor design patterns. I was therefore unsure what was intentional and what was

not. Based off the feedback from the Clippy character, I believe the multiple inner menus were done intentionally and the icon choice and hierarchy was not. The inner menus made it difficult for the user to remember where everything was, but since that was part of the interface it is not a detriment. However, I believe the icons and hierarchy for the tools was not set up well and is not a deliberate design decision by the team. First, while the icons are mostly self-explanatory, the paint bucket icon was difficult to understand what it does since it doesn't work. In addition, the decision to place the move and eyedropper icons inside the marquee selection tool is not very intuitive from a user's perspective and forces the user to remember the unconventional layout to find those tools.

Consistency

In terms of visual consistency, the interface is consistent in its use of typography, colors, and themes for the tools. The application is also consistent with that of MS Paint, aiding in the understanding of how to use the interface. One issue, however, is that there is a lack of consistency between the functionality of the different tools. Some of them were not able to be selected, and selected another tool when clicked on. Rather than doing this, which confuses the user, the tools which do not work should be taken out. Additionally, the paint bucket and line tool do not work even though they can be selected. Again, these should be made to work or taken out to prevent confusing the user.

Feedback

This is definitely where the majority of the issues arise when evaluating the interface. The nature of the interface makes the distinction between intentional and unintentional mistakes vital to its success – without it the user is confused as to why the decision is bad or if the detail was put there intentionally or not. Examples of such include the icons either not working (paint bucket tool) or the icons selecting a different tool all together (the eyedropper and both selection tools). Since there is no feedback from Clippy, I assume those are bugs in the code.

Lastly, the time between performing the action and the explanation appearing needs to be shorter for the interface to have value to the user. While I was testing the application the feedback lagged behind my actions at every step, taking up to 8 seconds (5 seconds on average) for the “tooltip” to appear after performing the action that triggers it. Due to this, I was unsure as to why my actions weren't working until the tip eventually popped up.

Clearly Marked Exits

This was fine in terms of overall exits for the application since it is a single page. However, there needs to be a clearer explanation for how to switch tools since I was unable to switch my mode to another “select” tool if I had one of them already selected. For example, I was trying to open the select dropdown with the move tool selected, but was unable to do so. This made it difficult for me to understand why I couldn’t exit the current mode I was in.

Shortcuts

Not applicable, each tool had at most two clicks to get to the tool, so shortcuts here are not necessary. Additionally, the submenu’s for importing an image are done intentionally so a shortcut for that action should not be added.

Good Error Messages

The error messages that did pop up explained the error message well enough for the user to understand why they were happening. However, as stated before, they need to be more responsive to the user’s actions for them to be useful to the user. Having them lag up to 8 seconds behind the actions performed is too long for the user to make an immediate connection between the two. Additionally, I think the tooltips need to be more obvious when they change, since the text for each of them looked similar in length and style, making it hard to tell when there is a new message the user should be reading.

Prevent Errors

In the interface, there were 5 tools that did not work (rectangle selection, polygon selection, eyedropper, line tool, and paint bucket). If these are not going to be implemented in the final product, then they should be taken out. Having buttons that do not work only confuses the user, and since the purpose of Unterface is to explain poor design decisions it is vital for any possible confusion to be taken out.

Additionally, part of Task B is not possible in the version of the application I used to test. The first part says to type your name in uppercase, and I was unable to do so. The SHIFT button does not make the text uppercase, and there is no explanation as to why this is happening. If it is not possible to type your name in uppercase then there should not be a task that makes you do this and cause the error.

Help and Documentation

The Clippy character acts as the help guide for this interface, giving explanations as to why certain features are occurring or why the design decision is bad. The explanations that Clippy gives are all good and helps the user understand what is going on, however the issues mentioned above are vital for Clippy to be of any use to the user. Besides that, further Help and Documentation isn't necessary for this application since the actions and tasks are pretty straight forward.

Specific Problems

Out of Sync Feedback – Severity: Major

With the main purpose of your interface being to explain to users why certain design decisions are poor, it is necessary for the feedback tips to be as close to immediate as possible. When the tips lagged, I started clicking on multiple random tools just to try and get a response to see if the interface was working. This caused some of the tips to be skipped over quickly, making them unable for me to read. Additionally, it was difficult to attribute which action I performed to the feedback due to the lag.

Task Not Possible to Complete – Severity: Major

This is a major issue only when having the user try to complete the task. On its own, this would be a minor issue, however with your prompt telling the user to type their name in uppercase it becomes a major issue. Since this is a technical bug and not something put deliberately into the interface, it only confuses the user as to what really is an error and what is supposed to be intentional.

Cannot Select Tools when Move is Selected – Severity: Minor

Probably due to a minor technical bug, I was unable to open the selection tool menu when the move tool was selected. I believe this is due to how you implemented the on-click events for when a tool is already selected. Basically, just allow the user to open up the menu when the move tool (or any of the other tools within the menu) is selected.

Unable to Select Certain Tools – Severity: Major

Having the tools select another at random when clicked is a very random event which confuses the user and makes them second guess whether it is an intentional design choice or not. As stated before, each tool should either work or the ones that don't should be taken out.

Some Tools Not Working – Severity: Minor

This is not too big of a problem, and you could take one of two paths to fix it. First, the tools that do not work could be given functionality. Having all of the tools work to some degree would make the interface more consistent and help keep the users' attention to the issues that are due to poor design decisions. The second option would be to simply remove the tools that don't work, keeping only those that will have some sort of functionality at some point.