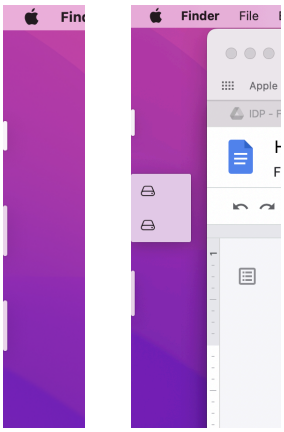
Heuristic Analysis - FileFillet

Objective: This report aims to assess the usability of the existing FileFillet design utilizing Jakob Nielsen's 10 general principles for interaction design.

1. **Visibility of System Status** - The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time.
    - The current design includes differentiated “states” for each of the port/path containers in an effort to keep the user apprised of the port/path status through size and color differentiation of the container.
    - In the current design, the “No Storage” and “Loaded” states look very similar with the only differentiation being the “Loaded” container is slightly larger and less opaque. As a user, I want to be able to quickly tell which port my flash drive is in so I know where to aim to drop the file. I believe further visual differentiation between the “No Storage” and “Loaded” port container states is required as the user will be quickly glancing and trying to decide where the drop target is as they are dragging files.

    - In the current design, the Port “Loaded” container and the Local Directory Path “Loaded” container look identical, but the local directory container is located lowest on the screen. As a user, I will decide whether to save on my local drive or my flash drive quickly before dragging and dropping the file. More visual differentiation is needed between the Port/Path container types to aid in the user quickly seeing their drop target.



    - It is difficult to differentiate between different flash drives plugged into the same port as the icons look identical and do not include the flash drive name. Further visual differentiation is needed to aid in usability.
2. **Match Between System and the Real World** - The design should speak the users' language. Use words, phrases, and concepts familiar to the user, rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order.
    - The design with each port having its own drop container matches the design of the macbook well and is logical for use with this single device, but may not be as intuitive if multiple monitors are connected or in the case of Mac Studio where the tower may be located on either the left or the right side of the monitor.
    - As a user, I expect to be able to click on the drop containers and have the appropriate location display similar to how the finder window opens when I click it. The current design doesn't allow for this feature.
3. **User Control and Freedom** - Users often perform actions by mistake. They need a clearly marked "emergency exit" to leave the unwanted action without having to go through an extended process.
    - The current design is lacking an emergency exit. Incorporating a way for the user to undo the action of moving a file in the event that the file is placed in the incorrect location would be helpful.
4. **Consistency and Standards** - Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions.
    - The container design is consistent regardless of whether it is the directory or a USB flash drive. The design could benefit from some differentiation as this information would aid the ease of use to the user in knowing which drop container to aim for.
    - If the user is a multi-device user, the consistency of the location of the drop containers dependency on the physical location of the ports may be confusing.
5. **Error Prevention** - Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone conditions, or check for them and present users with a confirmation option before they commit to the action.

    - The design includes visual feedback by highlighting the folder/subfolder as the user moves through the directory prior to actually moving/copying the file to the final destination which is helpful for error prevention.
6. **Recognition Rather than Recall** - Minimize the user's memory load by making elements, actions, and options visible. The user should not have to remember information from one part of the interface to another. Information required to use the design (e.g. field labels or menu items) should be visible or easily retrievable when needed.
    - This is an area of the current design that could be improved. It is not clear which USB is which when multiple are plugged into the same port.
7. **Flexibility and Efficiency of Use - Shortcuts** — hidden from novice users — may speed up the interaction for the expert user so that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.
    - The design does a good job of allowing the user to tailor frequent actions by allowing them to map a frequent drop location via the local drive.
8. **Aesthetic and Minimalist Design** - Interfaces should not contain information that is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.
    - The current design is very minimalistic, possibly too much so when it comes to the user being able to differentiate between individual USB drives and the local directory.
9. **Help Users Recognize, Diagnose, and Recover from Errors** - Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.
    - While conducting research, I did not encounter any system errors so further research may be required to investigate the efficacy of the design in regard to this principle.
10. **Help and Documentation** - It’s best if the system doesn’t need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks.

    - Additional documentation may be required to assist users in a multi-monitor set up; However, I was not able to test this feature with my lone-monitor setup. Further research is needed to properly assess the multi-monitor support.

Takeaways: To aid in usability, the design could be enhanced through:

- Visual differentiation between the "No Storage" and "Loaded" port container states
- Visual differentiation is needed between the Port/Path container types to aid in the user quickly seeing their drop target.
- Visual differentiation of different flash drives when multiple drives are plugged into the same port.
- Consideration of the match between the system and the real world for additional devices (Mac Studio etc) and multi-monitor considerations.
- Consideration of consistency of design across devices.
- General focus on recognition over recall in the design.