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Nielsen’s Heuristics

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Today we are going to look at the Ableton Note application through the lens of Jakob Nielsen's usability heuristics. Ableton Note is a musical sketchpad which allows users to play a variety of preset instruments like drums or synthesizers and to create instruments by recording sound with the iPhone microphone, a process known as sampling. The user is also able to apply effects to these instruments and record both notes and automation data for the instrument and effects parameters. These sounds can be arranged into song sketches which can be transferred to a computer for finishing in Ableton Live by using Ableton Cloud, a cloud-based file exchange. You can skip the interface description and go directly to the heuristics on page 11.

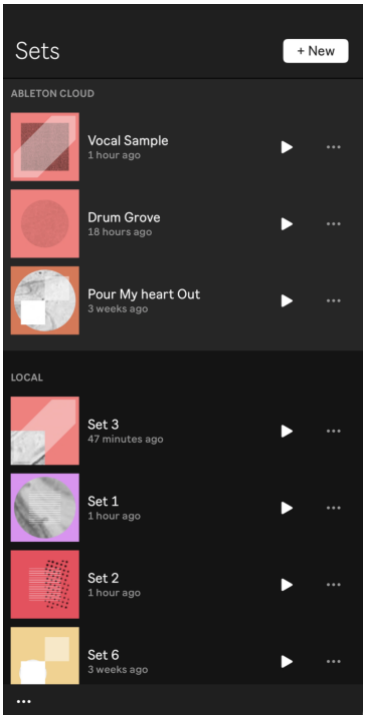

Figure 1 Sets page

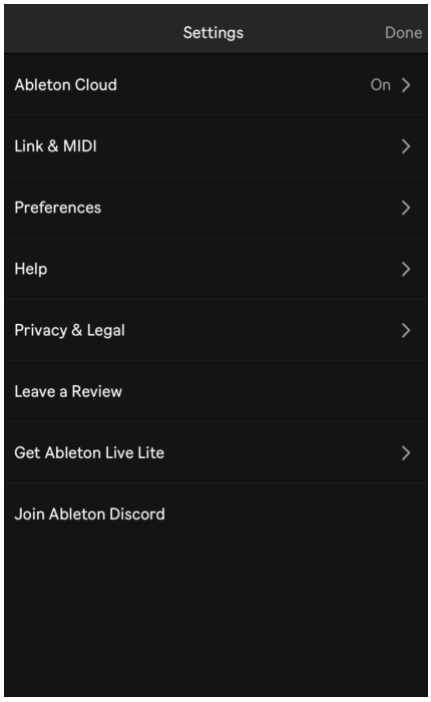

Figure 2 Note Settings

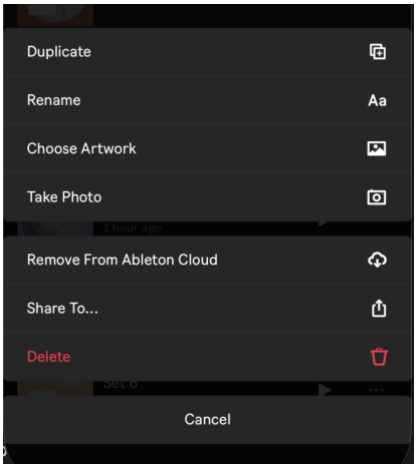

Figure 3 Set Options

When the user opens the application, they first encounter the Sets page, which allows the user to choose an existing session or create a new one. There are the three dots in the bottom left for additional options, which bring up the settings page. There are also three dot menus next to each set, allowing the user to access the set options.

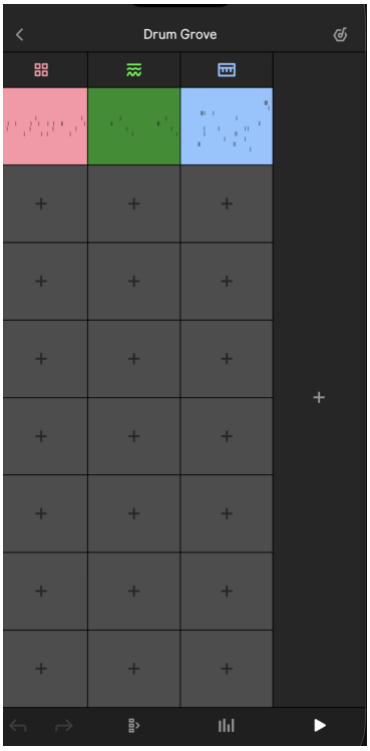

Figure 4 Session View displaying three instrument and three clips

When a user selects a set, the view changes to the Session view, where the user can create clips or select existing clips and access set settings at the top. There is a bottom bar with buttons for undo and redo, show/hide scenes, mixer, and play/stop.

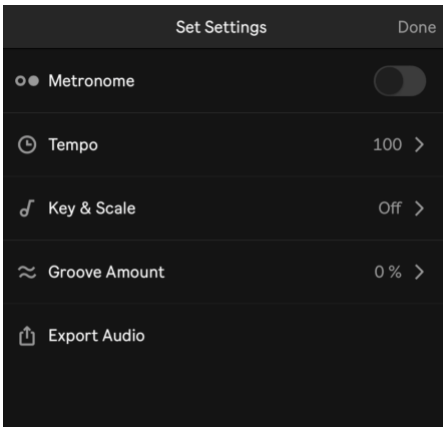

Figure 5 Set Settings

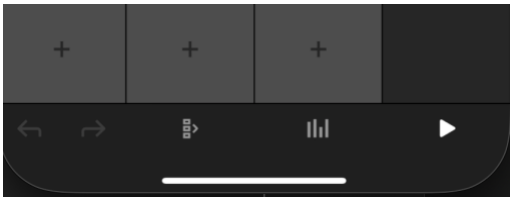

Figure 6 Bottom bar with buttons for Undo, Redo, Show/Hide Scenes, Mixer, and Play/Stop

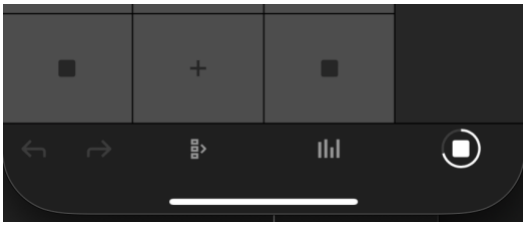

Figure 7 The play button changes when the set is playing, displaying the loop position

Users can tap on the colored icons to select the instrument, which brings up the instrument page. This page is different for different types of instruments. Below the instrument parameters there is an area for entering notes, which is formatted differently for drum racks and chromatic instruments. Drum racks have 16 pads which correspond with 16 individual sounds, while instruments are laid out in a different format allowing the instrument to be played melodically.

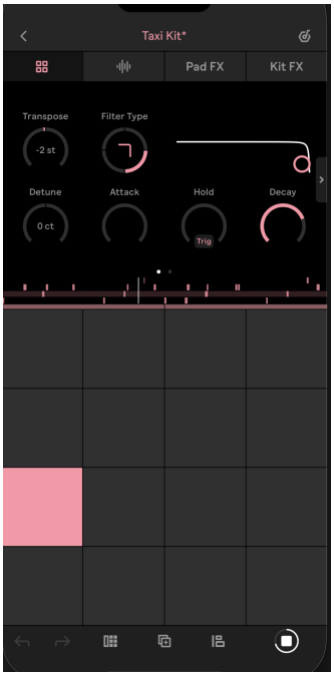

Figure 8 Drum Rack

Figure 9 Synth Instrument Preset

Figure 10 Sampler Preset

Pad displays change based on which type of instrument is selected, with options in the bar on the left of the pads. Notice that the Pad Performance icon must be selected to access these options. At the top of the instrument, users can select instrument and effects menus. The note and modulation information for the clips are shown below the instrument controls, above the pads.

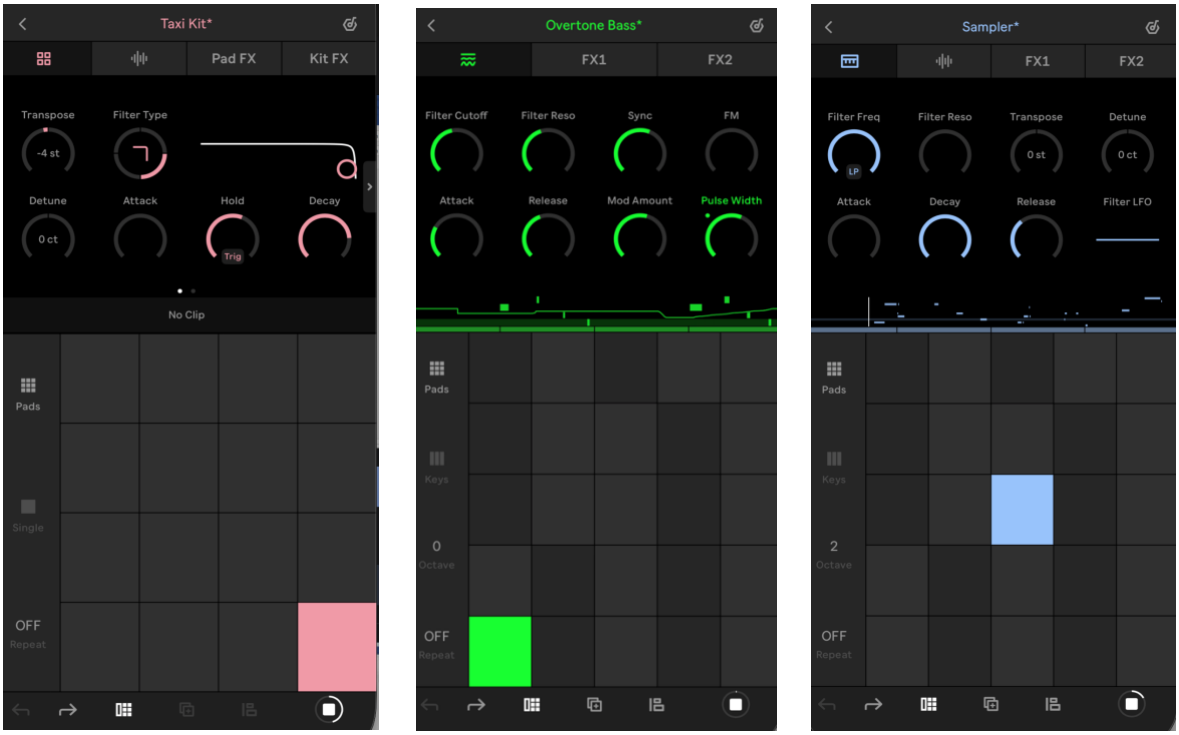

Figure 11 Pad Performance Options

Tapping on the clips bring up the clip view, here users can manipulate loop start and end. A second tap allows for editing of the individual notes within the clips.

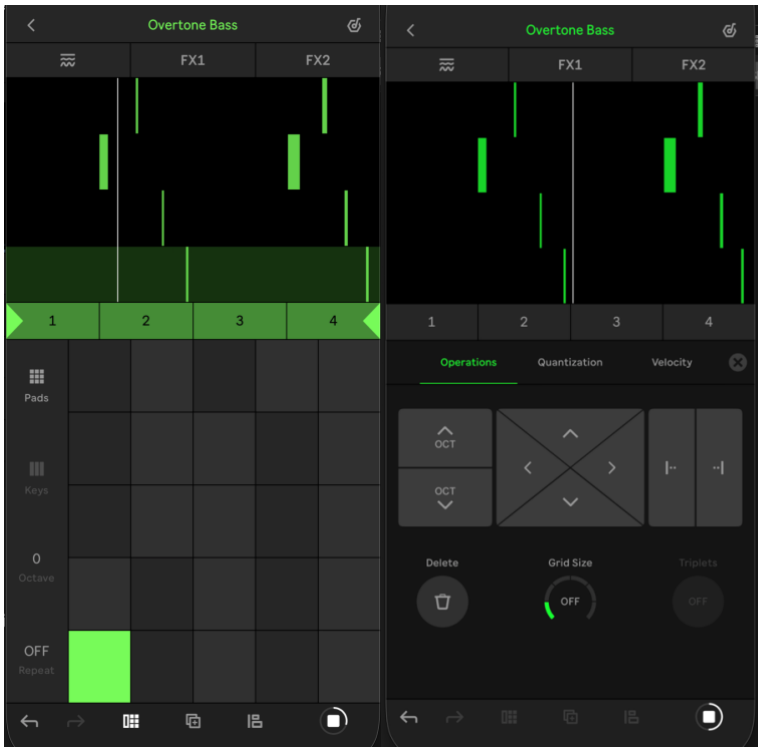

Figure 12 Clip Edit views

Back on the Set page, one of the last major pages to view is the mixer. The button to access the mixer is on the bottom bar and functions as a toggle. The mixer allows the user to adjust the volume for each instrument.

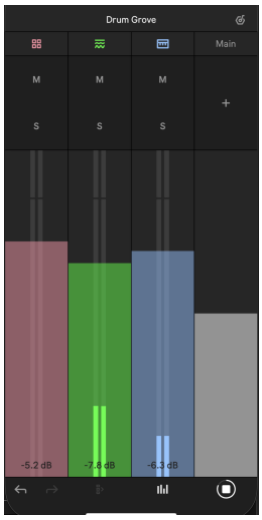

Figure 13 Mixer view

Samples are handled similarly between Drum Racks and Samplers. A Drum Rack is basically a nested set of Samplers, so that makes sense. In a Drum Rack, each pad has a corresponding Sampler, where the audio file can be changed or manipulated independently. This sample plays as a one shot, so it is not chromatic. In a Sampler instrument, the sample is changes pitch chromatically with the notes played.

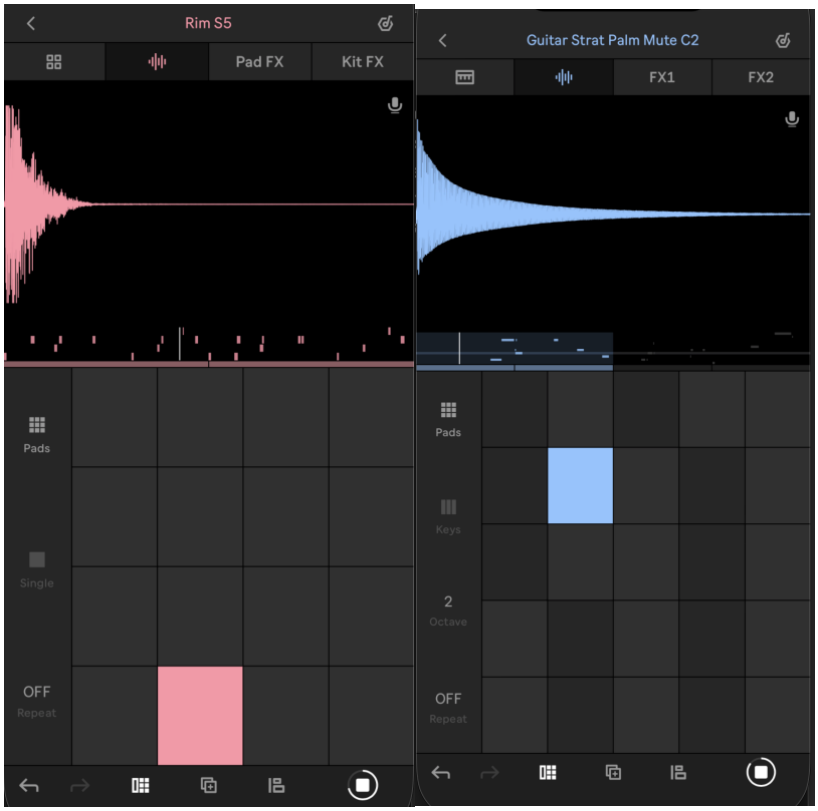

Figure 14 Drum Rack and Sampler, notice that the pads are different

The samples in a either instrument can be manipulated with vertical and horizontal scrolling, along with two finger pinch. Vertical scrolling increases the sample gain, horizontal scrolling changes the position throughout the wave form, and pinch zooms in and out of the waveform display.

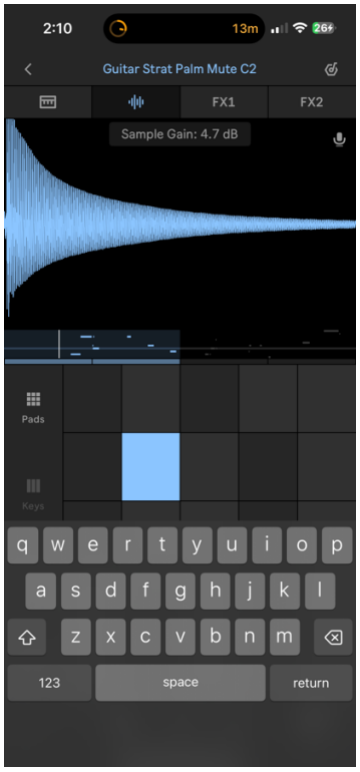

Figure 15 Waveform display

Every instrument has effects which are accessed through Pad FX and Kit FX on Drum Racks and FX1 and FX2 on Instruments.

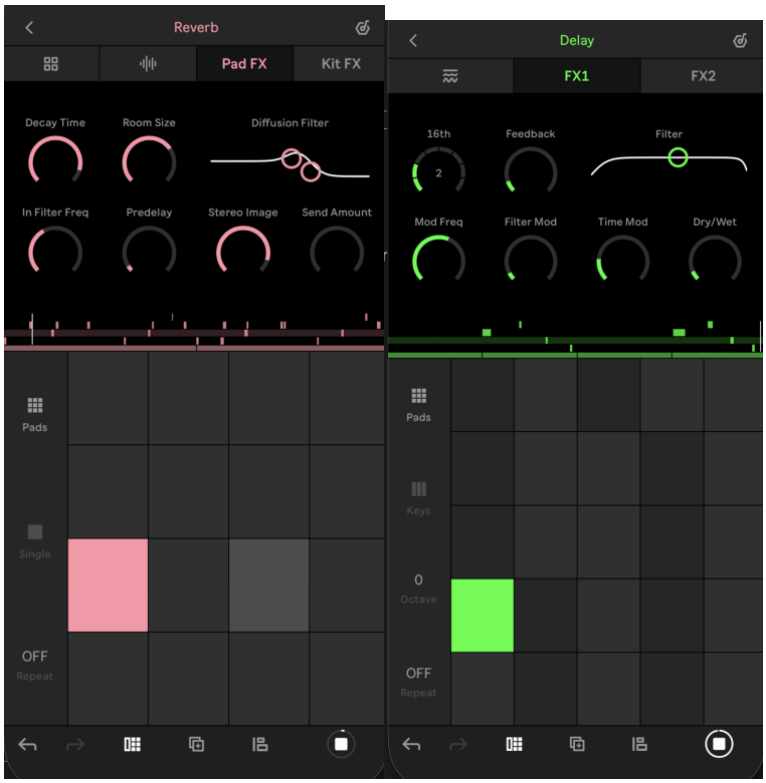

Figure 16 Effects

This covers most of the functionality of the Ableton Note Application. Let's see how it looks through the lens Jakob's Ten Usability Heuristics.

1: Visibility of System Status

I think that Note does a good job of keeping users informed as to system status through its interface. When play is activated, the play button changes to a stop button, and a progress meter is shown in going around the stop button. Also, all the clips that are playing have a progress display as well, where the color of the clip overtakes the length, showing progress through the clip. Progress can also be seen through the notes and modulation of each clip if you are in Instrument or Clip view.

Figure 17 Progress Meters

One area where this display is lacking is in the Sample View. I believe that a play position display here would be beneficial, because the truncating of a sample can be as important as the sample content itself for timing. The Sampler settings allow for the tuning of the Sample as well, and when a Sample is tuned up or down its waveform changes.

Unfortunately, the user cannot see the waveform when in the Sampler settings.

Figure 18 No play position marker, cannot see Sample in settings

Finally, the application clearly shows which Sets have been uploaded to the cloud and also displays that a set is playing and the progression through the set.

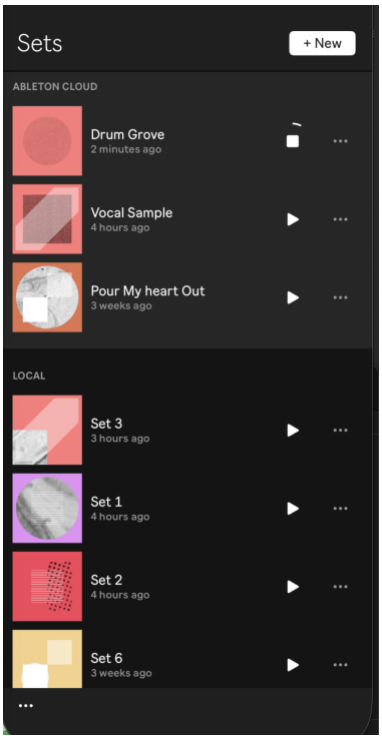

Figure 19 Sets in Ableton Cloud are clearly shown, notice the status notification next to Drum Grove

Ableton does a good job keeping the user aware of System Status, which could be better with the minor tweaks mentioned above.

2: Match Between the System and the Real World

Ableton Note partially adheres to this principle. Making music with technology is complex, and Ableton Live, Ableton's flagship product, is over 20 years old. To deal with the complexity of making music, it has developed its own terminology and design systems. This application is very similar in design to Ableton Live, and most of its users were most likely Ableton Live users first. It should be apparent that Note takes many design elements from Live. The mixer section and effects sends also mimic real world audio engineering technology.

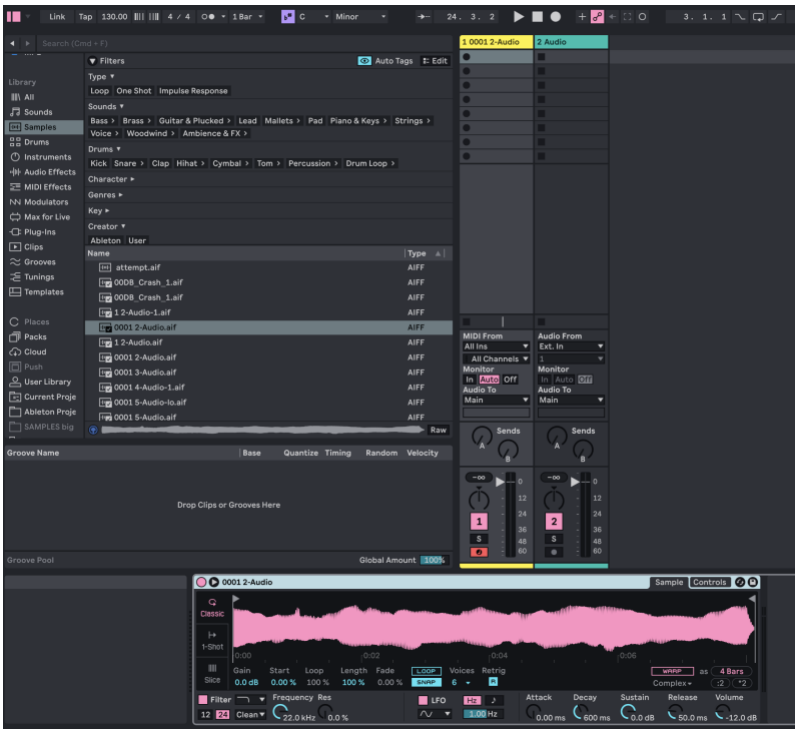

Figure 20 Ableton Live Interface

While the terminology and imagery used may be more familiar to experienced Ableton Live users, beginners may find the terminology, user interface, and information hierarchy confusing. Also, many of the icons used in the interface are not entirely clear, even to

experienced Live users.

Figure 21 Unclear Icons

I would recommend a more thorough application-based onboarding system, and the ability to turn on hover-over descriptive help tips.

3 User Control and Freedom

Note does an exceptional job of adhering to principle three. Undo and Redo are prominently displayed and appear to function throughout the application. Note perpetually saves the session as it is, so Save is not necessary. The addition of the capture function, shown here as Add at the bottom, allows the user to capture notes that were played previously and add them to the clip, further enhancing both user control and freedom by allowing users to capture anything good that they may have played without having record active. I have no recommendations for this principle.

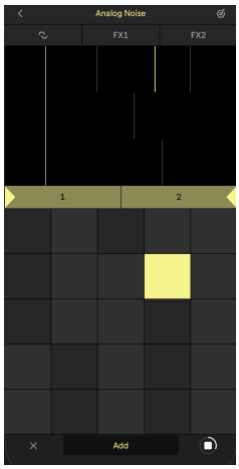

Figure 22 Capture, shown here as Add

4 Consistency and Standards

Ableton Live is an exception to Jakob's Law. Live is generally considered the most used Digital Audio Workstation in the world, and users are known to spend large amounts of time learning and using it. Note can be considered an extension of Live, and it demonstrates consistency within the Ableton product universe. It follows the conventions set by two decades of Live development, with the above-mentioned exceptions of some of the Icons. Interactions generally follow established touch screen interaction, but it may not be immediately clear to the user how or when to utilize them. My recommendation would be to adjust some of the icons, implement stronger application-based onboarding and hover-over descriptive help tips.

5 Error Prevention

This application is designed to capture happy accidents, amongst other things. The most likely place for error would be writing over clips that the user wants to keep a certain way, but there are systems in place to avoid this, mainly Undo and the Clip Duplicate button. The capture function also reinforces Error Prevention, in a way, since the user doesn't have to worry about the error of not pressing record. The addition of a lock clip function to make sure that the user doesn't accidently modify a clip could help.

6 Recognition Rather Than Recall

The core functions of Note are straightforward and easy to figure out, and its visual presentation is understandable. More advanced functionalities are buried in menus and are not readily apparent, and some additional pages are activated by icons which are not immediately clear. Implementing searchable settings and hover-over descriptions and hint would address these issues.

7 Flexibility and Efficiency of Use

This application's purpose as a musical sketch pad and its touch-screen interface creates constraints that limit the ability of accelerators. There is no keyboard, so there are no keyboard shortcuts, and touch gestures can only be so complex before they are useless. I have found the actual note editing interface to be cumbersome and slow. I think that implementing touch based dragging to move the notes around in addition to the incremental editing interface would help.

8 Aesthetic and Minimalist Design

This application is complex. It does an admirable job of presenting an appropriate amount of information and capability without becoming too complex to be useful. The design aesthetic parallels the minimal design of Live, and the familiarity of those constraints contribute to its overall functionality. I have no suggestions here that wouldn't break the functionality of the interface.

9 Help Users Recognize, Diagnose, and Recover from Errors

The Note application generally does not produce any errors, and as it perpetually saves and is perpetually Undo-able it is easy to recover from operator or performance errors. As I have not encountered any errors, I do not have anything to add for this principle.

10 Help and Documentation

All the help and documentation aspects of this app are online. The manual is 56 pages in length and illustrated, so adding it to the application may not be possible or advisable. All onboarding is done through the Ableton website via embedded YouTube videos. I think implementing a quick swipe through onboarding and contextual help hover-over functionality would help new users learn this application faster.