

This report analyzes Combopedia through heuristics derived from Nielsen's 10 Principles, Norman's Design of Every Things, Tognazzini's Principles and Shneiderman's Rules for 6.813/6.831 – User Interface Design. I did not collaborate with anyone.

Heuristic Evaluation for Combopedia

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April 24, 2013

Overview

“[Combopedia](#)ⁱ is intended to be a resource for learning and sharing combos for Persona 4 Arena, a 2D fighting game for video game consoles. Players control a single character to attack and defend against an opponent character, controlled by another player or by the computer.”

Report Structure

Order – Specific issues found are ordered by the natural flow of core user scenarios, to facilitate understanding of how problems may arise.

Severity – Severity ratings are borrowed from Nielsen’s guidelines, with a scale of 0 to 4:

0. Heuristic violation, although the issue doesn’t pose as a usability problem
1. Cosmetic, low priority.
2. Minor, should fix if there’s time.
3. Major, should fix before release.
4. Catastrophic, must fix immediately.

In addition, there is also **Awesome** and **Super Awesome!**

Overall Comments

The prototype is aesthetically pleasing, thoroughly thought out and crafted with care. Quite a few features had been implemented, and the joystick page is incredibly fun to play with. There are some minor cosmetic issues that slightly deter from the user experience.

General issues

- Can user edit combos (Flexibility and efficiency - Nielsen)?
- Can user remove combos for incorrectly entered combos (Reversible Actions - Shneiderman)?

Ordered List of Specific Issues

Task 1: A novice navigates to the site to add a new combo.

1. **Image links are not consistently colored with background.** (Consistency and standards - Nielsen, Tog, Shneiderman)

Severity: 0

Description: The textured gradient on the navigation bar is a good touch, but highlights that both buttons are different colors and textures from the background. A bit distracting to the eye, but does not impede usability.

Recommendation: Transparent background on these two images.

Screenshot:



2. **The Home and Combopedia image links are next to each other.** (Aesthetic and minimalist design - Nielsen)

Severity: 1

Description: Usually, clicking on the prominent logo of a site takes the user to the home page. In this case, there's also another button right next to the logo, which is clickable, that takes the user to home.

Screenshot:



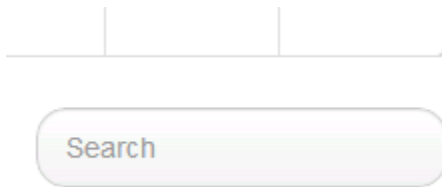
3. **Search bar has a light color saturation, tone and outline, thus easily missed.** (Readability - Tog)

Severity: 2

Description: Both the search bar and the table of combos are light colored, but the table merely forms a structured guide for the eye to easily navigate and parse combo information. On the other hand, the search input box is a key piece of functionality, which is placed at the bottom of the page, and almost blends into the background.

Recommendation: Move the search bar and add more contrast to highlight its existence.

Screenshot:




4. **The hover highlight color on the combo table is the same color as alternating rows.** (Feedback - Norman, Shneiderman, Visibility of system status - Nielsen, Norman)

Severity: 1

Description: The color of the highlighted hover row is almost identical to the light hue on alternating rows of this table, making it hard to register system feedback when a user is hovering over a row.

Recommendation: More contrast for hover rows, not same hue as alternating table rows.

Screenshot:

		412,AB,1,AD,5,874
Super combo B	Teddie	 236,C,1,236
Super combo C	Aigis	 89632,ABD,7
Super combo H	Yu Narukami	 7,21478,ABC,A,1,BC
Super combo D	Yosuke Hanamura	 CD,3,89632
Super combo E	Chie Satonaka	 ...

This is the hover over row

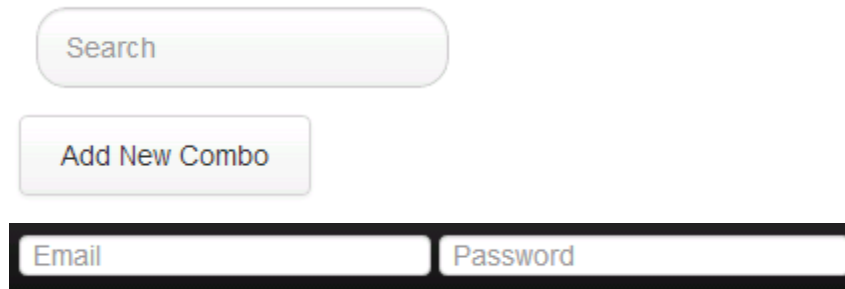
5. **The text input boxes are inconsistently themed.** (Consistency and standards - Nielsen, Tog, Shneiderman)

Severity: 2

Description: The two types of text input fields look different on the page, which would be ok, if the Add New Combo button isn't so similar in appearance as the Search input box. This slightly confuses the user as he expects more consistent formatting across similar functions.

Recommendation: Apply alike styles to controls with similar functionality.

Screenshot(s):




6. **The text fields, numbers, and favorite icon in the table are hard to read.** (Readability - Tog)

Severity: 1

Description: The small font size is surrounded by the relatively large height for which a row takes up, and shades of gray also decrease the readability of the text.

Recommendation: Increase font size and contrast, use more screen real-estate.

Screenshot:

Super combo A	Teddle		jab	150	50	80	1/5	★
		412,AB,1,AD,5,874						

7. **There's no feedback for the ability to click on the favorite icon.** (Feedback - Norman, Shneiderman)

Severity: 2

Description: It's not clear you can favorite a move because hovering over the entire row shows a hand cursor so there is no specific feedback for the favorite star icon to be clickable.

Screenshot(s):



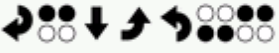
8. **Multi-sort is a cool and useful feature for expert users.** (User control and freedom - Nielsen, Tog, Shneiderman, Efficiency - Tog)

Severity: **Awesome**

Description: I enjoyed playing with the multi-sort feature for this table. No doubt for large amounts of combo data, users would like to sort on more than one attribute.

Recommendation: Tooltip letting the user know this feature is available.

Screenshot(s):

Character	Combo	Type	Damage	MeterGain
Kanji Tatsumi	 89632,AB,2,236,23698,CD,AB	special	980	50

9. **Sort by 'Combo' doesn't have a natural mapping.** (Natural mapping - Norman, Tog)

Severity: 0

Description: Although the rest of the columns map to a natural sort order, the combo description doesn't seem to have an intuitive mapping. This doesn't seem to affect usability of the site.

Screenshot(s):

Combo	Type
 CD,3,89632	kick
 89632,D,9,2369874	jab
 89632,ABD,7	bas

10. **'Add New Combo' button is easy to miss.** (Visible navigation – Tog, Flexibility and efficiency - Nielsen)

Severity: 2

Description: The ability to add a new combo is an important core feature, but is located and displayed in a way that's easy to miss. At the bottom of the page with the same color and border outline as the table, which is quite faint, it's easy for the untrained eye to miss, particularly for a squint test.

Recommendation: Add an additional option in the top bar, side bar, or on top of the table to allow the users to add combos, perhaps in higher contrast with a '+' sign.

Screenshot(s):

Super combo E	Chie Satonaka	 89632,D,9,2369874
Super combo F	Yukiko Amagi	 89632,AB,5
Super combo G	Kanji Tatsumi	 89632,AB,2,236,23698,CD,AB

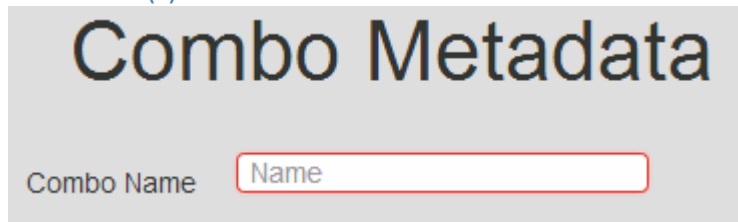
Add New Combo

11. **Keyboard focus on an input field to enter text turns it red.** (Consistency and standards - Nielsen, Tog, Shneiderman, Match the real world - Nielsen)

Severity: 2

Description: As I click on a field to enter text, the field is highlighted in red, whereas the rest of the site highlights an active input field in blue. This is both internally and externally inconsistent since red implies I'm doing something wrong, particularly for a US website.

Screenshot(s):



12. **Include more feedback and error checking for input values.** (Feedback - Norman, Shneiderman, Error prevention - Nielsen)

Severity: 2

Description: Incorrectly formatted text, once entered, does not turn red and is allowed. A new user, core scenario task 1, might not know the allowed range of input values for some of these attributes.

Recommendations: Tooltips or labels describing the valid values and some simple error checking would help novices.

Screenshot(s):

Combo Metadata

Combo Name

Character ▼

Type ▼

Damage

Meter Gain

Meter Drain

Difficulty ▼

13. **The 'Next' and 'Cancel' buttons are intuitive and well-located.** (Feedback - Norman, Shneiderman, Consistency and standards - Nielsen, Tog, Shneiderman)

Severity: **Awesome**

Description: I like the next and cancel buttons on the top of this panel, a natural location guiding a novice through a combo adding experience. It also provides feedback to the user that there's more to come.

Recommendation: Perhaps change Cancel to Previous, and add Step 1 / 2.

Screenshot(s):



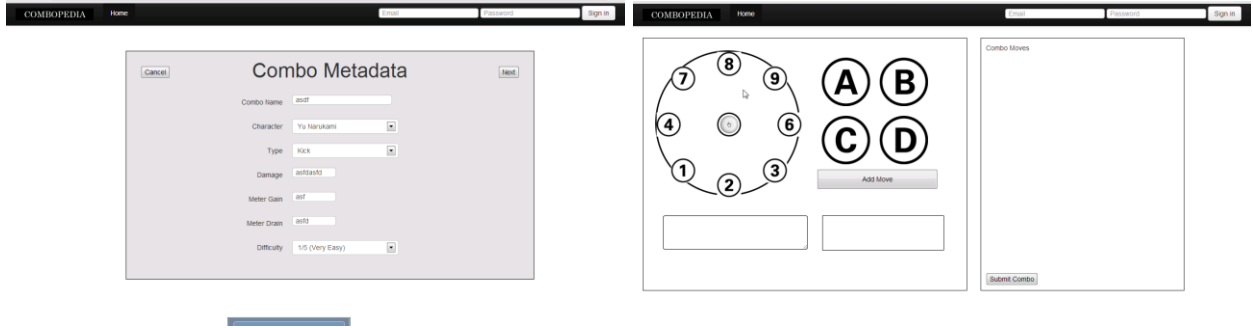
14. **No feedback, reversibility or safety for going to and from step 1 and step 2 during combo addition.** (Consistency and standards - Nielsen, Tog, Shneiderman, Reversible Actions – Shneiderma, Feedback - Norman, Shneiderman, Protect users' work - Tog)

Severity: **3**

Description: The two pages in adding a combo are styled differently, which is ok, but the second page doesn't provide a back button, unlike the first page. In addition, there is no user feedback that the data from the previous page was entered successfully and carries on to the next step. Furthermore, navigating back and forward to the joystick page causes the user to lose their progress with adding a series of combo moves. For a novice user, this is a high impact scenario because he might not be comfortable with the system, so reversibility, feedback and protecting his progress are quite important.

Recommendation: Add a back button, provide some visual feedback that the last step's entered data had been carried over to this page, and persist unfinished combo moves if user chooses to go back to previous step.

Screenshot(s):



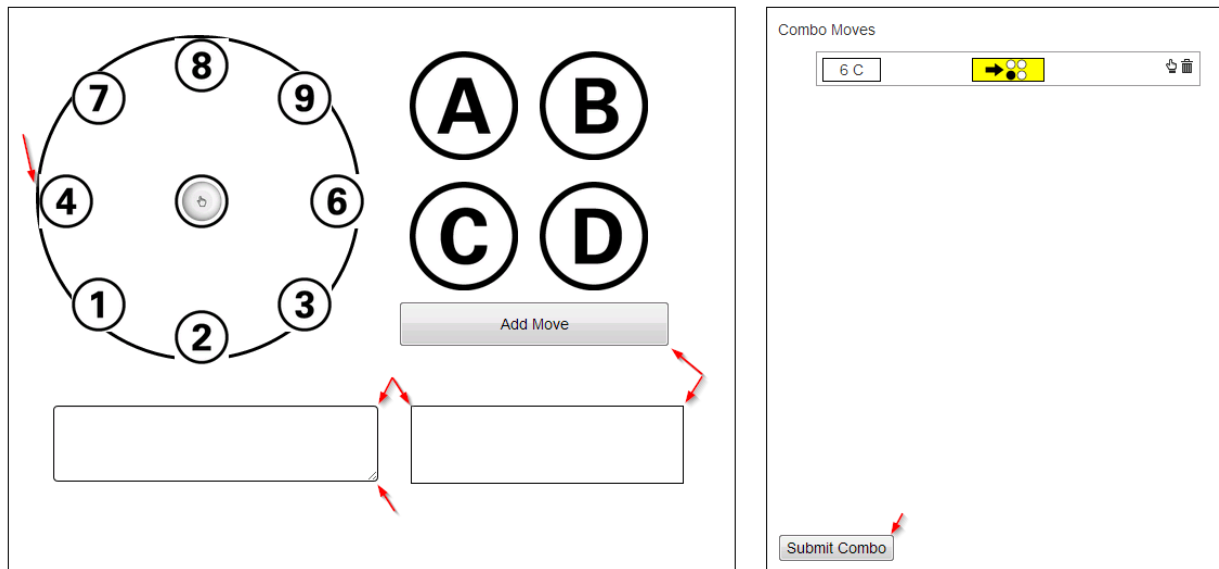
15. **Minor alignment and styling issues on joystick page.** (Consistency and standards - Nielsen, Tog, Shneiderman)

Severity: **1**

Description: See arrows in diagram below. There are a few cosmetic issues with alignment and edges of controls and images.

Recommendation: Grid layout would be nice here to standardize margins and layout.

Screenshot(s):

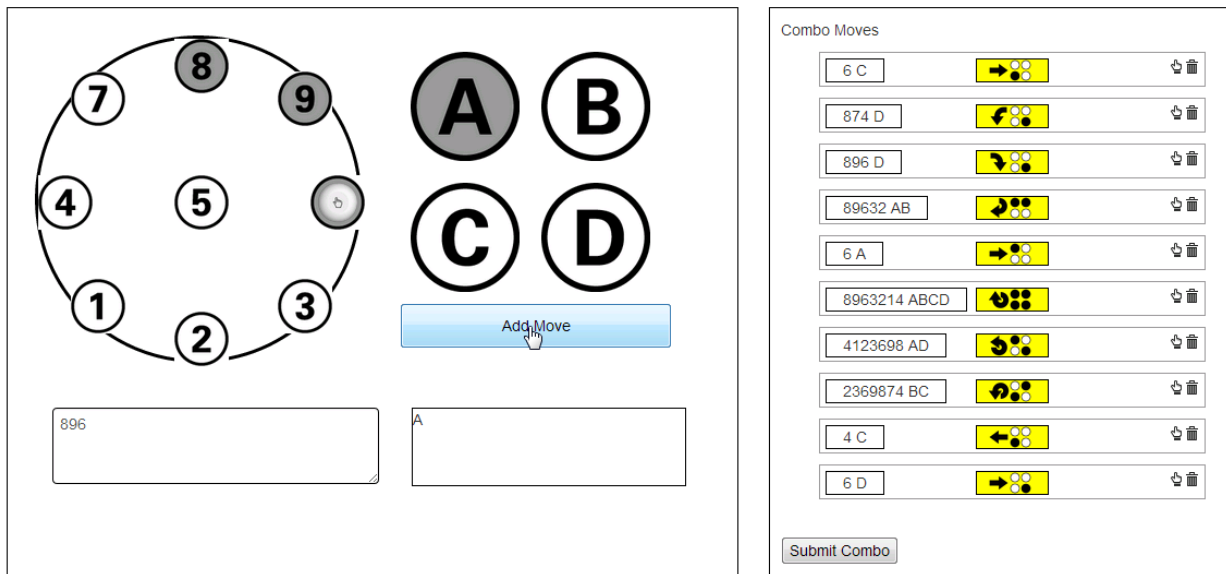


16. **The controls on the joystick page are naturally intuitive and almost addictively engaging.** (Affordances - Norman, Tog, Natural mapping - Norman, Tog, Track state – Tog, Reversible Actions – Shneiderman, User control and freedom - Nielsen, Tog, Shneiderman, Match the real world - Nielsen)

Severity: **Super Awesome!**

Description: The natural mapping of joysticks to a draggable or clickable wheel affords many of the ideas in heuristic evaluation. The user doesn't need any guidance to use this system to input complicated combo strings.

Screenshots(s):



17. **Icons on joystick knob should be a bit bigger.** (Readability – Tog, Visible navigation - Tog)

Severity: 1

Description: The comparison between a mouse cursor and the icon on the knob shows the icon to be quite tiny, in addition to a bit blurry.

Recommendation: Make the knob larger.

Screenshot(s):



18. **Clicking on an empty number dial and dragging doesn't move the control.** (Consistency and standards - Nielsen, Tog, Shneiderman)

Severity: 2

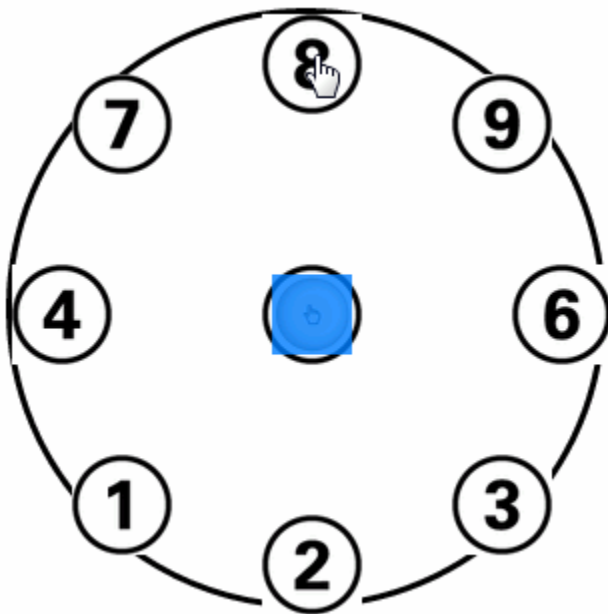
Description:

The reason this is unintuitive is two-fold:

1. Clicking on an empty number dial moves the knob to that dial and selects it.
2. Dragging the knob over dials selects them.

However, if we combine these two actions, clicking on an empty dial and dragging, this doesn't have the intuitive behavior of moving the knob to an empty dial, selecting it and any other dials it is dragged across. Hence, it's internally inconsistent and also feels unintuitive for this action not to work.

Screenshot(s):



When user tries to click and drag on 8

19. **The feedback icons that dynamically update are incredibly helpful and fun for joystick positions.** (User control and freedom - Nielsen, Tog, Shneiderman, Feedback - Norman, Shneiderman)

Severity: **Awesome**

Description: The dozen or so rotated icons as feedback and validation for a joystick move is brilliant. Not only do I validate my input as formatted correctly, it provides a visual cue that it's indeed what I intended, which is not trivial for 2-D finger motions.

Screenshot(s):

Combo Moves

8 ABCD			
2 C			
8963214 C			
8741236 ABCD			
412 C			
698 BD			
87412 C			
89632 AC			
7 C			
3 B			

Task 2: An expert user enters a new combo through keyboard notation and changes the order of moves.

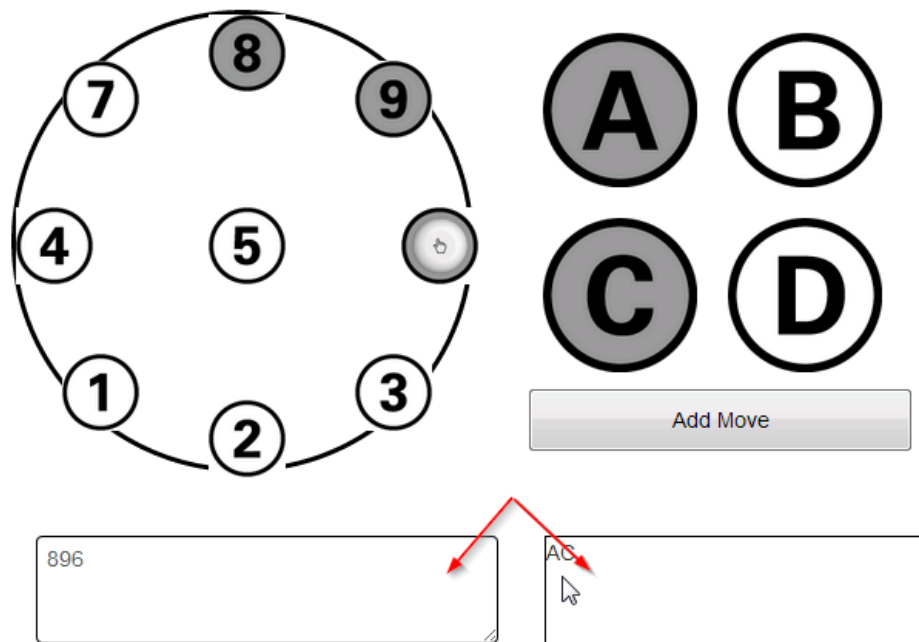
20. **There is little indication that user can type numeric moves, for which the visual joystick is a feedback for validation of input.** (Help and documentation – Nielsen, Recognition, not recall - Nielsen, Tog, Shneiderman)

Severity: 2

Description: I discovered the ability to type and validate keyboard entries in the first input box late in the testing process. This is because the adjacent text input and text output boxes look strikingly similar and consistent, which leads the user to believe that are the same if not careful. In addition, the primary mode of input, dragging and clicking alphanumeric buttons, sends the same feedback to both rectangular boxes, which further implies these two boxes are similar.

Recommendation: Add a tooltip, label or distinguish the appearance of these two boxes more prominently. Possibly strip away the outline of the second box.

Screenshot(s):



21. **The ability to drag and rearrange the list of combo moves is quite intuitive and easy to use.** (Feedback - Norman, Shneiderman, Natural mapping - Norman, Tog)

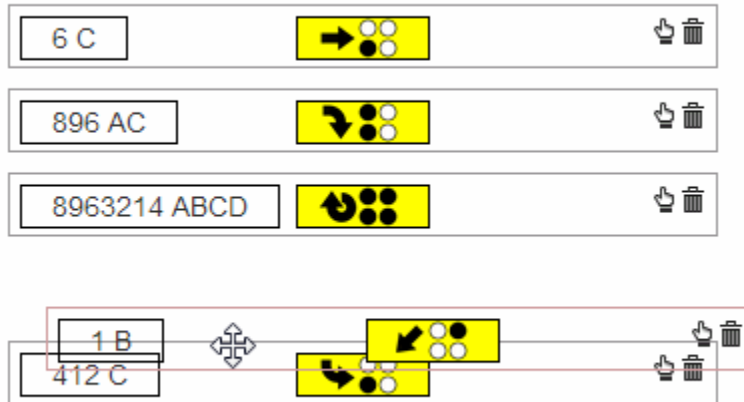
Severity: **Awesome**

Description: The ability to drag and drop moves to re-arrange the order is core to this second user scenario and highly usable. The feedback from mouse cursor changing to a commonly afforded move-arrow is excellent and easily discoverable.

Recommendation: Perhaps change the mouse cursor to a two directional move arrow: up and down.

Screenshot(s):

Combo Moves



Task 3: Find a high-damage combo for Teddie and learn to use it

22. **Ability to filter and select combos specific to a character by attribute is highly efficient and easy to perform.** (Efficiency – Tog, Flexibility and efficiency - Nielsen)

Severity: **Awesome**

Description: There's two ways to do this, one is filter by character, and then sort by damage. Another is to multi-sort by character and damage. These dual options make this core task efficient and flexible to perform.

Recommendation: Use the same highlight color for both selected row and column heading to allow easy scan-ability.

Screenshot(s):

Name	Character	Combo	Type	Damage	MeterGain	MeterDrain	Difficulty	Favorite
Super combo A	Teddie	412,AB,1,AD,5,874	jab	150	50	80	1/5	★
Super combo B	Teddie	236,C,1,236	kick	100	90	30	1/5	★

23. **The back/next/cancel buttons on similarly formatted panels should be consistent.**

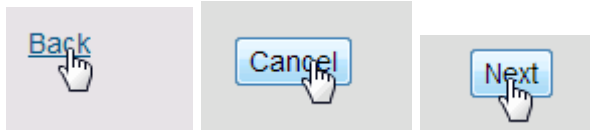
(Consistency and standards - Nielsen, Tog, Shneiderman)

Severity: **1**

Description: The back button (or link) should be consistent across similar panels. For the detailed view combo page, the Back button or link looks inconsistent and takes away from the user experience.

Recommendation: Standardize similar-function button styles.

Screenshot(s):



24. **The discussion field is intuitive, simple and provides multi-faceted feedback.** (Feedback - Norman, Shneiderman, Aesthetic and minimalist design - Nielsen)

Severity: **Awesome**

Description: The discussion field is highlighted by a blue glow when active, in addition to a blinking cursor, which are nice forms of feedback for the user. Pressing 'enter' to enter text is simple and appropriate for a casual discussion thread.

Screenshot(s):



25. **It's hard to discern individual steps within a combo.** (Readability - Tog)

Severity: **2**

Description: The spacing between moves is the same spacing between joystick and buttons within a same move. Similarly, the keyboard text for joystick motion and button presses are separated by commas, as with between moves. Both of these ordered lists of moves are hard to follow.

Recommendation: Change delimiter between moves.

Screenshot:



26. **The spacing between labels and values impedes readability.** (Readability – Tog, Efficiency – Tog, Consistency and standards - Nielsen, Tog, Shneiderman)

Severity: **1**

Description: The spacing between labels and values for the list of combo attributes is a bit odd – one is centered and the other is left-aligned. The large gap in between is a bit hard for the eye to follow, and takes the user a split second longer to register the value and label for which it's associated with.

Recommendation: Close the margin and be consistent with alignment.

Screenshot:

Name:	Mega Kick
Character:	Aigis
Type:	Kick
Damage:	3600
Meter Gain:	10
Meter Loss:	50
Difficulty:	4/5

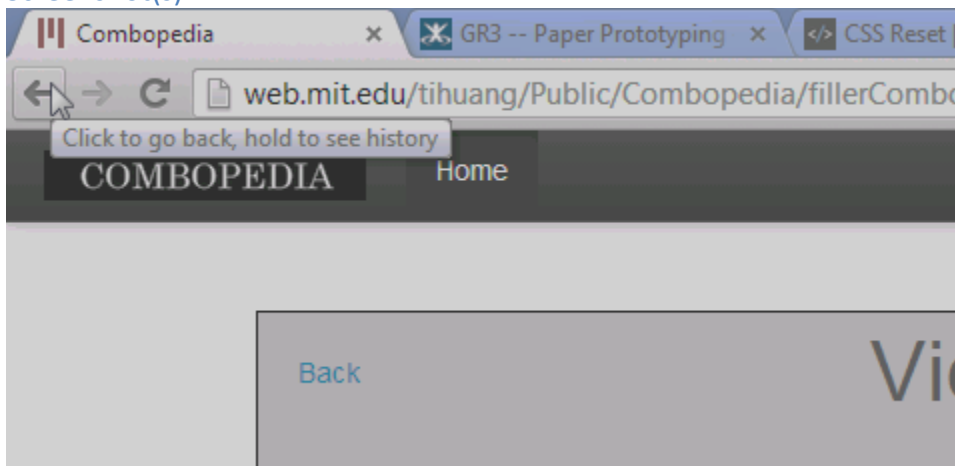
27. **The back button doesn't take you to your filtered, ordered list.** (Reversible Actions – Shneiderman, Track state - Tog)

Severity: 3

Description: When a user searches for a combo specific to a character, he would filter the list by the character and sort by damage. There is likely to be an abundance of combos available, so there are probably a few combos he's interested in. However, after viewing details for Combo A, pressing back in the browser doesn't take him to his filtered and sorted table specific to what he was looking for.

Recommendation: Track state of table sections between pages.

Screenshot(s):



Conclusion

Awesome design and a pleasure to use, I'd love to see an application for Mortal Kombat for this design!

Conglomerated Heuristic Principles

1. Match the real world - Nielsen
2. Consistency and standards - Nielsen, Tog, Shneiderman
3. Help and documentation - Nielsen
4. User control and freedom - Nielsen, Tog, Shneiderman
5. Visibility of system status - Nielsen, Norman
6. Flexibility and efficiency - Nielsen
7. Error prevention - Nielsen
8. Recognition, not recall - Nielsen, Tog, Shneiderman
9. Error reporting, diagnosis and recovery - Nielsen, Shneiderman
10. Aesthetic and minimalist design - Nielsen
11. Affordances - Norman, Tog
12. Natural mapping - Norman, Tog
13. Feedback - Norman, Shneiderman
14. Anticipation - Tog
15. Color blindness - Tog
16. Defaults - Tog
17. Efficiency - Tog
18. Fitt's Law - Tog
19. Latency reduction - Tog
20. Metaphors - Tog
21. Protect users' work - Tog
22. Readability - Tog
23. Track state - Tog
24. Visible navigation - Tog
25. Shortcuts - Shneiderman
26. Reversible Actions - Shneiderman

Appendix 2

Severity Rankings	
Rating	Definition
0	Violates a heuristic but doesn't seem to be a usability problem.
1	Superficial usability problem: may be easily overcome by user or occurs extremely infrequently. Does not need to be fixed for next release unless extra time is available.
2	Minor usability problem: may occur more frequently or be more difficult to overcome. Fixing this should be given low priority for next release.
3	Major usability problem: occurs frequently and persistently or users may be unable or unaware of how to fix the problem. Important to fix, so should be given high priority.
4	Usability catastrophe: Seriously impairs use of product and cannot be overcome by users. Imperative to fix this before product can be released.

Appendix 2 - Detailed severity rating explanations

¹ <http://web.mit.edu/tihuang/Public/Combopedia/menu.html>