

Group 14 - Week 10 - Final Project

Team Members: Adam Cankaya (Leader), Freelin Hummel (User Communicator), Jared Krull (Writer), Daniel Sloane (Visual Designer)

<https://cs352.mybalsamiq.com/projects/team14/grid>

1. A very brief summary of the problem your system is addressing and what kind of users you're targeting.

We are trying to design a television remote control for use with Netflix that is aimed at people who struggle with new visual and physical technologies (primarily elderly and visually impaired people).

2. A myBalsamiq storyboard of your high-fidelity prototype

See attached "Team 14 Prototype Storyboard.pdf" or

<https://drive.google.com/file/d/0B3F4xb97H0bcYTQ4RFN0MnVVNTQ/edit?usp=sharing>

3. A copy of your interactive PDF from myBalsamiq

See attached "Team 14 Interactive Prototype.pdf" (updated June 2 !) or

<https://drive.google.com/file/d/0B3F4xb97H0bceURLcEtGTG50MzA/edit?usp=sharing>

4. For the design decisions you have made, include a written justification of each of the design decisions as they have ended up in this prototype. You can base some justifications on general usability principles, but the majority should be based on your particular population and your user Research and Evaluation. Justifications based on feedback you've received are good too, especially if they are tied to the specific users/tasks your software is supposed to support.

#	Design Feature	Justification	Source (general usability, user population & research, feedback)
1	Portable / hand held / battery powered	Ease of use in living room, no other computer equipment needed for use	User research shows limited desktop computer experience
2	Large search button and arrows keys, large centered play/pause button	Direct access to search - no digging through menus to find it. Large button is easy to see, identify and press	User research shows searching for media is primary goal and current source of difficulty in other remote control products
3	Search box on screen is highlighted after	We want users to be aware of current state of the system - highlighting the search box after the search button is	General usability suggests that users are kept informed of current system status. User

	pressing the large search button	pressed tells the user they can begin typing their search keywords	research shows confusion over whether a button press was successful or not.
4	Display immediately updated suggestion list after each letter entered	This will minimize the number of letters necessary to be entered before a user can find if their requested media is available	User research shows a desire to minimize the amount of typing necessary while seeing available search matches
5	Sliding keyboard underneath the remote	Physical keyboard is much easier for entering letters than an on screen keyboard. Keyboard slides underneath remote to reduce surface size and keep a palm friendly shape	User research shows confusion and frustration trying to navigate through keys on an onscreen keyboard & confusion over trying to setup a wireless keyboard.
6	Help button	Need an "escape route"	Peer feedback from Piazza
7	Settings button	Easier access to audio/video settings without going through menus	Peer feedback from Piazza / User analytical research
8	Settings menu emphasizes menu text / icon size and audio interface options	Visually impaired users will immediately want to increase the text size or have the software read out text aloud. Having the settings menu immediately open up to accessibility features allows independence for impaired or disabled users.	User research with elderly people showed a clear difficulty with being able to see on-screen text and menu icons.
9	Large enter key in traditional keyboard location replaces old select key	Clearly lets users select their media after searching. No need to search for additional button(s) in non-traditional locations.	User analytical research showed confusion over how to select media once decided upon. General usability principles remind us to not reorganize layouts for unnecessarily.
10	Power button immediately turns on unit and loads Netflix start screen	Having one button turn on our Netflix hardware and also lead into the main welcome screen eliminates confusion over how to start the process	User analytical research showed immediate confusion over how to start the hardware and how to start using Netflix
11	Physical remote design instead of touch screen or app based	Users are already confused by new features inherent to Netflix. By trying to replicate the traditional physical remote control we are minimizing their necessary adjustment	User research showed a hesitance to trust touch screen technology while also heavily valuing reliability and replicability over all else.
12	Large browse button	Browsing is second most common goal besides searching - we want users to have immediate access	User research shows browsing and searching to be primary desire for using Netflix
13	Backlit keys and keyboard	Additional light helps keys be distinguished from each other, especially in reduced lighting	Cognitive walkthrough showed large amounts of time being used simply searching for keys

14	Volume buttons	Lets user control audio volume without using additional remotes	User research has shown concern over having multiple remote controls being necessary
15	Multiple favorites buttons act as shortcuts	Lets users return to their favorite searches or categories quickly. Update 6/2: Allows users to easily remove or edit favorites list	User research shows a desire to return to the same search entries or media genres repeatedly without having to reenter terms Update 6/2: Design Gallery comments suggest ability to edit/remove items from favorites
16	New Releases, Recommendations buttons	Lets users quickly see list of new releases and personalized recommendations without going through a menu	User research shows a desire to quickly be able to peruse available media frequently
17	Predictive AI autocomplete used when searching	Lets users only enter a few letters and quickly see if their desired media is available	User research indicates a desire to minimize the amount of typing required
18	Braille lettering on each key and keys click when pressed	Allows users who know braille to use the keyboard while also introducing tactile feedback	User research and general usability encourages keeping the user aware of current system status

5. A very brief list itemizing what you changed after Interactive Design Gallery #2 and why:

We had three comments from the Interactive Gallery:

Comment #1: *I'm looking at your prototype with information foraging in mind, and it seems to be very well designed overall. However, I'm a little bit confused by the distinction between the queue and the favorites section, as well why there are two sections for favorites. If I were a user who had saved a movie or television show at one point, there are three different sections I would have to select from just on the main page. I could check the queue, where I might see the movie, but it doesn't look as if there are any sorting features to help the user out in this section. Assuming I didn't find what I wanted here, I would have to then check two different favorites sections. Obviously, it wouldn't be disastrous for a user to have to do a little searching, but you might consider condensing the two favorites section, and possible renaming it to something that distinguishes from the queue. Given that favorites aren't something included in Netflix already, you could even remove it. Also, while this is unrelated to information foraging, you might want to add a way for users to delete shows from these sections, as well as to add them.*

Group Response and Design Justification: The difference, in our minds, between the

queue and the favorites, is that the queue is generally for movies that the viewer hasn't seen before but which they plan to watch, while favorites are for films that the viewer either has already watched or is currently watching, and likes enough that they expect that they will watch them again and again. In other words, the queue is a transient holding spot in which the movies are removed after being watched, but the favorites are a more permanent list. There are two favorites lists to accommodate either multiple users in one home or one user using the two lists for two separate categories. *It is true that being able to remove from the favorites lists should be an option, so we have added those buttons to the favorites pages on the prototype (though they are not currently interactive).*

Comment #2: From a foraging perspective, I found the homepage had enough scent for me to follow to the next page. For example, I could have followed the links for new television shows, or movies. I chose to follow the link for new movies. Following the scent led me to a screen with different movie genres, also an option to browse new releases. This abundance of browsing options is a good example of providing different scents all in one place. I never felt like I had lost the direction I was trying to move in, I never had to backtrack through the webpage. The initial scent from the homepage led me to the movies of the genre I wished to browse.

Group Response and Design Justification: We are glad you were able to maneuver through the prototype easily. Our whole goal was to provide a more user friendly Netflix experience that really let users see what Netflix has to offer.

Comment #3: First of all, Well done! I enjoyed this prototype. It is very thorough and well put together. From a surprise-explain-reward angle; I had trouble 'turning on' the machine. The remote itself has many buttons, that would cover most of what the user would want to do, but it wasn't very evident to me which button would turn it on. In some ways the menu button could be seen as 'obvious' but I think it could be highlighted more, or on the other hand, perhaps any button could take you to the main menu. From an information foraging angle, most of your 'results' screens looked pretty well layed out, though there wasn't much to indicate whether the list continued or if there was a way to get more results. Perhaps an arrow or some such would indicate that the user could keep scrolling. Other wise, it seemed like my searches weren't yielding many results; somewhat underwhelming.

Group Response and Design Justification: We had some similar comments during our previous empirical research regarding the labeling of the "main menu" home button. Some thought it was clear this was the button to press to start using the device, but others thought the button should be labeled "power" or "on/off." We feel the "main menu" label is most helpful because the remote device is designed to be used with an already running instance of Netflix. Our remote will not be streaming anything Netflix directly. Its instead intended to be used to browse through Netflix no matter how you are already

streaming Netflix to your TV (PC, Xbox, Roku, etc). Since Netflix should already be running and displayed on your television before you pick up the remote, we believe the label of "main menu" makes more sense instead of "on / off" or "power."