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CIS 133

05/05/2023

Roku Ultra — A Roku Streaming Player Used to Watch TV, Stream Shows & Movies  
for all types of Families and Consumers.

# Overview

The Roku Ultra is one of the many streaming players created by Roku for customers and families worldwide offering TV shows, movies, and streaming services on-demand. Their innovative products are well made and useful, although lack certain features and aspects their competitors don’t.

# Problem Statement:

On the initial homepage of the Roku device, there are options on the left to navigate through and an indefinite number of tile icons on the right offering streaming services and platforms, this initially slows down the device and can cause frustration when trying to find a specific platform or section.

On the physical remote control, the four shortcut buttons on the bottom are both a blessing and an annoyance. Having the shortcut features is nice for allowing customers to quickly access their favorite streaming platforms but not every customer uses the same four services.

When it comes to voice control, AI and virtual assistants are very helpful when connected to multiple different smart products all in one device, sadly Roku’s smart home application cannot connect to other smart devices that aren’t made by Roku themselves. This raises a problem that Apple does not have since their smart home application and voice assistant Siri can connect to both Apple and products made by other companies such as Philips and Logitech. With this lack of connectivity, the Roku device cannot answer questions such as “What’s the score…?” for specific sporting events or weather-related questions. Although the device and remote are cheaper than Apple’s 4K TV device and Siri remote, this lack of useful features and all-in-one product/device might not make up for the difference.

# Competitor Analysis:

A screenshot of a computer

Description automatically generated with low confidence

Image credit to Apple

The Apple TV 4K streaming device offers a clean and simple interface, offering the bare necessities of options unless delving deeper into the categories. The interface navigates seamlessly across icons and offers little to no lag when opening or closing applications. It comes equipped with a Siri remote which seems very limited physically as it offers very few buttons and no unique shortcut buttons to desired platforms, but it does come with their built-in virtual assistant that makes up for the limited aspects by offering far more features via voice commands and interactivity with other smart devices.

The Siri virtual assistant can interact with other smart home devices around the household, supporting both Apple and third-party products such as video doorbells giving it a great advantage and usefulness over Roku. When someone rings the bell, the video broadcast will be shown on the screen and, based on facial recognition and learning patterns, Siri will suggest who it might be. Customers can then respond to this notification with their Siri remote.

A few other useful features showcased are that you can connect AirPods for personal listening and Apple offers its users an alternative to on-screen keyboards by allowing their customers to use their iPhone, iPad, or iPod to enter text into the search bar without the hassle of scrolling along each letter.

Many of the smart devices in the home can be controlled from the Apple TV 4K device easily or by voice control by asking Siri to do something for you such as dim the lights or lock the front door by a certain time. A singular device that’s connected to almost everything eliminates the need for additional devices.

Though the Apple TV 4K device is more expensive than the Roku Ultra streaming player, it does offer far more features and assistance and has a greater advantage when it comes to flexibility within its product.

# Goals:

* Inspect and identify problematic features within my chosen electronic device, provide feedback, and redesign them with the user’s experience and business model in mind.
* Improve already existing elements of the device to further enhance load times and consumer satisfaction.

# Roles & Responsibilities:

My roles and responsibilities in this case study were to analyze my chosen frequently used electronic device for problematic features, compare it with a competitor’s device and redesign those problematic aspects to make my product more user-friendly and faster to use.

# Scope & Constraints:

Due to financial restrictions, interacting physically with the competitor’s device was difficult, therefore, a lot of online research and visits to the Apple website were conducted to further understand its interface, capabilities, and features to compare it to the Roku device in my home. Limited screen capture capabilities on the Roku device itself proved difficult to obtain screenshots and images so all images in the design process used in this case study are credited to Roku, whereas in the competitor analysis section, all images are credited to Apple.

# Design Process:

A screenshot of a computer

Description automatically generated with low confidence

Image credit to Roku

The main homepage interface has a lot of features instantly on the screen. I would reduce the number of default icons and features instantly displayed, allowing users to navigate the interface faster and quickly select what they desire to view.

Though there are some already customizable options on the homepage such as moving icons around and removing them, that is only available for the tiled icons on the right-hand side. I would insist on this menu should be fully customizable, allowing users to add or remove the listed options on the left-hand side such as “My Feed” or “Live TV” if these aren’t options customers want. The availability to change the layout of the home screen between multiple premade presets, rearranging the listed options into, for example, tabs above the icons (Similar to that on the Apple interface) could be a nice added feature to reduce load times and increase speed within the device.

A screenshot of a computer

Description automatically generated with medium confidence

Image credit to Roku

When searching for movies or shows, a design change where one can click and hold a letter or simply change keyboards similar to that on an iPhone would be a great benefit to multi-lingual families that want to search for their desired shows and movies, in whatever language, without having to change the language of the system to access these characters. An example of this feature would be letters such as “ñ” in Spanish-speaking languages.

On the physical remote control, being able to either customize the four unique shortcut buttons for desired platforms before purchasing the remote from the Roku vendor online could help with a more personalized and satisfactory feel for each customer, although all the different button combinations and shortcut layouts could become tedious and time-consuming for the manufacturer. Another alternative would be to make these buttons generic, either black or their signature purple color, and allow customers at home to set up these buttons the way they want, linking their desired streaming platform to each one.



Image credit to Roku

For the problematic feature of the lack of voice assistant answers for weather or TV-related questions, a potential solution to this problem could be working closely with Google or Amazon and integrating Google Home or Alexa in a more in-depth manner, allowing the Roku device to communicate with, for example, an Amazon Echo to source the information from.

A screenshot of a web page

Description automatically generated with low confidence

**VS**

Opening communication channels with third-party smart product developers would be beneficial to Roku in terms of sales and for customers who enjoy having a single device that can connect to almost all smart devices, whether created by Roku or not. It is very convenient and less tedious for consumers as they aren’t looking to have multiple different devices controlling each and every different smart device when they can have an all-in-one product.

A close-up of a computer chip

Description automatically generated with low confidence



Image credit to ARM

When it comes to making the product faster, not only reducing the sheer load on the initial interface, but some hardware adjustments could also help solve this issue. The CPU inside of the Roku Ultra and the Apple 4K TV device is of the same ARM v8-A instruction set architecture, but Roku uses an older processor made in 2017 (ARM Cortex A-55) in comparison to Apple’s CPU, created in 2021 (A15 Bionic) which has a clock speed of 3.23GHz in comparison to the 2.1GHz. I would recommend the ARM Cortex-X1 processor, released in 2020, and has been redesigned for pure performance over a balanced performance, power, and area. It offers more clock speed (3.3GHz), which will improve the overall performance and responsiveness of the device.

# Outcomes & Lessons:

A more user-friendly and faster device with these changes I believe would be achieved. Customization features on the home screen and remote control would allow customers to create a more personalized feel with their device and negate the tedious task of shopping around for ideal remotes with the shortcuts they want, boosting customer satisfaction.

Lessons learned from this case study were that redesigning already decent products proves tougher than expected. Although comparing them with features offered by their competitor products offers insight into potentially great ideas and designs to include in my chosen electronic product, it’s still difficult to be unique and think outside of the box.