

Assignment M1 (Summer 2021)

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Abstract—This paper, and the other papers following this will be focusing on the download function on the HBO Max app. At 2.9/5 stars, the HBO Max app is by far the lowest rated app among the 5 most popular apps in the app store. While reviews of the app demonstrated a very positive reaction to the content within the streaming service, most reviews were harshly critical towards the interface and user experience provided by the app. People who were otherwise very happy with the streaming service often found the app buggy and difficult to deal with. This is a perfect example of how an interface can make or break the experience of the user even when all the other aspects of an application are working very well. I chose to focus on the download function, because this is a use case that's very commonly used. It is also one of the most commonly criticized features of the app as a whole.

1 PROBLEM SPACE

The act of streaming videos has become increasingly prevalent over the past few years. Almost everyone today streams videos on a daily basis – whether through YouTube, Facebook, Netflix, or even news sites. As technology improves and becomes more widely available, the ability to consume content in this manner improves along with it. As a result, streaming services and applications have become some of the most popular applications in the world.

One issue with streaming videos however is the fact that you have to be online to do so. Usually, this isn't an issue. For most people, at least in the U.S., internet access is almost ubiquitous. The majority of people have internet access at home, Wi-Fi is available almost anywhere, and most people have cellular plans that give them access to the internet throughout most of the country.

While the majority of people who use these streaming services can easily access the internet wherever they are, there are still many instances where this is not the case. Sometimes, people don't have access to a stable internet connection at

home. In other instances, people have access to an internet network, but either can't or don't want to use that network for what they're streaming (for example, streaming Netflix on a school or work network). On top of this, people who are traveling or commuting often don't want to or don't have the ability to use their cellular data.

Because of this, most video streaming platforms provide an option for offline video access. HBO Max is one of those streaming platforms, but while they do offer the option for offline video access, this feature has a lot of room for improvement.

2 USER TYPES

For the purposes of this needfinding analysis, the user types will be divided into three groups (based on the device used to access the HBO Max application). The initial needfinding will focus primarily on the first two groups (listed below), since they are the groups most able to make use of the downloads/offline viewing feature.

1. PC users: People using Macs or devices utilizing Windows 10
2. Mobile Device: Phones and tablets
3. TV: Televisions

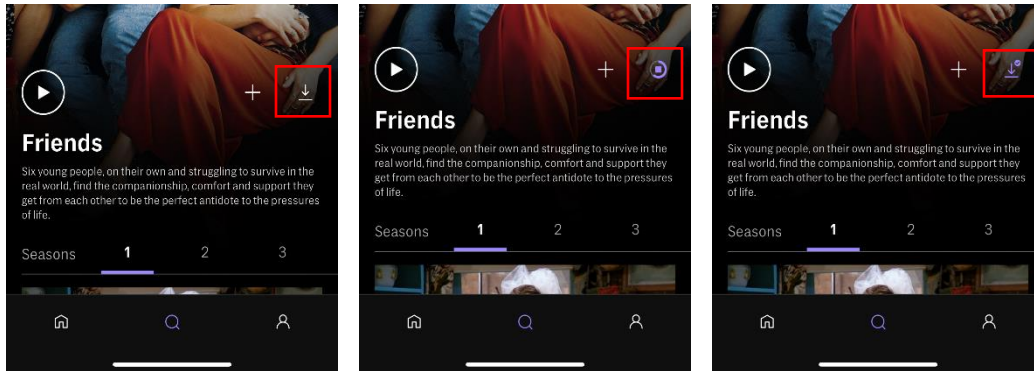
One thing to note is that the user can often switch between different types. For example, a user could start watching something on their TV, close what they're viewing, then finish what they're viewing on a mobile device. Regardless of the user type however, the application should be as accessible as possible, and users of every demographic and level of expertise should be able to use this app, download videos for later viewing and pull up and watch the downloaded videos whenever they want.

3 NEEDFINDING PLAN 1 – PARTICIPANT OBSERVATION

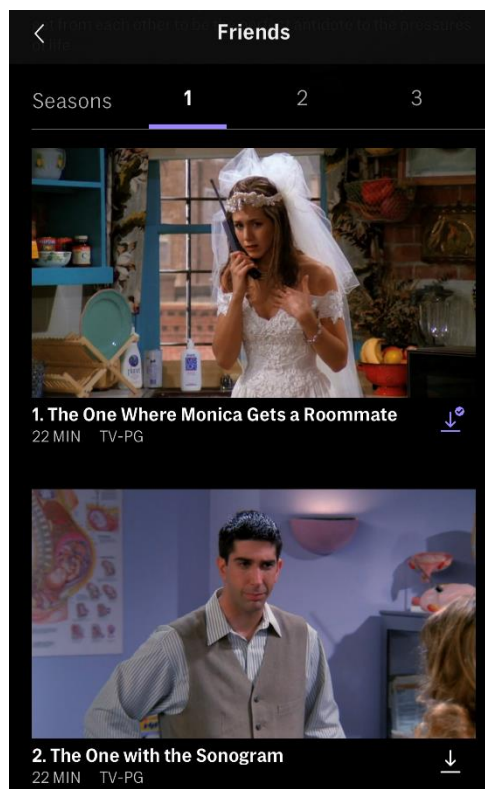
Since the interface we are working with already exists, the most logical first step would be an analysis of the interface from the perspective of a user. This will give us a better idea of what we're working with and the current state of how everything already works. To do this, we'll use this application from the perspectives of both a mobile user and a PC user with the goal of downloading a tv show

for offline viewing. We'll start with looking at the app from the perspective of someone using a mobile device:

3.1 Analysis of Mobile Interface



At first glance, the steps to downloading a show on HBO Max seem pretty straightforward. I navigated to a show on the app, and one of the first things I saw was a download icon (highlighted in red in the picture above). After clicking on the download icon, the icon changes to a progress bar giving instant feedback that the app registered my actions and was downloading the show. When the download finished, the icon switched to a download icon with a check next to it.



After downloading however, a few thing came to my attention. First, I noticed that the download icon wasn't clear about what would be downloaded. While I expected the app to download either a season or the full series of the show, it turns out that the main download option only downloads one episode at time.

When I scroll down, I noticed that only the first episode of the series ended up getting downloaded, and to download the rest of the series I either had to click the download option multiple times (once for each episode), or I had to click on the download icon next to each individual episode for the series.

3.2 Analysis of Computer interface

For most streaming apps, there are two ways to access the app on a personal computer. The first method is through a browser. Since this requires a connection to the internet, this method does not allow for offline viewing. The second method for accessing an app on a personal computer (for most streaming apps) involves downloading the app on the computer and accessing it from there. Accessing the application this way doesn't require a connection to the internet, and as such, allows for offline viewing.

In the case of HBO Max, there doesn't seem to be an option for downloading the app on a personal computer. While the app does exist on both the Microsoft store, and the Apple app store, the apps are only available on an Xbox or iPad respectively. As such, an option to stream online using a personal computer doesn't seem to exist.

3.3 Potential Biases

While I was able to glean multiple important insights through participant observation, I do want to note that I am NOT the user. As such I need to be careful not to overrepresent my own experiences. Instead, I should use these experiences to inform what I ask users going forward.

4 NEEDFINDING PLAN 2 – ANALYSIS OF PRODUCT REVIEWS

A second method of needfinding involves an analysis of product reviews. Since the HBO Max app is one of the most popular apps on both the Android and Apple app stores, there is a very large amount of detailed feedback regarding this app (over 30,000 rating on the Apple app store alone). Not only does this give a

large amount of quantitative data through numeric ratings of the app on a scale from 1-5, it also gives very detailed qualitative data such as what a user thought about the app, what they liked, and what they didn't like.

One of the most popular criticisms of the app is the download function. Since this is the feature that we are trying to improve, we will mainly be focusing on reviews that mention this piece of functionality. Some of the preliminary feedback I collected from this is listed below:

- App does not keep track of the number of downloaded videos
 - There is a global limit of 30 downloaded videos across all devices and the app does not let you download past this
 - Deleting downloaded videos does not seem to affect the limit
- When watching a video on airplane mode, the video will play at first, then start giving constant error messages about not being able to contact the server (this seems to be the most common point of negative feedback regarding this issue).
- When switching to offline mode, the app does not pick up from where the user left off
- The user can only download one video (movie or tv episode) at a time.
- Deleting downloads is not intuitive (have to click edit, scroll through the list, delete the download you don't want, then scroll back up and click "Done").
- The app often streams downloaded shows instead of playing the downloaded version
- Offline viewing isn't available for anything that isn't a mobile device.

One thing to note when looking at feedback is the potential for biases. When feedback is voluntary, people tend to only leave feedback when they have strong opinions. This leads to a higher percentage of 1 and 5 star reviews than would occur within a population as a whole (mainly because people with opinions in the middle wouldn't have a strong enough opinion to warrant them going out of their way to leave a review).

5 NEEDFINDING PLAN 3 – ANALYZING EXISTING INTERFACES

A third method of needfinding would be to analyze existing interfaces. There is a very large number of popular streaming services – each with their own set of

applications. By looking at their interfaces, we can gain a better understanding of how other applications do things, what they do well, and what important features other applications have that HBO Max is missing. For the purposes of this analysis, I'll be looking at the three (U.S. based) streaming services with the highest number of subscriptions. They are Netflix, Prime Video (subscriptions are included with an Amazon Prime membership), and Disney+.

5.1 Netflix

At first glance, the Netflix downloads/offline viewing feature is very similar that that of HBO Max. The locations of the download icons are in the same place, and the apps have similar indicator for shows available for download, downloads that are in progress, and shows that that are downloaded. Also, like HBO Max, the user is only able to download one episode of a show at a time.

A few things set this app apart from HBO Max. One major differentiator is the fact that offline viewing is available for more than just mobile devices. Through the use of a separate PC version of the app, a user is able to download shows and movies to their personal computers. Also, users are allowed to download up to 100 unique titles, the shows play consistently and without issues when offline, and deleting downloads is much easier.

One useful feature Netflix offers that never occurred to me is the "Smart Downloads" feature. This is an optional feature (that the user can toggle on and off), that deletes downloaded shows off the user's device after they finish watching the show. This is a very useful feature that HBO Max could implement.

5.2 Prime Video

The process for downloading videos on Prime Video is very similar to that of Netflix and HBO max. The main difference is that the download button on the top of the episode list downloads the entire season all at once – with the download buttons next to each episode letting the user download one episode at a time.

Also, like with Netflix, offline viewing is allowed on any device utilizing iOS, Android, or Windows 10. On top of this, users are able to view offline videos on a Fire tablet (though I don't think this is a major competitive benefit). One

drawback however is that users are only able to download either 15 or 25 total titles (based on region). This is lower than both Netflix and HBO Max.

5.3 Disney+

The process of downloading a show on Disney+ is very similar to that of HBO Max, Netflix and Prime Video. Also, like Prime Video, the user is allowed to download an entire season at a time. The icon for downloading an entire season of a show is located in a slightly different location than the generic download icon for the other streaming apps, but it is still easy to find. Also, like with Netflix and Prime video, offline viewing works smoothly with no issues. On top of this, there is no limit to the number of shows that can be downloaded. One major drawback however, is the fact that like HBO Max, there is currently no app for anything other than a mobile device. This means that users can't utilize offline viewing on personal computers.

5.4 Potential Biases

One potential bias is that this might take attention away from the task at hand and instead on how other groups of people might go about accomplishing the task. When looking at how other applications implement offline viewing, I need to keep on mind the task at hand (offline viewing), instead of just focusing on the specific ways that other applications implement this task.