

How “Settings” Has Grown

To study how easily people could navigate their phones, we recruited five users (3 experienced, 2 inexperienced) to do two related tasks on an iPhone 6 running iOS 9.

Unless you have an unlimited data plan, it’s reasonable that a user would want to check how much data they are using; specifically, it’s important to know what kinds of activities are using all the data so that you can change your behavior. Theoretically, the task is completed by:

1. Unlock iPhone
2. Tap the “Settings” icon on the home screen
3. Tap the “Cellular” button to reach the cellular settings pane
4. Scroll all the way down through an alphabetized list of all apps to determine which used the most

All users knew that they should start by navigating to the Settings application, in which Apple gathers almost all meta-information about your iPhone. Once in the settings application, two users became lost because they did not connect the “Cellular” settings pane with their data usage, perhaps assuming cellular referred to settings regarding phone service. Instead of tapping the “Cellular” tab, two users tapped “General” and then “Storage & iCloud usage.” It makes sense that one could go this route, as the “Storage & iCloud usage” tab contains information — statistics, numbers — about one’s usage. It’s a tab dedicated to learning about how you use your data, where it is, and how much of it is free in various locations. In contrast, the “Cellular” tab begins with a bunch of settings and switches, making it unclear that it is a place to gain information. It is important to note that these two users were our inexperienced with iPhones, and to make matters more

difficult, English was not the first language to these participants. Regardless, their actions have solid logic behind them (compartmentalizing settings and information), and these users *should* be able to complete such a task.

The second task the same users performed was conceptually similar to the first, but the UX that comes along with accomplishing each task is different. In the same way that a person might want to manage his or her data usage, it can be prudent to examine which applications are draining your battery if you find your phone running out of charge frequently. Theoretically, the task is completed by:

1. Unlock iPhone
2. Tap the “Settings” icon on the home screen
3. Scroll down in “Settings” until you come across the “Battery” button
4. Tap the “Battery” button

All users knew that they should search in the “Battery” pane in the “Settings” app within a short amount of time, and the users were able to easily identify which apps used the most battery because the list is sorted by **quantity of battery used** rather than alphabetically, like the analogous statistics found in the previous task. Furthermore, it helps that the statistics are available from the top of the “Battery” pane, making them easy to find without scrolling through the pane (unlike the “Cellular” data, which shows nearly a full page of settings so that you have to scroll down to see that there is data below).

It seems that as the iPhone has grown more complex, Apple has been steadily increasing the amount of options a person has when he/she opens the “Settings” app, to

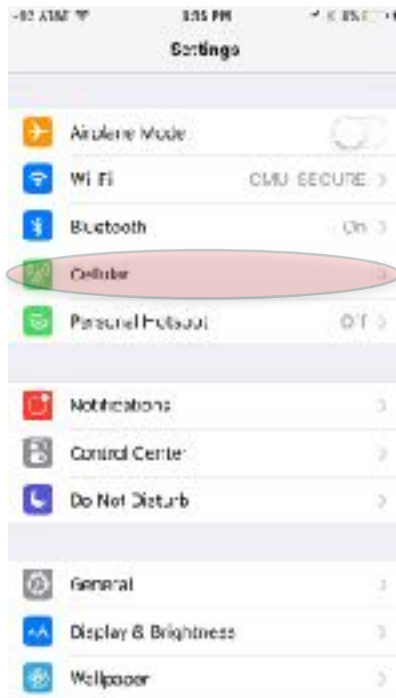
the frustration of many users. A major problem is the lack of consistency between tasks that are conceptually similar, yet have a different structure in “Settings” leaving the user with conflicting mental models. If Apple is insistent on preserving the current structure, it might be prudent to change the “Cellular” panel to “Cellular & Data Usage,” to reflect the options contained within the panel. However, it would be even better to put all the information and statistics in a all-encompassing “Usage” tab so that when users are trying to change settings, the task of changing settings is separate from the options they see when trying to get information/see statistics. Furthermore, the “Cellular” panel could be more consistent by sorting the data usage by amount of data used (i.e. putting the most significant apps first — the apps users actually care about seeing when doing this sort of evaluation). Moreover, there does not seem to be a good reason for including apps like “Videos” which do not and are incapable of using any data. Instead, these irrelevant apps should be left out.

In earlier versions of iOS, Apple actually did separate the statistics from the settings in a “Usage” panel under “General” in “Settings,” but this was at a time when there were very few statistics to show the user. As “Settings” becomes more and more bloated, Apple needs to be increasingly thoughtful of the consistency of completing similar task — they need to craft a clear mental model so that users are easily able to find information and make settings changes.

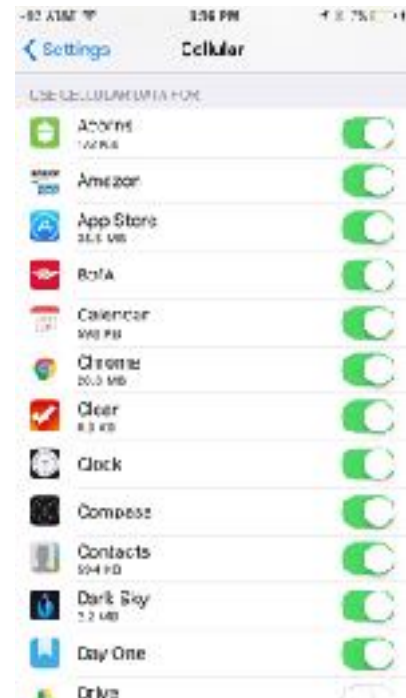
APPENDIX

Task 1 Steps

(1) In “Settings” tap “cellular”



(2) Scroll down



Battery Panel From Task 2



Early Version of iOS That Separates Usage from Settings

