



Redefining screenshots as more than just a picture

A modern look at screenshot practices opens up new ideas for design. Aske Mottelson, an assistant professor at the IT University of Copenhagen, researches screenshot use to better understand how people interact with them and what it means for design.

Sometime during his parental leave, Aske Mottelson found multiple screenshots on his wife's phone of the lock screen at weird hours of the night. Looking at them he simply couldn't figure out what they were for. Had she misclicked? Was she trying to save some notification? Or was there another reason? It turned out that she had a habit of taking screenshots as a form of logbook for when she had to feed their son during the night. Preferring it over having to fiddle with a pen and paper, or having to open the phone and log it in an app. Intrigued by this discovery, Mottelson delved into the world of screenshot functionalities, uncovering the unexpected ways users transform their smartphone interactions.

In its original inception, the screenshot was meant to capture the state of a computer screen for later reference, while being limited to only text. Through the revolution of the personal computer and since the ubiquity of the smartphone, screenshots have become increasingly part of the way we use computers, but it has seen little change. A lot of people assume screenshots are used primarily for sharing information but Aske disagrees with this view, writing in his paper *"Screenshots are technically bitmap representations of screen contents with little to no contextual information, although their use goes far beyond their value in pixels."*

Today, the technical barrier for capturing screenshots is almost nonexistent. Most people now have the muscle memory of pressing the two buttons to take screenshots. Aske's

interest in Human Centered Interaction led him to explore the intricacy of why we take these photos to get a deeper understanding of how we interact with our smartphones.

As with many problems bridging between sociology and technology, there was no publicly available dataset. Mottelson collected the data himself by designing an iOS app to gather screenshots. Users could then download the app, select screenshots to be used for the study, and then annotate them if they decide to share it with him. Participants were given monetary compensation and the chance to support scientific research as an incentive. This gave him an intimate access to the needs.

Using both quantitative and qualitative methods, he categorized the screenshots based on what their inferred use case is. Ending at a total of 9 main themes for which most screenshots fit into, each with their own sub classes. Categories such as 'learning', 'social' and 'inspirational', with 'social', for example, being broken further down to 'social for sharing entertainment'. What is most prevalent is that it is almost impossible to say that screenshots themselves have a single value in their usability. They range in their use cases, and in their usefulness.

This ties back to the main problem – nowadays, smartphones store screenshots the same place as photos. And beyond that, trying to be specific in where the screenshot is being stored is often convoluted and more tedious than rewarding. This can make it hard to keep your phone organized and often leads to clutter.

A recurring problem that was found was that most people had some patterns in their screenshotting practice, but no designated destination, saying, *"Many take screenshots when they win a mobile game, but when you look in your images, there is no accomplishments folder"*. One solution mentioned in our interview was a popup of some interface that would try to suggest a folder to store your screenshot based on what it is related to. That way the user would still stay in control of the organization, and the smartphone can help without being too invasive.

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Aske strongly suggests that such an implementation or something similar can be used by designers to help improve their platforms. He further says, *"If I was sitting at Google Headquarters or Apple, I would consider a screenshot as an activity, not as a photo"*, in an attempt to truly emphasize the fact that screenshots can be used to redefine user experience if considered as an interaction style. However, he recognizes the fact that a change like this requires more than just the technical solution.

This re-definition of screenshots helps us understand the reasons for capturing, storing, and sharing screenshots, while helping to reveal design opportunities in mobile applications.

Aske Mottelson is currently an active Assistant Professor at IT University of Copenhagen. You can reach out to him and find out more about his projects here on his [website](#).