

Minimalism in Mobile User Interface Design

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Abstract

Minimalism is a design philosophy being adapted in the field on User Interface design of digital products. This paper aims at understanding how a minimalistic design affects usability and performance of an Interface. For demonstration, we have considered the Metro UI design language and its effect on the sales of windows phone users in India. This has been done by using the sales report of Microsoft as well as users survey through random sampling methods. This paper outlines the basic principles which ensured a success to such a design philosophy, which is making it easier to use Mobile interfaces.

Keywords

Less-is-More, User Interface Design, Human Computer Interaction, Metro UI, Microsoft Windows, Mobile Interfaces

I. Introduction

Minimalism has been the buzz word that gets tossed around in a lot of different contexts. Whether it be a lifestyle or an art form, saying something is "minimalistic" can take on a variety of meanings. In the interface design field, minimalism is carving out an ever-increasing niche among designers that are looking to convey important content in a new way. Like just about any trend or theory in the interface design world, minimalism can be easy to get wrong.

It's easy to see how a minimal interface design can be misconstrued as something that requires less effort or time to create. After all, conveying the feeling of simplicity and a primary focus is really the purpose of a minimal design.

However, saying that it requires less work couldn't be further from the truth. Minimal interface designs are strategically stripped of excess features and gimmicks in order to deliver a clear and concise message to the target audience. One working approach for implementing such a design concept can include a procedural approach as given below.

A. Minimal Mindset

In order to properly execute minimalism in your design, a focus needs to be established. Being able to present a clear message to your visitors is the core function of a minimal design.

Trying to execute a broad scope of information while still maintaining a minimal style can have pretty disastrous results, so before you dive into the actual design process, having a project plan and narrow scope will go a long way.

Take the time to consider what this site is going to be about. Not all sites can afford to dedicate themselves to a single mission and if this particular project is one of those sites, a different method of design may just be the best way to go.

If you have a clear focus, the next step is to consider what bits of information are going to be vital to your design and structure them in order of significance.

You may be surprised at how little information really needs to be presented to the user at a time in order to get your point across.

B. The Art of Taking Away

French writer Antoine de Saint-Exuper once said, "Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away." Designers are often praised for the ability to create. Starting from a blank screen or canvas, we sculpt beautiful works of art — often from scratch. Because of these trained skills, the art of taking objects away from a design can be a hard one for some to master. Designers love to invoke visual stimulation anywhere they can, which usually spells out bad news for minimal designs. Sometimes the best practice can be to design out a full site — and once the design feels complete, start removing all of those objects that don't fulfill a functional need for the site. True, this can be a painful and time-consuming process, but if done right, the results can be stunning. Practice the concept of reductionism.

C. Smarter Color

Minimal interface designs are notoriously black and white, but that certainly isn't a rule written in stone. Minimalism in interface design does not imply a lack of color; instead it calls for an intelligent use of well-planned color palettes.

With that said, when it comes to colors, black and white do tend to be the weapon of choice. This is because it leaves the door wide open for pretty much any accent color, allowing designers to match an existing brand image. More unique color options can be just as effective. The key here is not just that you use color, but rather, how you use it. In a minimal design, a continuous background color can be used to set the tone and emotion of a site while an accent color is used to capture the viewer's attention and highlight the most important features of a web site. A properly used accent color will be used sparingly and never draw the user's eye to more than one bit of information at a time. The colors embedded in a minimal interface design play a huge role in the feeling a site conveys. From sleek and sophisticated black and white designs to vibrant and bold colors across the spectrum, minimalistic interface design is not prejudice to any color.

D. Typography

Designs that have been stripped of all the unnecessary bells and whistles place extra emphasis on the content. Naturally, this magnifies the importance of well thought out typography.

With fewer distractions for the user, it comes down to the text to maintain attention and develop the flow of the web site.

E. Layout Structure

Having a minimal design does not always imply a simple site structure. Oftentimes, dialing back the visual overload of a site means turning up the effort put into an intelligent layout.

Not many things can destroy the effectiveness of a minimal interface design quite like a poorly thought out site structure. Is your logo in a relevant location? Is your site navigation easy to find and convenient to use? These are huge questions that will make or break the functionality of your site without over-the-top graphics to back these important elements up.

If your design requires users to think about how they should use

it or look around for the content they need, then you are breaking one of the cardinal rules of interface design.

Even though we see many well-executed minimal designs are brilliantly easy to navigate and visually index, they are not inherently that way. Instead, a massive amount of effort and great visual sense is required to pull off such a natural flow that seems effortless.

F. Negative Space

The art of properly spacing content will separate the men from the boys in any area of design — and when the goal is to make less mean more, negative space becomes one of the most powerful tools available to designers. Varying amounts of negative space acts as a subconscious visual guide, giving us important feedback on what items on the screen are the most important.

Simply put: The more an item stands alone, the more attention it is going to get. Additionally, negative space is used to group similar bits of information together which helps to solidify the structure of a design.

The empty space between these information groups gives our eyes and brains a needed break from information. As a designer, it's easy to want to fill this space with graphics and pretty doodads to look at, but acting on these urges will quickly result in a cluttered and disorganized design.

G. Find the Balance

With all of this talk about taking away and avoiding graphical gluttony, it may seem as though images are the enemy here. On the contrary, a minimal design allows images to hold even more meaning. The increase in negative space and the use of simple color palettes in a minimal interface design provide images with a real opportunity to shine as true focal points of the screen.

II. Metro Design Language

“Metro” is the codename of a typography-based design language by Microsoft. A key design principle is better focus on the content of applications, relying more on typography and less on graphics (“content before chrome”). Early examples of Metro principles can be found in Encarta 95 and MSN 2.0. The design language evolved in Windows Media Center and Zune and was formally introduced as “Metro” during the unveiling of Windows Phone 7. Under the name Microsoft design language, it has since been incorporated into several of the company's other products, including the Xbox 360 system software, Xbox One, Windows 8 and Outlook.com.



Fig. 1:

The design language is based on the design principles of classic Swiss graphic design. Early glimpses of this style could

be seen in Windows Media Center for Windows XP Media Center Edition, which favored text as the primary form of navigation. This interface carried over into later iterations of Media Center.

Microsoft's design team cites as an inspiration for the design language signs commonly found at public transport systems; for instance, those found on the King County Metro transit system which serves the greater Seattle area where Microsoft has its headquarters. The design language places emphasis on good typography and has large text that catches the eye. Microsoft sees the design language as “sleek, quick, modern” and a “refresh” from the icon-based interfaces of Windows, Android, and iOS. All instances use fonts based on the Segoe font-family designed by Steve Matteson at Agfa Monotype and licensed to Microsoft. For the Zune, Microsoft created a custom version called Zegoe UI, and for Windows Phone Microsoft created the “Segoe WP” font-family. The fonts mostly differ only in minor details. More obvious differences between Segoe UI and Segoe WP are apparent in their respective numerical characters. The Segoe UI in Windows 8 had obvious differences - similar to Segoe WP. Characters with notable typographic changes included 1, 2, 4, 5, 7, 8, I, and Q.

Microsoft designed the design language specifically to consolidate groups of common tasks to speed up usage. It achieves this by excluding superfluous graphics and instead relying on the actual content to function as the main UI. The resulting interfaces favour larger hubs over smaller buttons and often feature laterally scrolling canvases. Page titles are usually large and consequently also take advantage of lateral scrolling.

Animation plays a large part. Microsoft recommends consistent acknowledgement of transitions, and user interactions (such as presses or swipes) by some form of natural animation or motion. This aims to give the user the impression of an “alive” and responsive UI with “an added sense of depth.”

A. Clean, Light, Open and Fast

We took an approach that we call “Fierce Reduction” to remove any elements in the UI that we felt were unnecessary; both visual elements and feature bloat. It allows us to shine a focus on the primary tasks of the UI, and makes the UI feel smart, open, fast, and responsive.

B. Alive in Motion

The transitions between screens in a UI are as important the design of the screens themselves. Motion gives character to a UI, but also communicates the navigation system, which helps to improve usability.

C. Celebrate Typography

Our design inspiration is very typographic, and it felt like it was time for User Interfaces to be uncompromising about type as well. Type is information, type is beautiful.

D. Content, Not Chrome

It's the content on the phone that people want, not the buttons. Reducing the visuals on the phone that aren't content will help you create a more open UI, and it also promotes direct interaction with the content.

F. Authentically Digital

Finally, we believe in honesty in design. A user interface is created of pixels, so in Metro we try to avoid using the skeuomorphic shading and glossiness used in some UI's that try to mimic real world materials and objects.

So now that we've established Metro, where do we go next? To help us think about what the future of our experience is, we need to understand where we've come from.

III. Impact of Metro on Sales

Kantar Worldpanel's numbers for September 2013 show continued strong growth for Windows Phone, especially in Europe where double digit sales are seen in the Great Britain (11.4%), France (10.7%) and Italy (13.7%). The data collected spans 3 months, up until September.

In terms of sales for September 2013, Windows Phone has claimed 10% for the "big five" European countries combined (UK, Germany, France, Italy and Spain), representing a doubling in sales from 12 months ago, marking a substantial increase from 2012.

Italy	3 m/e Sep 2012	3 m/e Sep 2013	% pt. Change	France	3 m/e Sep 2012	3 m/e Sep 2013	% pt. Change
Android	61.2	71.6	10.4	Android	62.3	68.2	5.9
BlackBerry	3.4	2.1	-1.3	BlackBerry	7.4	4.7	-2.7
iOS	14.2	10.2	-4.0	iOS	15.5	15.0	-0.5
Windows	10.8	13.7	2.9	Windows	5.2	10.7	5.5
Other	10.3	7.4	-2.9	Other	9.6	1.4	-8.2
GB							
	3 m/e Sep 2012	3 m/e Sep 2013	% pt. Change				
Android	58.6	58.4	-0.2				
BlackBerry	8.5	3.1	-5.4				
iOS	28.0	27.0	-1.0				
Windows	4.2	11.4	7.2				
Other	0.7	0.2	-0.5				

Fig. 2:

Even bigger news is that sales for Windows Phone has surpassed the iPhone in Italy (13.7% versus 10.2%). Granted, Apple's iPhone 5s and 5c have just launched and are expected to rebound during the Christmas period, skewing the numbers slightly. However, it's still a significant accomplishment analogous to the situation in Russia, India and Lithuania where Windows Phone is also doing better than Apple's legacy smartphone.

Fascinatingly, even in the United States sales of Windows Phone is nearing 5% versus 2.7% one year ago. That 2% increase in sales shows continued awareness of the Windows Phone operating system, most likely perpetuated by sales of the Lumia 520 and Lumia 521. So far, the United States has established itself as a difficult market for Nokia to gain traction in, but that may be finally changing in late 2013.

USA	3 m/e Sep 2012	3 m/e Sep 2013	% pt. Change
Android	59.8	57.3	-2.5
BlackBerry	2.2	1.0	-1.2
iOS	34.6	35.9	1.3
Windows	2.7	4.6	1.9
Other	0.7	1.1	0.4

Fig. 3:

Other numbers in the United States are revealing as Android has dipped 2.5% in sales in 2013, along with an expected decrease for BlackBerry. Only iOS and Windows Phone has shown growth in sales, conceivably signaling a changing tide in the States.

IV. Conclusion

The design philosophies have a lot of impact on the performance of a mobile device. Ensuring the users are conversant with the

interface ensures better sales and better prospects. Minimalistic approach has been proved to work well in communicating the core message of an interface. This is an important advancement in computer science to build user centric products.

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