

The Integrative Relationship Between Design and Function in smart government applications in Egypt.

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Introduction:

The success of smartphone applications depends on those which touch customer's needs, and maintain the quality to provide services in attractive and easy way.

What makes applications work and be able to do their job is how to use the controls in app's interface, which includes all elements like, clickable buttons and tools specifically designed for this purpose, to allow users to interact with the screen.

The visual design of any element of the visual interface can strongly affect understanding, function, and how to use.

The functional standards of the application are the line between user experience design and the visual design of the application interface. When designing smartphone apps, their function is the characteristics and tools that users realize and thus allow them to control the elements of the app interface, whether or not they are clickable buttons, or pull the slider and icons.

Every signal makes the user realizes a guide of how to interact with the app, so sending misleading signals through inaccurate or unclear design processors make it difficult for users to interpret what they see correctly.

This study focuses on how to choose application interface controls very carefully, and how to make decisions about the visual design of each of these elements in a way that enables users to predict the function of each item.

Research Problem: The research problem is the lack of many smart applications launched by the Egyptian government to the successful complementary relationship between design and functionality, which led to a defect in the success of the main purpose of the application. The research problem can be summarized into the following question:

What should we do when designing smart government applications to achieve the functional goals of these applications?

Research Objective: The research aims to reach the design considerations that would achieve the functional goals of the application.

First: User interface design

Regardless of how much effort you put into understanding your product's users and crafting behaviors that help them achieve their goals, these efforts will fall short unless significant work is also dedicated to clearly communicating these behaviors to users in an appropriate manner. With interactive products, this communication commonly happens visually, through a display (although in some cases you must communicate product behavior through physical properties such as the shape or feel of a hardware button).

Visual interface design is a frequently misunderstood discipline, largely because of its similarities to visual art and graphic design. It is also commonly mischaracterized as "skinning" the interface; we've even heard people refer to it as "hitting the product with the pretty stick."

In our practice, we've come to recognize that visual interface design is a critical and unique discipline, and it must be conducted in concert with interaction design and industrial design. It has great power to influence the effectiveness and appeal of a product, but for this potential to be fully realized, visual design must not be an afterthought, but should be thought of as an essential tool for satisfying user and business needs.

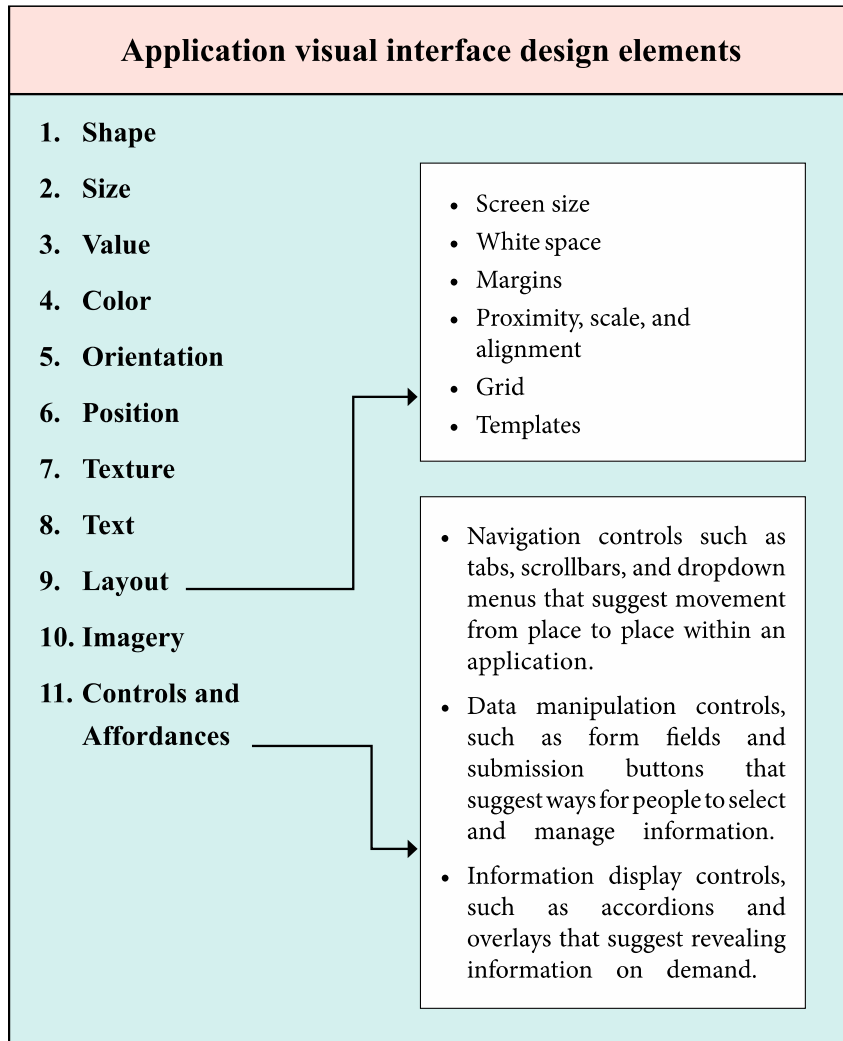
Visual interface design requires several related skills, depending on the product in question. To create an effective and engaging user interface, a designer must have a command of the basic visual properties — color, typography, form, and composition— and must know how they can be used to effectively convey behavior and information and create a mood or a response. Interface designers also need a fundamental understanding of the interaction principles and interface idioms that shape the behavior of the product.

The Elements of App Visual Interface Design

The design of the application interface depends on the ability to distinguish between elements through the distinctive visual appearance of each element, so that the meaning that may dispense with the use of words alone can be created, it appears on an efficient and attractive user interface.

A graphical user interface (GUI) is what a user sees and interacts with. GUIs are used for many industrial applications via keypad, mouse or touch screen.

The use of color, text, icons and buttons can direct the user's attention to the most important or most often used items on the screen. Screen layout should be easy-to-use, highly legible and intuitive while performing the necessary functions. The major components of a well-organized interface are color, font, icons/images, layout and navigation.



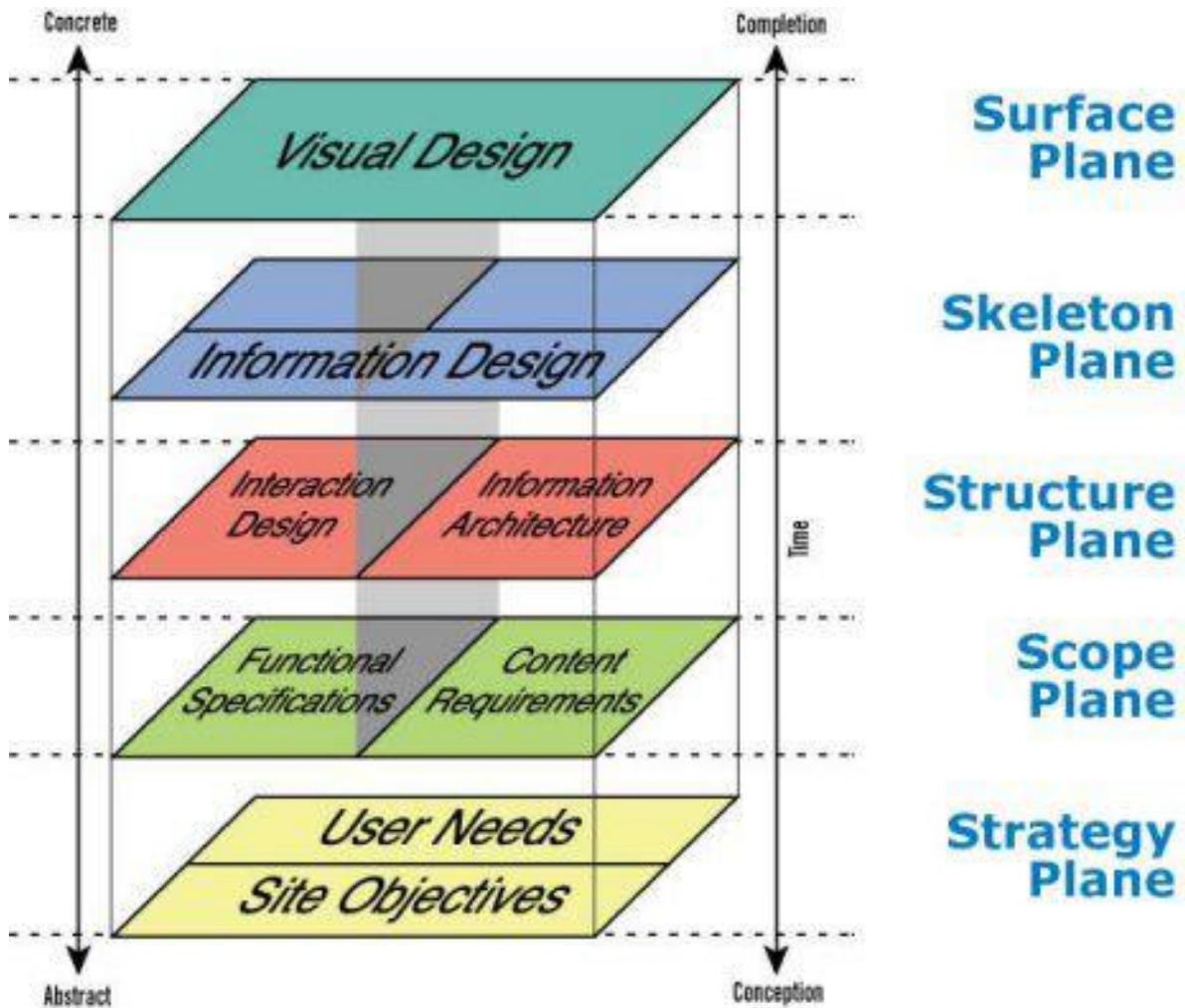
Second: User experience design

The user experience development process is all about ensuring that no aspect of the user’s experience with your site happens without your conscious, explicit intent. This means taking into account every possibility of every action the user is likely to take and understanding the user’s expectations at every step of the way through that process. It sounds like a big job, and in some ways it is. But by breaking the job of crafting user experience down into its component elements, we can better understand the problem as a whole.

The Five Planes

Most people, at one time or another, have purchased a book over the Web. The experience is pretty much the same every time—you go to the site, you find the book you want (maybe by using a search engine or maybe by browsing a catalog), you give the site your credit card number and your address, and the site confirms that the book will be shipped to you.

That neat, tidy experience actually results from a whole set of decisions—some small, some large—about how the site looks, how it behaves, and what it allows you to do. These decisions build upon each other, informing and influencing all aspects of the user experience. If we peel away the layers of that experience, we can begin to understand how those decisions are made.



1- The Surface Plane

On the surface you see a series of Web pages, made up of images and text. Some of these images are things you can click on, performing some sort of function such as taking you to a shopping cart.

Some of these images are just illustrations, such as a photograph of a book cover or the logo of the site itself.

2- The Skeleton Plane

Beneath that surface is the skeleton of the site: the placement of buttons, tabs, photos, and blocks of text. The skeleton is designed to optimize the arrangement of these elements for maximum effect and efficiency—so that you remember the logo and can find that shopping cart button when you need it.

3- The Structure Plane

The skeleton is a concrete expression of the more abstract structure of the site. The skeleton might define the placement of the interface elements on our checkout page; the structure would define how users got to that page and where they could go when they were finished there. The skeleton might define the arrangement of navigational items allowing the users to browse categories of books; the structure would define what those categories actually were.

4- The Scope Plane

The structure defines the way in which the various features and functions of the site fit together. Just what those features and functions are constitutes the scope of the site. Some sites that sell books offer a feature that enables users to save previously used addresses so they can be used again. The question of whether that feature—or any feature—is included on a site is a question of scope.

5- The Strategy Plane

The scope is fundamentally determined by the strategy of the site. This strategy incorporates not only what the people running the site want to get out of it but what the users want to get out of the site as well. In the case of our bookstore example, some of the strategic objectives are pretty obvious: Users want to buy books, and we want to sell them. Other objectives might not be so easy to articulate.

Research Problem:

1. The arrangement of the interface elements by size shows its relative importance.
2. Considering variations in the value of the application interface elements in relation to other elements it works as a very good tool to draw attention to the elements that need to be highlighted.
3. The differences or similarities between the elements can be determined through the color component to create an effective visual system that allows users to define these matters.
4. If we have directional information and we want to express it in the application interface, then employing the direction component correctly is very helpful in this case.
5. Determine the position of the element relative to other elements that transfers and delivers information about the hierarchy.
6. The use of unclear and complicated language in texts confuses users.
7. The lack of adequate contrast between the text and the background negatively affects the ease of reading.
8. The excessive multiplication of the types of fonts used creates a kind of visual clutter with design.
9. Coordination of all elements of the application interface on a logical basis that explains how to use, serves to guide the behavior of users.
10. Disturbances within the application interface can be minimized by ensuring that only visible visual comfort spaces, which in turn give the feeling of eye comfort.

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