

Research on User Interface design Innovation and Development Path in the Era of Convergent Media

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Abstract: User Interface design is produced with the emergence of various digital media terminals. Its main function is to convey product information to the majority of users and bring intuitive and understandable information experience to the public. It has become the product of the times of emerging industries, and its importance has become increasingly prominent. As an industrial design, it is a typical combination of "Art" and "Technology". With the advent of the digital age, the old information transmission mode is gradually changing or dissolving. Therefore, designing an effective system that starts with user emotion and aims to achieve an interface style can better increase the user experience. This paper analyzes the extensive influence of media technology on the design concept and design method in the mobile terminal interface design, and puts forward the new demands of mobile terminal users for integration, emotion and personalization. The mobile terminal interface design in the era of integrated media needs to have innovative design features. Only by combining personalized and diversified customized experience with emotional experience can the innovative needs of the design be met.

1. Introduction

With the development and progress of science and technology, various digital media have become indispensable and important information media in people's lives. The emergence of different forms of digital media products has brought people convenient, fast and rich information experience [1]. The arrival of the new era of financial media has become an indispensable powerful driving force in the fields of press and publication, new media, radio and television and various information applications, and has continued to create new progress and development in human information communication [2]. Traditional cultural communication is mainly through newspapers, radio, followed by television, etc. now more digital new media are transmitted through mobile wechat, Weibo and network, with a large audience [3]. Therefore, mobile phones, wechat, etc. not only have planar text reading, but also have visual and touching changes, greatly enriching the audience's vision. More and more users begin to pay attention to the interface design of products [4]. The interface design pays more attention to the user's feelings and allows the user to integrate his own thoughts into the product. It can even change the original ideas of the product, enrich the emotion of the product, and form a "work integrating the emotions of thousands of people" [5]. The high-quality UI (User interface) design should have a uniform style to ensure that users can recognize and read the interface content well. The uniform interface style can also improve the page aesthetics and user interface experience [6]. UI is an important link between users and media. The icon or button in the interface design is the entrance to achieve in-depth human-computer interaction. Excellent UI design will enable users to understand the steps of human-computer interaction in the shortest time and highlight the functional practicability [7]. Before the interface design, it is necessary to conduct in-depth research on the target users, and design the design works that meet the user's needs in combination with the designer's own cognition, understanding and professional quality of the product [8]. Constantly improve the design thinking to deal with various design problems and find reasonable design ways to meet users' needs for new media interface design [9].

2. About the Development Status of UI Design

2.1. Development Status of UI Design

Generally speaking, UI design can be divided into three major parts, including prototype, interaction and visual design (see Figure 1). In terms of the design objects and behaviors, interaction design pays more attention to the user's operation and behavior, while UI visual design is from the external of the interface, that is, the visual feeling and effect. What they do is more to beautify the static interface design and coordinate the interaction design [10]. Thus, the interface design has become the main body of UI visual design, that is, the behavior design and the interface design should work together [11].

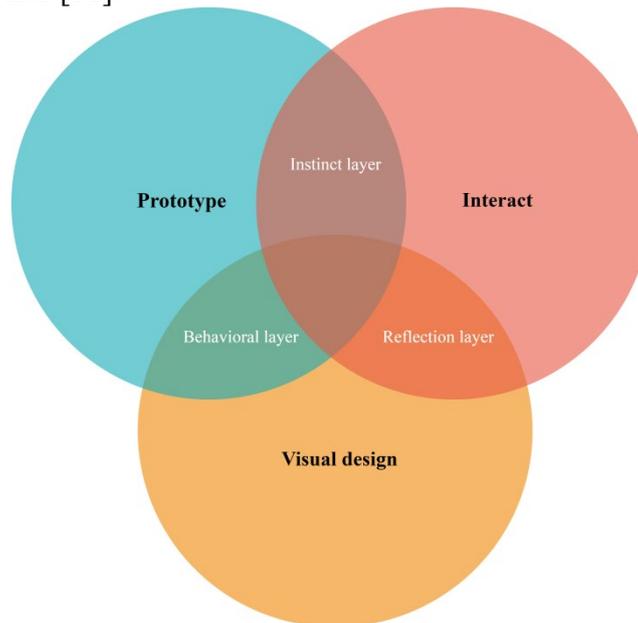


Figure 1 UI design composition

The intelligent living environment not only brings great convenience to people's life, but also stimulates people's demand and enthusiasm for intelligence. People are eager to enrich their daily life and solve more life problems through simple operation of moving their fingers with the user interface. The user experience has changed from a single plane of interconnection to a comprehensive and diversified coexistence and interaction. At present, the theoretical research on the combination of UI design and user experience is relatively scattered, and the current situation is that the key issue of user experience in UI design has not received extensive attention. UI design is also facing more tests. Users are no longer simply accepting, but forming an interaction with the interface to put forward more requirements. In order to meet the needs of the new user market, the visual expression of UI design has gradually been paid attention to in the design of intelligent electronic products. It is no longer the satisfaction of the previous functions, but the satisfaction of the deeper psychological needs of users.

2.2. UI Design Principles

UI design can effectively deal with the environment, psychology, function, emotion and other conditions. As a designer, it is necessary to introduce aesthetics, psychology, ergonomics, etc. when designing UI. The use of graphics and text in UI design allows us to quickly communicate visually with digital interfaces to obtain information. In the design of visual elements of the interface, the user's visual experience is very important. The combination of graphics, text and colors requires further analysis and research to meet the user's aesthetic requirements. The beauty reflected in UI design has a direct relationship with people. The most obvious expression is that it not only inherits the traditional concept of beauty, but also extends and innovates on this basis, which is a beauty of communication between people and things. The concept of aesthetics reflects people's yearning for high-quality life. The beauty generated by interface design is attached to the communication

interface between users and products, which belongs to a simple, practical and efficient beauty. In addition, user psychology is a kind of perception formed by users in a certain environment and based on rationality, such as the perception of beauty and emotional cognition, through which users evaluate the visual performance of UI design. Generally speaking, it is the user's personal aesthetic concept and evaluation standard. According to the above design principle analysis, the UI interface design requirements are obtained, as shown in Figure 2 below.

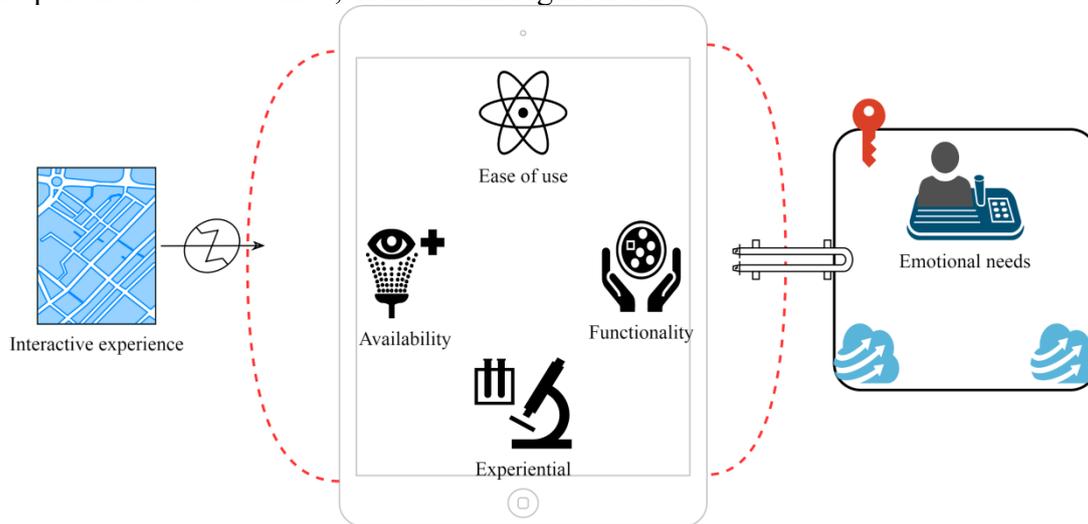


Figure 2 Interface design requirements

3. Development of UI Design in the Age of Converged Media

In the financial media environment, media technology links and gradually integrates the independent media information release, publishing planning and information gathering and editing through digital technology, network technology, mobile Internet technology and related software, forming a production chain and application industrial chain of media information product production. Media information products are reconstructing the organization and production methods of information, promoting the service of the public with lower cost, better quality, better service and wider form, and in this service, improving the level of human civilization and realizing the value-added of media information, making media information a high value-added resource. Cultural communication in the era of integrated media has a wide audience. Therefore, the UI design under this background needs to adopt quantitative and qualitative analysis, because any design needs to combine sensibility and rationality. If you want to make excellent UI design, you need to combine aesthetics and practicality perfectly based on the actual situation to create a satisfactory effect. The key to leading mass media and its value-added application is to effectively use the support of financial media platform and expand the accurate expression of media information by media technology.

4. Innovative Development Trends of UI Design

Successful UI design can bring visual feast and high-quality user experience to customers, making customers more dependent on interactive products. To establish a user centered UI interaction design, users need to feel a sense of existence, which means respect for users. In today's information flooded society, Baohua users need to constantly innovate design concepts and technologies to get a pleasant reading experience. Establish a set of methods and technologies suitable for the description and expression of media information content pages, break through the resource management bottleneck of media information in terms of high efficiency, low cost, no redundancy and strong interaction, form an all digital, multi application and high value-added product manufacturing chain and application value chain, and expand and innovate the interactive experience and service value-added of media information. Therefore, we should deeply understand

its development trend, which is mainly manifested in the following points:

(1) From the perspective of design elements, the future UI design needs to meet the following points: Simple and effective visual experience, free and harmonious emotional experience and personalized and diversified customized experience (see Figure 3). Specifically, the concise performance of product design enables users to quickly find the functions they really need. Personalized mobile terminal interface is an extension of traditional user interface, which can meet the diversified user needs of different groups, different use environments and products in different industries. The user's experience of the product is not only based on the function and beauty of the product, but also includes many factors such as inner feelings, use psychology, cultural cognition, environment, etc. only the design that meets the user's needs and is recognized by the user is a good design.

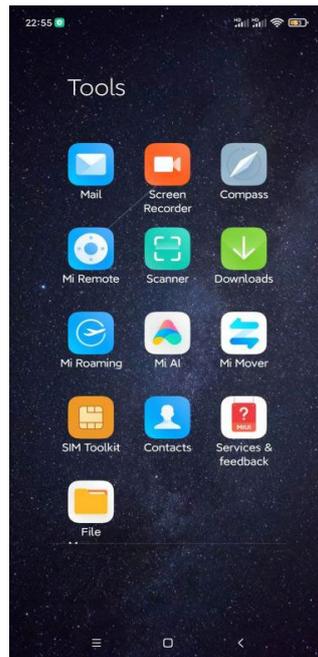


Figure 3 Simple visual experience design

(2) From the perspective of technology application and combination. While the application and promotion of big data technology bring new experiences to users, it also makes the interface design concept gradually break away from the traditional "user centered" appearance, explore the essence of "user centered", and set a new concept for interface design from a broader perspective, including the interaction between products (recognizable language of products), interaction between users and products (user interaction experience). This change of design concept leads to the innovation of mobile terminal interface design method and the change of design style.

In a word, UI design has broad market prospects and faces greater challenges. In the modern society where science and technology are first, interface design has become a key link that all kinds of technical media must pay attention to. To win the favor of more users, we need to invest more human resources and innovation to specialize in UI design. To stand out from many competitors, we not only need to gather talents in various fields for integrated innovation, but also need to continuously improve the design through arranging user experience links.

5. Conclusions

Human demand is the basis of design, and "people-oriented" is the starting point of all design. Visual thinking always runs through the UI design to obtain better visual effect experience. The proper use of design elements, the establishment of user centered user experience and the control of details are conducive to enhancing the coordination and hierarchy of the picture, improving the fineness of visual effect expression and the expression of emotional design, creating a reasonable, beautiful, practical, humanized and personalized visual interface, better transmitting product

information, enhancing the user's good impression of the product and establishing a good image. This is the user's pursuit of beauty and the value of UI design. With the development of 5g technology, the visual expression of mobile terminal interface tends to be more refined, efficient, personalized and humanized. At the same time, with the gradual increase of users' personalized needs, the user interface design will continue to innovate and provide users with more novel, unique and diversified customized experience.

References

- [1] Zhang Yongsheng. Talking about the integration of VI design and UI design [J]. Inner Mongolia Art, 2018(2):2.
- [2] Liu Huan. On the UI design and implementation of digital audio-visual media terminal equipment [J]. Computer Knowledge and Technology: Academic Edition, 2020(5):94.
- [3] Wang Wenli, Bu Tianran. A brief discussion on the cross-border integration of art and information technology from UI design [J]. Beauty and the Times: Creativity (Part 1), 2017(7):3.
- [4] Wang Jianjun. Innovation and Development of Media Technology in the Converged Media Environment [J]. Media Forum, 2019(11):2.
- [5] Zhang Xueting. Research on Interactive Visual Experience in UI Design in the Media Age [D]. Shenyang Jianzhu University, 2019(6):35.
- [6] Ding Sinong. Research on Visual Experience in UI Design [J]. Art Appreciation, 2020(27):87-89.
- [7] Wang Dandan. The development and innovation of digital media majors in the information age—taking the direction of UI interface design as an example [J]. Science and Technology Wizard, 2020(14):2.
- [8] Yang Shi. UI interface design and development in the new media environment—Comment on "New Media UI Design" [J]. Chinese Journal of Education, 2022(6):1.
- [9] Pan Hongming. The established law and innovative design in UI design [J]. Success: Zhongxia, 2017(18):1.
- [10] Lin Jiayi. Research on the innovation trend of mobile terminal interface design in the era of big data [J]. Packaging Engineering, 2017(2):239-242.
- [11] Yang Huan, Bao Kunfang, Sun Yao. Research on user experience-oriented mobile application interface design innovation method under big data analysis [J]. Design, 2022, 35(1):3.