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Analysis of Cosmetics App Smart UI convergence Design in Mobile Environments

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모바일 환경에서의 화장품 앱 스마트 UI 융합 디자인 분석

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Abstract omputer and the Internet (online) services have rapidly been developed and evolved over the last 10 years. They also reduce time and costs in many parts of human life. Yet, a range of adoption and expression has been segmented as a piece of information is diversified. Particularly, while this segmentized information can be integrated according to fields, it is hard for users to aware it at a glance.
Therefore, this study aims to improve and analyze programs that have been developed in a variety of ways from the existing unified design of GUI as the UIs of the Internet and programs have become accentuated recently so that it could suggest the importance of user-oriented UI designs.

• **Key Words** : UI, GUI, Design, Idenification, Analysis

요 약 컴퓨터 및 인터넷(온라인) 서비스 보급은 약 10여년이라는 시간을 통해 급속도로 발전 및 진화하고 있다. 또한 인간 생활의 많은 부분에 시간과 비용을 절감하는 효과를 가져왔다. 그러나 하나의 정보가 다각화 되면서 적용범위 및 표현범위가 많이 세분화되고 있는 실정이다. 특히 이러한 세분화 된 정보를 각 분야별로 통합 할 수 있을지는 모르나, 사용자가 시각적으로 한번에 인식하기에는 다소 어렵다. 따라서, 본 논문은 최근 인터넷 및 프로그램의 UI가 매우 중요시 됨에 따라, 기존 GUI에서 통일화된 디자인으로 프로그램들이 다각적으로 개발이 이루어짐으로써, 이를 개선하고 분석하여, 사용자 중심의 UI디자인의 중요성에 대해서 제안하고자 한다.

• **주제어** : UI, GUI, 디자인, 인식, 분석

1. Introduction

As society rapidly becomes information society, the Internet and mobiles have been disseminated in our actual lives, leading to online marketing to improve and enhance corporate images in the social, educational and research areas and emphasizing the importance of User Interface (UI) to smoothen the interactions. Yet, there have not been enough studies on the importance of UI.

UI refers to what users directly see, approach, investigate, and control to handle computers and

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various mechanical devices and as in the case of Figure 1, it is a representative structure we contract through computers. As a matter of the development speed of computers and peripheral devices, UIs have been developed and studied focusing on users. Therefore, UIs divide visual and physical elements and data into several and provide information to users, and depending on the range of interactions, they are categorized into input, touch, recognition, printing, and visualization.

UIs more emphasized in this paper change their behavior factors according to changes in society and thus, it has been discovered that new UIs are rapidly developed and expressed due to changes in awareness and value aspects. This is why the author tries to improve and analyze the importance of UIs through the ranges of their uses and by improving the awareness of users.

2. Related research

2.1 Method of UI(User Interfaces)

UIs refer to devices, software, cell phone (smart) touches, haptic, sensing technology, and bio signal technologies allowing smooth interactions between users and system. All the things that users control and contact through various menus, methods, and technologies belong to user interface.

Looking at these methods and devices, first of all, there are two representative keyboard-based devices: keypads and pointing devices. Keypads are comprised of a number of input keys. And with a pointer, you can direct the movement of directions. Second, touch method means that you touch a tablet with the fingertip, an electronic pen, or another object, it notices the touch and regards its location value as an input value. The examples include touch screen and touch pads. Second, sensing technologies such as acceleration is a way to equip gravity sensor or gyro sensor to a smartphone so that these sensors can analyze the sensing data and detect the movement of a device. Fourth, haptic in a wide sense means the entire systems that deliver a sense of touch to users, or in a narrow sense, means a sense of touch that is directly generated to users through a delivery of physical force. And lastly, bio signal uses an artificially generated bio signal such as iris, electromyogram, and brain wave [1].

2.2 Status of utilizing UI

UIs coexist in our actual lives through segmentalization techniques (key input process, pointing, digitizer, image processing, voice, body motion, device pressure, and display process using menus).

Among them, virtual learning (e-learning) that is making a sudden rise at university research centers is a tool that facilitates the interaction between learners and professors. Virtual learning (e-learning) has recorded a rapid growth in step with the increased Internet use and the development of IT technologies, allowing self-initiated learning for students without limitations of space and time through virtual spaces. It also maintains a constant interaction while learning specific knowledge, creating a study community for those who share specific knowledge. This is why it is an online study system enabling mutual communications based on web [2].

UIs used to enhance the images of social enterprises enhance the awareness of brand values based on important factors of visualization, differentiation of products, and qualities to general public. Accordingly, people try to coexist with User Interface (UI) and User Identity (UI) as a strategic marketing program in step with changes in times or lifestyle. A representative example includes symbols and slogans of universities to enhance the competitiveness reflecting innate identities and traditions based on online and mobile [3]. They are now used as an important element that symbolizes, concretizes, and communicates with universities.

In this way, UIs are constantly evolving for users and in the medical field, people make a huge amount

of investments in medical devices based on BT and NT for the health of human and medical environment in the future [4]. While User Interfaces are rapidly evolving, it is hard to accurately understand variables that can lack differentiation in terms of the range of expression and approaches tailored to space, times, and the age of users.

3. Design and Discussion

3.1 Cosmetics App Smart UI Design

In this study, the author designed and developed the UI of a cosmetic expiration date notifying application by integrating ideas based on an alarm service of a food expiration date notifying application. This provides an alarm service and utilizes general beauty-related information or reviews so that users can more conveniently and effectively be provided with information.

The author modified a general shelf life notifying application[5] so that this application notifies user the expiration with an alarm and provides camera and map functions. In addition, the author designed the UI of an application that provide cosmetic-related information and expiration dates for cosmetics.

The author designed this application so that it could provide information and functions with regard to the expiration dates of cosmetics. Information provided is largely consisted of three: First one is a camera function allowing users to take a picture of and register his or her cosmetics. Second is an alarm service notifying users the expiration date of a cosmetic by calculating the date. It also allows users to conveniently find registered products. Third, it provides a map when users use to re-purchase a used cosmetic or can use conveniently to look for a useful shop for a purchase.

3.2 Cosmetics App Layout UI Design

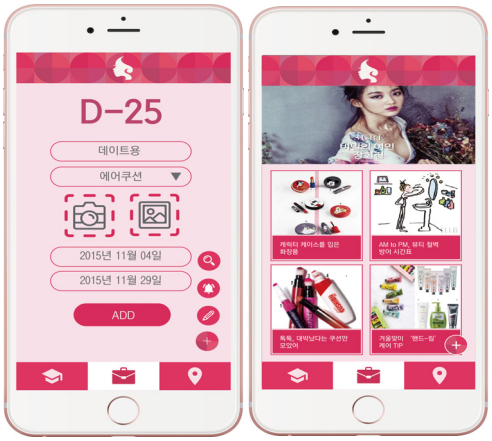
The UIs of the screen of MakeLook implemented in this paper are comprised of the intro, menus, and details on functions as follows so that users can easily understand.

[Fig. 1] Cosmetics App Main UI Design

As in the picture, UIs for the icon search window and icon alarm window have been designed. Worrying that users might find it difficult to find a product if there are too many products registered, it is designed to search for the product name set by users when they register the product for the first time.

[Fig. 2] Cosmetics App List UI Design

If you set all items on the product registration UI screen and press ADD, registered products are listed in the list.



[Fig. 3] Cosmetics App Register UI Design

4. Conclusions

In this paper, the author designed UIs of an application that gives off an expiration date of cosmetics through smart phone and tried to find the roles of UIs by comparing and analyzing User Interfaces in a variety of fields. In the process, the author used tool-based approaches and examined educational and social elements. Moreover, by investigating the awareness of users and Medias using various UIs, the author confirmed the differences in awareness in regards to UIs provided in different fields.

Therefore, if we can conclude that the ranges and satisfactions of UI-utilizing fields are diversified, we can try to provide UIs tailored to the needs and tastes of users by saving user-tailored information to computers, mobiles, and virtual learning (e-learning) and by liking them to a personal information system. This will effectively improve the importance of UIs and awareness in the future. It should be an effective factor in the ICT field and accordingly can help the ICT industry to equip market competitiveness domestically and internationally.

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