DEVELOPMENT OF NATIONAL IDENTITY CARD DESIGN (1)

By Suggesting New Design Methods to Reflect the Needs of Citizens

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Abstract: The design of the next generation NID card (National Identity Card) is proposed to address the shortcomings of the current NID card and to integrate diverse fields of personal information management. The new NID card should express the national identity of Korea and satisfy the needs of many citizens. In countries that have successfully introduced a NID card, the aesthetic design of the cards tend to focus on the following factors: the unified symbols of national identity (Switzerland and Singapore); public convenience in terms of compatibility with existing systems (Austria and Estonia); and, special care services (New Zealand). These examples show that the existing KOMSCO design needs to be improved to satisfy the needs of citizens. Thus, the objective of this study is to suggest design new methods of designing the Korean NID card to reflect the needs and opinions of citizens.

Key words: National Identity Card, NID Card, Design Methods, Design Criteria

1. Introduction

1.1 Background

In Korea every citizen has a unique national identity number. The government issues a national identity (NID) card for all citizens over 18. The card was designed by Government Corporation called; the Korea Minting and Security Printing Corporation (KOMSCO). New NID cards will be introduced for the benefit of the public, so it is necessary to improve the design method. The new card should express the national identity of Korea and satisfy the needs of many citizens. In countries that have successfully introduced a NID card, the aesthetic design of the cards are tend to focus on the following factors: the united symbols of national identity (Switzerland and Singapore); public convenience in terms of compatibility with existing systems (Austria and Estonia); and, special care services (New Zealand). These examples show that the existing KOMSCO design needs to be improved to satisfy the needs of citizens. Thus, the objective of this study is to suggest design new methods of designing the Korean NID card to reflect the needs and opinions of citizens.

1.2 Preliminary Review

We conducted preliminary research to understand the public perception of the existing NID card and to examine the technologies and methods (such as content analysis and field trips) which can be used to study the NID card. The case study show how each NID card is implemented and how people perceived the NID card system. From those studies, we can gain insight and determine the optimum design direction. Content analysis, which involves analysis of, news, articles, movies, and Web advertising, reveals the publics' unconscious perception and bias toward the NID card and the card system. To understand the anti-counterfeiting technologies and standard security elements of currencies, we visited KOMSCO on a field trip.

From our preliminary research, we specified the following three design criteria that can be used in the design of the NID card.

- Form: the use graphic elements that express the public perception national identity as well as security features
- Function: the recognition of different needs for different life styles.
- System: the registration and management system of NID cards

2. Research Method

Our preliminary review confirms the need for universality and personal customization. In addition, designers must consider the characteristics of every citizen (or card user). Special attention must also be paid to the difficulty of redesigning an existing card. Our three proposed design criteria (of form, function and system) should therefore be carefully considered in the design of the new NID card.

We applied an industrial design method to survey the personal needs of NID card users. From those results, we developed a user task based on three design methods; namely, a personal inventory and narration of the functions of the card, and an experience prototyping method that provides insights into the optimal form and system. The NID card must also reflect the national identity. So, to determine public opinion about Korea's national image, we prepared a questionnaire that would highlight the main form factors to be implemented in the new NID card.

3. Results

3.1 Design method

We developed four methods of gathering information on the user needs to get inspiration for the design of the next Korean NID card. The methods involved focus groups with rich data and a general group of subjects.
3.1.1. Personal inventory
The objective of a personal inventory is to examine the needs and usage pattern of users of various cards. The steps are as follows:
- The subjects are invited to a test place without being told any details about the test method. (This process minimizes the Hawthorn effects)
- The subjects are asked to show any cards in their possession.
- We listen to the subjects as they talk freely about their cards and their usage of the cards.

3.1.2. Narration
The objective of a narration is to determine the problem space with regard to the use of existing cards so that we can evaluate the needs of users. We developed task cards that explain the user's daily life, and we used the task cards to understand how certain cards are used. The steps are as follows:
- The subjects are asked to choose scenario cards
- The subjects are asked to use their cards to do certain tasks explained in the task cards.
- We listen to the subjects as they talk about why they use their cards and their perception about the existing card or the existing card service.

3.1.3. Experience prototyping
The objective of experience prototyping is to derive insights about the exposed data and hidden data. By asking users to make their own NID cards, we learn about their perception of NID card, especially with regard to data security. The steps are as follows:
- The subjects are given some NID card samples to help them become familiarized with NID card.
- The subjects are asked to make their own NID card with the given materials.
- The subjects are asked why they made the NID card the way they did and, from their responses, we derive insights about users' card-related needs.
- The subjects are asked to do a real life task by using their designed NID card to find out possible problems and improvements

3.1.4. Web questionnaire
The objective of the Web questionnaire is survey public views on which aspects of the national identity should be reflected in the NID card. Through the survey, we expect to see how Korea can be represented by a large number of respondents. The steps are follows:
- A set of images is posted on the Web and users are asked to state which image is the most representative of Korea and why.
- Answers from many people are collected and analyzed by means of an image map.

3.2 Analysis of user research data
We use four methods of quantitative and qualitative analyses to derive insights. The insights are then categorized into a matrix of the form, function and system of the design of the next Korean NID card.

3.3 Design concept development
The matrix of insights can be used to set the design directions. We developed the final designs by using a so-called 'fragmented' concept and a 'hidden' concept. Figure 1 shows the designed NID card of the 'fragmented' concept, which is based on the insights shown in Table 2.

4. Conclusion
The aim of this research is to suggest new methods of designing a NID card, with emphasis on overcoming existing problems. Our preliminary highlighted three design criteria that should be considered when designing the NID card: namely, the form, function and system. From these criteria, we developed four design methods: a personal inventory, a narration, experience prototyping, and a Web questionnaire. These methods can be used to elucidate the national identity of Korea and reflect the individual needs of citizens. The results show that these methods can affect the NID card design. The limitations of these methods can be effectively complemented by conducting a long-term research to build a database of views on NID cards from a greater number of citizens.

5. Acknowledgment
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6. Reference