Requirements analysis for Dynamic Updating of E-Book Content from User Feedback

Ja-Ryoung Choi[1], JungSoo Hwang[1], Soon-Bum Lim[1]

[1]Dept. Of Multimeda Science, Sookmyung Women's University,
Cheongpa-ro 47-gil 100, Yongsan-gu, Seoul, 140-742, Korea
{j2arlove, hjs6344, sblim}@sookmyung.ac.kr

Abstract. Recently, advancement in technology has been involving participation from users. This study proposes an electronic publishing service, which dynamically updates contents of E-Book by receiving user's feedback as reader participatory contents. We designed feedback interfaces and analyzed the requirements for providing real-time updates by inserting predefined form of feedback to receive the user feedback and receiving user feedbacks.

Keywords: User Feedback, Dynamic changes, E-Book, Content Update

1 Introduction

The environment of Web 2.0 has provided users to participate and share among the community. Users have started to express their thoughts and advices, and reading has become a social activity; instead of reading alone, people are starting to share thoughts and feelings with those around them. For instance, collective intelligence, a special aspect of Web 2.0, is formed by opinions from various people rather than opinions from a few specialists. Consequently, these changes in the web environment have started to also demand a change in digital publishers. If a small number of authors wrote on their books previously, a digital publishing service now allows the readers to contribute on contents of the books.

In order to apply real-time feedback from users with the contents of E-Books, this research analyzes the requirements to design the service and proposes feedback interfaces.

2 Related Works

Out of the three major studies, research on feedback is found in Martin et al[1]'s Marky, a web-based document annotation marking system. The author, through Marky's editor, makes documents and defines annotation types that the author wants from the users and the specific time to be annotated. Based on the choice of the editor, users are able to use various forms of highlighting techniques to provide feedback.

Fig. 1 Marky System

Furthermore, the document of Sacha et al[2] allows readers to argue and express views through the NB system, an annotating system that is provided next to the content of a document. This system enables users to question certain places of a document, which another user can give feedback to them.
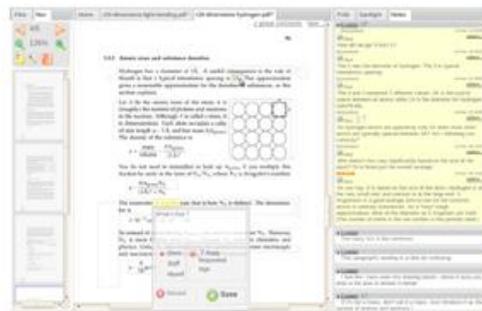

Fig. 2 NB System

Finally, EPUB3, a social reading system proposed by Eri Kataoka et al.[3], is shown. Through this system, readers can not only share feedbacks, but also save important information. These three researches on feedback are based on annotation separated from the original documents.

3   Requirement Analysis

Previously, feedback from users were solely based on comments, which had the purpose of only sharing opinions. However, this study intends to use feedbacks from User Participation contents. Foremost, inserting User Feedback in books in real-time can bring certain problems. If readers are to express anything, the content of that may not be what the author wishes and may be a distraction to the book's content. In addition, quantity may be a problem, for a reader may give or not give any feedback at all. In order to solve these problems, this study advocates a structured form that helps authors to receive desired feedback.

4   Design of Feedback Interface

In order to insert User Feedback inside an E-Book, the information has to be put in beforehand. To make this possible, the authors need to choose which parts of the book they want to receive feedback from readers. The authors also need to decide the format of displaying the received content. Therefore, this research determines the feedback interface, which is composed of an input and output.

The input constituent defines the content of feedback that is needed from readers, the way to insert feedback, and the layout for displaying them. To insert feedback, users can choose a method that best suits their purpose. These methods of feedback include a form of survey for questions and answers, a form of reply for answers to a specific question through comments, a form of evaluation for judging whether the content is liked or disliked, and a form of collaboration for creating new content through cooperation. Then to display these responses, diverse input forms are used to determine the layout of the feedback.

The output constituent defines the process of displaying the received feedback from users. Since the output is able to control the content of an E-Book, it has to include the author's intention in the content through restriction elements. Restriction elements can control feedback through the update frequency, displayed order (latest, oldest, random), and the number of feedback displayed at a time.
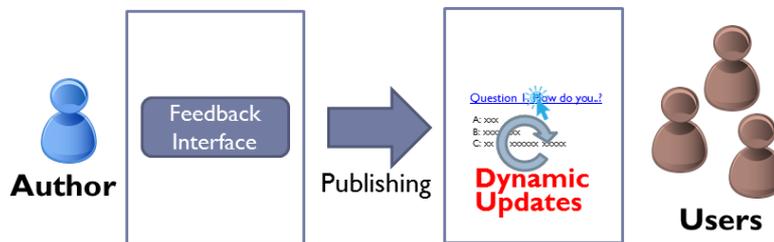

Fig. 3 Overview of Feedback Interface

5   Conclusion

This research has proposed the service of updating the content of E-Book by inserting User Feedback. While previous feedback was composed of people merely sharing their opinions, this study helped expand that by predetermining the desired User Feedback in certain parts of the book and designing the feedback interface as the author desired. The feedback interface is composed of an input and output constituents, and having this as the foundation, the feedback sent from readers can now be dynamically updated with the content of the book.

References

1. Martín Pérez-Péreza, Daniel Glez-Peñaa, Florentino Fdez-Riverolaa, Anália Lourenço, Marky: A tool supporting annotation consistency in multi-user and iterative document annotation projects, Computer Methods and Programs in Biomedicine. 118(2), February 2015, pp. 242–251
2. Sacha Zyto, David R. Karger, Mark S. Ackerman, Sanjoy Mahajan, Successful classroom deployment of a social document annotation system, CHI '12 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, pp. 1883-1892, ACM(2012)
3. Eri Kataoka, Toshiyuki Amagasa, Hiroyuki Kitagawa, A System for Social Reading based on EPUB3, IIWAS '13 Proceedings of International Conference on Information Integration and Web-based Applications & Services, ACM(2013)