

Web-based Proceedings Article Repository

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Abstract : The number of proceeding articles has increased in recent years. Because they are not systematically managed, it is challenging to locate and recover a certain proceeding that people want. Therefore, a digital repository system is proposed in this study. This system can be used to share and distribute the proceedings articles. The goal of this project is to offer a long-term solution to the need for a system for storing and retrieving proceedings articles that is reliable, efficient, effective, and simple to use. This might increase the productivity and calibre of research. At the end of the project, it is expected that the normal user, admin, and organizer of the conference will be able to manage the proceedings articles and generate reports using the system. In this project, first, the functional requirements were gathered through the requirement analysis. Based on the requirements gathered, a prototype called the Web-based Digital Repository for Proceedings Articles (WDR) was constructed. A field study was then conducted to assess the prototype's usability. The evaluation's findings suggested that WDR is practical and simple to utilize. The functions for managing and retrieving the proceedings articles by WDR were likewise rated favorably by the respondents.

Keywords: Digital Repository, Proceedings Repository, Web-Based System

1. Introduction

Information storage and retrieval refers to the systematic process of compiling and classifying data so that it may be retrieved and displayed upon request. The digital repository is one of the information retrieval applications [1]. Various items can be stored in a digital repository for a range of users and uses. The resources can be used for research, education, and administration purposes. The main advantage of repository is it can help institutions build a systematic and well-organized method to capture, identify, store, and retrieve academic resources [2]. A well-managed approach to these resources improves the odds of making efficient use of current research, improves learning opportunities, and stimulates collaboration within and between disciplines and groups [3]. To encourage more information exchange among communities throughout the world, many digital repositories have been made open access [4].

Proceedings is one of many publications that have been published by many universities and research institutions as an outcome of a conference, congress, symposium, or other meeting. Researchers present papers on their current research at conferences and receive feedback from the audience. The conference papers are usually collected and published in a volume called a proceeding article. In recent years, the number of published proceedings has increased due to the increased number of conferences organised. The issue is that the proceeding articles are not systematically managed, as there is no specific system in place for that yet. In most cases, the proceedings are only listed as a static display with hypertext documents. Furthermore, because no database is available, the administrator must manually update the contents if any changes are required before uploading the proceedings. Furthermore, there is no search facility available, so the user must manually browse for the article. It is very difficult to manage and find the articles because of these issues.

Thus, it is important to have a repository for proceedings articles where the articles can be stored and managed in a single location [5]. By offering a quick and reliable mechanism for the uploading, storing, and retrieving of proceedings articles, the development of a web-based repository will help to alleviate the problems highlighted. Therefore, in this study, a prototype of a web based digital repository (WDR) for proceedings articles is proposed.

2. Materials and Methods

The WDR is a platform that allows normal users, administrators, and organisers of the conference to manage and retrieve the proceeding articles. The prototyping model is used in this study in the development of the prototype as it is simple to comprehend and implement [6]. The website was built using HTML, CSS, JavaScript, and PHP. All the data on the website is stored and managed in the MySQL database.

Figure 1 is the use case diagram of WDR. This diagram depicts the interactions between the use cases and the actors. In this use case, there are three actors: the organizer, the administrator, and the normal user. Four major use cases are registration, login/logout, managing the organizer account, managing proceeding articles, viewing the report, and searching for proceeding and articles. The use case of Manage Organizer Account allows users to perform sub functions including "View Information," and "Edit Information." The use case of Manage Proceeding Articles allows users to perform sub functions including "Update Proceeding Status," "Update Article Status," "Download Article," "View Article," and "View Proceeding." Meanwhile, the View Report use case allows the user to perform sub functions such as "View Proceeding Report" and "View Article Report." **Figure 2** shows the main interface of WDR. While the interface elements for the three users are depicted in **Figure 3**.

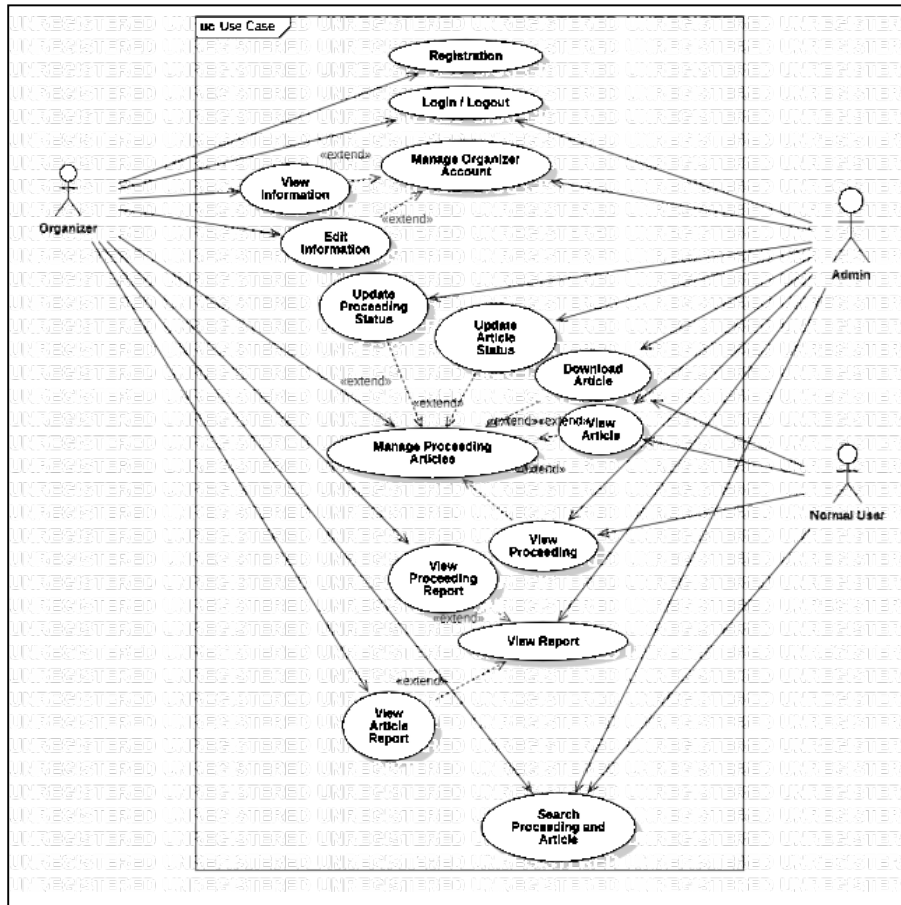


Figure 1: Use Case Diagram



Figure 2: WDR Main Page

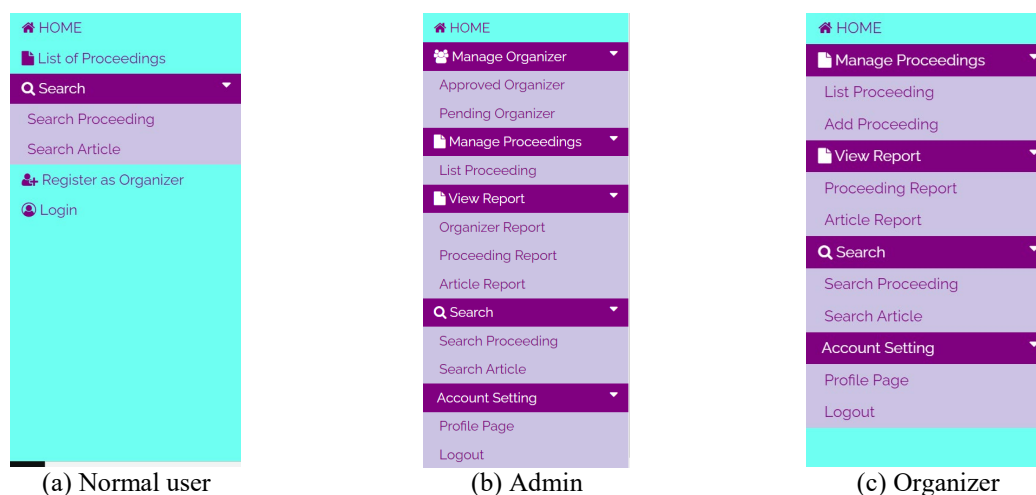


Figure 3: Different Menus for the users

3. Findings

The evaluation's findings indicated that WDR is attractive, controllable, effective, useful, and learnable since all usability characteristics had satisfaction rates of greater than 80%. Efficiency, controllability, and helpfulness received the highest average satisfaction ratings from respondents, with 88.85%, 85%, and 84.5%, respectively. Overall, respondents are 82.8% satisfied with learnability and 82.8% satisfied with attractiveness, respectively. On the other hand, efficiency, helpfulness, and learnability received positive feedback from respondents, with 95.8%, 93.3%, and 90% satisfaction, respectively. In the meantime, 82.5% of respondents gave a good reaction regarding controllability. Only attractiveness, at 79.2%, received a favorable reaction that was under 80%.

Based on the findings, the majority of respondents are satisfied with the proposed WDR. However, some respondents are still in disagreement with or express displeasure with certain components, such as those relating to appearance. In this situation, the user interface of the system may be made more appealing and user-friendly, which would increase the possibility that people would desire to use the repository. Additionally, the functionality of the system has to be somewhat enhanced to increase user acceptance and satisfaction..

4. Conclusion

In conclusion, this paper described the design and development of the web-based digital repository for proceedings articles. This system allows the normal user, admin, and organizer of the conference to manage the proceeding articles, manage the organizer and manage the report. Furthermore, there are many aspects of the digital repository for proceedings articles that can be studied. In the future, we plan to extend the functionality of WDR by providing more options to the normal user, organizer, and admin to manage the system properly.

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