

Web-based Conference Management System for Higher Learning Institutions

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Abstract- This study is about Conference Management Online System which provides an easier way of managing events when conducting a conference. The system will be specifically built for the convenience of Event Manager in managing online submission of papers and procedures with relation to the Event Manager himself, Reviewers and Authors. Besides that, this system is being proposed due to the lack of Conference Management Online System built especially for a university. This study would not only focus on the development process of the Conference Management Online System but it would also summarize current system which are in use, design analysis of the new system which will include the flowchart of the systems and requirements needed in order to develop the system.

Keywords: Online System, Event Management System, Online conference, E-Education

I. INTRODUCTION

Online management system is very important nowadays in education [1], recently many systems have been designed in this field to help the users to communicate online [2] [3] [4].

The Conference Management Online System is the system that will be used by Event Manager in order to manage conference papers that were submitted by the authors, examples of these systems are shown in [5], [6]. In this study, the implementation of system features would provide an efficient submission of conference papers that will be arranged systematically which will be easier for users to understand.

The main objective of this system is to give IIUM a specific platform for them to organize their own conference with their own system. It would assist the Event Manager in organizing the conference papers that are submitted by the authors which would be reviewed in a professional, efficient and systematic way. This system would also alert authors about new information of upcoming conference that will be held and it would provide brief information about the event. In addition, the authors of each paper would be encouraged to participate in conferences as this would give an opportunity to knowledgeable authors to share their conference papers.

II. IMPORTANCE OF THE SYSTEM

This system would be developed for IIUM, as this would allow them to be able to handle conferences better and effectively without difficulties pertaining to the organization of the conferences. The importance of the system can be summarized as follows:

- Event Manager can easily update some notice about the conference papers that are submitted by authors.
- Event Manager will handle the system effectively and efficiently. Therefore, it would allow the Event Manager to alert people about the upcoming conference information.
- Easy for Event Manager to distribute the tasks assignment to the examiners or reviewers based on their preferences and specializations.
- This system would allow examiners or reviewers to easily evaluate conference papers that were submitted online by the authors.
- Clear, easy to use registration and paper submission system for the authors of conference paper to submit their papers.
- The authors also would be given access to update, maintain their contact details and edit their submitted conference papers online.
- Authors would be notified about the status of the their papers based on the notifications or alerts from the event manager.

III. LITERATURE REVIEW

This chapter would be reviewing few existing conference management online systems that were used by other organizations and it would be compared with the new system. This would allow the organization (IIUM) to know what they lack in their current business management and try to find ways to improve their management system for better performance as well as to follow the evolution and growth of technology that can change from time to time.

EXISTING SYSTEMS

i) EasyChair Conference System

EasyChair is a free conference management system that is flexible, easy to use, and has many features to make it suitable for various conference models. The first version of EasyChair was implemented in 2002 and it was used by 12 conferences in 2002-2004 and by 66 conferences in 2005. Besides that, it is currently the most commonly used for conference management system. This conference management system aims at helping conference organizers at all stages and facilitates the creation of conference as well as the workshop proceedings [5].

ii) OpenConf Conference 2012

OpenConf Conference 2012 is an abstract and peer-review management system that facilitates the submission and review processes for conferences and workshops. This system was developed using PHP language together with MySQL database and available for installation on the client server.

This management system is available in two editions which is Community and Professional. For the Community edition, it provides a peer-review system that is suitable for many organizations and it is free but with limitation support they offer. On the other hand, Professional edition includes all the Community edition, technical support, additional features and available with multiple deployment options [6].

iii) iChair

iChair is a powerful submission/review server software which is designed to help the program chair or event manager of a conference with the submission and collection of articles, assignment of articles to reviewers, review collection of submitted articles, discussions among reviewers, and mailing to authors and reviewers.

This online management system was developed with a view to being as easy to install as possible. It was developed in PHP5 and intended to run on an apache web server. As this would allow easy installation on a Linux box which it should be possible by anyone (even with only basic knowledge of server administration) in about one or two hours. It might even be possible to run it on a windows based server (but this was never tested) [9].

Table 1 compares the new online conference management system with the existing conference management system. The new system would be having some features such as the online registration process, submission and reviewing of papers by reviewers designated by the conference committee. Additionally, it would also feature an online paper evaluation which was submitted by the author, alert on upcoming conferences and an event management that can easily update and provide notices about the conference papers that are submitted by authors and to distribute the

tasks assignment to the examiners or reviewers based on their preferences and specializations.

IV. SYSTEM DESIGN

For this study, the developer will use the PADIM (Planning, Analysis, Design, Implementation and Maintenance) approaches in the development process [7], as shown in figure 1.

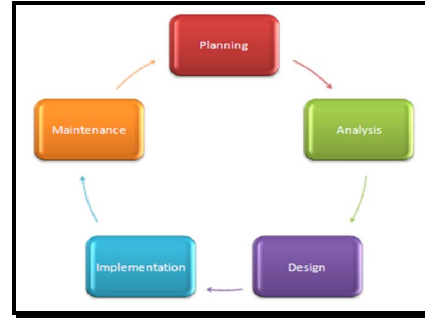


FIGURE 1: System Development Approach [7].

In planning stage, developer establishes a high-level of intended study so that they can see the overall proposed system. Besides that, developer must be able to determine the goals of this development system in order to ensure the development system going smoothly and follow the sequence of the process. Thus, this goal also can help the developer to finish the system within the time given.

In analysis stage, the developer will do the analysis through the system process in order to ensure the system is free of errors and correct the defects that will affect its effectiveness. In design stage, the developer will do the code generation of developing this system. While in implementation stage, the developer will do unit testing and also module testing in order to measure the quality and performance of the system. Finally, in maintenance stage, the developer will do some maintenance if found any fault with the system. The Waterfall Model (System Development Life Cycle) has been used by this study [8].

TABLE 1
COMPARISON BETWEEN NEW AND EXISTING SYSTEMS

	Online Registration Process	Online Paper Evaluation	Submission and review of Papers	Alert on upcoming Conferences	Effective Event Manager	Online paper discussion
IIUM Online Conf. system	Yes	Yes	Yes	Yes	Yes	Yes
EasyChair Conf. System	Yes	Yes	Yes	No	No	Yes
OpenConf Conference 2012	Yes	Yes	Yes	No	No	No
iChair	Yes	Yes	Yes	No	Yes	Yes

TABLE 2
Use Case Glossary

Use-Case	Description	Actors
Registration	New author's that want to join the conference system must register as membership	Author
Log in/log out to/from system	Users can have the access to the system based on their privileges to each different users	Author Conference Manager Reviewer
Submit proposal/final conference paper	Author have the right to submit the conference paper once they willingly to register as one of membership	Author
Receive update status proposal/final paper	Authors will receive their status update from Conference Manager about the conference paper they submitted	Author
Update Information and account	Authors have the right to update their information like changing account, change information	Author
Create conference	Conference Manager have the opportunities to create conference trough Conference Management Online System	Conference Manager
Setup online forms	Online form will be setup by Conference Manager that registered to the system	Conference Manager
Notify authors to login	The system will notify the users to login into the system	Conference Manager Conference Management Online System
Receive proposal/final conference paper from author	Conference Manager will receive the proposal/final paper that submitted by the registered authors	Conference Manager
Assign and send proposal conference paper to reviewer	Conference Manager have the authority to assign and send proposal paper to particular reviewer	Conference Manager
Notify author's status of proposal conference paper	After conference paper being reviewed by reviewer, Conference Manager will update the status of author's proposal paper	Conference Manager
Grade and give comment	Reviewer have the authority to grade and give comment to proposal paper	Reviewer
Accept/reject proposal/final paper	Accept/reject proposal/final paper will be done by reviewer after review the paper	Reviewer
Notify status proposal/final paper	After review the paper and take decision whether accept/reject the paper, reviewer will notify the status update to conference manager	Conference Manager
Create and control Conference Manager's account and access	Conference Management Online System will control over all of the system	Conference Management Online System
Overview of conferences	Conference Management Online System have the opportunities to overview the conference new updating	Conference Management Online System

Table 2 shows the use case glossary while Figure 2 shows the interaction between system and the actors involved in this Conference Management Online System. Thus, it also capture business scenario.

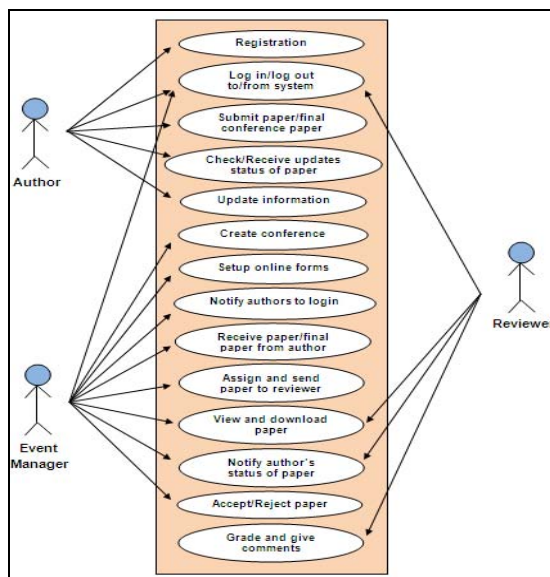


FIGURE 2: Use Case Diagram

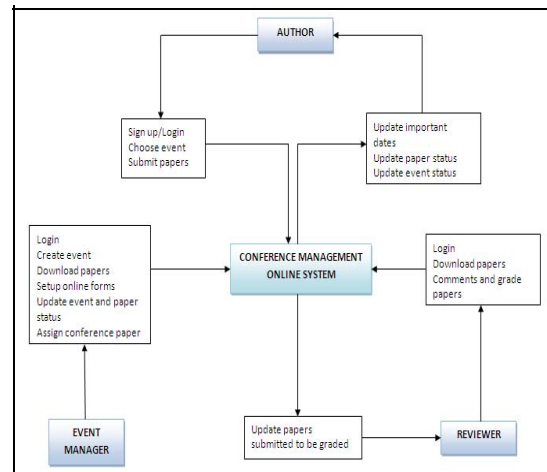


FIGURE 3: Data Flow Diagram

In figure 3, it shows the data flow diagram and how different actors with different role will act and experience through the website. Starting from the login page, which identifies the actors' authority and it would be directed to the appropriate page suitable for their role in the conference. Besides that, this data flow diagram also shows the interaction between the system activities to the specific actors.

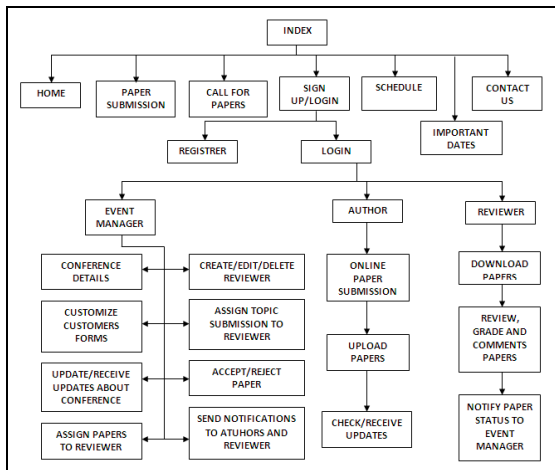


FIGURE 4: Interface Design Diagram

Figure 4 shows the interface design of the website which consist of Home page, Paper Submission page, Call for Papers page, Sign up/Login page, Conference Schedule page, Important Dates page and Contact Us page. The sign up and login page will have a major role in the website because it will direct the user to the main function of the website. Thus, the actors will be directed to different page according to the different type of authority. From this diagram, developer would understand it easily in order to build this Conference Management Online System because this diagram can be an easy reference for the developer.

V. LIMITATIONS OF THE SYSTEM

There is no available conference Event Manager that would test the Conference Management Online System that was developed due to it being time consuming which makes it hard to actually know all of the weakness of the system. For the system constraint, some problem was faced regarding the coding for the system to be functioning because more understanding is needed in developing the system and it would be difficult to get all the information because of the information sensitivity of the existing system in IIUM.

VI. FUTURE ENHANCEMENTS

In the Conference Management Online System, there is a need for future enhancement in order for the system to be user friendly. This is important because it will influence the effectiveness of certain part of the system for example the Conference Management Online System does not have an edit function for any function in the system. Adding the edit function will give a feel of user friendly as this would allow the user to be able to edit any information about him and the conference. Other areas that need to be given attention are:

- Profile page (Author, Reviewer, Event Manager)
- Call for papers
- Important dates

VII. CONCLUSION

In conclusion, this Conference Management Online System provides a lot benefits as it allow Event Manager to organize the submission of conference papers submitted by the Authors. The system hopefully would provide the necessary functions to the Event Manager in order to manage the event effectively, efficiently and thus knowing that the system will function smoothly. Besides that, it would be nice and interesting if users found the procedures used in online conference paper submission and review to be user-friendly and flexible. In addition, this system will also help the Event Manager of the conference to publish and alert the authors of the important dates of submission. This will provide a better understanding between the authors and event manager regarding the conference in order to effectively manage the conference. The Conference Management Online System is expected to be used in and outside Malaysia as this would portray not only IIUM but also Malaysia as a technology and educational hub.

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