

KMICe eX: Conference Management Tool

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ABSTRACT

The e-management application in organizing a conference is vital to help users whether they are organizers, reviewers, or authors who will make benefit from the Internet or web. The application is linked with the conference website that contains the conference information (such as the important dates, conference venue and the organizer) and the guidelines for presenters such as how to write and submit their papers. In developing such application, the important features and functions to be included have been identified and put into a working model. This article presents the working model which has been tested in organization KMICe 2008.

Keywords

Conference Management System, Web-Based System, E-Management system

1.0 INTRODUCTION

Conferences, seminars and workshops are among the most frequent activities organized by academic organizations. Commonly, the targeted participants are both local and international communities. Since distance is the most concern factor, conference promotion activities are very limited due to higher cost and time. Therefore, organizers of conferences, seminars or workshops have a possibility to utilize web-based technology in order to promote their activities by developing an official website and posting all relevant information regarding their activities.

However, updating information on a conference website is also a crucial task as most of the conference websites are developed as static pages. Furthermore, the dynamic functionalities such as online registration and online submission are not available. It requires basic programming skill, familiarity with web scripting language and tool, and knowing of using the server or web hosting technologies. Thus, the participants can only submit their registrations via conventional method and the conference committee has to manually process the registration and paper submission. Another issue is handling and reviewing conference papers as stated by Nierstrasz (2000) whereby selecting the best paperworks

from hundreds of submitted papers is really time consuming and a difficult task.

This paper discusses a model for Conference Management System (CMS). This model is developed to facilitate the organizing of Knowledge Management International Conference & Exhibition (KMICE) which is held every two years by the Universiti Utara Malaysia. The system is equipped with several facilities to help and support all users (conference secretariats and participants) in managing the related conference information and activities.

2.0 CONFERENCE MANAGEMENT SYSTEM (CMS)

Many research and development related to CMS have been performed. Snodgrass (1999) conducted a survey and has listed around 20 CMS software. Each of them was developed for a specific conference and later expanded and reused for other conferences. Three major entities have been identified for a major role in CMS which are participants (including paper contributor), reviewers, and organizer. Figure 1 shows these entities and the interaction between them in CMS.

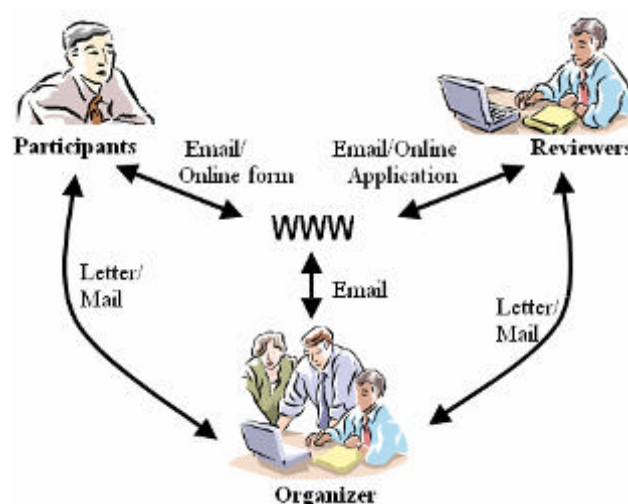


Figure 1: Interaction in CMS

2.1 CMS Models

CyberChair for example is a free web-based paper submission and reviewing system with Programme Chair (PC) meeting and proceedings preparation support (Stadt, 1997). It was originally developed in 1996 for European Conference on Object-Oriented Programming (ECOOP). The system is then renewed and improved with more features such as electronic review forms and uploading papers. Each feature in CyberChair is handled by the specialized agent (Schneider et al, 2001). The approach not only saves the time but also cuts the operation cost.

Another system is WintanWeb which also provides almost the same facilities with CyberChair (Johnson & MacKay, 2000). WintanWeb is developed to meet a recurring need, which is to facilitate the communication associated with the paper submission and reviewing process for the conference. It supports interaction between conference secretariats, contributors and reviewers. It was originally set up in 1997 and evolved a great deal in supporting the requirements of several conferences such as CASCON'97, WWW8 and ICSE 2001. Managing Conference Proceedings (MCP) is a tool to help conference secretariat preparing and managing the conference proceedings (Fellner dan Zens, 2001). The implementation of MCP can minimize the secretariat time and reduce the process of preparing electronic conference materials.

Another CMS called PUMA (Publications Manager) was developed at the Cornell University (Young & Seshadri, 1998). PUMA is implemented as client/server three-tier application. The PUMA interface provides forms which are customized using Hypertext Mark-up Language (HTML) and controlled by the Conference Committee. The technology of the web server supports the Common Gateway Interface (CGI) scripts to integrate with the PREDATOR database. PUMA users can be divided into three categories: paper contributor, reviewer and administrator. Contributor interface provides facility to send their abstract and papers, and check their paper status. On the other hand, in the reviewer interface they can check, read, and download the assigned papers and then review it. The administration page is the most important one which enables the conference committee to manage, control, and monitor all tasks provided in the PUMA system.

The next model is called as Conference Manager (ConfMan), which was divided into four main modules; paper registration, PC online meeting, participant registration, and administration (Halvorsen et al., 1998). Paper registration is managed by paper registration module where it provides authors to fill in their personal and paper information. When the information has been saved, the system will notify to the author on how to send their papers. The online meeting module enables the PC to arrange the committee meetings and manage the

reviewing process. The registration module is used for managing the online registration process. All these modules are controlled and monitored through administration module which assists PC in sending emails, updating database, and managing paper status.

All features and functionalities of CMS Models as discussed in this section, we have summarized and implemented in our model which is called as KMICE Extended Version (KMICE eX).

4.0 KMICE Ex

Knowledge Management International Conference (KMICE 2008) is the continuation of our previous Knowledge Management International Conference & Exhibition (KMICE) conferences which were held in 2001, 2004 and 2006. In 2008, exhibition has been excluded from the event.

The website for KMICE 2001 was developed as static informative web pages. Online registration is the only dynamic feature provided in the website. Other advanced facilities such as online paper submission, online support for conference managers and participants, and paper reviewing were not available. In 2004 and 2006 KMICE websites have been equipped with a CMS support tool which typically supports the online registration, online submission, and online administration facility (Figure 2). However the reviewer facility was not included. Hence, the reviewing process was managed offline. Based on our observation this limitation has caused a number of constraints such as:

1. *Difficulty to scan and email the feedback report from the referee to the authors.*

The poor scanning effects reduce the reading quality of the document. In addition, scanning multiple pages of the report has increased the email size and some of the recipient emails have limited capacity.

2. *Late feedback*

Feedback to the authors has been delayed as lots of time and effort have been put to scan and convert the report to images and PDF formats.

3. *Monitoring and tracking of reviewers*

Manual process of reviewing limits the secretariat in monitoring and tracking the reviewers. Problems with late feedback for example cannot be resolved at the earliest.

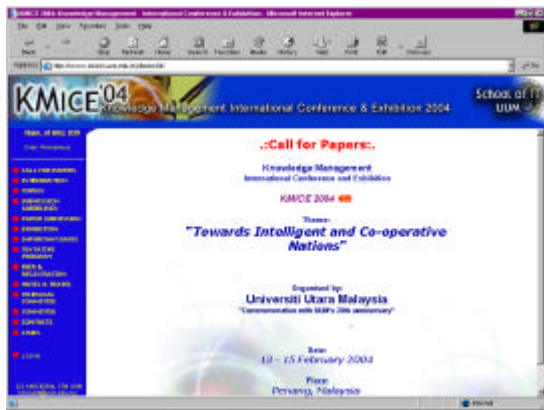


Figure 2: KMICE 2004 website with UUM first CMS

Due to the previous constraints, KMICE 2008 website (<http://www.kmice.uum.edu.my/kmice08/>) has been designed as dynamic website (Figure 3). The website was developed based on our CMS enhanced model (KMICE eX) using web-based scripting languages and tools such as Active Server Pages (ASP) and JavaScript.



Figure 3: KMICE 2008 Website with CMS Support

2.1 KMICE eX Features and Functionalities

Besides the informative contents, the KMICE 2008 website has a number of main dynamic features such as:

- online registration form
- online paper submission
- page for secretariat.
- page for contributor
- page for reviewer
- online reviewing assignment
- automatic generation of book of abstract
- automatic generation of proceedings
- current progress statistics

Figure 4 shows the major functionalities and features in KMICE eX CMS which are combined with the three entities.

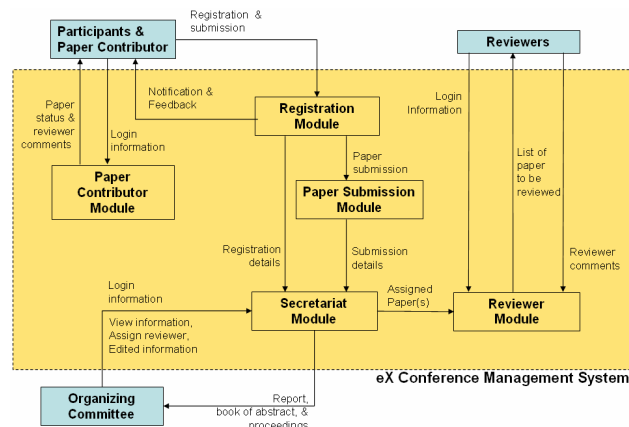


Figure 4: Major Function in KMICE eX CMS

Online Registration and Paper Submission

The online registration accepts two types of conference registration, which are participant, and paper presenter. The details of the registration can only be accessed and viewed by the conference managers. For the convenient of paper contributors, online paper submission form with uploading facility was developed. The facility is a step-by-step process where contributors have to fill in their personal and paper information and then they can upload the full paper. After displaying the confirmation page, KMICE eX engine will send email to the contributor. The email contains a summary of submission information such as paper title, paper identification number (ID), authors and corresponding email address together with the login information such as login name and password.

Login name and password are used to give contributors permission to access the system in order to update their details of registration and paper submission (Figure 5). In addition, the system also provides facility for re-uploading or re-sending paper, uploading camera-ready paper and checking their paper status. The login facility can also be used by the committee members and paper reviewers.



Figure 5: Login facility for committee, referee and paper contributor

Page for Secretariat

Page for secretariat allows the secretariat to manage conference information, participant, reviewers, and paper contributors. Following are features available for the secretariat:

- a) Manage Conference
 - 1. Manage Conf Details
 - 1. Manage Scope
 - 1. Visitors Log
- b) Program Committee
 - 1. Manage Committee Member
 - 1. Manage Referee
- c) Participants
 - 1. Manage Participants
- d) Submission
 - 1. List of Papers (All)
 - 1. List of Papers (Complete)
- e) Review Process
 - 1. List of Papers by Referee
 - 1. List of Referee by Papers
 - 1. List of Papers by Status
- f) Statistics
- g) Publications
 - 1. Book of Abstract
 - 1. Proceedings

“Manage referee menu” allows secretariat to manage referee information, assign paper for review, update the review duration and track the reviewing process (Figure 6). The module allows assigning more than one paper to one reviewer and will automatically check and remove redundant assignment. The reviewing will be made through online form.

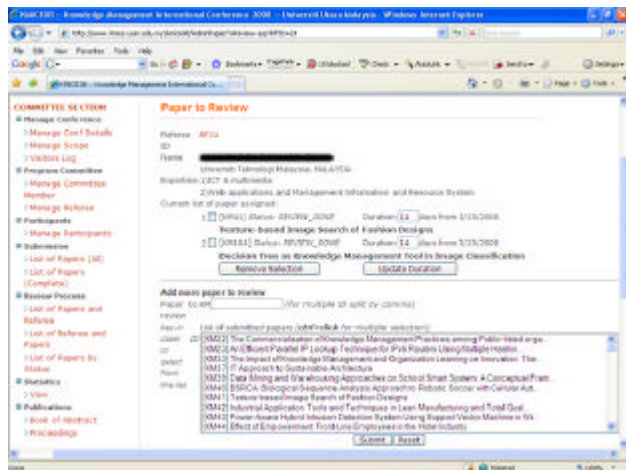


Figure 6: Assigning papers to reviewer module

Once the reviewers have completed the review, the secretariat can make a decision online through the decision module (Figure 7). This module will display all reviewers’ comments and the score average. Once the decision has been made, the paper contributor can view his/her paper status together with the comments through contributor page.

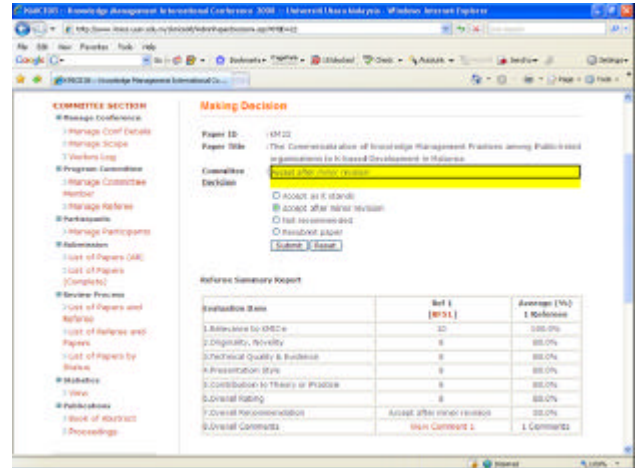


Figure 7: Secretariat decision module

The manage participants and submission menus allow secretariat to manage participants information and paper submission (Figure 8). Typically this module allow secretariat to view, edit, delete, upload (and re-upload) both to be review paper and camera ready.

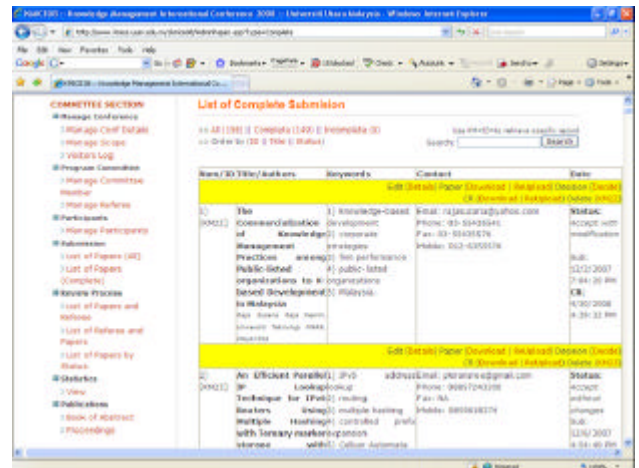


Figure 8: Part of the managing paper submission module

The statistics as shown in Figure 9 is the summary of all activities performed through the CMS. This includes number of referees, participants (total registered participants and presenter), submissions (incomplete and complete submissions), list of paper by review status and paper final status.

Another feature provided by the CMS is the automatic generation of the book of abstract (Figure 10) and the proceedings (Figure 11). Both book of abstract will be generated once the author has submitted the camera ready paper. These books will automatically expend and the paging number will be automatically counted based on the number of pages.

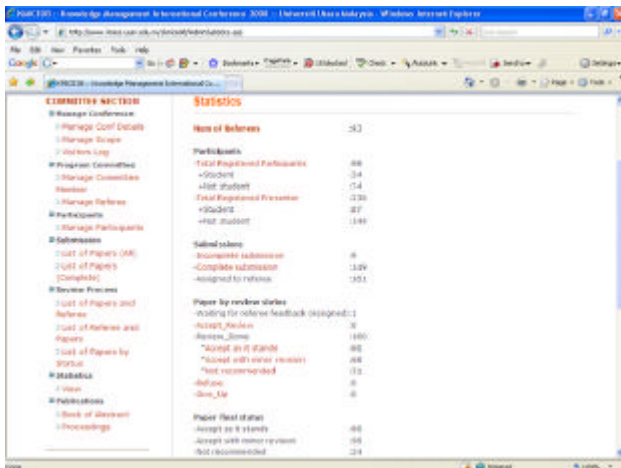


Figure 9: Statistics that show the current status and progress of work

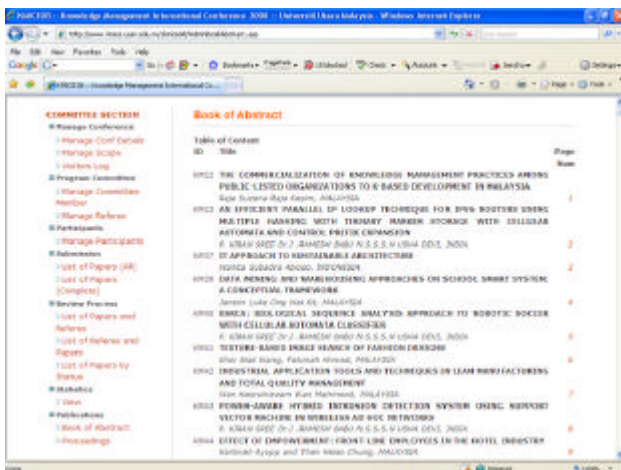


Figure 10: Automatic generation of book of abstracts

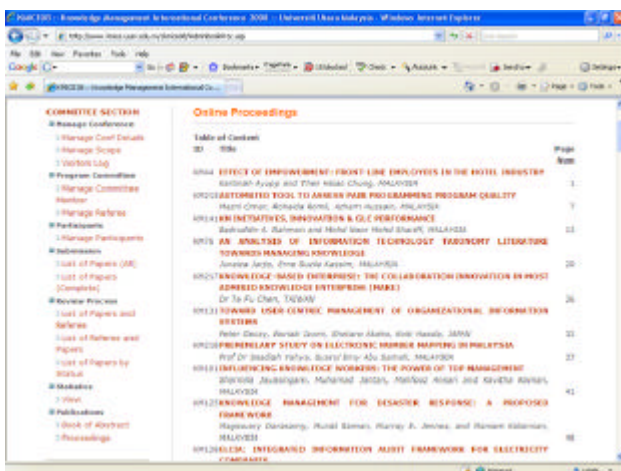


Figure 11: Automatic generation of the proceedings

- a) Manage Preferences
- b) Manage Submitted Papers
 - | View submission details
 - | View paper current status
 - | Re-upload paper
 - | View reviewers comments
 - | Submit and re-submit camera ready paper

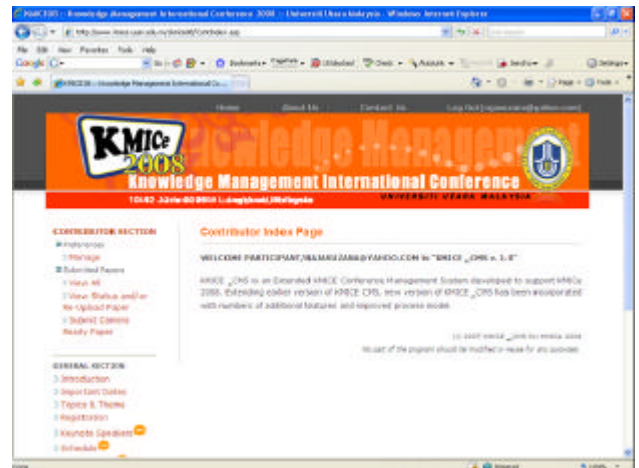


Figure 12: Page for paper contributor

Page for Reviewer

Page for reviewer is developed to assist reviewer in reviewing process. Once registered, the reviewers will be given an ID and password which can be used to login into their personal page. Through this page reviewers can edit their preferences and view the list of papers to be reviewed (Figure 13). The reviewers are allowed to download the paper and state their choices whether to “accept” or “refuse” the review. Once accepted, the reviewers can begin the review and fill in the review form (Figure 14). At any time, a reviewer can “give up” the review, which will remove the paper from his review list.



Figure 13: List of paper to review

Page for Contributor

Page for paper contributor (Figure 12) is developed to assist paper contributor to manage their information and submission. Typically, this module supports the following functionalities:

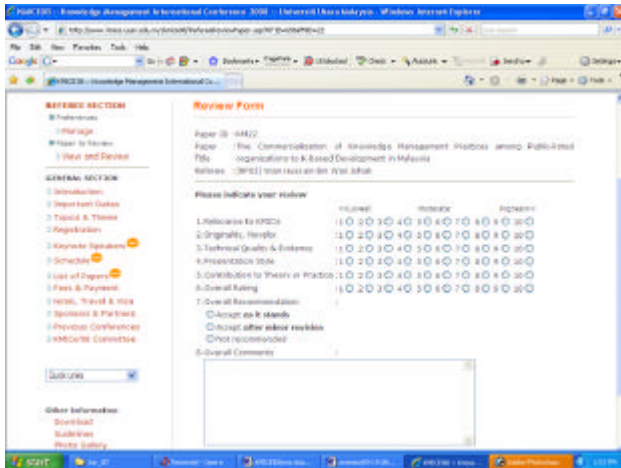


Figure 14: Review form

5.0 CONCLUSION

KMICE CMS has undergone a number of improvement since it was first developed at UUM in 2004. The basic features and functionalities such as online registration, online paper and camera ready submission, automatic reply, and online administration have been among the first modules being developed. As for KMICE eX 2008 other enhanced features such as online assignment to reviewers, online reviewing, online paper decision, and automatic generation of book of abstracts and proceedings have been incorporated.

These new features have improved the reviewing process and reduced the review time. Based on the secretariat experience, the full use of this features has also reduced the use of paper, stamp, fax and telephone. Thus reducing the overall cost.

In future, the usability test will be conducted in order to know how usable the system is so that the enhanced version of the KMICE Ex will be developed.

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