

CONFERENCE MANAGEMENT SYSTEM: AN ONLINE DSS FOR CONFERENCE SECRETARIAT

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***Abstract.** Conference Management System (CMS) is used for efficiently managing a conference and supporting management decision-making. This paper presents a model of an Online Decision Support System (DSS) and the current status of its development. The system development process is divided into two phases. The first phase consists of online conference management, which is initially implemented for Knowledge Management International Conference and Exhibition 2004 (KMICE'04) online system. The system supports all management activities, which typically have to be performed by conference secretariat in managing, retrieving and analyzing conference information and other decision related information to systematically make decision. The system provides facility of online participant registration and paper submission as well. The second phase involves the development of a decision-making model for paper pre-reviewing process, which produces current online reports of paper reviewing status and ranking alternatives. In the future the model can be used as a template for other university conference, seminar or workshop.*

1 Introduction

The popularity of web-based application research and development had increase since the Internet became the most popular medium for communication. In addition all universities, research center and government offices have been facilitated with the Internet services. The information stored on the Internet can be accessed from anywhere and at anytime around the world. Through this medium the information can be disseminated faster compares to the traditional method. The uniqueness of web-based technology encourages the development of web-based application. Gal *et al.* (1999) and Gal & Mylopoulos (2001) for example discussed the potential of web-based technology and its importance toward application development and services via web.

Many research and development related to Conference Management System (CMS) have been performed. Snodgrass (1999) performed a survey and had listed around 20 CMS software. Each of them was developed for a specific conference and later expended and reuse for other conference. CyberChair for example is a free web-based paper submission and reviewing system with 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. The approach not only saves the time but also cutting the operation cost. According to Schneider *et al.* (2001) each features in CyberChair is handle by the specialized agent.

WintanWeb also provide almost the same facilities with CyberChair (Johnson & MacKay, 2000). WintanWeb developed to meet a recurring need, which is to facilitate the communication associated with the paper submission and review 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. MCP or *Managing Conference Proceedings* 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.

This paper discussed a model for CMS that can be an online DSS and presents a current progress of the system development. The CMS is developed to facilitate Knowledge Management International Conference & Exhibition (KMICE) 2004 to be held in February 2004. The system is equipped with several facilities to help and support conference secretariats and participants in managing the related conference activities as well as making different kinds of decision.

2 Online Decision Support System (DSS)

The use of the Internet as a medium for the collaboration and supporting decision-making is now expanding. There is increasing number of research and development on innovative and interactive web-based application using the latest software technology to aid decision making in various fields. Multi-Pest DSS for Oilseed Rape is an online DSS that contributes for the agriculture (CSL, 2003). The system is designed by Central Science Laboratory (CSL). CSL is an Executive Agency of the UK Government Department for

Environment Food and Rural Affairs. Generally the system is used for sustainable crop production, environmental management and conservation and in food safety and quality. The Facilitate.com provides another online DSS (Facilitate.com, 2003). The system supports to the group decision-making process with tools that facilitate brainstorming, idea generation, organization, prioritization, and consensus development. The system actually more concentrates on the online collaboration and meeting for organization.

Hämäläinen and Mustajoki from Systems Analysis Laboratory (SAL), Helsinki University of Technology, have developed Web-HIPRE (Hämäläinen and Mustajoki, 2003). Web-HIPRE is stand for HIERarchical PReference analysis in the World Wide Web and the system is a Global Multicriteria Decision Support. The specifications of Web-HIPRE are as follow:

- a) Platform independent - works in different computer environments
- b) No installations on local computers - just a Java-enabled browser needed
- c) Computer-Supported Collaborative Decision Making
- d) Physical distance is no longer a barrier
- e) Individual models can be processed synchronously or asynchronously

Another system developed by SAL is called Opinions-Online (Hämäläinen, 2003). Opinions-Online allows user to generate a private and customized site for interactive, web based group decision-making, voting and surveys. There are different ways to view the results of the group opinion. It lets you generate a private and customized site for interactive, web based group decision-making, voting and surveys.

3 KMICE 2004 Website: An Online DSS

The development of KMICE 2004 website (<http://www.kmice.uum.edu.my/kmice04/>), is an initiative for supporting conference secretariat and chairman (Figure 1). The system is an interactive web-based application to support all management activities, which typically have to be performed by conference secretariat in managing, retrieving and analyzing conference information and other decision related information to systematically make decision. The system gives a significant decrease of the workload of the conference secretariat and the ease of communication between contributors and secretariat instantly in electronic form.

The website is designed dynamically and has been developed using web programming languages and tools such as ASP and JavaScript. Dynamic website is when it has features that provide user using the system interactively. The dynamic features that KMICE 2004 has:

- 1) Online registration form
- 2) Online paper submission form including paper uploading facility
- 3) Personal page for contributors
- 4) Personal page for conference managers such as the conference chairman, secretary and chairman of proceeding and publication committee.
- 5) Automated abstract reviewing

The first four features are currently available and ready for use. However the fifth is still in development process.



Figure 1: KMICE 2004 Website

Figure 2 shows an overview of the activities KMICE system supports or carries out for paper submission process. The system flow is started when contributors or presenters submit their paper to the system. Then User Account System creates a user account for the presenter with email notification contains a summary of submission information such as paper title, paper ID, authors and corresponding email address together with the login information such as login name and password.

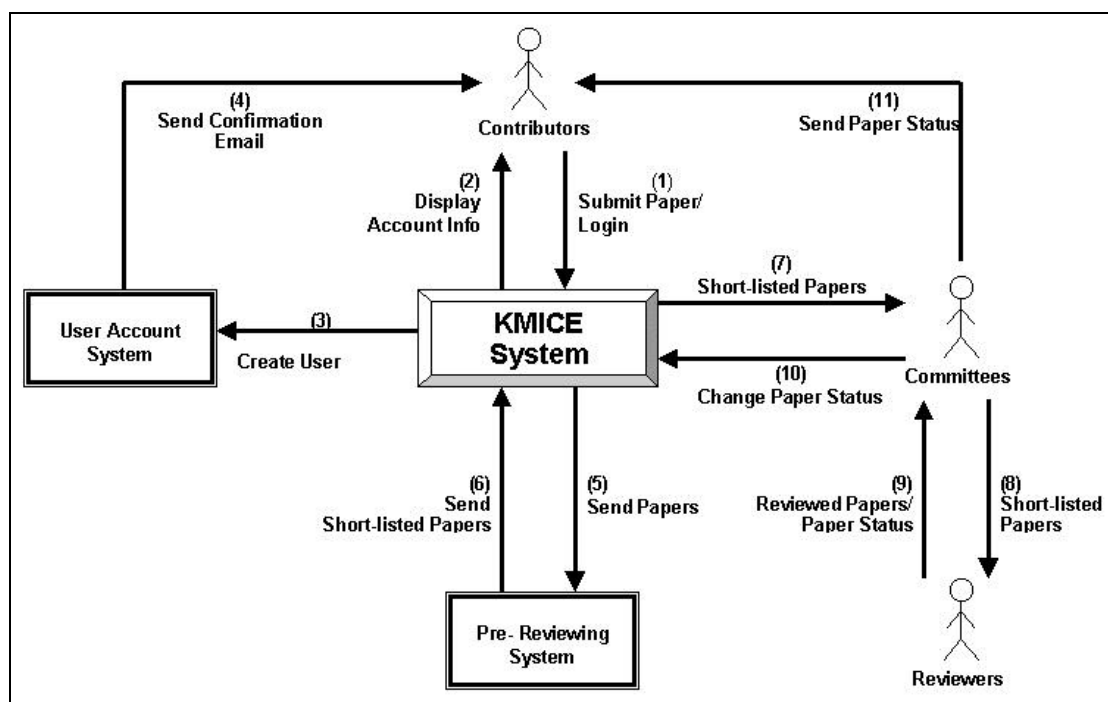


Figure 2: An overview of the activities CMS supports

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. In addition, the system also provides facility for re-uploading or re-sending paper, uploading camera-ready paper and checking their paper status.

To manage the system, the conference managers such as the chairman, secretary and chairman of proceeding and publication committee can view contributor's details by login to their personal pages. The view and access control are limited based on their work function. For example, the chairman of proceeding and publication committee can view, edit and delete all items relating to paper submission, but not the registration details. On the contrary the secretary can view, edit and delete the registration details except the paper submission details. The chairman however, is given authority to access to all controlled pages.

The reviewing process, which is still in development, is a decision-making model for paper pre-reviewing method, which produces current online reports of paper reviewing status and ranking alternatives. In the Reviewing System, committees and reviewers are two main actors who involve directly to the system. When participants successfully uploaded their paper, the system will set the paper status to "Pending" then it automatically sends the paper for pre-reviewing process. In pre-reviewing process, the system actually will make shortlist based on some criteria such as keyword matching and ranking alternatives. In this case, the system helps the committee to select papers that related to the conference theme and scope. It reduces the whole reviewing process in terms of the time to actually review a paper but it does not really understand the content. It certainly reduces other aspects of the reviewing process, such as the time to organize the reviews.

The short listed papers then are sent to the reviewers for complete review. At the same time the paper status is set to "Under review". After the papers have been reviewed, the reviewer sends it back to the committee to make decision whether the paper is accepted or rejected. Then, notification to the contributors is sent regarding their paper status together with comments or correction suggestions. Lastly, the contributors send the camera-ready paper for publishing process. The reviewing process is finished when the committee made decision whether the papers are accepted or rejected.

The next process is publishing the papers for conference proceeding. Conference proceeding needs some specific format to be published in a printed or digital format. This requires some publishing techniques such as proof reading, font editing and colour adjustment. The publishing facility is also in study and development. In future development of KMICE system, the publishing process can be done automatically without using conventional publishing techniques.

Address: http://www.kmice.uum.edu.my/kmice04/default.asp

KMICE'04 Knowledge Management International Conference & Exhibition 2004

Num. of Hits: 1705
User: Promosi

FORMS

- REGISTRATION FORM
- PAPER SUBMISSION FORM

REPORT

- REGISTERED PARTICIPANTS**
- PAPER CONTRIBUTORS
- PAPER & AUTHORS
- PAPER, AUTHORS & ABSTRACT

EDIT

- PASSWORD
- PAPER STATUS

DOWNLOAD DATABASE

MAIN MENU

LOGOUT

(C) KMICE2004

Registered Participants [PRINT]

Num.	Reg. On	Category	Name	Organization	Email	
1	8/24/03 8:04:29 PM	Presenter	Mohamad Hisyam Selamat	Brunel University	hisyam@uum.edu.my	[DETAIL] [EDIT] [DELETE]
2	8/19/03 9:52:14 AM	Presenter	Marzanah Binti Abdul Jabar	Universiti Putra Malaysia	marzanah@putra.upm.edu.my	[DETAIL] [EDIT] [DELETE]
3	7/23/03 10:13:53 AM	Presenter	Rusli Haji Abdullah	Fakulti Sains Komputer dan Teknologi Maklumat, UPM	rusli@fsktm.upm.edu.my	[DETAIL] [EDIT] [DELETE]
4	7/17/03 4:41:34 PM	Presenter	Ali Selamat	Osaka Prefecture University	aselamat@sig.cs.osakafu-u.ac.jp	[DETAIL] [EDIT] [DELETE]
5	7/17/03 4:36:05 PM	Presenter	Kalsom Salleh	Faculty of Accountancy, UITM	mdchom@yahoo.com	[DETAIL] [EDIT] [DELETE]
6	7/2/03 2:15:10 PM	Presenter	Anton Abdulbasah Kamil	School of Mathematical Sciences, USM	anton@cs.usm.my	[DETAIL] [EDIT] [DELETE]
7	6/11/03	Presenter	Kamsuriah	Universiti	kam@fism.ukm.my	[DETAIL] [EDIT] [DELETE]

Figure 3: List of Registered Participants

Address <http://www.kmice.uum.edu.my/kmice04/default.asp> Go

KMICE'04 Knowledge Management International Conference & Exhibition 2004

Num. of Hits: 1705
User: Promosi

FORMS

- REGISTRATION FORM
- PAPER SUBMISSION FORM

REPORT

- REGISTERED PARTICIPANTS
- PAPER CONTRIBUTORS
- PAPER & AUTHORS
- PAPER, AUTHORS & ABSTRACT

EDIT

- PASSWORD
- PAPER STATUS

DOWNLOAD DATABASE

MAIN MENU

LOGOUT

(C) KMICE2004

Paper Status Update

Num.	ID	Title	Status
1	KM69	Data Integration for XML based on Semantic Knowledge	Pending
2	KM73	Capital Mobility With Convergence In Open Economies	Under Review
3	KM75	A Survey Study on the Awareness and Effectiveness of Electronic Delivery Services of Local Authorities in Malaysia	Pending
4	KM77	THE DEVELOPMENT OF KNOWLEDGE MANAGEMENT SYSTEM FOR PUBLIC HIGHER LEARNING IN COLLABORATIVE ENVIRONMENT	Under Review
5	KM78	Preliminary of Knowledge Management: Case Study of Teaching Support System	Under Review
6	KM80	Mobile Agent Routing for Query Retrieval Using Genetic Algorithm	Under Review
7	KM81	Knowledge Management Initiative in Universiti Putra Malaysia (UPM)	Under Review
8	KM84	The Diffusion of Tacit Knowledge and its Implications on Information Systems: the role of meta-abilities	Pending
9	KM85	Lubricant: The Moderating Role of Social Capital in the Contigent Relationship Between team Members Composite Diversity and Knowledge Sharing	Pending

Figure 4: Paper Status Update

4 Conclusion and Future Development

In this paper, the status of Conference Management System for KMICE 2004 has been discussed. It unlimited global access, opens up a new dimension in decision support. The system has been designed with five dynamic features. Four of them have been implemented while the final feature, which is reviewing process, will be completed soon. The other addition feature that will be developed is publishing facility. The facility will assemble the proceedings, including the front pages such as Table of Content, index page, sponsor page with logo, preface and so on. The KMICE 2004 website is now available for accessed at <http://www.kmice.uum.edu.my/kmice04/>. Hopefully the KMICE system will be the most complete and efficient system for handling the review process and reduce conference committee workload. In the future the model can be used as a template for other university conference, seminar or workshop.

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