Enhancing the Electronic Publishing Process based on
Most Recent Techniques of ICT

Othman Musa Al-Okili & Abdullah Mohammed Abdullah Al Yateem
Information Science Department, King Abdul-Aziz University
Jeddah, Saudi Arabia

Abstract
Electronic publishing system is considered as some type of *digital publishing « Rapid Browser »* appeared and was innovated by collaborating between IT engineers in the newspaper and the manufacturer of the Software «Knowledge View» , which is headquartered in London . Thus the first version of the program was announced and began working in 2003. Considering the functions of the characteristics of the system , we found that the *Rapid Browser* is an internal electronic system combines the information and data transfer , news and images between the various parties involved in the editing via computer without using paper . Therefore , it can be classified within the activities that free offices of a purely manual system to an electronic system that is highly efficient and flexible performance . In this paper , we present a new study about the role of ICT in digital publishing through illustrating the structure, functions, capabilities of the *Rapid Browser system* that is applied in the electronic newspapers , particularly in Al-Medina Newspaper sample in Saudi Arabia. The importance of this work comes as a result of its capability to provides information , description and facts about *Rapid Browser* system , as it is a system used widely now in the field of e-newspapers . Therefore , this study explains this system in view point of: study how to develop it , study the best ways to take features of it and why it is chosen as a system in the field of e-newspapers . After identifying the problematic study , we explored that the best approach for the current study is descriptive approach that is based on the case study (which focus on the study of the phenomenon) .

Key words
Electronic press – Rapid Browser – Medina newspaper – Electronic publishing – information – Information technology

1. Introduction

Information has a role that can't be denied in all activities , as it is the basis on which the scientific research and decision-making based . The existence of information constitutes a suitable background to make good decisions for any official in any field . In addition , it is an indispensable element in the daily life for any individual . Add to the above , it is considered a resource for the industry , development and economic , administrative , military and political affairs . So , do not be surprised when we hear the statement , "who owns the information has the power". Appearing the electronic information sources have associated with the electronic publishing. The electronic publishing produced new types of information vessels are referred to :

- The electronic information sources are considered result of the electronic publishing , which ultimately led to the emergence of the so-called electronic , digital , default , hyperactive and future libraries .
- The electronic publishing is "producing information and transferring it via computers and long-range means of communication from the publisher or author to the ultimate beneficiary directly or via communication network .

The electronic publishing contributed in the emergence of some types of sources such as , electronic journals or magazines that are considered application for electronic publishing , where we can enter the data and read it electronically . This is what the samurai mentioned , as he said , "It's the magazine that hasn't hard copy , and the data of articles is entered , evaluated , published and read electronically via terminals of computers [1].

In addition , the newspapers were affected by the scientific progress in the technical field and benefit from the innovations of technology . It was ascertained that to get the information from its original sources , documentation and retrieval lead to making distinct media materials . In addition , hard works to achieve a head start in the field of news and subsidiary of news continuously , in addition to in-depth analysis . All of this lead to interaction by the reader with the newspaper , increase the distribution of such media outlet , keep up increasing the desired direct interaction , allow to express freely and sharing opinions , points of view and ideas .

It is noteworthy that Rapid Browser is an internal electronic system for transferring information and data , news and images between the various parties involved in the writing via computer and without the use of paper . Therefore , Rapid Browser can be classified within the activities that free offices of a purely manual system to an electronic system that is highly efficient and flexible performance . In addition , it allows write information very rapidly to provide the reader with immediate news , unlike the traditional mechanical methods . The user of the system also can access the news from different views and telling . The system also made it easy to deal with the vast amount of information that flows daily to the newspaper , especially international news agencies .

This study will investigate Rapid Browser system applied in electronic newspapers . We will take Medina newspaper in Saudi Arabia as a model of the study . The problematic represents in recognizing the Rapid Browser system used in electronic newspapers , particularly Medina newspaper , in terms of the concept , selection criteria for the system , requirements ,

components , manufacturers , the benefit , professions , operating mechanism , features , problems , relationship with the other systems , in addition to mean of development . This presented investigation led to show the role of the information institution in selecting media system to serve its needs and be suitable for types of information , which you deal with , users who deal with the system , suitable methods to save information to recover it easily . We have made suggestions to develop the system so that it can serve the media institution effectively .

2 . Literature Review

Through a review of the previous studies , the dimensions of the effects natures and the relationships between using modern communication technology and the press practices , where there were many aspects that studies focused on the press in this regard , including :

Study [2] entitled: *"The impact of ICT on developing Arts Journalism : an Empirical study on the daily Syrian and Egyptian press"* aims at monitoring the impact of ICT on developing the press coverage in the Egyptian press . In addition , it monitors the impact of ICT on developing the art of the writing press release in the Syrian and Egyptian press . The researcher made an comparative analytic descriptive on an intentional sample from Egyptian *Al Ahram and Syrian Teshreen newspaper* in the period from November 1997 to October 1998 , the study led to number of results , mainly :

- There are substantial differences in the uses of the technology in communication in both Egyptian press and Syrian press for the benefit of the Egyptian press .
- Using the Egyptian press for the modern communication technology led to rapid coverage of events , extend the geographical , explanatory and objective coverage and breadth of the press arts .

Study [3] entitled: *"The impact of using the Egyptian public to the updated electronic communication means regarding his*

relationship with printed media means, Field Study" **:** in it, the researcher presented a survey study on random sample of 500 researched from users of traditional and modern communication means , from Cairo and Assuit governorates , 348 researched from Cairo , and 152 researched from Assuit , 252 were males and 248 were females . The researcher found some results, the most important are as follows:

- Most researched read newspapers .
- Newspapers that the researched read were various as the Egyptian newspapers were in the foreground , followed by specialized newspapers .
- The vast majority from the sample prefer paper newspapers .
- Most users of electronic newspapers no longer keen on reading daily newspapers the time of issuance .

Study [4] entitled: " *The role of modern communication technology in developing journalistic performance*". In this work, the author presented a study on sample of national and partisan Egyptian newspapers. Also, the author performed a comparative analytic study on full numbers of Al ahram , Akhbar , El wafd and Al ahrar newspapers from 1 January 2004 , to the end of January 2007 .

- Using hypertext technology helped to develop the technical level for electronic websites of newspapers of study .
- The impact of using technology positively in the work on the completion rate of who communicate with national and partisan newspapers.

3. Problem Formulation

The problematic study of this work represents in analyzing and checking the Rapid Browser system used in electronic newspapers , particularly Medina newspaper in Saudi Arabia , in terms of the concept , selection criteria for the system , requirements , components , manufacturers , the benefit , professions , operating mechanism , features , problems , relationship with the other systems , in addition to mean of development . The questions of the study were as following:

- What is the concept of Rapid Browser?
- What is the importance of Rapid Browser?
- What are the requirements of Rapid Browser system?
- What are the components of Rapid Browser system?
- What is the work mechanism of Rapid Browser system?

4. Methodology of Solution

After viewing the different researched methods , similar previous studies and identifying the problematic of the study , we can say that the suitable method for the current study is the analytic descriptive approach , which studies the phenomenon , as it exists in the fact .

4.1. Defining Medina newspaper in Saudi Arabia

Ali Hafez and Othman Hafez , the first version issued in Thursday 8\4\1937 , established Medina newspaper and the newspaper was moved to be owned by Medina institution for press and publishing in 1963 . This is daily newspaper published by Medina institution for press and publishing . The newspaper went by various developments and grew gradually during nearly half a century. The most important developments that occurred to the newspaper was using automatic information system that helps it to organize its components , saving and storing it . Then be broadcasted to the public , it is the Rapid Browser system which was used first in Medina information centre in February 2009 to now [5]. The Rapid Browser system is responsible for the newspaper determines some requirements that were classified here as standards to select the program are given by:

- There are applied solutions that software programs provide to complete the editorial operation in the newspaper, including receiving, writing, archiving and exporting the news with photos to the publishing system.

- There I need to find solutions that support receiving news and photos from the external sources.
- There is a need to achieve to make returning to the materials easy in the future.
- There is need to multilingual system.
- There is need to easy system that uses windows.
- There is need to system that is easy to use and maintenance.

Fig.1 illustrates the basic structure that Medina newspaper consists of, as being media organization it consists of the following:

Fig.1 Life cycle of information in the media organizations that illustrates the relationship and correlation between processes and functions inside the system of the information about media

4.2. The requirements to operate Rapid Browser system

Requirements to run the system are , at least computer device Pentium 3- Ram 256 megabyte and 512 megabyte is best – operating system XP – the internet browser in the Rapid Browser system are internet explorer +7 , fire fox +1 ,5\ , Net Skype +7 , mackintosh OSX , Safari 2 and the system operator is HTML language. Working with Rapid Browser system begins with operating internet explorer , where the special address is editorial in the special place , a rectangular will be appeared to enter the user name and password – where the system don't access entering the user name except the user has the right to enter and was registered in the system by the supervisor of the system . If the entry to the system occurred successfully , a rectangular window will be appeared , that represents the user interface for Rapid Browser system . This window views news of the news

agencies of the available system, and this window will be used in making the internal work cycle. After that, the process of preparing filters: It is the means that determines the materials that the user wants to view in the system window .

There are many and various icons inside Rapid Browser program : including icon of viewing news about the default candidate of the user and another to view the material in the folder of "My folder" . Third , to view the materials in the folder of the group . Forth , to view sent materials for editing from the user . Rapid Browser system includes alerts : which color the material with a color according to the settings that the user selects , to alert the user that the material he wait has been arrived . Finally , we come to how to view the material and that : by clicking two times on the material in the material view window to allow open the complete material , so that the user can view the materials . Also , the user can edit and classify the text materials , or make forms of various materials in a special folder , by using "copy to my folder" . In addition , the user can view notes and procedures we have made . If the user wants to edit in the material , he only should enter the editing window . He can open a material in the viewing window from the special folder by clicking two times on the material address , as the following Fig.2 illustrates.
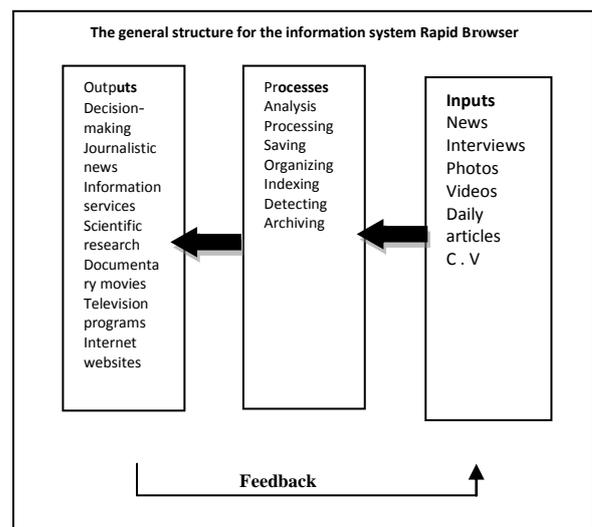

Fig.2 The material in the viewing window from the special folder

4.3. Using the filters

This is a drop-down list that includes all the available filters the user determines or the system administrator determines to the user . A filter can be selected from it to view within the window . If the user wants , he can open several Rapid Browser windows , and show different filters at the same time .

4.4 Selecting the materials
Selecting the materials by clicking on the check box for every material . Materials are numbered automatically by the sequence of choice . In addition , the system facilitates selecting group of next materials by selecting the first material to be selected , and then click on the radio button for the last material by clicking on the control button see Fig.3) .
Ctrl : to remove the selection of any material , click on the radio button . If we select several materials , we can press on next button or previous button to move among the selected news . To remove all selections , press on the remove the check button .

Fig.3 Process of selecting the materials

4.5. Shortcuts in Rapid Browser
Now , there is an opportunity is available to move in Rapid Browser without using the mouse but through keyboard shortcuts . The following is a list of its shortcuts .
- Key Tab is used to move across all fields.
- "Shift-Tab" : is used to back to the previous field .
- "Ctrl-space" : this shortcut opens the drop-down to display available values for the specific feature; the editor may select the value by the up and down keys .

- Esc : close the drop-down list . And by using the key Tab , the drop-down lists closed automatically after the user is away from it .
- Enter : opens or closes detected boards .
- In the text body , and when concentrating :
  Ctrl + Alt + r : to move to the rich text area .
  Ctrl + Alt + p to move to the normal text area .
- Ctrl + m to open the text in big size . The mentioned shortcut may be used also in terms of other characteristics of the text .
- Date characteristics Ctrl + Alt + s , to Convert Gregorian date to Hegira and vice versa .
- Archive vocabulary options :
  Stop option : Ctrl + Alt + s
  Automatic : Ctrl + Alt + a
  Identical : Ctrl + Alt + e

4.6. Optional and Obligatory functions in Rapid Browser
The obligation : enter both address – writer – formal name .
The optional : enter (version name \ number of version \ edition \ section \ version date (Hijri – AD) \ title \ author \ official name \ personalities \ organizations \ places \ keywords \ article size \ article type \ subject headings \ archived notes)

5. Information security that Rapid Browser system allow for Medina newspaper
Rapid Browser allows for institutions and journalistic information centers several features that aim at keeping security and confidentiality for the institution and its staff [6]. The most prominent of these features includes the following:
- The system allow the password to enter .
- The system allow the password sets out the validity of dealing with each category of employees of the institution .
- Control in security of cooperative environment , so that users within the

institution of the media and users abroad can participate in preparing monitoring and storing information and interaction in various editorial production processes.

- Giving attention to the contents of the information security system so that the data is collected on a special computerized servers and no one can access them only those who are authorized to do so and have the password for the servers.
- The system provides backup copies for each of the system (jar file) and its settings (XML) and databases (MYSQL) so as not to lose information and to avoid natural and industrial disasters .

6 . Performance Evaluation of the Rapid Browser system

6.1. Features of Rapid Browser system :

- The system has a set of features which are as follows:
- Get the news and browse the text , images and hundreds of news clippings.
- Show news directly (text , images , graphics , PDF) with continuous updating .
- Create customized classifications to display content classified according to the source , keywords , classification schemes and the date of custom actions for selected commodities .

6.2. Rapid Browser system allow auditing the following

- Copy it to the set of individual and collective work.
- Open it for editing with Adobe InCopy , Photoshop and other applications for editing .
- Publish it on the Internet or on wireless services .
- Send it by e-mail to his colleagues .
- Create new elements and load it into the editing systems .

- Integration with the editing and content management systems , including systems In Design - based .

6.3. Rapid Browser system also allow for publishers the following:-

- Viewing the News in several windows and by continuous updating of all the stories and related images.
- Participate in the content of the news at the same time with individuals or groups of employees or customers.
- Preparing editorial work in the newsroom and in the region associated with it.
- Publishing the content immediately on the web , blogs and feed RSS.
- Attract the information , images and the contents of the media and news agencies and other specialized news packages.
- Converts all content to a unified system (XML) and feeds the database that are automatically indexed and categorized.
- Possibility of creating detailed filters to display the content according to the type of news source , indexing systems , convergent keywords , or by date.
- The system Gives news -you-go once it reaches him , and sending and receiving materials through the windows in the scope of the editorial business cycle .

6.4. Rapid Browser system features
The most important problems of this system as follows :
- The lack of detailed reports of operations in the system .
- Slow system .
- The lack of sending materials for full pages daily .

7. The Final Conclusion and Development Suggestions

Since the System Information is a media information System which serves the media organizations sector , researchers suggested several criteria for the development of "Rapid Browser system" through reading literature about media information systems in media institutions. Among these **criteria , what already** exists in the system and has been mentioned in other subjects , from these criteria are the following :

7.1. General criteria for the producing company

The producing company allowed for the Press Information System Rapid Browser some standards for the development of system that can be guided by them , and they are as follow :

- The nature of the direction that prepared the system and its previous experience
- The reputation of the previous direction.
- Do you provide after-sales services?
- Do you offer training services on the system?
- Provides full Systems documentation
- Is there a permanent development of the system?
- What's assessment and previous experience of other media organizations used the system
- Is the system supports a range of American and European letters beside Arabic letters?

7. 2 . System Management Standards

- The system Must provide control support according to the role and the nature of the user : (RBAC) Role Based Access Control.
- Control and monitor the actual production for the flow of and workflow.
- The system has to been characterized by the ability to receive the news and saved it in files , managing , producing and distributing the services via multiple channels broadcast by

SMS to Mobile or via e-mail , or over wireless internal networks LAN or by fax or via FTP Services .

- The system has to include four important functions meet the demands of safety and accuracy in doing business : receiving information , processing , editing , and distributing it .
- Receive , organize , classify , send and archive news material files from texts , pictures , graphs , Audios and Video.
- Observe users and its applications.
- Control and monitor dates relating to entry of users of the system and provide some statistics.
- The system has to include a mechanism to receive and archive news coming for the Media Foundation by texts and images related to them.
- Speed in the processing and distributing news to participants and users within the agency.
- Complete control in all types of information received and treated during the editorial production process.
- Ease of information management by using a single tool and a single interface for the Internet browser.
- Possibility to adjust the personal settings of the user , where the user can specify the number of news that can be reviewed every screen and select the language of the application interface "Arabic" or "English ," according to his desire . He can also choose the favorable candidate for the show and choose the number of news to be reviewed with the start of the system .
- The system should allow the user to read the news coming from news sources , as well as the producing news from agency .
- The system secures the tools needed to internal work cycle of editing news ,

and sent by mail via the internal network to other users , or to the inner work according to user permissions.

- Control the number of articles by preparing a simple file in which you can control the number of the existing articles on the home page of each classification.
- Speed News processing , which is done by an effective system ensures the flow of the contents of documents .
- The existence of the feature of fax server , e-mail feature , advantage of the local and global network server , and server backup feature.
- The possibility of reviewing the news first hand as soon as they are received to the system , as well as the user can send and receive materials via the window in the scope of the editorial work cycle of either one screen or more to facilitate the work.
- Control the progress of the work related to editing texts and follow-up for all users of the system .
- Archive has to be updated with the new system variables that occur during the process of planning and preparing for the pages .
- Alarms have to be available in the system that color the material by the settings chosen by the user; to alert the user that the material he awaited has been arrived.
- The existence of ready-made models for editing materials can be used directly.
- Access for all search sources centrally , where the system integrates with content and other sources , including archives , lists , public records and other websites , from one place.

References

[1] Al-Samarrai , Iman Fadel (1993 m) . Electronic sources of information and its impact on libraries . Arab Journal of Information : vol 41 , p 1 .

[2] Samira Mohiuddin Shikhani , the impact of ICT on the development of arts journalism Empirical Study on the Egyptian press and the Syrian daily "Ph . D . thesis . (Cairo : Department of Press and Publication , Cairo University Faculty of Media , 1999) .

[3] Hind Ahmed . The impact of the Egyptian public use electronic means of communication developed on his relationship with the media printed a field study , "Ph . D . thesis . (Cairo : Department of Journalism Faculty of Information , University of Cairo , 2007) .

[4] Amal Mohammed Amin Yousef speech . The role of modern communication technology in the development of press performance applied study on a sample of national newspapers and political parties in Egypt , "Ph . D . thesis . (Cairo : Department of Journalism Faculty of Information , University of Cairo , 2007) .

[5] The official site of Medina newspaper : http ://www . al-madina . com/about

[6] Mona Dakhel Surayhi (2007) . Information system in the Saudi Press Agency : analytical study calendar / supervision of Mohammed Arif Jafar , Jeddah . King Abdul Aziz University - Faculty of Arts - Department of Library and Information 1428 , Thesis (PhD) , p 76