

International Islamic University Malaysia

Centre for Languages and Pre-University Academic Development

Topic: Personal Information Management using MediaWiki.

Course: LE 4000 – Engineering for academic Purposes

Student: Emir Habul (0613713) – 014 264 8020

Mentor/Tutor: Shamin binti Abu Bakar

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Abstract

Personal Information Management (PIM) is a rising need in modern society. Many people have wrong attitude regarding this issue and use this tool incorrectly. Goal of this research is to promote the usage of MediaWiki software for the purpose of PIM. Many characteristics and problems of PIM are explored, with focus on benefits of using MediaWiki. This software is widely utilised in different areas, and still it is extremely simple and easy to use. Possibilities of expansion are discussed that allow addition of extra features and integration of MediaWiki with other systems. This paper is applicable to students, lecturers and researchers that wish to enhance their capabilities regarding the collection and storage of information.

Introduction

With the emergence of so called “information society” people are overwhelmed with problem of information and knowledge management. This is a vital issue for virtually anyone who is working, studying or researching. There is simply too much information for us to remember, and potentially any of this data can be required and called upon in our daily lives. Generally people resort to a method writing down the notes either on a paper or using some digital device, this is where Personal information management emerges.

Personal information management (PIM) refers to both the practice and the study of the activities people perform in order to acquire, organize, maintain, retrieve and use information items such as documents (paper-based and digital), web pages and email messages for everyday use to complete tasks (work-related and not) and fulfill a person’s various roles (as parent, employee, friend, member of community, etc.).

Even if someone is to simply dismiss the notion that Personal information management is needed, study shows that every person is developing and using some sort of Management system on their own (Kelly, 2006). It could be using a stack of papers to store information; such people when asked with some question will start browsing through their papers in order to retrieve necessary information. On the other hand, some people use electronic devices such as computer for this purpose. It could be implemented by using bookmarks to preserve the web URLs that someone has visited. However, some people find benefits in writing their notes in program called “notepad” and then saving that onto an USB device or sending it to their e-mail.

Managing and enabling knowledge is a key to success in economy and society (Wenger et al., 2003). Knowledge is fundamentally created by individuals (Nonaka & Takeuchi, 1995). Supporting individuals in their personal knowledge management is therefore crucial.

Requirements for personal knowledge management are: authoring, soft transitions, finding and reminding, knowledge reuse, collaboration and cognitive adequacy (Volkel & Oren, 2006).

In my opinion, MediaWiki software should be used for means of Personal Information Management because MediaWiki has easy and standardised usage, it is high quality software and it provides integration with virtually any other system.

First argument

MediaWiki is easy to learn because it is based on the principle of wikis and many other computer-based systems use the same editing techniques. As many users are usually non-technical people, ease of use is of big importance.

Wikis are simple to use, asynchronous, Web-based collaborative hypertext authoring systems. The original concept is due to programmer Ward Cunningham, whose prototype implementation has inspired many variants. While a precise definition of wiki does not exist, the general consensus is that a wiki is a collective website where a large number of participants are allowed to modify any page or create a new page using their Web browser (Désilets et al., 2005).

Wiki introduced groundbreaking innovations at the level of technology for supporting collaborative web-authoring, but also at the level of the process, philosophy and even sociology of such collaborative authoring. From the point of view of technology innovation, wiki introduced a new and simple way to edit web pages, and this at a time (1995) when the web was a read-only medium for all but the most technically adept users (i.e. webmasters). To edit a page on a wiki site, all a user needs to do is to click on the Edit button that appears on that page, modify the text that is then displayed in an editable field, and click on a Save button (see Figure 1). In most wiki systems, authors do not use a WYSIWYG (“What You See Is What You Get”) editor to modify the content of a page. Instead, they use a text area to modify text that is marked up using a very simple syntax called wiki markup (Désilets et al., 2005).

Khan, M & Aleem (2008) conducted a usability evaluation of wiki system as an effective hypermedia educational system. The system is evaluated on the basis of results of usability test and a questionnaire specifically designed to know the subject’s opinion. Further, to validate the findings a number of individual subjects participated in usability test and questionnaire are interviewed. The authors find that for higher education, student wiki systems could prove effective in student’s learning but not with current set of tools and interfaces. Moreover it is important that a system should have sufficient amount of relevant and useful educational contents. There is need to improve student wiki systems in terms of interfaces, contents, and set of tools for creating and editing pages. The authors find that student wiki systems have potential to be effective in student’s learning in higher education.

Number of projects that are using wiki as editing and storing medium is extremely high as shown by Tonkin (2005). The same author gives a list and comparison of features of a number of possible wiki implementations. No such list can hope to be exhaustive, but it is hoped this comparison will provide an idea of the span of available software and their dissimilar use cases.

Schaffert (2006) denotes that a recent survey on the popular technology site Slashdot showed that wiki systems are currently used for a wide variety of purposes, including:

1. Encyclopedia systems: collect knowledge in a certain area (e.g. Wikitravel) or unrestricted (e.g. Wikipedia) in a community effort with contributions from a wide range of users
2. Software development: collaboratively create documentation, collect ideas, track bugs; most of today’s high-profile Open Source projects (e.g. Apache, Mozilla, OpenOffice) use wikis for coordination
3. Project knowledge management: project tracking, brainstorming and exchange of ideas, coordination of activities, agenda tool for collecting topics of meetings, project notes repository, knowledge base, staff directory

4. Personal knowledge management: sketchpad to collect and elaborate personal ideas, addresses, dates, tasks, bookmarks, etc.
5. Collaborative writing: authors work collectively on a writing (short story, novel, etc.) which is immediately accessible by readers for their enjoyment
6. CMS/knowledge base: collect content, connect content, simple publication tool.

We can conclude that MediaWiki is appropriate and adoptable for everyone as it is extremely usable, user friendly and universally employed by many projects and organisations.

Second argument

MediaWiki is software with high quality because of its many features, it has stood the test of time since its creation and is founded on fast and secure architecture.

MediaWiki software is used for serving the online page called Wikipedia. One of the extraordinary stories of the Internet age is that of Wikipedia, a free online encyclopedia that anyone can edit. This radical and rapidly growing publication, which includes close to 4 million entries, is now a much-used resource.

Jimmy Wales, co-founder of Wikipedia and president of the encyclopedia's parent organization, the Wikimedia Foundation of St Petersburg, Florida, says the finding shows the potential of Wikipedia. "I'm pleased," he says. "Our goal is to get to Britannica quality, or better." (Giles, 2005)

Wikipedia is growing fast. The encyclopedia has added 3.7 million articles in 200 languages since it was founded in 2001. The English version has more than 45,000 registered users, and added about 1,500 new articles every day of October 2005. Wikipedia has become the 37th most visited website, according to Alexa, a web ranking service. As well as comparing the two encyclopedias, Nature surveyed more than 1,000 Nature authors and found that although more than 70% had heard of Wikipedia and 17% of those consulted it on a weekly basis, less than 10% help to update it. The steady trickle of scientists who have contributed to articles describe the experience as rewarding, if occasionally frustrating (Giles, 2005).

There are many features of wiki systems, according to Schaffert (2006) the most notable ones include: Rollback Mechanism, Collaborative Editing, Strong Linking, Search Function and Uploading of Other Content.

Changes to the content of a wiki are versioned each time they are stored, i.e. previous versions of pages are kept. This allows to revert back to earlier versions of a page e.g. in case important parts have been accidentally deleted or undesirable modifications have been made by someone else. Also, most wiki systems allow comparing two versions of a page, making it possible to identify changes between edits quickly. The above-mentioned properties combined make wikis an ideal tool for collaborative editing. As soon as someone creates content, others can contribute to it, extend it, correct it, etc. Many wiki systems provide further support for collaborative editing, e.g. by means of discussion forums, summaries of changes, and list of last updates (Schaffert 2006).

Pages in a wiki are usually strongly linked with each other using hyperlinks. The reason for this is that the simplified wiki syntax makes it very easy to define a link to another page in the wiki. For example, in many wikis a link is defined by enclosing a word in square brackets, or by using a so-called "CamelCase" where a word contains several upper-case letters. Links to non-existing pages are usually rendered in a different color. If a user clicks on such a link, the system redirects him to a view where he can create the non-existing page. In many wikis, this is even the only way to create a page. Links in a wiki are the most

important tool for navigation. Therefore, many systems allow not only following links in the direction they are defined but also in reverse direction. As a further tool for navigation, almost all wiki systems allow a full-text search over the content of all pages. In addition to creating text content, some of the more sophisticated wikis allow uploading of arbitrary (multimedia) content, like documents, images, program code, etc (Schaffert 2006).

In this argument I have listed the most notable features of MediaWiki and I have shown that MediaWiki has done a successful job of serving Wikipedia on the web. One can conclude that if MediaWiki is good enough to support this huge encyclopedia, then surely it will manage to serve our purposes of Personal Information Management.

Counter argument

Some people might argue that MediaWiki does have a fragmentation problem. The project fragmentation problem in personal information management occurs when someone who is working on a single project stores and retrieves information items relating to that project from separate format-related collections (documents, emails and favorite Web sites). Study conducted by Bergman (2006) indicate that users tend to store and retrieve project-related information items based on different formats in one project folder when the interface design encourages it. However, they store and retrieve project related information items in different folders (documents, emails and favorite Web sites) when the design encourages such fragmentation.

Following Bergman's (2006) argument one can insist that from MediaWiki users cannot search or view: e-mails, documents written in other programs, contacts etc.

Refutation of counter argument

MediaWiki supports for extension and integration. Extensions to MediaWiki add new capabilities to original software (Reuven 2006). Many extensions are publicly available that increase the scope and domain of MediaWiki for the purpose of Personal Information Management and beyond. One popular example of extension is Semantic Wiki discussed in (Schaffert, 2006).

Integration capabilities as discussed by many authors one such example is integration with LDAP analysed by Adarch (2006). Such integration is useful in firms that have LDAP database and does not want to create a new one for their workers, so instead these two systems are linked instead.

Following this trend of integration, MediaWiki can integrate with virtually any other existing system. In order to solve the problem of fragmentation, we can integrate MediaWiki with indexing software such as GoogleDesktop which already has web interface. Such integration would lead to unique interface for accessing all stored data including our notes, e-mails, files etc.

Conclusion

Islam promotes research and development (UTM 1985). Moreover, in order to conduct a successful research we need a way to organise and sort data. God almighty has commanded a man to help himself in this world and to pray for help from God. For this reason, proper organisation of information is essential and this is one way to improve it.

Personal Information Management is a way of dealing with huge amount of information that we are required to poses but cannot possibly remember everything. Reusability and accessibility comes important when we want to revisit some previous experience or research and collect the fruits of our labour. MediaWiki is helpful with collaborative work applicable to a group of people in school, work etc.

where everyone is allowed to contribute a part of the work and all changes are kept in history, meaning that every contribution is credited and someone's hard work cannot be erased.

References

- Adarsh, B. (2006). *LDAP Authentication for mediawiki*. Retrieved July 20, 2008, from <http://blog.adarshbhat.com/2006/01/ldap-authentication-for-mediawiki.html>
- Bergman, O., Beyth, R., Nachmias, R. (2006). *The project fragmentation problem in personal information management*. CHI Proceedings, 2006, p. 271-274.
- Désilets, A., Paquet, S., Vinson, N. (2005). Are wikis usable?. *WikiSym*, 2005, p.3-15.
- Giles, J. (2005). Internet encyclopedias go head to head. *Nature*, 438, 900-901. Retrieved August 10, 2008, from Nature – International weekly journal of science, <http://www.nature.com/nature/journal/v438/n7070/full/438900a.html>
- Jones, W., Klasnja, P., Civan, A., Adcock, M. (2008). Personal project planner: planning to organise personal information. *CHI Proceedings*, 2008, p. 681-684.
- Kelly, D. (2006). Evaluating Personal Information Management Behaviors and Tools. *Communications of the ACM*, 2006, v.49, p. 84-86.
- Khan, M., Aleem, A. (2008). Usability Evaluation of a Student Wiki System in Higher Education. *Proceedings of world academy of science, engineering and technology*, August 2008, vol. 32, p. 680-689.
- Nonaka, I., Takeuchi, H. (1995). *The Knowledge-Creating Company*. Oxford University Press, New York, 1995.
- Reuven M. (2006). Installing and customizing MediaWiki. *Linux Journal*, Issue 144, April 2006.
- Schaffert, S. (2006). *IkeWiki: A SemanticWiki for Collaborative Knowledge Management*. Retrieved 16 October, 2008, from http://ki.informatik.uni-wuerzburg.de/twiki/pub/Dev_d3web/PapersRessourcen/schaffert06_ikewiki.pdf
- Tonkin E. (2005). Making the Case for a Wiki. *Ariadne*, Issue 42, January 2005, Retrieved 16 October, 2008, from <http://www.ariadne.ac.uk/issue42/tonkin/intro.html>
- UTM. (1985). *Islamic approach to technological development: 10th. anniversary proceedings International Conference on Islam and Technology*. Kuala Lumpur: UTM.
- Volkel, M., Oren, E. (2006). *Personal Knowledge Management with Semantic Wikis*. Retrieved 16 October, 2008, from <http://eyaloren.org/pubs/pkm.pdf>
- Wenger, E., McDermott, R., Snyder, W. (2003). *Cultivating Communities of Practice*. Harvard Business School Press, Harvard, 2003.