

Collaborative Computing to Improve Work Process or Environment

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## Introduction/Problem Statement

Today's workplace is an environment where there are many challenges that need to be overcome. With the advancement of technologies such as the World Wide Web, organizations and enterprises have changed the way they are doing business. International markets have become easier to access with technology. Making deals and doing business among people from different continents have become a reality without ever meeting in person. This is possible through collaborative tools and systems.

There are many types of collaborative tools and systems that organizations and enterprises can use to work together with others. Some of these tools and systems may not be for all organizations and enterprises and it is up to each individual business to determine which one best suits them. Collaborative tools and systems come in all shapes and forms. There are three main collaboration tools that are commonly used.

The first are electronic communication tools such as email, faxing, wikis, web publishing and conferencing. Electronic communication tools send messages, files, data, or documents between people and hence facilitate the sharing of information (Wikipedia, 2013). The second are electronic conferencing tools such as forums, online chat, instant messaging, video conferencing and electronic meeting systems. Electronic conferencing tools facilitate the sharing of information, in a more interactive way (Wikipedia, 2013). The third are collaborative management tools such as electronic calendars, online spreadsheets, enterprise book marketing and workflow systems (Wikipedia, 2013). Collaborative management tools facilitate and manage group activities.

In a workplace where communication is a key factor to success, collaborative tools help to strengthen communication between individuals and teams. Collaborative tools are designed to help people involved in a common task achieve goals (Matias, 2003). The design intent of collaborative tools is to transform the way documents and media are shared to enable more effective team collaboration (Wikipedia, 2013). Collaboration requires individuals working together in a coordinated fashion, towards a common goal.

Accomplishing the goal is the primary purpose for bringing the team together. Collaborative tools help facilitate action-oriented teams working together over geographic distances by providing tools that aid communication, collaboration and the process of problem solving (Educause, 2005). Additionally, collaborative tools may support project management functions, such as task assignments, time-managing deadlines, and shared calendars (Goodnoe, 2005).

There are many advantages of working in teams. Big team projects can get done faster when everyone contributes and work collaboratively (Matias, 2003). Even though working together can help make things seem impossible possible, one thing for sure that can ruin a team project is document management. Examples of bad document management are emails following divergent paths, spreadsheets and Word documents getting passed around and no one knows which one is the most recent version (Goodnoe, 2005). Others are the person taking notes stores the notes on their individual hard drive and is now on vacation and other times strategies change, but no one remembers to update the company's website.

Too many times teams have experienced these scenarios or been on the short end of a situation that could have been so easily corrected with better communication and collaboration. One simple solution to help avoid these common workplace incidents is using a wiki. Wiki also provide a solution to time constraints and distance.

## Discussion of possible solution

The most famous wiki is Wikipedia. According to Wikipedia, a wiki is a website which allows its users to add, modify, or delete its content via a web browser usually using a simplified markup language or a rich-text editor (Wikipedia, 2013). The creator of wiki was Ward Cunningham, an American computer programmer. Cunningham created the first wiki software in 1995 to help manage the Portland Pattern Repository's site content (Wikipedia, 2013). He named this new software after the Hawaiian word wiki-wiki, which means quick. Cunningham described a wiki as, "the simplest online database that could possibly work." (Wikipedia, 2013). Wiki is collaboration software that solves all these problems yet, unlike many traditional content management systems, remains simple enough for non-technical employees to use (Goodnoe, 2005).

The main function of all wikis is that it is a content management system. A content management system is a computer program used to manage the content of a website (Rouse, 2007). They present information onto websites (Goodnoe, 2005). Users can modify, edit, and publish content from a central interface.

Content management system features vary widely from system to system (Rouse, 2007). They are essentially a template that looks and works the same, but has different content on each page that can be changed, modified and edited by those that have permission. One of the main things that set wikis apart from other content management systems is that they revolve around a group of users, making it more community orientated (Goodnoe, 2005). They allow many users, even public users to write and edit articles. Because of how wiki draws its content from many users, it can grow bigger and faster with the help of many experts in the field.

Wikis are different than blogs in that they usually have multiple authors, where as blogs usually have one author. Some blogs may have multiply bloggers, but it is usually credited to a single blogger (Educause, 2005). One of the most distinct advantages that wikis have over blogs is that it draws on the expertise of many authors. Blogs maybe limited to the knowledge of that blogger. A disadvantage of wikis is that with so many authors, sometimes heads may butt into each other and everyone may not agree on the content versus a blog where one author can express their experience and expertise without dispute.

Wikis work as a community orientated project because it allows those that contribute to feel a sense of ownership (Goodnoe, 2005). This also looks appealing to the public because anyone can add content. In the case of an enterprise or organization, it allows users to feel part of a team and allows those that have added or edited the content to feel good about voicing their knowledge.

Organizations and enterprises who think a wiki can help them should consider the following:

### Consider implementing a wiki if:

- You want to establish a company intranet quickly and cheaply without sacrificing functionality, security, or durability.
- You want to publish a range of corporate documents in one universally accessible location and let employees manage those documents with a minimum of effort, lag, and risk of redundancy.
- You want to manage and organize meeting notes, team agendas, and company calendars.

- You need a project management tool that is cheap (if not free), extensible, and accessible through any Web browser.
- You need a central location where shared documents can be viewed and revised by a large and/or dispersed team.

**A wiki might not be right for your organization if:**

- You need to use complex file formats. Some wiki platforms can support only text or HTML files. Consider using a PHP/SQL-based wiki platform that can handle robust file types. Avoid wikis based on PERL.
- You don't have a staff member who can take responsibility for its use. A wiki is only as good as its ontology (or the search engine it uses). You will need somebody who can establish conventions for naming pages and maintaining links.
- The collaborative format isn't appropriate for your group or workplace. Peer review is not always the best solution for content management.
- You're looking for an exchange of views. Wikis are not the best tool for airing opinions or carrying on conversations. If that's your primary goal, use a blog instead (Goodnoe, 2005).

There are many popular wiki programs that organizations and enterprises can find throughout the World Wide Web. A few notable ones that well known organizations such as Nokia, Yahoo and Michelin China uses are Socialtext and Twiki (Goodnoe, 2005). Other wikis that are used, but must be purchased commercially by an organization are Confluence, JotSpot and Atlassian. If an organization is looking for open-source or non-commercial wikis, they can use Tikiwiki, Twiki, Zwiki and Perspective (Goodnoe, 2005). Organizations and enterprises should be open to trying out open-source wikis first and work their way to deciding which ever one best suits their needs.

**Recommendation/Preferable solution**

There are many collaborative tools to help organizations and enterprises teams to work together. It is important for those that are utilizing them to find the right purpose. If businesses cannot distinguish which tools work best for their organization, it does not help team members on large projects.

Wiki is a perfect tool for a collaborative team working on a large scale project to share documents, content and ideas. By using a wiki, team members can access, edit and modify content in real time. None of the members have to save the file on an individual hard drive because it can be uploaded to the World Wide Web or the company's intranet system. Everyone will have access to the same content as soon as a team member changes something. No more trying to keep track of the most updated version. Wikis also allow team members to feel ownership because they are directly contributing to the content that is being published. This helps to raise awareness and morale for the team. There are many types of collaborative tools that can be used in the workplace, but a wiki is a good solution to juggling team projects.

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