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Implementation of online notice boards as an alternative to location based physical notice boards

Author:
Menzi Walter Motsa

Supervisor:
Associate Professor
Hussein Suleman

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Abstract

For so long, many institutions, especially academic ones, have been throttled to posting notice messages physically up at a notice board. Besides the low audience that this method has often seen, the notices suffer from staleness and non-portability. In an attempt to solve these problems, several notice broadcasting techniques around the globe have been tested. These may include electronic screens, which may solve all but the latter problem: portability. Upon implementing a sample website at which students could post and delete online notices, It has been realized that a greater majority of participants are in fact interested in using this form of the notice board. Furthermore, they were pleased with the potential that it carried. However, the fact that using expensive INTERNET quota each time a notice was to be viewed remained a major concern with this model.

1   Introduction

The introduction of the internet in the 1950's has offered the world a new idea to the continuously developing IT world. Several uses of the internet have since been adopted with applications in commerce, communications and media [1], [2].

With the diversity of technologies available, finding the most convenient server software and programming language to develop a website is always an area of concern. Even more, implementing an online notice board requires more than just a fast accessible website, but also, one that supports concurrent views, and changes to the notice board seamlessly.

On the other hand, a location based and physical notice board does not raise such demands. Instead, the concerns here are ensuring that it is properly positioned and that certain authorised individuals are responsible for the board maintenance.

Adding the website based model to currently available models can only extend the scope of users that can be reached. In fact, given the scale and rate at which the internet is becoming the *defacto* standard for communications, this model might soon become the best notice posting model available.

2   Design and Implementation

Setting out to develop a prototype website based notice board, the software program Tomcat6 was selected. This is an open source web server and servlet container developed by the apache software foundation that is used to develop and run web applications [3], [4].

All the back end server scripts were writen in the programming language java and a mysql database system was used to store notice information. The website front end was developed using cascading style sheets (CSS), HTML and HTML5. Figure 1 shows a sample homepage screenshot of the website that was developed.
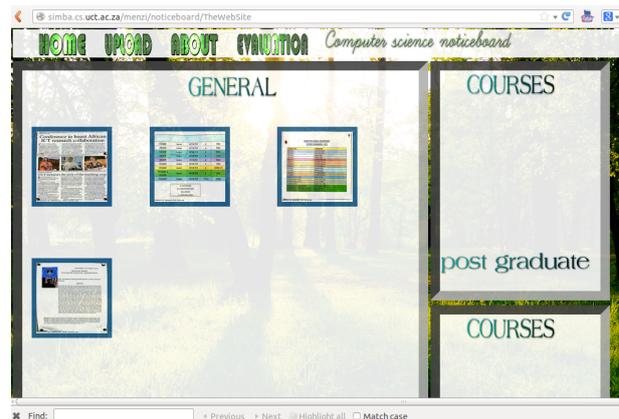

Figure 1: A screenshot of the notice board website interface. This is accessible from `http://simba.cs.uct.ac.za/menzi/noticeboard/TheWebSite`

A sample screenshot is shown in Figure 2 below. This is the upload interface that can be used to post notices online. The notices that are uploaded will then be immediately available to the homepage screen in Figure 1. Even more, they will appear in the corresponding notice category (General, post-graduate or undergraduate). The upload form below also allows the user to specify the date untill which the notice must be show.
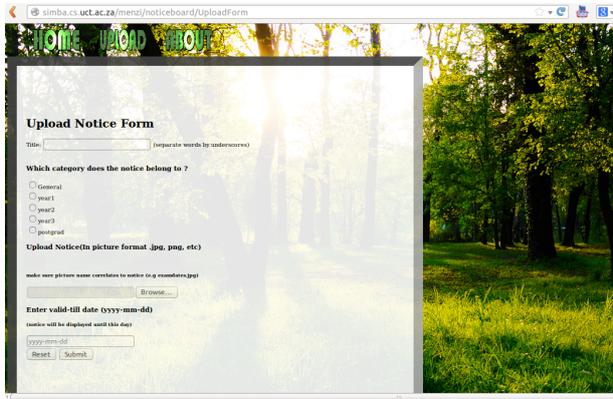
Figure 2: A screenshot of the notice board upload interface. For simplicity notices could only be uploaded in picture format. This is accessible from `http://simba.cs.uct.ac.za/menzi/noticeboard/UploadForm`

3 Evaluation and results

This section presents a discussion on how feedback from the users was obtained and interpreted.

3.1 Methodology

Twenty-one students from the university of Cape Town took part in the survey. Of these students, thirteen answered questionaire provided through online survey tool. Eight of them were face-to-face interviews. In both cases, identical questionaires were given out.

Users were asked to use this website to post and view online notices in electronic picture format. An online and face-to-face survey was then carried out to determine the views of different users upon using the website and how the general idea of implementing an online notice board was responded to.

Two sets of questionaires were devised to archieve this goals; a *users' questionaire* and an *administrators' questionaire*. This was aimed at two different groups that were going to be directly involved in the notice cycle process: the notice viewers (users), as well as the notice posters (administrators). Their expiriences and opinions in the testing of the prototype were equally important in evaluating the transition idea.

Users Questionaire

1. Do you read the notices on the computer science notice board?
   a). Yes
   b). No

2. If yes, how often do you read notices from the physical notice board ?
   a). Every day
   b). 2-4 times a week
   c). At least once a week
   d). Every other week
   e). At least once a month
   f).Other

3. If not, why?
   a). I don't know where the notice board is?
   b). I don't have time to go to the notice board?
   c). other

4. In your opinion moving from the paper based and location restricted model to the Web based model is:

   a). A great idea, as it allows me to read the notices anytime anywhere.
   b). Good, before I did not read the notices and since it it's on-line I will start reading them.
   c). Good but I still want to be able to read the paper based notices for when I'm not on-line.
   d). All the same to me.
   e). don't like it, I prefer the old model.
   f). Other. specify

5. In your opinion the web interface is?
   a). Nice clean and easy to follow.
   b). Cluttered
   c). Needs more information Needs more information.
   d). Needs more links or buttons Needs more links or buttons.
   e). other , specify other , specify.

6. Should the web based notice board replicate the information from the paper based version or should it be easy to update notices by users (static versus dynamic)?
   a). Yes keep it up-to date.

b). No, that makes it unreliable.

c). other, specify.

7. Should there be a login system for notice posting or an open access method be adopted?

a). Yes that would hold people responsible for what they post in the notice board.
b). Yes that makes its believable and secure.
c). No, that makes the notice posting a tedious process.

8. In your opinion how can this web-notiboard be improved ?

Administrators Questionaire

1. Have you been posting notices in the main (physical) notice board ?
a). yes
b). no

2. If yes, how does posting notices in a website compare to posting them in the physical notice board?
a). Great convenience, less printing and pinning.
b). Time and quota wasting.
c). other, specify.

3. If no, has the new online system made a convenience in making important notices reach your target easily ?
a). Yes
b). No
c). other, specify

4. In your opinion how can we make the notice posting process an easy and time saving one ?

3.2 Results

Analysis of the survey data provided the following results.

The distribution of students on how they view notices in the physical(localized) notice board is shown in Figure 3 below. It was noted that:

- Eight percent of students view notices every day. Fifteen percent of students view notices 2-4 times per week.

- Eight percent of students view notices once in a month.

- An overwhelming majority of students (69 percent) that do not view notices on the physical notice board claim that time is a major constraint.
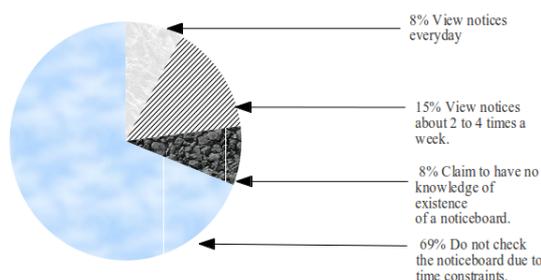
Figure 3: Distribution of Students viewing notices in the localized notice board

Figure 4 shows the response from students upon being ask on how convenient the movement from the paper based and location restricted model to the Web based model was.

1. Thirty-seven percent of students responded by saying that it was a great idea, and that it carried the convenience of portability.

2. Eight percent pointed out that the new model involves the use of internet which implies that one has to have expensive internet quota to gain access to the website. Furthermore, it was pointed out that occasional power blackouts and server failures can pose temporal lack of access to the notice board; disadvantages that the papaer based model had.

3. Fifty-five percent saw no distinction between these two models. This category of students coincided with those that do not often view notices in either models offered.
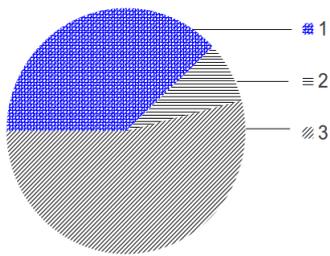
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Figure 4: Response patterns from students towards transition from the paper based and location restricted model to the Web based model. Numbers 1 to 3 are representatives of the data as explained above.

The chart in Figure 5 below shows the results of the students when probed to find out how the web interface appealed to them, whether or not it retained the basic features of the conventional (localized) notice board.

1. Twenty percent of students claimed that the web interface was decent and easy to work with.

2. Eight percent of students believed that the web interface was cluttered and great improvement was still to be made to make it easy to work with.

3. Another 8 percent of students believed that even though the web interface was presentable, it lacked a lot of information and that a few more improvements in the delivered content of information would help make it more useful.

4. The remainder 64 per cent could not describe it as either perfect nor dismal.
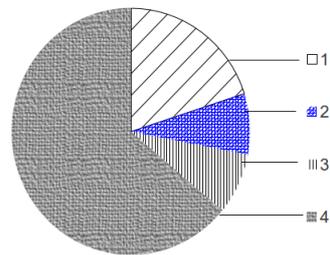

Figure 5: Responses of students on how web interface appealed to them. Numbers 1 to 4 are representatives of the data as explained above.

It was also neccessary to find out whether the web based notice board should replicate the information from the paper based version update notices automatically(static versus dynamic). It was found that:

1. About thirty-eight percent of students said that implementing an automatic feature that would keep the notice board up-to-date was recommendable.

2. The remainder majority could not respond to this question possibly because an immediate advantage or disadvage of this feature was not apparent.

The administrator's side of the questionaire was not properly responded to. However, some users pointed out that the new model of the notice board is more fragile in that unauthorised people may delete important notices. As such it was suggested that a security measure where only certain individuals with administrator priviledges are allowed to post and delete notices. Some groups further suggested that profile accounts be created for administrator purposes to exercise this.

However, there are contradictory views with respect to whether such a login system should be implemented as an attempt to foster security or whether this would make the notice posting and viewing a laborious process.

4 Discussion

Based on the results obtained, it is clear that most students (69%) do not utilize the location

based and physical notice board. The primary reason for this is given to be the lack of time to do so. However, one can conclude that more than that; there is an apparent resistence and lack of interest in walking to location based notice boards everytime a notice is to be viewed.

A greater number of students who use the physical model of the notice board - in fact including those that appear to have no interest in using it - attested that the new website-based model was more convenient. This was supported by saying that it offered them with greater portability; a key feature that would in fact change their attitude towards viewing notices posted by department. This implies that key messages and opportunities advertised would be readily be intercepted by a massive audience without spanning users by posting individual emails.

5 Conclusions and Recommendations

Amoungst the myriad communication methods available localized notice boards provide users with message delivery at low costs. However, this method has a time cost to its users and its efficiency depends greatly on location. The alternate approach of a web based notice board proves ideal in solving these problems. Portability and time-specificity are not the only features carried by this model; its plausible elasticity implies that more notices can be served to the users and there exists the options of storing older notices, an option lacking in the localized model. In all the web-based model appears to maximise the potential of notice boards.

However, considering the fact that several weaknesses can be pinpointed in both models, it is advisable that both models be used. A balance of these two models may win interest from individuals who are unhappy with the localized model without loosing users who were finding it satifactory and convenient.

References

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