A Method for Evaluating Web Page Design Concepts

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ABSTRACT
In redesigning the Intranet at Fidelity Investments, we used a paper-based technique for getting user feedback on initial design concepts for the web pages. The technique involved color printouts of "Greeked" versions of five different candidate web page designs. Users had to try to identify nine standard elements that appeared on each page (e.g., owner, last updated). They also rated each on three subjective rating scales (format, attractiveness, color). The technique was successful in helping us to derive a new design.

Keywords
Web design, Intranet, user feedback, evaluation

INTRODUCTION
One of the challenges we face in designing web pages is how to get feedback from users about design concepts that are not even implemented yet. Recently, in the redesign of Fidelity's Intranet, we were faced with such a challenge: How could we get meaningful user feedback about five different design concepts submitted by three different ad agencies?

The five design concepts are shown in Figure 1. Each represents what a home page for a specific site (e.g., Human Resources) might look like. Note that the designs have all been "Greeked": no English text is used in the representation of the page. This is a common technique that allows the designer and viewer to focus on the overall design instead of the actual "copy" material.

The designs share a few common features because the agencies were given a basic set of requirements to meet. These requirements included certain elements that every page had to contain, as illustrated in Figure 1.

Our goals were to learn whatever we could from Intranet users about the usability of each of these designs and about their subjective reactions to them. These data would then be used as input to a new design for the Intranet.

METHOD OF THE STUDY
When all you have is a static screen shot for each design, you can't do a traditional usability test. So we started thinking about what a good web page template should do for the user. We concluded that a good template, quite simply, should *guide the user's eye*. The layout and overall design of the page should help the user to spot the various elements of the page and to "parse" them appropriately. So we decided to explicitly test how well users could identify the various "standard" elements that were represented on the Greeked designs. In addition, we would ask the users to assess each of the designs on three subjective rating scales (format, attractiveness, and color).

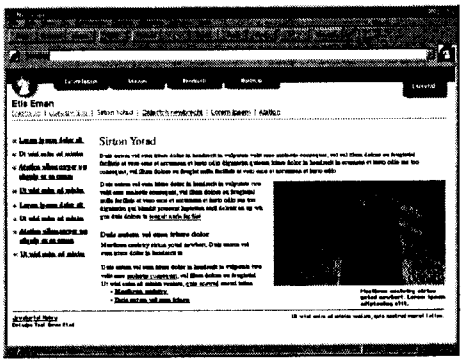
Twenty-three Fidelity employees participated in the study. They represented a wide range of business units and job classifications. Most use the web at least once per day.

The five templates were presented to the participants in a random order and they performed the following tasks for each template:

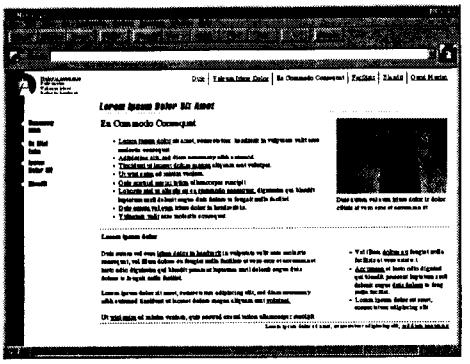
- "Blocking" Exercise: Given a list of nine standard elements (see Figure 1), they were asked to identify those elements on a color printout of the window by drawing blocks around them. Blocks could not overlap and could not contain other blocks. If an item appeared to be missing, it was to be marked as "not there."
- Questionnaire: They were asked to complete a questionnaire rating page format, attractiveness, and use of color, and to list three things they liked about the design and three things they disliked.

After completing these tasks for all five templates, the participants were asked to rank order the templates in terms of their overall preference.

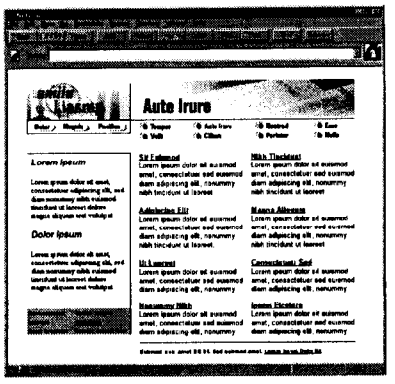
RESULTS
In judging whether or not a participant had correctly identified a particular element, we were quite generous. Figure 2 shows the overall accuracy of these identifications for each template. Note that Template 3 was significantly better than all of the others. In fact, it was the only template for which some participants (four) got 100% correct.



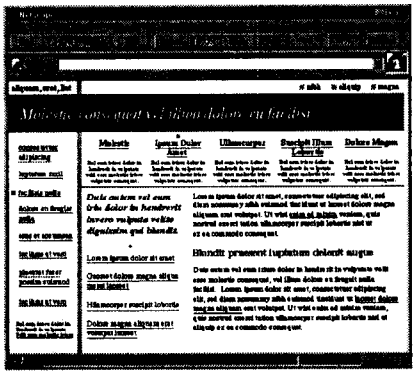
Template 1



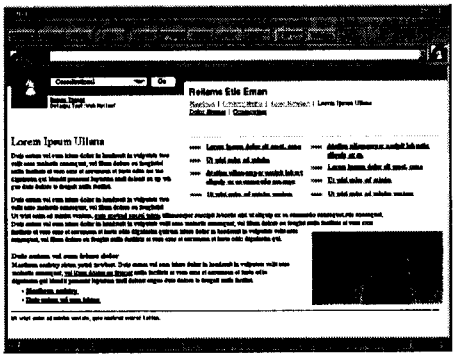
Template 2



Template 3



Template 4



Template 5

Standard Elements

Main content selections for this page
Page title
Person responsible for this page
Intranet-wide navigation (e.g., Home)
Last updated
Intranet identifier
Site navigation (e.g., sections of a site)
Confidentiality/Security
Site news items

Figure 1. Five different concepts for the design of a home page built using a new Intranet design template. Note: The drop-down list in Template 5 was explained to the participants, and a screen shot showing the list dropped down was also shown.

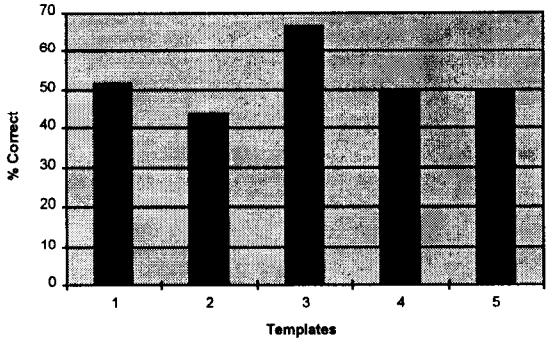


Figure 2. Overall percent correct identification of the nine standard elements for each of the five templates.

Figure 3 shows the average ratings that the templates received on three rating scales. The most obvious conclusion from this graph is that Template 4 came out very poorly. (On these rating scales, "0" is the neutral point.) Overall, Template 1 was slightly better than all the others, although it was followed fairly closely by Templates 2 and 3.

In rank ordering the templates, the results closely mirrored the ratings on the three scales. Overall, Template 1 had the best rank, followed closely by Template 3, while Template 4 had the worst rank.

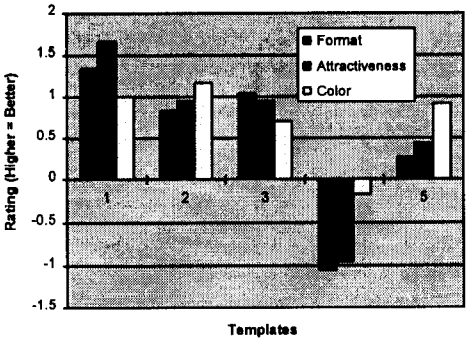


Figure 3. Average ratings for the five templates on three subjective rating scales.

CONCLUSIONS

As is often the case in usability studies, the participants' performance data (correct identification) did not exactly correlate with their preference data (subjective ratings). Template 3 came out the best in terms of performance and Template 1 came out the best in terms of preference. Our next step was to study what seemed to work well from both of these templates and then to develop a new template representing the "best of breed." This version was then fully prototyped and tested in a traditional usability test.

In summary, this "Greeking" technique was very useful in capturing user feedback on early web design concepts.