Harvesting Helpfulness: A Case Study of an Online Farmer's Forum

Neil Patel, Steve Marmon, Greg Schwartz
Stanford University HCI Group
Computer Science Dept, Stanford, CA 94305
{neilp | smarmon | mrgreg}@stanford.edu

ABSTRACT
We present a case study on using geo-location information to help users navigate an online forum for farmers. Working with newfarm.org, we ran a controlled experiment where maps were added to each thread on the forum. One group of users was shown maps with the location of all the thread's viewers; another group the location of both viewers and posters. We then measured how the maps affected users' viewing behavior. For the most trafficked threads, we found that maps showing posters noticeably increased geographic clustering of viewers. However, interviews with forum users revealed that other information, such as soil type or climatic zone, would be more useful for navigating content. Consequently, we believe that further investigation will reveal how best to design contextually-relevant navigation elements.

METHODOLOGY
We partnered with the Rodale Institute [3], the operators of www.newfarm.org/forums, to run a controlled experiment. The forum has been live since 2004 and currently has about 1,300 members. Each day it receives about 90 unique visitors and 8 new posts. We ran our study for one month, during which we placed each visitor into one of three experimental groups. For users in Groups A and B, the forum's UI was altered to include maps of the United States next to the thread listings (see Figure 1).

Group A's maps displayed the locations of the viewers of each thread. Group B's maps displayed both the thread's viewers (in blue) and posters (in orange). To explain the activity maps to users we displayed an informational bubble when they first logged in. The control group's interface was not changed.

To test H1, we added a popup to collect satisfaction votes from viewers as they browsed the forum (see Figure 2). It appeared twenty seconds after the user navigated to a thread.

To complement our quantitative analysis, we interviewed eight of the forum's most active users for approximately one hour each. The interviews were intended to gather information about how they use the forum, get personal reactions to the maps, and to discuss ways...
to improve the forum.

RESULTS
Over the course of our 34-day study period we logged 12,400 unique visits, 351 new posts, and 34 new threads. There were 1178 users in Group A, 1161 in Group B, and 1137 in Group C. We recorded 1079 satisfaction votes.

Our data analysis supports H1. While positive votes accounted for 82% and 78% of all votes from Groups A and B respectively, they were 70% of Group C’s votes, a statistically significant drop-off (p < .01).

To test H2, we analyzed the views logged from users on the Pacific coast and in New England. Comparing the amount of traffic between the two regions to the traffic within each region showed no discernable preference for local content. It should be noted that this analysis measured traffic, not viewers. This was done for two reasons: (1) identifying viewers via geo-coordinates would miscount separate viewers from the same coordinates, and (2) identifying viewers via IP address could misidentify dial-up users, who are often assigned new IP addresses when they dial in.

We found that across the threads, Group B traffic was noticeably more clustered than the other two groups (see Table 1). Surprisingly, the clustering in Group A was roughly comparable to that in Group C.

DISCUSSION
Our most surprising result was that there was a noticeable clustering effect for users in Group B, but not in Group A. This implies that users’ viewing behavior was impacted only by knowledge of the location of posters. This result was consistent with two findings from our interviews. First, interviewees from Group A reported confusion about what the maps meant and expressed a general lack of enthusiasm for them. Second, users stated that poster location is most relevant in determining how local the content is, since the sources of the information are the posters’ own farms. This result is also strong evidence to support H4: a seemingly small difference in the visualization generated a noticeable effect on user traffic.

When we analyzed the threads based on their subject matter, we found the clustering effect was most pronounced for threads that discussed idiosyncratic farm issues in a classic Q&A pattern. This is in line with our claim that the maps would guide users to geographically relevant information. In contrast, blog-like threads from the forum’s highly active “Daily Journal” section were likely more valuable for their inspirational quality. Daily Journal threads come from a core group of users who dominate the content production on the forum: 50% of all posts are made by the twenty most active members (1.5% of total membership). Thus, the maps did not help users who already knew the geo-origin of the most popular content.

Five of our eight interviewees also reported that geo-location would be more useful if traffic on the site increased to a point where they were unable to read all new content regularly. Finally, several interviewees told us that filtering on farm attributes such as climatic zone, soil type, and farm size would be more relevant than geo-location.

CONCLUSION AND NEXT STEPS
Our work attempted to improve user satisfaction and efficient discovery of content in an online forum for farmers. We ran a controlled experiment which modified the forum to display maps next to each of the threads. These maps either displayed the locations of viewers, or the locations of both viewers and posters. Analysis of the data indicated that viewing behavior was affected in the latter case. However, we learned that geo-location was not a very powerful navigational aid given the forum’s content and traffic characteristics. Our future work will explore the design of new navigational elements which more directly reflect this context.

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REFERENCES
3. The Rodale Institute, www.rodaleinstitute.org