Independent Study Project — <Spring, 2008>

Exploring output filter mechanism to provide more convenient and trustworthy output results to users

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Abstract

So far, my monthly progressive report has covered the mechanism to develop more effective output filter for 3D warehouse mainly. However, as the research progresses, I realized that I need to address the way to encourage the user to be the prosumers. In addition, the research has been based on the assumption that is the current rating mechanism is valid to evaluate the 3D image model on 3D warehouse. Unfortunately, the number of people who rate the 3D models is quite limited, and with this condition, the research which has been done would be less effective.

Thus, I would like to address the way to encourage people to engage more actively and to evaluate the 3D image without direct rating system.

Context

3D warehouse has been updated to catch the end users' need. It has many features that were not seen when I launched this independent study. I have addressed several techniques to improve the trustworthiness and convenience of the output filter, and 3D warehouse has more than half of those techniques now.

In spite of their updates, 3D warehouse does not have effective ways to promote users to prosumers as I believe. Still, the main purpose of the 3D warehouse users is finding something cool or saving time to build 3D models as I heard in the Google meeting. We are in the transition period from professionally dominated cultures to democratized design cultures. 3D warehouse would be a good model of this innovation, but the current situation is not good enough. 3D warehouse is not the monopolized playground by several professional users but the open place for both amateurs and professionals.

Then it is the time to think about how to make users participate actively?

I believe that the below approaches would work for this question.

- Compensation
- The different levels of communities
- The sophisticated rating strategy

Compensation

People tend to be compensated for their activities even though the compensation is useless in the real world. If the user would get some cyber money or points when he or she uploads his or her 3D model to 3D warehouse, this compensation would encourage people to upload more frequent than now. In addition, this cyber money or points can be used for promoting user's rank, which I suggested in the second progress report. Otherwise the users could use their cyber money for the future service offered by Google. (i.e. buying the private extra web capacity, purchasing some commercial 3D models or extra service)

The different levels of communities

There are some communities to share the users' interests. These communities are quite effective to get some feedbacks from other users in same interests. Similarly, we may have the different levels of communities; the novice community, the intermediate community, and the professional community. The novice users tend to be shy to show their clumsy artifacts to others, but within same novice group, they would be willing to show theirs to each other and share feedbacks.

The sophisticated rating strategy

In the Sketchup forum, I found this discussion; ***Its official: 3DW is full of junk??***

Even though there are many beautiful 3D models on the 3D warehouse, many people think that there are more junks than good ones because the output filter of warehouse could not filter the junks. Some people suspect the usefulness of the current rating system. As we see, few people rate the 3D models and it is hard to see the model rated more than a thousand people. However, I bet more than a thousand people use the 3D warehouse daily.

We have to revise the current rating system. We may leave the current star rating system, but we need to add some new features; evaluate the 3D model with page views, the number of times in download, and the number of times the related links clicked etc. These features would be weighted differently and calculated together with current star rating.

For example,

Page view : weight 0.3

Download : weight 0.8

The related links clicked : weight 0.7

The star rating : weight 0.9

Total rating points calculation:

The number of page view * 0.3 + the number of download*0.8 + the number of the related links clicked* 0.7 + the number of given star*0.9

Research Questions

> ➢ Is there any technical problem to revise the current rating system?
> ➢ Is the idea to compensate users possible in the current system?

Research Plan

- Further research on the current rating system
- Other approaches for motivating the novice users

Expected Results
- Compensation would encourage both novice and professional users
- Revised rating system would increase the trustworthiness of the service.

Relevant References

Mobasher, B., Cooley R, Srivastava J, (August 2000) Automatic personalization based on web usage mining, Communications of the ACM Volume 43 , Issue 8   Pages: 142 - 151

Buono, P., Costabile, F M., Guida, S., Piccinno, A., Integrating user data and collaborative filtering in a web recommendation system, Lecture Notes In Computer Science; Vol. 2266

Revised Papers from the nternational Workshops OHS-7, SC-3, and AH-3 on Hypermedia: Openness, Structural Awareness, and Adaptivity Pages: 315 - 321

- These papers give good ideas to revise the current rating system for 3D warehouse.

Deliverables

Monthly progress report — March, 2008