

# Preliminary Questionnaire

1. Have you ever taken a course on modeling for 3d computer graphics?

yes

2. Have you ever followed a tutorial in order to create a 3d model?

yes

3. On a scale of 1 to 5, how confident do you feel that you could create a 3d model that you have never attempted before using a tutorial? 1 being the least confident, 5 being the most confident.

1      2      3      4      5

# Study Questionnaire

## Part I. In general, compare the use of a video or static document tutorial to the interactive visualization system.

1. Rate the usefulness of each of the following on a scale of 1 to 5, 1 being the least useful and 5 being the most useful.

Usefulness for getting a general overview of how a model is constructed

Tutorial Document:	1	2	3	4	5
Tutorial Video:	1	2	3	4	5
Interactive Vis:	1	2	3	4	5

Usefulness for investigating key details and understanding how they were achieved

Tutorial Document:	1	2	3	4	5
Tutorial Video:	1	2	3	4	5
Interactive Vis:	1	2	3	4	5

2. If you had to choose only one way of learning how to make a model, please rank your preference for each type of tutorial/visualization in the order you would choose.

1<sup>st</sup> choice: Interactive

2<sup>nd</sup> choice: Document

3<sup>rd</sup> choice: video

3. What did you like about your first choice compared to the others?

Ability to move camera  
& change level of detail shown

**Part II. Compare the tutorial screenshots to the screenshots from the interactive visualization system.**

1. Rate the usefulness of each of the following on a scale of 1 to 5, 1 being the least useful and 5 being the most useful.

Usefulness for getting a general overview of how a model is constructed

Tutorial:	1	2	3	4	5
Interactive Vis:	1	2	3	4	5

Usefulness for investigating key details and understanding how they were achieved

Tutorial:	1	2	3	4	5
Interactive Vis:	1	2	3	4	5

Usefulness of the graphical annotations

Tutorial:	1	2	3	4	5
Interactive Vis:	1	2	3	4	5

2. If you had to choose between the two, which set of images better explained how the model was built (tutorial or interactive vis)? Explain what you liked about your choice.

Interactive Ability to move camera & zoom in on areas of interest.  
No fixed perspective.

3. How did the use of graphical annotations affect your choice?

Also?  
It made the tools more apparent.  
I could tell when something was achieved via edge loop, extrusion, etc.  
Also, it used a predefined color code for signifying what action was done where, as opposed to the tutorial in which I had to infer what symbols meant (red line vs orange line vs dotted line)

**Part III. Compare the interactive visualization system with and without the ability to cluster or filter changes to the model.**

1. Rate the usefulness of each of the following on a scale of 1 to 5, 1 being the least useful and 5 being the most useful.

Usefulness of for getting a general overview of how a model is constructed

Clustering:	1	2	3	4	⑤
Filtering by types of operations:	1	2	③	4	5
Filtering by selecting parts of the model:	1	2	③	4	5

Usefulness for investigating key details and understanding how they were achieved

Clustering:	1	2	3	④	5
Filtering by types of operations:	1	2	③	4	5
Filtering by selecting parts of the model:	1	2	3	4	⑤

2. Would you prefer to have the ability to cluster and filter changes to the model? Explain why or why not.

Yes. I don't think I would use all the filter functions available. At least not immediately. The clusters I used most were 1-7-10, sort of high medium & low detail. I'd probably find more use for the other levels if I had a longer time to work with the program.

Filtering by selected parts seemed very useful. Definitely fixed problem of having to guess or remember where in a tutorial or video a certain area is worked on.

**Part IV.** Consider the interactive visualization system. Please leave a few comments on each of the following.

1. In general, do you think that the ability to interact with the visualization and change characteristics of what you see helps you to understand how a model was created? How so?

Yes. The camera movements were very helpful for spatially orienting the changes.

2. Do the clustering of operations and the graphical annotations help to give you an overview of how the model was created? Do you find this useful? How so?

Yes. In modeling tutorials sometimes operations are inferred or not addressed. The step-by-step graphical annotations make me feel like I wouldn't miss steps.

3. Do you think you would change the level of detail in the clustering often? How important to you is the ability to change this level of detail?

I think that if I were making a complex model I would begin at level 10 detail to see what the order was for constructing different parts, stick at 6 or 7 for parts I thought were less complex and use level 1 for details and complex actions. I think being able to change detail in clustering would be very useful, but I would not use all the levels all the time.

4. Does filtering out types of operations help you to focus on parts of the model creation process that are interesting to you? Please give an example.

Most of the operations are basic functions, so I don't think I would need to separate by moving vertices or extrusions or whatnot. The most useful filters are camera and model parts.

5. Does filtering out operations that affect only certain parts of the model help you to focus on parts of the model creation process that are interesting to you? Please give an example.

Yes

hand, fine hydrant caps

6. Do filtering out sections of the timeline and using the thumbnail views help you to focus on parts of the model creation process that are interesting to you? Please give an example.

I didn't use that when I was playing around with the program. I probably would use filtering on the timeline for complex parts of the model. I did use the thumbnails to find where certain parts were being worked on.

7. In general, please rate the usefulness of each of the following features compared to one another on a scale of 1 to 5, 1 being the least useful and 5 being the most useful.

Graphical annotations:

1      2      3      4      5

High level clustering (seeing many operations at once):

1      2      3      4      5

Ability to control the clustering level of detail:

1      2      3      4      5

Filtering by types of operations:

1      2      3      4      5

Filtering by selecting parts of the model:

1      2      3      4      5

Filtering by focusing on the timeline and thumbnails:

1      2      3      4      5