

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.

1st choice: Interactive Vis

2nd choice: Tutorial Video

3rd choice: Tutorial Document

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

The Interactive Vis gives me the option of the level of detail I can investigate something. It has more detail than a document and can leave out irrelevant detail that a video often comes with.

There are so many more features in an interactive Vis.

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.

IV. The color key code says much more than a normal tutorial. // Graphical annotations.

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

they were key to my decision since they're the biggest difference.

I don't put too much emphasis on camera angles, although the IV was better in this department also.

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.

OF COURSE.

The painting tool which then shows you where changes pertaining to that which was selected on the timeline is a fantastic time saver if you're focused on a detail. Filtering is probably the most important tool in highlighting only the things that the artist is trying to figure out. Clustering is key to finding the parts that you want to focus on more because it saves so much time. It can also be used to get rid of some ambiguities that may come with too much detail (along with filtering out the undos, etc.).

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? ABSOLUTELY. As the "ability to interact" suggests, it's all about the choices/options. There are times when a general view is more helpful (clustering) and also times when a more detailed view is preferred (filtering). What sets the interactive vis apart is the ability to cater to both needs at any time.

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. The clustering saves time in giving a general view, like a traditional document tutorial, and the graphical annotations serve as a kind of narrative about what's being done, like a video. The two together is the best of both worlds.

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?

YES. VERY. Like I said, it's all about catering to the two needs of the artist whenever it pops up [see answer to #1]. It is even helpful to use both a high level and a low level at the same time — to understand in general and then study in detail — that way you can get pass some of the ambiguities in a really detailed view.

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.

Yes. Filtering out the undos is helpful even w/o an example. That's just great common sense.

Filtering out selections gets rid of extraneous details.

Filtering ~~out~~ only that which is done to vertices is just really good detail — ex. = the fire hydrant and how the knob was created.

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. Like when we focused on the hand. It was tremendously helpful to get rid of the distractions of the rest of the body.

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.

Yes. In the robot, for example, the timeline and thumbnail helped us to find what we wanted to focus on even after the program crashed numerous times.

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

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Love this!