Essay Web Technology

The Ideas

I have done a lot of research before making something for Web Technology. The initial idea was to edit the game Lemmings, as I found an open-source script in DHTML, using JavaScript. But it wasn't very new to edit something that already existed without adding something really new. Then I thought of a few new ideas, of which two, I thought, were very good.

The first one was to make an interactive video, in which the time could be frozen so the user can move objects, avatars or make other chances. Then the story would chance because there was a new environment for the avatars to play in. But after some trying in Processing it was too time consuming to make something that would just work.

The other Idea was to make a 3D website. After some research I found that Processing would be a good program to make this in. Firstly because I already had some experience using it and secondly because it has a very stable, and light 3D engine. Also without much time investment there would be a good result to show.

Developing the idea

Then I thought about what I would want to do with this site I make in this 3D environment. After some brainstorming I decided to import the information from Hyves and then load it into Processing. Making a room, where the wall colors are based on the back ground. The food on the table based on your favorite food. The paintings on the wall photos from you photo collection and the movie playing on the television from you uploaded videos. Also a place for reading your "krabbels" would be nice.

Because all this was very hard to realize in a single program, without spending a few weeks non-stop on it, I decided to make all these things in single programs to show what is currently possible to make.

Importing from Hyves

I knew it was possible to import information from websites in PHP, so I thought it would also be possible to do this in Processing. But after reading the update notes when I upgraded to the latest Processing version, I read that XML is a default feature of processing. After surfing around on Google I found that Hyves has some RSS feeds, which are like all RSS feeds made in XML. So this made it a lot easier to import information from it, and use it in Processing. Of course, HTML is a type of XML so it is also possible to read those files.

Video

In one of the default examples in Processing is something that shows how to add textures to a 3D object. So I thought it would be possible to add a video on this, if I can convert the video into images. Because videos are loading into Processing as images (when you import the library), this was very easy to realize.

But since videos usually posted as YouTube videos and YouTube has very good protection against downloading their videos, it is nearly impossible to upload the files and use it in Processing. If the videos are uploaded to Hyves itself it is possible to use them in Processing using an .flv library. I have

not done this yet, because each library requires more knowledge, and I wanted to spend my time on other aspects.

Images

The most challenging in using images was to read the RSS feed and then import the images into Processing. I started with copying the URL from the RSS page. When I saw it worked I decided to look into XML and how it works. After some trial and error I finally knew how to import an array of images into an array. I have only made the importer for images, because if I can do it for images, I can do it for a lot more programs. After that it was very easy to implant. The only thing that needed fixing was changing the plane size so the image was not stretched. Also the UV-coordinates of the plane, so the image fits on the plane, needed some fixing.

Text

One of the most important things is of course text. Even if the aim is to do it with a minimal amount of text and use of clear images it is still very useful. Like what I tried to do with my portfolio; Logo's and understandable images, and only text when your mouse is over the image. This was not very difficult to implant. The only problem is that if the text is to long it will just fall outside the printing area, and is not shown. And my computer seemed to have more trouble rendering text. But it would be better if the text could be used as a texture on a plane.

OBJ Files

Another thing I think is essential for a 3D website is to make them look good. It took several years for use to get to Web 2.0 style web pages. I don't want to see that after a step to 3D that all websites must redevelop to look good again. So importation of 3D objects, preferable in the .OBJ format is very essential for this to work. There already were two projects to import .obj files into Processing. So I downloaded one of the libraries, and made two quick low polygon models; a television and a plate. Then I wanted to import them into my program. This took quite a long time, but when I got it to work it worked very good and stable.

Browsing

Browsing in a 3D site can be done in multiple ways; turn text into links, click on an object, add a User Interface that can be used for browsing. The first two need the same technique, which require new and very complex library. I did found something on internet, but it was very hard to understand and import into my file. The third one is a lot easier to make as it only needs to check where the mouse is when you click the button. But it still took me some time before I found a command that switches from 3D drawing to 2D drawing to make an User Interface, or add text there.

Conclusion

3D websites can be the future, and can easily exist as a second option to browse through a site, as it has support for RSS feeds, and can just contain the same information as the normal website. Also it is possible to walk with an avatar through an environment like this, so in the future it will be possible you walk with all visitors through the 3D site.

3D websites are not very fast on a low end pc, so it will take some time before 3D website will be used on a large scale.