

### ***Kaan Meralan***

This week, I studied on some tools, MilkShape3D, Jpatch, and Blender3D. MilkShape3D is a low-polygon modeler, which was initially designed for Half-Life. It has all basic operations like select, move, rotate, scale, extrude, turn edge, and subdivide. MilkShape3D has also skeletal animation capabilities that will help us to implement our animation editor. Jpatch is now a modeling tool rather than supporting bones. It may help us during the design of our signer although I believe we can find better tools. Blender3D is a tool to create high quality 3D graphics, movies and replay real-time, interactive 3D content. As the first impression, I think Blender3D is very powerful, since the gallery in their official web site is fascinating.

### ***Umut Orhan***

In this week, I have been responsible for deriving feature extractions table and information gathering about requirements analysis phase of our project.

I used our literature review document for specifying and classifying features that are common in the products similar to ours.

We had some concerns about the content of the analysis report. Indeed, we had not been in an object oriented project before. None of us knows the exact format of analysis report. By considering these in mind, we decided to take advice from a professional. Then, I have talked with Ali Doğru about analysis report and told him our concerns. He suggested using report template in his web site.

Table 1:

	3D Anim.	Video Based	Sign Editor	Educ. Tools	Dictio -nary	Free Text Analyzer	Speech Recog.
Vsign	✓	-	✓	-	-	-	-
ASL Project	✓	-	✓	-	✓	-	-
Reading Power	✓	-	-	✓	✓	-	-
Sign Genius	-	✓	-	-	✓	-	-
Personal Commun.	-	✓	-	✓	✓	✓	-
eSIGN	✓	✓	✓	✓	✓	✓	-
Ready Set Sign	-	✓	-	✓	✓	-	✓
Tessa	✓	-	-	-	-	✓	✓

### ***Sağnak Taşırlar***

Agreeing on designing a 3D tool for simulating human motion, we started to investigate a platform for implementation . We were recommended to use skeleton animation and skinning for the subject so our investigation involved those topics. After gathering the RenderWare from our instructor Veysi İşler, I had a glance through the documentation. The skeleton animation and skinning are handled in the document and also there exists a small example with skeleton animation and skinning.

A header file like "skeleton.h" was included and a non-enormous C code was following it. In the example you can select the bones with the arrow keys while they are highlighted. Moreover you can edit the bones by changing their lengths. Likely a skinning exists. A muscle layer covers the skeleton which can also be edited by reshaping. Since our copy of RenderWare is not licenced we do not have access to developer forums, but I have observed from the game developer sites that RenderWare would be a good choice for implementing.

### ***İbrahim Taşyurt***

This week my task was to search OpenSceneGraph, which is an open source 3D toolkit. OpenSceneGraph is coded in C++, it is a platform independent tool runs on Windows and Linux systems which are relevant to our project. However OpenSceneGraph has some problems with Visual Studio 6, which is a significant disadvantage for its feasibility in our project. To achieve skeletal animation OpenSceneGraph uses an adapter osgCald2 to adapt Cal3d, a character animation library based on skeletons and bones. I cannot say anything about the quality of animations of Cal3D, since there were not sufficient screenshots in their website.

Furthermore I had chance to examine another Ogre3D, which is also an platform independent open source 3D library coded in C++ and has some ports in Java etc. It has classed to perform skeletal animations. There were many screenshots available that belong to the models created with Ogre3D. Some of them looked very realistic. But the link to skeletal animation screenshots page was broken.

Apart from the research I continued to communicate with Engin Arık. After his reply, I sent him our proposal and described our project in detail. I asked for his help about the education related issues. He commented that there are not any successful 3D sign language tools, and found our project exciting. Also he recommended us to prepare a math tool as an introductory education material and added that there is not a well defined way in sign language education.

### ***Utku Utkan***

During the week I have made some research on Skeleton Animation. From my investigation, I figured out that nearly all the game vendors are now using Skeleton Animation technique to create their animations. Actually, this method does not provide any advantage in 3D Modeling. But when it comes to the animation of the 3D models, you understand how useful it is. With this method it is possible to create more natural movements and animate the 3D model by just animating the skeleton which is a practical way with respect to the classical approach. Also, there are many human skeletons available on the net. Using such ready skeletons can fasten the project development process.