This week, having written the requirements analysis report, we had more control over the project in general. On Friday we had a meeting with Tolga Can for the project. He made useful comments on our project and helped us to clarify the environments and tools that will be used. He provided us some sample Java3D and network code to give an idea. We were quite motivated at the end of the meeting. Also this week we made improvements and clarifications on the scenario. For the network implementation we decided to use a monolithic architecture similar to Quake’s, which uses clients only for rendering and sending inputs to the server. Game logic will be implemented on the server. However some tricks of Unreal can also be applied when possible. For the programming language, we became closer to C++ since we want to use Ogre for the graphics. For the network, an API compatible with Ogre will be used such as Raknet. We also thought about the data description part of the project in detail. We considered about the content of the classes related to civil defense (such as health info of a patient, details of fires and ways of extinguishing it, etc...). Actually preparing the requirements analysis report was quite useful to make the project clearer.

Bahadir Özdemir:

In this week, I searched network and audio libraries compatible with Ogre and I briefly described them in the requirement analysis report. I evaluated libraries in terms of platform independency, documentation support and free license (open source or non-commercial usage). For audio libraries, 3D audio and recording support was also taken into consideration. Number of libraries which can be used in the project decreased to two for both audio and network. Network libraries are Raknet and ZoidCom. Audio libraries are AudioAL and FMOD. After detailed examination of the libraries, we decide the libraries that will be used. Furthermore, I searched network and game structures for games. DFD Diagrams in the report describes the structure of our project in more detail. Briefly, server will be the only decision maker structure and all user commands that affect the game come to server. According to the decision of the script engine, game engine at the server changes game states and sends it to all users. Clients are responsible to update their game state and rendering. The commands that only affect the local user like menu commands are evaluated and processed locally at client machines. In addition, recorded sounds send to other players via network card.

For the next week, I am planning to search the libraries mentioned above in detail in order to select appropriate ones. After choosing the libraries, I will start to read documentations of the libraries.
Nilgün Dağ:

This week, I focused on the requirements analysis report. After determining our main tasks and subtasks in the previous week, I finished scheduling our project by assigning start and finish dates for our tasks. I tried to be realistic and tried to distribute the work equally. Assignment of the tasks to team members is done considering their skills and interests. I also wrote down the project constraints and mitigation, monitoring and management of the risks we can face during development of our project. I read most of the documentation we got from Civil Defense Collage and made a summary of it. From that I figured out what our main classes, their attributes and methods can be. This helped us while drawing our class diagrams and use cases.

I was also planning to read Ogre tutorials and make a small demo, but I could not. So for the next week I plan to do that.

Aslı Özal:

This week, as other team members I have done my tasks given for the requirement analysis report. In order use case diagrams and activity diagrams, I decided on possible execution paths of our program. Also, I wrote down the challenges that we may include in the scenario; to make the simulation more useful. To add, as I will deal with graphics and modeling part of the project, I searched for modeling tools. I have sketched possible map of the scenario, and some buildings that we may model in the program. We decided to model the buildings that will add some functionality to the scenario; such as Chemistry Labs where there may be possible fires. As we have decided C++ after meeting with Mr.Can, I searched possible Ogre libraries that may be useful.

As we have to provide a prototype of program by the end of semester, we want to create some of the models by that time. Next week, I will work on Ogre and will try to create some basic drawings.
Duygu Atılgan:

This week I examined Ogre4J in more detail. Since it is quite a new project and may contain bugs that we would have to deal with; we thought that it would be risky to use it in our project. I searched for C++ network APIs compatible with Ogre. ACE, ENET and Raknet are three of these. I plan to search about those (especially Raknet since it is documented better related to others) in detail next week. Raknet is also good for voice communication with the speed 2 KB per second for 16 bit audio. It is a nice feature in the scope of our project. For the requirements analysis report we prepared simple use case, activity and class diagrams of the project which helped us to improve the scenario.

For the next week, I intend to study about Raknet and Ogre APIs since we aim to start implementation as soon as possible.