

ORION®

This week, our web page became available at www.ceng.metu.edu.tr/~e1298215, in Ergin's METU CEng account. It will be moved to www.senior.ceng.metu.edu.tr/orion as soon as the host becomes available.

Eren YILMAZ

In the beginning of this week, we selected some new concepts to examine, and I chose HDL, Hardware Description Language. In the days Monday, Tuesday and Wednesday, I conducted searches over the Internet and found some resources about HDL. However, these resources drove me into confusion. I am not an expert in hardware field, and I do not know the languages I found, therefore I could not end my examination with a complete conclusion. The following is what I concluded (incomplete):

There are two industry-standard HDLs. One is VHDL, the other is Verilog. These are used very common in the market. Sometimes these languages are used together in applications. In either standard, we need to learn extra programming language and need extra compiler/interpreter integration to our application. These are time consuming things that seem not to be good for our project. However, the timing in the digital circuit components is well simulated in these languages, and that seems as the biggest problem in implementing the circuits in Java classes.

Mehtap Ayfer PARLAK

This week, Xilinx, the design implementation software is searched roughly. Since it is a huge application which has many facilities, it will be analyzed thoroughly next week. Xilinx is also the name of the company which offers many products and services to ensure PLD designs enable time to market advantage, design flexibility and system future proofing. The Xilinx portfolio includes both CPLD (Complex Programmable Logic Device) and FPGA (Field Programmable Gate Array) devices. An FPGA is a regular structure of logic cells or modules and interconnect completely under the designer's control. This means the user can design, program and make changes to his circuit whenever he wants. Xilinx presents two choices to the users for designing their circuit. First one is the traditional schematic capture

which allows designers to graphically describe a circuit. (This week only schematic capture was examined and its properties were added to literature survey report.) The second way of designing circuits is the language templates of Xilinx. It has language templates of both the Verilog and VHDL hardware design languages. Thus I obtained some information about HDL, Verilog and VHDL in order to understand the components of Xilinx.

M. Ergin SEYFE

After our first meeting, we discussed the meeting and decided the things we need to do in one week. Afterward, we divided the jobs to every team member. İlgin and I searched the SPICE; spice netlist, programs that use spice as a kernel and programs that automatically generates schematics from raw spice input files. In other words we made a research about spice and tried to answer questions like why, where and how spice is used in programs. Meanwhile, we examined the program '5SpiceAnalysis' which creates spice output files (spice netlists) in simulation mode. Also there is an application 'QUINTICS', which draws circuits automatically from spice input files. This application is commercial and there is no trial version so I could not examined this kind of applications.

Moreover, I collected all literature survey reports and constructed a table, which has columns for programs and rows for features. Then I decided which of these features would be in our project. I also examined the Java and C# programming languages and also Eclipse and NetBeans Java development tools.

İlgin YARIMAĞAN

This week I mainly focused on examining SPICE (Simulation Program with Integrated Circuit Emphasis) a general-purpose circuit simulation program for designing both digital and analog circuits.

My studying process began with obtaining general overview about the SPICE program. I mainly focused on the part of SPICE that handles digital circuit design since analog circuits are beyond the scope of our project. First I downloaded documentation about SPICE and discovered that the main advantage for using SPICE is that changing a value and seeing the effect is very quicker compared the schematic circuit drawing. Using SPICE users will be able to modify the circuit and see what happens in seconds.

After getting a general overview, I downloaded a SPICE program called '5SpiceAnalysis' and examined the program by designing some basic digital circuits. (I didn't exactly focused on the analog part.) After drawing a basic digital circuit and ran the simulation I observed

that at the reports section of the simulation, the 'SPICE Netlist' of the circuit is shown which could be used for the SPICE input file of the circuit. I concluded that this could be a very useful reference for our project in the sense that automatic generation of the SPICE netlist of the circuit from the schematic drawing of the circuit. Also automatic generation of the circuit schema from the SPICE netlist would be a very useful feature for users of our application in the sense that generating a circuit from SPICE instead of drawing complex circuit schemas.

Emin ÖZCAN

This week, firstly we distributed the responsibilities. Therefore, i have chose the design of our company web-page.

At the beginning, i search a compatible web-page design language. As a result, i decided to use Java Script and HTML. Also i decided to use Macromedia Dreamweaver as a designer.

Then i started to doing researches about Java Scripts. I found a site, www.dynamicdrive.com

This site contains a lot of Java Script code. I took some scripts codes from this site. After finding the required script code, i started to design the project site. By using Macromedia Dreamweaver, and adding the script code to them, base line of the site was established. It will be developed later. Finally, we put the site into the net at the address

www.ceng.metu.edu.tr/~e1298215.