

CSE293 Computer Science & Engineering Design Laboratory

PDA and/or Cell Phone Projects

Two of the rapidly emerging technologies with programmatic interfaces are PDAs (e.g., Palm pilots) and cell phones. In PDAs, the wide range of software available (from gaming to email), along with the wide variety of features and capabilities has dramatically increased their functionality over the past 5 years. Cell phone technology has also taken quantum leaps, incorporating features such as web browsing, email, digital cameras, video phones, multi-player gaming, etc., in the last few years. There has also been cross over between the two, with each beginning to offer the other's capabilities (i.e., PDAs that are cell phones and cell phones with PDAs built in).

Programmatically, it is possible to integrate the different technologies of PDAs and cell phones into a single environment. The options for projects seem endless. Both PDA and cell phones involve the concept of embedded computing - where the computing is done on another platform (i.e., PC) and then after testing, the software can be downloaded into the device for further testing. Java and its embedded and mobile technologies (Sun One Studio - Mobile Computing) is one of the available technologies. I would encourage you to consider and propose projects with these new technologies which will give you experiences that aren't typically found in a normal computer science & engineering curriculum/program. I would suggest limiting teams to 2-3 individuals.

The intent of the major design experience is to have you work on a real world project. Thus, as part of this course, you will be required to consider the following realistic constraints and their impact and effect on your project: economic, environmental, sustainability, manufacturability, ethical, health & safety, social, and political. In a software project, economic issues are related to the cost of the software, which you can try to estimate during the semester, and at the end of the semester, you can give an estimate of the retail cost.

Remember, all of the projects require you to utilize UML for design and documentation. In addition to our use of this equipment in the course, we also intend to utilize the projects as part of demonstrations at the various open houses that are held at UConn to recruit high-school juniors/seniors as college freshman.

As a major design experience, you will be asked to help assess the way that this course meets the objectives within our CSE programs. Specifically, at periodic times during the semester you will be queried for input. This will include which courses were most useful and critical for this course, and for each of those courses, which topics were most relevant. At the end of the semester, you will be solicited for suggestions for improvement.