Abstract

Capstone Design
Commercialization and Internationalization

9th International Conference and Workshop on Ambient Intelligence and Embedded Systems (AmiEs-2010)

The Electronics and Telecommunications (EET/TET) Program at Texas A&M University is continuing to develop its real-world undergraduate capstone learning experience. Currently, the two-semester capstone projects require groups of three to four students to form teams (startup ventures), identify a problem or opportunity, secure an external sponsor and select a technical advisor (faculty member). In the first semester, the teams learn and use project management techniques and tools to plan the project and complete an initial design. In the second semester, the teams implement, test and validate, document, and present a fully functional prototype that meets all performance requirements. All projects are product oriented and generally will include embedded hardware/software development and integration which includes sensors, signal conditioning, algorithm development, wireless/wired communications and specialized packaging of the prototype. Students can transfer intellectual property/know-how to the University to facilitate licensing to the private sector for commercialization of their work. Formal procedures allow team members to be identified as inventors and thus participate in any royalties accruing from the licensing activity.

The EET/TET Programs are now looking at two areas of expansion for the capstone projects. The first is developing more opportunities for commercialization of the student-generated IP. The second is to incorporate an international flavor to the capstone experience. Dr. Jay Porter, Program EET/TET Program Director and Dr. Joseph Morgan, Mobile Integrated Systems Laboratory Director will outline the capstone design project as it currently exists and then provide an overview of activities underway to promote a higher level of licensing, commercialization and entrepreneurship. In addition, the faculty team will present a plan for a proof of concept pilot effort to successfully undertake an international capstone project at the undergraduate level.