

STUDENTS DEVELOP HIGH-TECH SOLUTION TO LOCAL PARKING PROBLEM

By Renee Parilak

If you have lived in the Shenandoah Valley for more than a decade, the names Brian S. Cowger, Dusty L. Moyer, James M. Price, and Christopher P. Wilson may sound familiar to you. These four college students were born and raised in the Harrisonburg area and are currently seniors at James Madison University in the Integrated Science and Technology (ISAT) Department. To fulfill their ISAT senior thesis project requirements, the four long-time friends designed and developed a high-tech system that could help solve a problem that affects every driver on the JMU campus: Parking.

The “SmarterParking™” system that Cowger, Moyer, Price, and Wilson have developed tracks uses RFID technology along with a robust data storage and management system to track the number and type of vehicles entering a parking area. The information is obtained by automated scanning of a Radio Frequency Identification (RFID) tag attached to a vehicle as it enters or exits a parking area.

The data stored on each RFID tag allows the system to determine what type of parking permit (Faculty, Resident, Commuter, etc.) is on the vehicle. By tracking the number of vehicles of each type that are currently in the parking lot, the SmarterParking™ system can determine how many spaces of each type are available. The young entrepreneurs developed a website that allows drivers to determine the availability of spaces in each parking area prior to traveling to campus. This can decrease congestion in the vicinity

of full parking lots by rerouting traffic to parking lots or garages with parking spaces available. The system can also be set up to alert authorities if an unauthorized vehicle enters a restricted parking area.

In addition to the internet-based notification system, the four seniors have designed software that allows registered users to automatically receive parking availability alerts by way of a unique notification system.

The SmarterParking™ system developed by Cowger, Moyer, Price, and Wilson is widely applicable, as it can be easily customized for implementation in any parking system like public city lots or private business parking garages.

Christopher Wilson, a graduate of Harrisonburg High School, explains that “[Our SmarterParking™ system] incorporates technology into an easy management system to help solve a growing problem. This community has expressed interest in technological growth and this system uses a wide variety of [high-tech] components.”



(Left to Right) Brian S. Cowger, Dusty L. Moyer, Christopher P. Wilson, and James M. Price are Harrisonburg residents and long-time friends that have developed a high-tech solution to a local problem.

Brian Cowger and James Price, graduates of Turner Ashby High School, attribute their interest in computer programming to a local high school teacher. "It was because of the instruction and guidance that I received from Mrs. Curl that I decided that I wanted to do something related to technology and computing," Cowger said.

Price praises Dr. Anthony A. Teate, the group's senior project advisor, for his contribution to the success of their system. Price said, "Every time we meet with Dr. Teate, we all leave the meeting more excited and determined."

Local residents are encouraged to attend the presentation of their SmarterParking™ system at the ISAT Senior Thesis Project Symposium. According to Dusty Moyer, also a graduate of Turner Ashby High School, "It is important for Harrisonburg residents to hear about our project because as four life-long residents, we are excited to begin our professional career helping and advancing the community we have grown a part of."

Cowger, Moyer, Price, and Wilson will be presenting their system on April 21, 2006 at 10:45am in the nTelos room (rm 259) in the ISAT/CS building at James Madison University. Please contact Fasha Strange at 568-2790 for more information about the ISAT Senior Thesis Project Symposium.