

2008

***BizTechReports.Com***

**Editorial Director**

Lane F. Cooper

**Managing Editor**

Stephen Lee

# **Phoenix Union High School District Tracks Wandering Students with Mobile Solution**

“Tardiness and delinquency emerged as a real problem at one of our larger campuses.”

-- Donald Fournier, Student Information Specialist

## Phoenix Union High School District Tracks Wandering Students with Mobile Solution

### Summary:

*Walking into class after the bell has rung is as time-honored a tradition for many high-school students as the prom. The temptations to be late are many. The hallways are chock-full of buddies that just have to say "hi!" There are after-school plans to make...all way more important than the chem quiz that starts next period. And then there are the reasons that are not fit for print.*

*All of these, however, translate into wasted time and disruption to the general learning process as kids interrupt the class with late entries and teachers take time away from the lesson plan to redirect late arrivals to the principal's office or sign them up for detention. Worst still are the cases when kids wander the school grounds and cut class altogether.*

### School district looks at problem in new ways

Delinquency of this sort is one of the routine barriers to learning that schools—especially high schools—across the country must deal with. And it is a challenge that the Phoenix Union High School District in Arizona has decided to tackle with the sophisticated deployment of mobile technology.

Founded in 1895, Phoenix Union today has 11 full-sized campuses that collectively educate some 25,000 students. The average school has a student body of more than 2,000—a group large enough to make any kind of an up-tick in tardiness a serious issue.

“Tardiness and delinquency emerged as a real problem at one of our larger campuses,” says Donald Fournier, student information specialist at Phoenix Union High School District. “One of the assistant principals contacted us to see if there was anything that could be done to improve the process for getting students to class on time.”

At the time, the most common technique for dealing with the issue was to have the security teams perform a “sweep” of the halls right after the bells would ring.

“They would gather kids that were late to class and run them through a centralized point...issue them a pass and then let them go back to class...with detention citations,” says Fournier. “The problem was that the number of students they were dealing with was rising dramatically, and it was taking longer to get them all through the recording process.”

The sweeps grew from gathering 20-30 kids between classes to between 100 and 200 students who were late for class. The logistics of procedures that made sense when only a handful of students were involved were not viable as the volume increased. By the time kids were sent to class with their detention documents, as much as half of the class would be missed. As a consequence, the school cut back on the sweeping practice.

It did not take kids long to see the let up in hallway enforcement. “And that made the problem even worse because students realized that they were not going to get picked up at all,” says Fournier.

One of the assistant superintendents of the school district tasked Fournier for help with applying mobility technology to address the problem.

### **Mobile devices offer a solution to the problem**

“So we built an application for handheld personal digital assistant (PDA) devices that could be carried by the school security team,” Fournier says.

Using Microsoft Windows Mobile technology, the system was designed to let security personnel capture information about students during hallway sweeps, correlate data with information in the student information system, and then process information so that an appointment would be made for the student at detention. The design called for a robust mobile client platform because a significant amount of work had to be performed on the device itself.

“While plans are currently in place to have a 100-percent wireless LAN footprint in all schools in the district, that connectivity is not yet available,” explains Fournier. “Whatever we designed had to be able to be docked at some point in time...so that information could be exchanged between the main databases and the devices. That is why we decided to implement the system on Pocket PC devices from Dell. We selected Windows Mobile as the platform of choice because of the database connectivity with our SQL Server (database).”

The PDAs are equipped with a camera and barcode scanner that is synchronized with a “thin” version of the school’s student database. So here is how the new “hallway sweep” process works.

- Students caught wandering halls after the bell are asked to produce their student identification cards. The multipurpose cards – which are used for everything from managing the subsidized lunch program to paying for student-discounted trips on the city transit system – feature a barcode.
- The PDA scans the barcode, which produces a student database record that includes a photograph of the student.
- If the photo on the card matches that of the record and the student, then the security guard can make the decision to issue a detention appointment right there on the spot.
- The same can be done if a student does not have their ID.

The security guard can confirm identity by looking at the database image of the student on the PDA. Within a minute or two a student is put on his or her way to class without having to go through a centralized processing center. Meanwhile, the next time the security officer docks the

device, it synchronizes with the student records database to ensure that the detention list is updated.

Among the many positive unintended consequences of this technology rollout has been the ability to better-control who is on school property. If the image on the database does not match the student holding the card, it is a strong indication that an unauthorized person is on campus and appropriate action can be taken immediately. The PDAs also serve as a good way to document graffiti and other vandalism, as well as to expedite action during emergencies.

“We had a student get hit by a car while crossing the street from one of our schools. We immediately called emergency services, and by scanning the student’s ID card, we were able to get emergency contact information for the parents and call them simultaneously. In this case, the parent was able to rush over to the accident site and ride in the ambulance with the child,” says Fournier.