



## Windows Mobile Customer Solution Case Study



## Nationally Ranked School District Improves Efficiency, Community with Mobile Solution

### Overview

**Country or Region:** United States  
**Industry:** Education—Primary and secondary schools

### Customer Profile

Irvine Unified School District (IUSD) in California has nationally recognized schools and comprehensive programs in academics, the arts, and athletics. It educates more than 25,000 students.

### Business Situation

School administrators wanted to have access to student data—including photos, class schedules, and emergency contact and medical information—even while out on campus and away from their offices.

### Solution

Built on top of the Microsoft® .NET Compact Framework, AERIES Mobile links the district's AERIES Student Information System with Windows Mobile® devices.

### Benefits

- Improves emergency preparedness
- Helps maintain student attendance rates
- Helps teachers oversee students while off campus
- Creates districtwide administrative efficiencies

“Now if a student isn't where he or she is supposed to be, we can pull out AERIES Mobile and check pictures and information.... So that kind of thing happens less and less as use of the device ... spreads.”

Mark Reider, Director of Information Services, Irvine Unified School District

With nationally recognized schools and comprehensive programs in academics, the arts, and athletics, Irvine Unified School District (IUSD) educates more than 25,000 students. In late 2005, the district began to search for a mobile solution that would give administrators access to student data while away from their offices. To meet this need, the district deployed AERIES Mobile from Eagle Software. Based on the Microsoft® .NET Compact Framework and Microsoft SQL Server™ 2005 Compact Edition database software, the application runs on any Windows Mobile® device or smartphone and is integrated with the district's AERIES Student Information System. The solution helps the district maintain healthy student attendance levels and increases the sense of community preparedness in case of emergencies. It helps staff oversee students while away from classrooms, saves time, and reduces paperwork.



**“It typically takes less than 30 seconds to sync a device.... For database connections our AERIES Mobile application uses two-way encryption and Microsoft SQL Server Compact Edition database software.”**

Camden Iliff, Director of Student Systems Development, Eagle Software

### **Situation**

Irvine Unified School District (IUSD) in California educates a diverse population of more than 25,000 students in 22 elementary schools, 5 middle schools, 4 comprehensive high schools, and 1 continuation high school. IUSD has nationally recognized schools, student performance well above state and national comparisons, and comprehensive programs in academics, the arts, and athletics.

As part of its comprehensive technology plan, IUSD wanted to ensure that authorized personnel had remote access to student information by using a PDA or other wireless device. “Assistant principals in several schools wanted administrators to have access to student data even while out on campus and away from their offices,” says Mark Reider, Director of Information Services at Irvine Unified School District. “The district thought it was important for administrators to be able to approach students, find out where they were supposed to be, and to have this information right at their fingertips, rather than needing to take a student back to the office to check. Secondly, we felt that we needed remote access to student data for disaster preparedness, in case of emergencies.”

### **Solution**

In late 2005, school district administrators began to search for solutions and make proposals to the information services staff. “At the time, there weren’t many products readily available, so we ventured around looking for variety of things,” says Reider. One contender ran on both Palm operating system devices and Windows Mobile® devices.

“One of our administrators downloaded the product and asked us to set up a test interface between our student information system and a Palm device,” says Reider. “But

as we proceeded to test it over the course of a couple of weeks, we ran into some technical difficulties, including that it took several hours to upload photos and sync data onto the device.”

As district administrators looked for more efficient alternatives, they began to discuss the district’s needs with Microsoft® Certified Partner Eagle Software. The company is a leading developer of school administrative software and student information systems in California. Backed by more than 40 years of education experience, Eagle Software serves more than 3,300 public and private schools with its Windows®-based AERIES Student Information System. IUSD had used the AERIES Student Information System since 1999.

Reider says, “We began talking with Eagle Software about needing to have our student information system data on a PDA type of device, and they were very interested in creating something to meet that need.”

Director of Student Systems Development at Eagle Software, Camden Iliff, says, “At the time Irvine Unified brought this to us in January 2006, we had not yet extended our application to mobile devices, but we did have extensive experience writing Windows and Web applications with the Microsoft .NET Compact Framework.” Eagle Software began to work on an application and soon discovered that it could develop a program very easily. “We actually had a test product to them within four weeks,” says Iliff.

Built on top of the .NET Compact Framework, AERIES Mobile links the AERIES Student Information System directly with Windows Mobile devices. “With other products the district tested, administrators had to wait a long time for the application to create text files during synchronization, because the programs were built generically rather than

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Mark Reider, Director of Information Services, IUSD

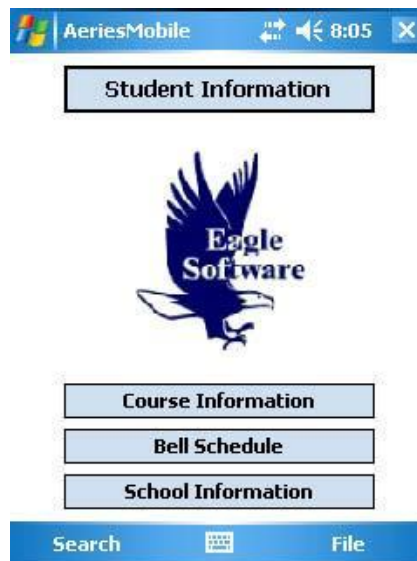


Figure 1. AERIES Mobile home page

for the AERIES Student Information System. “We didn’t have that limitation. Because AERIES Mobile is built from the ground up to link directly with the AERIES SQL databases, it typically takes less than 30 seconds to sync a device,” Iliff says. “And security is very robust. For database connections, our AERIES Mobile application uses two-way encryption and Microsoft SQL Server™ Compact Edition database software remote data access with everything done through Secure Sockets Layer,” says Iliff. “If a person fails to log in within three tries, the entire database is deleted from the device.”

The direct link to the AERIES Student Information System also means that district administrators can easily manage user permissions inside SQL Server 2005 Compact Edition with preexisting Active Directory® service accounts. Devices can be synchronized with district databases by connecting with a cradle, through any Internet connection, or through a wireless

telephone connection. Administrators can choose whether to sync the device with a single school or with the entire district. Each synchronization includes updates to student information, as well as any updates in AERIES Mobile software.

The AERIES Mobile application contains student demographics and photographs, emergency contact information, student medical history, class schedules, current attendance, discipline and counseling history, locker assignments and combinations, class lists, and bell schedules (see Figure 1). If administrators use a telephone-enabled mobile device, such as a Windows Mobile smartphone, they can place phone calls by clicking on contact numbers within the AERIES Mobile application.

Because IUSD uses Dell hardware, it initially distributed Dell Axim X50 (and later X50V and X51) handheld devices. In February 2006, the district began to pilot the devices at two high schools. Soon there was a strong demand to roll out the devices more widely. “A few weeks into our pilot, I gave a demo of the devices with AERIES Mobile to local emergency services workers—fire and police authorities—and parents,” say Reider. “Seeing the many applications of the device, they immediately encouraged us to roll out the devices as widely as possible.” Because of its earthquake-prone location in Southern California, the district can subsidize the device’s costs by using its emergency preparedness funds, which makes out-of-pocket costs negligible. “Both of these factors enhanced demand for the ARIES Mobile devices tremendously, and it has grown steadily since.”

So far, IUSD has deployed nearly 100 devices across its 32 schools. Each school has at least one device, and each high school typically has between 6 and 10 devices. “We are reevaluating our emergency plan and

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Mark Reider, Director of Information Services,  
Irvine Unified School District

finding new uses for the AERIES Mobile devices all the time as their role on our campuses expands.”

### Benefits

Administrators and educators have found numerous uses for the AERIES Mobile application, all of which contribute to a more cohesive, successful, organized school district. “Administrators use AERIES Mobile devices out on campus, for lunchtime supervision, after-school activities, and nighttime athletic activities. Teachers have been using it for field trips, to have student contact information with them,” says Reider. Benefits of the solution include an increased sense of preparedness in the event of a disaster. The solution has helped to maintain and improve student attendance; teachers can more easily oversee students while away from classrooms; and the devices invariably help the district to save time and cut down on paperwork.

#### **Improves Emergency Preparedness**

Reider says that AERIES Mobile improves the feeling of community and preparedness in the event of an emergency. “In the past, it was very haphazard in terms of how student information would get out of the buildings in the event of a disaster. We were in charge of all these kids, and how are we going to know who to release them to? I’ve got 600 kids and can’t remember 600 faces,” he says. “We don’t have to do that anymore. We can feel a little more secure in the knowledge that we have a way to track students and account for all of them.

“That’s always been a big concern—to be able to ensure the safety of everybody in an emergency—and AERIES Mobile has given us a way to do that that we didn’t have before,” Reider says.

AERIES Mobile has also been a key resource when school administrators try to sort out other types of emergency situations. “The

other day we had a student in crisis on a weekend and needed to quickly contact the parents. AERIES Mobile enabled us to do this in the most efficient manner possible,” says Reider.

#### **Helps Maintain Healthy Attendance Levels**

Reider credits AERIES Mobile in conjunction with the AERIES Web portal for parents with improved attendance. “Word gets around pretty quickly that students aren’t going to be able to evade administrators quite as easily as before. For this reason, parents especially praise AERIES Mobile.”

Although in the past there were “plenty of incidents” where students were off campus or out of the classroom, when they weren’t supposed to be, the number of these incidents has lowered with the use of AERIES Mobile. Reider says, “Now if a student isn’t where he or she is supposed to be, we can pull out AERIES Mobile and check pictures and information. If it doesn’t add up, there will be consequences. So that kind of thing happens less and less as use of the device—and AERIES Web portal for parents—spreads.”

#### **Helps Teachers Oversee Students While off Campus**

AERIES Mobile has helped improve teachers’ sense of security while away from classrooms. Says Reider, “Elementary schools still love to take field trips, and AERIES Mobile makes teachers feel better about taking 60 or 90 kids to the zoo. It’s better than carrying around a stack of emergency cards and hoping that they’re up to date.”

A teacher at one of the district schools says, “I had Aeries Mobile on a field trip when a girl got stung by a bee and was showing signs of anaphylactic shock. I was able to easily provide the medical personnel with information regarding her medical history and

## For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: [www.microsoft.com](http://www.microsoft.com)

For more information about Eagle Software products and services, call (888) 487-7555 or visit the Web site at: [www.aeries.com](http://www.aeries.com)

For more information about Irvine Unified School District products and services, call (949) 936-5000 or visit the Web site at: [www.iusd.org](http://www.iusd.org)

allergies to medications. I was also able to contact her mother on her cell phone to apprise her of the situation. I would not have had all that information on my hip if we had to bring all the student emergency cards."

### **Creates Districtwide Administrative Efficiencies**

The district has found many efficiency gains associated with the use of AERIES Mobile. One teacher recently used a device at a parent-teacher conference instead of printing out grades and student achievement information. "We're trying to eliminate as much paper as possible, and AERIES Mobile helps us to both save paper and cut down on time. We have less need to print things since the information we need is right at our fingertips," says Reider.

Reider concludes, "Eagle Software has been very responsive in ensuring that the product is meeting our needs, and indeed it has saved the day many times. We've tested it on smartphones, and we'll add these to the mix soon. So if an assistant principal wants to call a parent, he or she can pull out a smartphone, bring up AERIES Mobile, tap on the phone number, and the call is made. We're also working on getting devices to the health services team that serves the 32 schools. These devices are very handy to have in use wherever one might need student data."

## Windows Mobile

Windows Mobile brings the power of the Windows® operating system to mobile devices, helping businesses and their mobile employees stay connected while on the go. Windows Mobile runs mobile versions of Microsoft programs, including Microsoft Office Outlook® Mobile, Internet Explorer® Mobile, Pocket MSN®, Windows Media® Player Mobile, and Microsoft Office Word Mobile, PowerPoint® Mobile, and Excel® Mobile. With Windows Mobile, information workers get powerful software combined with the familiarity of Windows. Combined with available service plans and connectivity options, Windows Mobile-based devices, available from 42 device makers and 68 mobile operators in 48 countries, can be used to make calls, send e-mail and instant messages, surf the Web, and access critical business information even when users are away from the office.

More information about Windows Mobile can be found at: [www.microsoft.com/windowsmobile](http://www.microsoft.com/windowsmobile)

### Software and Services

- Windows Mobile

### Hardware

- Dell Axim X50, X50V, X51
- Windows Mobile device
- Windows Mobile smartphone

### Partners

- Eagle Software