

Biometrics Use Cases in Schools (K-12) in the United States

Desert Sands Unified School District, La Quinta, California

Interview and report conducted by: Optimum Biometric Labs (Irvine, California, 2011), www.optimumbiometrics.com
Use case study report published on Swedish National Biometric Association: www.biometricassociation.org

School District Snapshot (2011)

- Desert Sands Unified School District, DSUSD
- Based in La Quinta, California
- <http://www.dsusd.us/dsusd>
- 34 schools (20 Elementary schools, 7 Middle schools, 7 High schools)
- 2,384 Employees/Faculty
- 28,687 students enrolled

Use Case One Snapshot

- Biometric application: Biometrics for School lunch lines (K-12 food service environment)
- Biometrics used: fingerprint
- Use case period: installation started as trial and now is permanent
- Number of users: Approx. 400 students (out of 820)
- Products and suppliers: PAD+ 3-in-1 Input Device from SL-Tech, School-Link Technologies, <http://www.sl-tech.net>

Yesterday's Challenges and Goals

For the Desert Sands Unified School District, DSUSD, the idea of applying biometrics for the school lunch lines came from a great combination of requirements and goals several years ago. They wanted to eliminate identity fraud by using cutting edge technology in order to boost PR and at the same time increase convenience and help students that forgot their student ID card. The previous identification method was based on the traditional student ID card and PIN code.

Today's Result

Compared to the traditional identification methods used previously, the advantage with DSUSD biometric solution for the school lunch lines is versatile: quicker lunch service since each ID transaction is performed faster, minimized potential fraud since the person needs to be physically present, and no need for students to remember their PIN number or bringing their ID card. (Reporter's note: we could feel the hightech-ness factor in the air when we entered the beautiful school district's HQ and its surrounding area in the all fresh and new Palm Desert and La Quinta).

The school lunch system is comprised of a server software and several scanners (model: PAD+ 3-in-1 Input Device from SL-Tech) and serve 820 students of who around 400 have opted in to the biometric option. Here is how it works in short: after selecting a meal a student scans his/her finger on the input device which simply performs a one-to-many match (identification in its list of templates) and if matched it sends the student PIN to the back-end software for processing, the input device then receives the information. The biometric identification process takes 1-2 seconds.

Privacy is ensured by storing only the scanned templates on the database and not the fingerprint images.

Biometrics Use Cases in Schools (K-12) in the United States

Desert Sands Unified School District, La Quinta, California

Interview and report conducted by: Optimum Biometric Labs (Irvine, California, 2011), www.optimumbiometrics.com
Use case study report published on Swedish National Biometric Association: www.biometricassociation.org

Those students who have not opted in for the biometric program can still enter their PIN number or swipe their ID card into the same input device. In terms of availability, reliability, and performance requirements, the complete 3-in-1 solution system must be operational and perform as intended during normal cafeteria hours which is around two hours per day.

Future Improvements

For the DSUSD biometric lunch system, Marta Shand, Nutrition Services Site Manager, would like to see improvement in decreasing the time and labour to setting up and managing the system by automatic synchronization of the records in order to eliminate the need for manual synchronization between the scanners.

Additionally, Optimum Biometric Labs suggested monitoring of system availability and performance to improve the biometric lunch system by using the following features:

- Sending alert notifications to the system administrator as soon as an input device or any other hardware and software component fails or not performing as expected. This will result in minimizing potential downtime and maximizing quality of service and user experience.
- Tracking relevant system metrics in order to measure the performance on overall and on individual scanner level for easier maintenance and optimization of the system along with more efficient user instructions and management (for example: re-enrollment due to template aging or other factors).

Use Case Two Snapshot

- Biometric application: System Tracks Students Riding Buses
- Biometrics used: fingerprint
- Use case period: Trial started October 2010, ended June 2011
- Number of users: 84 students per day on 2 buses
- Operational hours: morning and afternoon shifts, 2 hours per drive and biometric device
- Products and suppliers: Biometric Observation Security System (BOSS) from Global Biometrics Security
- Video link: <http://www.kesq.com/news/25832887/detail.html>

Result: For the biometric school bus system, the software and hardware is in the development stages and needs additional fine tuning to operate as desired. The district expressed an interest in the integration of this program with routing software. The ultimate goal of the system is to enable the school administration to know where the kids are, where the buses are, and to maximize bus usage efficiency.