Two sorority houses at the University of Central Florida (UCF) in Orlando have installed Schlage biometric hand readers to heighten security for 200 sorority sister residents and staff. Hand readers automatically take a three-dimensional reading of the size and shape of a person’s hand and verify an identity in less than one second. Because they operate outdoors, hand readers were selected over fingerprint readers.

“Both the Alpha Delta Pi and Kappa Delta sorority houses were experiencing problems with unauthorized students from the university coming into the houses at all times of the day and night,” says Jerry Ofstedal, Installation Manager for Sonitrol, the Florida dealer which installed the hand readers. “To eliminate the possibility of an unauthorized individual gaining access without a resident being present, the hand readers offer redundant access to the sororities. Each student must enter a PIN code and then present her hand in order to gain entry.”

Sonitrol originally installed a proximity reader with a magnetic lock at the front door to control access to each sorority house. The door would open when an authorized user presented an electronic key fob. However, it was discovered that electronic keys were being shared or provided to non-sorority individuals. Sonitrol then installed an additional outdoor access keypad so individuals would be required to enter a unique PIN code along with using the electronic key to gain entry. Unfortunately, it was determined that the PIN numbers were also being given out to unauthorized users, lessening the overall security level for the sororities.
If the goal of an access control system is to control where people, not credentials, can and cannot go, only a biometric device truly provides this capability to the end user. A card-based access system will control the access of authorized pieces of plastic, but not who is in possession of the card. And, as Sonitrol discovered with the two sororities, systems using PINs require that an individual only know a specific number to gain entry. But, who actually entered the code cannot be determined.

Ofstedal and Gabe Gomez, Operations Manager for Sonitrol, began testing various biometric options. The two most viable options were fingerprint or hand geometry systems. Both hand readers and fingerprint readers recognize people, not plastic cards. For locations with card systems, they provide an additional layer of higher security to vital entrances or doors, assuring that lost or stolen cards are not later used to access facilities. They assure that “you are you.” For locations not using cards, these biometric technologies are very easy to supervise since nobody forgets to bring their hands or fingers with them, and there are no hands or fingers for administrators to manage.

Hand readers and fingerprint readers cover 80% of biometric access control applications. They are complementary, as each meets specific needs in the market. However, each offers certain advantages depending on the situation.

Sonitrol found that hand readers handle any population volume with ease, while fingerprint readers tend to work better with smaller populations. With dramatically lower false reject and failure to enroll rates, the value of hand readers grows as the number of users and/or transactions increases. Not only do they keep the bad guys out, hand readers ensure the good guys gain access in any size application. This flexibility is why they cost a little more. So, it not surprising that in small applications with 50 or even 100 people, the inconvenience caused by the higher error rates of fingerprint readers is not a big deal. However, when 100 or more people create large numbers of transactions, it's a very big deal.

The fingerprint reader also was not suitable for outdoor use. The hand reader offered a weatherproof enclosure to ensure that the sorority houses would not experience downtime due to maintenance issues and abuse. Hand readers are typically the choice if the installation is outdoors or in harsh environments. The core technology of the unit lets it work in inclement weather, including temperature highs and lows.

And last, but not least, Sonitrol found that it is extremely easy to enroll people with hand readers, which have a miniscule failure to enroll of only 0.01%. This is very important when enrolling 100 or more people. The patience level for both user and administrator drops dramatically when constant exceptions must be made to accommodate those who can't enroll, not to mention the increased security risks.

After further testing, Sonitrol chose to go with biometric and readers at the two UCF sororities. They replaced the proximity readers and keypads with Schlage biometric hand readers and eliminated electronic key technology. Each of the installations took only a matter of hours, which included the enrolling of more than 200 residents and staff into the systems.

“Although the residents knew they could no longer pass on their electronic keys for friends to gain entry to the sorority house, they seemed very excited about the increased security protection that the hand geometry technology provides,” Ofstedal reports. “Users were a little nervous at first about placing their hands in the reader, but once it was explained that it was similar to ‘just taking a picture of their hand,’ they accepted the new technology.”
Sonitrol of Orlando expects to install many more biometric hand readers in order to provide the best security solutions to its customers. The benefits of biometric technology include unparalleled accuracy and reliability, true security, cost savings when compared to card-based systems, and fast, easy enrollment and use. The hand readers also integrate into existing systems and increase user convenience by eliminating cards.

The most critical factor in the success of a biometric system is user acceptance of the biometric device. There are biometric systems available today which economically meet the needs of almost any application. And, as costs continue to decline, justifying the use of a biometric is becoming a reality and necessity for more and more organizations.

Frost & Sullivan’s World Biometric Report determined that hand geometry readers (hand readers) continue to be the dominant biometric technology for access control and time and attendance applications. In fact, more people order hand readers for these applications than all fingerprint and face systems combined.

The University of Central Florida, UCF, is a metropolitan public research university located in Orlando, Florida. UCF is a member institution of the State University System of Florida, and is the second-largest university in the United States by enrollment. The University of Central Florida was authorized by the Florida State Legislature in 1963, and opened in 1968 as Florida Technological University. Although initial enrollment in 1968 was only 1,948 students, as of 2011 enrollment consists of 58,587 students representing over 140 countries, all 50 states and the District of Columbia. The majority of the student population is located on the university’s 1,415-acre main campus. The university offers over 225 separate degree options through twelve colleges and eleven satellite campuses throughout Florida.