



Company: Santa Clara County Crime Laboratory

Application: Evidence tracking

Area of Use: 4-story, 90,000 sq. ft. laboratory facility in Santa Clara, CA

RFID Supplier: Alien Technology®

Integrator: CIBER, Inc.

Status: Production

Frequency: 902-928 MHz

Range: 30 feet (Range is dependent on many factors)

Challenge:

- Allow criminalists and toxicologists to efficiently check evidence in and out of property lockers
- Laboratory analyzes 35,000+ pieces of evidence annually from multiple law enforcement agencies

Solution:

- All evidence is tagged with RFID
- RFID readers located in major passageways
- RFID tracking system links to the Laboratory Information Management System (LIMS) database
- Toolset includes:
 - Alien ALR-9650 readers
 - Disposable Squiggle® tags

Benefits:

- Efficient evidence tracking in expansive, multi-story crime laboratory
- Fast RFID readers allows laboratory staff to easily check-in/check-out evidence

CRIME LABORATORY SOLVES

EVIDENCE TRACKING CHALLENGE WITH RFID

Solving crime is no easy business. It involves disciplined law enforcement, a thorough investigation and collection of facts, and extensive evidence testing performed by well-trained teams of criminalists and toxicologists. With new advances in forensic science that include mitochondrial DNA sampling, crime laboratories have become the vital link in helping solve crimes, even decades old cold cases. The mystery now is how should a crime laboratory accurately keep track of all the evidence going in and out of its testing facility? A single piece of lost evidence could mean the difference between a solved—or forever unsolved—crime story.



CHALLENGE

While the Silicon Valley is not known for its high crime rates, it is known for its leadership in technology. To that end, Santa Clara County recently opened a new \$75.5 million, state-of-the-art crime laboratory in the Silicon Valley. With a staff of more than 60 professional crime solvers, this laboratory examines thousands of pieces of criminal evidence coming in from local, state and federal agencies such as area sheriff, police and fire departments as well as probation officers and the courts.

This 90,000 sq. ft., four-story complex is equipped to handle digital evidence, perform DNA typing, fingerprint analysis, ballistics and firearms testing, toxicology and drug testing, and assist with crime scene processing. The crime laboratory receives more than 35,000 pieces of evidence each year, according to Benny Del Re, Crime Laboratory Director.

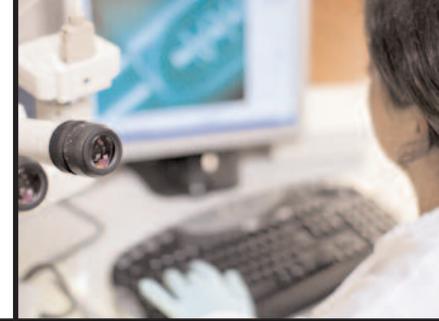
This new laboratory replaces a decades-old crime laboratory that was spread out among three separate buildings in Santa Clara County. In the old laboratory, much of the equipment being used to evaluate evidence was antiquated, slow and unreliable, which resulted in a backlog of cases as high as 600 at times, with a turnaround time for evidence as long as 35 days. The old laboratory used a manual bar code scanning system to track the flow of evidence.

SOLUTION

To provide ultimate efficiency in the crime laboratory, Laboratory Director Del Re worked with system integrator CIBER, Inc. to develop a fully integrated solution that includes a floor-to-floor, passive RFID evidence tracking system. Using RFID solutions from Alien Technology®, the laboratory can track and monitor the movement of evidence as criminalists and other staff members check it out of

CRIME LABORATORY SOLVES

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storage in the property lockers and take it to the various laboratories for testing.

“We wanted to find a better way than bar coding to track evidence as it traveled through the four-story laboratory,” says Del Re. “Our concern is knowing where any one particular piece of evidence is at any one time, and who it had been assigned to.” The CIBER team, familiar with the benefits of RFID in supply chain management, recommended using Alien RFID solutions to Del Re before the laboratory was even completed.

“We wanted to track the movement of evidence throughout the building in an innovative, efficient way,” says Del Re. “We are breaking ground by using RFID. We’re the first laboratory in the U.S. to do that.”

RESULTS

With the RFID system, the laboratory tracks movement of all evidence throughout its entire evaluation cycle. First, the evidence is brought in by law enforcement agencies that use a Web-based system to log it into the crime database. The RFID tracking system works alongside the Laboratory Information Management System (LIMS) already in use at the Santa Clara Crime Laboratory.

Once the physical evidence is at the laboratory, Del Re’s team attaches an Alien RFID Squiggle®

tag as well as a bar code to the evidence before it enters the first floor property room. The bar code is a backup system to the RFID. With both technologies in place, the laboratory has 100 percent accuracy in evidence tracking.

“Using RFID and bar coding is the best of both worlds,” says Del Re. “We have the efficiency and accuracy of RFID. With criminal evidence, we can’t afford mistakes.”

The team uses two different-sized RFID tags: A small one for evidence such as blood vials and a standard tag for all other evidence. The tag is affixed to all kinds of substances, including plastic bags containing tiny pieces of evidence as well as blood vial trays and even automobiles. It will need to withstand elements such as the below-freezing temperatures in cold storage.

The building currently has seven Alien RFID 9650 readers at checkpoints on every floor, located inside the property room and near the elevators. The staff and the evidence technicians use the checkpoints to confirm the evidence inventory as they check it out, move it to the laboratory, and return it to the property lockers. The tracking system reads the RFID identifier and acknowledges when it leaves the evidence locker on any given floor. By using RFID to monitor the “chain of custody” of the evidence, the laboratory can improve the efficiency and quality of tracking.

BENEFITS AND NEXT STEPS

The new laboratory equipment, along with its more efficient RFID tracking system will result in a quantifiable increase in process turn-around time. Multiple law enforcement agencies will also be able to access the evidence database, allowing the linking of evidence from crimes across different jurisdictions. And at any given time, the laboratory can locate a single piece of criminal evidence.



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*–Benny Del Re,
Santa Clara County
Crime Laboratory
Director*

