

**The state attorney office for Florida's 15th judicial circuit is now using EPC Gen 2 tags to track the locations of almost 18,000 files, as well as hundreds of employees.**

By Claire Swedberg

May 15, 2009—The [Office of the State Attorney for the 15th Judicial Circuit](#) in West Palm Beach, Fla., is saving approximately \$100,000 annually by installing an RFID-based tracking system for its felony case files within its four-story facility. The savings are the result of drastically reducing the time spent manually searching for the case files, according to Dan Zinn, CIO for the 15th Judicial Circuit office. Since the initial deployment in 2007, the office has upgraded the system to power the RFID interrogators via an Ethernet connection, as well as added dozens of readers and provided RFID-enabled badges for all of its employees.

The state attorney's office has about 21,000 active felony case files, Zinn says, which can travel at any given time from one room within the four-story building to another, and to the adjacent Palm Beach County Courthouse and back. Typically, one file or another would go missing approximately five times each day, and staff members would have to stop what they were doing each time, in order to find it. Felony files often need to be found immediately, in the event that, for example, they are unexpectedly needed in court. It was not unusual, Zinn says, for all 120 employees in the felony division to have to cease their work until a particular file was located. He had been considering RFID-based solutions to track the files' locations, he says, but when he initially investigated RFID technology, the files would have required active tags at a cost of about \$5 per tag.

Zinn put the plan aside, he explains, until Gen 2 ultrahigh-frequency (UHF) passive tags came onto the market, and "the price went from dollars to pennies." He then began working with systems integrator [SimplyRFID](#). Zinn's department began attaching a 1-by-4-inch paper label with an embedded [Alien Technology](#) EPC Gen 2 RFID tag to each folder used to hold a particular legal case's documents (see [Florida Prosecutor Uses RFID to Track Files in Real Time](#)). The integrator installed 18 readers throughout the office area, enabling it to track the movement of files

With the initial success of this limited deployment, says Carl Brown, SimplyRFID's president, the office then installed additional RFID readers flush against the ceiling, and also added sufficient antennas to cover the entire felony office area. Altogether, Zinn notes, this entailed installing 67 interrogators, resulting in a total of 117 read points. The interrogators installed for the expansion, [ThingMagic's](#) Astra, utilize a power-over-Ethernet connection. By avoiding the need to install an AC power line for each new, Brown says, the system ultimately made the deployment simpler and less expensive.

The 15th Judicial Circuit office has now also begun providing RFID-enabled badges to 350 individuals, including all employees in the felony and misdemeanor divisions, in addition to contractors. The badges are made from Zebra CR-80 size plastic cards with embedded Alien Technology EPC Gen 2 inlays, and the staff uses a Zebra P430i printer to create each card and encode a unique ID number to its RFID inlay. Each badge's unique ID number is linked to that employee in [InnerWireless'](#) PanGo software. In

this way, Zinn says, employees can determine in real time where a specific employee is located in the building.

"That can be a critical tool for finding an attorney," Zinn says, noting that lawyers can sometimes be called into court without notice. Determining their location, therefore, is often time-consuming for the office staff. In the future, he adds, the system will also allow the staff to determine which worker has which specific files.

Thus far, Zinn says, the office has tagged nearly 18,000 files, and the system allows workers to see the location of the files in real time, anywhere in the offices, by signing into the back-end system and viewing an icon on a floor map of the building on the computer monitor. The office still uses 1-by-4-inch paper self-adhesive labels containing Alien EPC Gen 2 RFID inlays. Employees utilize a [Zebra Technologies](#) printer-encoder to print and encode each tag with a unique ID number that includes a five-digit Commercial and Government Agency (CAGE) code corresponding specifically to the state attorney's office in West Palm Beach. In that way, if a tag from another organization using RFID file-tracking comes within the read range of an interrogator at the prosecutor's office, the reader will not recognize the ID number and will, therefore, not read that tag. The CAGE code also ensures that the tag's ID number will not duplicate the number of any other tag from a separate organization.

Data from the readers is transmitted over the Ethernet connection to the PanGo software, which then links the tag's unique ID number to such file data as the case number, names on the case file, and the history of where the file has been. The staff can then view the file's exact location on a map displayed on a computer screen.

The first deployment of approximately 18 readers, Zinn says, afforded the staff a granularity of about 20 feet for each tagged file within range of those readers. However, he says, that was not close enough for finding files in, for instance, an attorney's office, or between several cubicles that could contain hundreds of files. With the installation of additional readers, which began in July 2008, that granularity is now a matter of a few feet, and the entire felony division is being covered.

According to Zinn, the RFID system "is proving itself, day after day, as a valuable tool." When he has to take down the system intermittently to add more readers, he says, employees ask him when the system will be working again. "I would say we now have a realistic handle over the location of our files," Zinn states. The installation cost approximately \$100,000, he adds, and paid for itself in less than 18 months.