

CUSTOMER CASE STUDY

Linking Multiple Devices in Central Ohio Crimes Against Persons

THE ISSUES

- Digital evidence is central to many violent crimes cases
- Increasing volumes of digital data on multiple kinds of devices
- Complicated validation
- Communicating findings to investigators
- Limited examiner resources
- Stretched budgets

MAGNET FORENSICS TOOLS

- Speed and ease of use make it faster and easier to process large quantities of digital evidence than would be possible using other forensic tools
- Collaboration tools make it easier to share cases for review and completion
- Magnet software identified critical evidence that other tools had missed, making them a go-to for validation

Name: Det. James Howe

State: Ohio, U.S.

Investigation Type:

Computer & Mobile

“I love that you’re able to do multiple images... phones and PCs together ...I wouldn’t change a thing about it.”

BACKGROUND

Digital forensics is more than just important for the central Ohio region. While the area crime rate has dropped steadily in recent years, the region covers roughly 3,000 square miles, includes the greater Columbus metropolitan area, and has a population of more than two million, so it still sees about 100 homicides and roughly 600-700 violent crimes each year. Nearly all of those have some kind of digital element, making a digital forensics capability mission-critical.

15-year veteran James Howe began his digital forensics career performing examinations on mobile devices, and he says mobile devices still account for 90% of the examinations he does for the types of investigations his bureau performs. However, within the past year the range of other devices he examines has increased to include PCs and Digital Video Recorders (DVRs).

Currently a member of the Homicide unit, Det. Howe performs these digital investigations for his and other units in the Crimes Against Persons Bureau: not only investigating homicides, but also other untimely deaths including suicides and overdoses, rapes, child exploitation, assault and sexual assaults, robberies, and other violent crimes. The Crimes Against Persons Bureau investigators work on a rotating basis, with bigger and more complex cases assigned to those who have more experience.

Howe works closely with his bureau's nearly 70 detectives, including close to three dozen who specialize in homicide and about 20 who focus on assault investigations. Many of these men and women work shifts in conjunction with the patrol shifts. During any given week, that can mean Howe is examining between 7 and 12 devices.

Although units outside of the Crimes Against Persons Bureau, such as patrol or other jurisdictions, typically don't rely on Howe to process digital evidence, he says the warmer months can lead to increases in evidence volume, along with requests for evidence types that he doesn't see on a regular basis.



COLLABORATING ON DIGITAL INVESTIGATIONS

Building cases requires a close collaboration between Howe and the lead detectives who request digital forensic examinations on various pieces of media. The first step is for the detective to make a request for an examination on the device or devices. “We’ll go over make and model of the phone, figure out if we’ll even be able to get into the phone,” says Howe. “Then I’ll help them write the search warrant, which they’ll get signed, and then they’ll bring me the items. I’ll then execute the warrant.”

After imaging the device and analyzing its data, Howe also needs to ensure the lead detective understands the findings and their relationship to the case. “He or she and I will review what the findings were, and specifically what they’re looking for,” he explains. “Once they find the evidence they need, and the case is ready to be presented, then we’ll send the entire case off to the prosecution.”

WHY MAGNET FORENSICS TOOLS?

Howe first encountered Magnet IEF in training at the National Computer Forensics Institute (NCFI) in Hoover, Alabama in 2015. A program of the U.S. Secret Service, NCFI trains investigators and forensic examiners in how to conduct many kinds of investigations, from social media to mobile devices and networks.

NCFI also funds and disseminates digital forensics tools to agencies that cannot otherwise afford them—or the training that goes with them. The intent is not just to help the individual agencies, but also to help provide the Secret Service with secondary digital forensics resources, if needed.

“It just works. I don’t have to go through eight steps to make it work, where a Magnet Forensics tool does it in one. I can’t tell you how much easier that makes life.”

“If they get in a backlog situation or they need help, having been trained by them, you’re in a better position to assist them with any images or forensics that they need done,” Howe explains. “I’ve had a couple of cases with them. The majority of cases come from my own department, but I’ve had a few instances where they’ve needed stuff done, and I’ve been able to help them with the tools that [NCFI provides].”



At the NCFI, Howe was issued a copy of Magnet ACQUIRE together with Magnet IEF. This, he says, was a game-changer owing to the tools' ease of use, especially relative to other, competitive software he had been issued. "What I've liked about Magnet Forensics tools is they're simple to use," he says. "It just works. I don't have to go through eight steps to make it work, where a Magnet Forensics tool does it in one. I can't tell you how much easier that makes life."

Other software, Howe says, does a good job, but is "just hard to use. The ease of use is what makes the Magnet Forensics products better than anything else. Just being able to hand that off to [investigators] and not spend six hours just trying to show them how to use and find what they need, whereas you can just point and click."

Having also recently trialed Magnet AXIOM, Howe hopes that NCFI will soon offer it as part of its arsenal. "I love that you're able to do multiple images. I love that you're able to do phones and PCs together, different images. I wouldn't change a thing about it," he says.

The ease of use is what makes the Magnet Forensics products better than anything else.

VALIDATION IS A CORNERSTONE

Another important aspect of the newly issued Magnet Forensics software was that for the first time, it offered Howe the chance to validate his work. "I didn't have a good secondary tool," he says, citing competing tools' limitations in reporting or other critical features as reasons why. Because validation is a cornerstone of good forensic process, this shortfall was a serious one.

Now, Howe can run a forensic image through both Magnet IEF and the other forensic software to see if it pulls anything different. "I love being able to run an image that you've acquired with another tool through a different product, and just seeing what the results are," he says.

In particular, "[Magnet ACQUIRE] just does a great job with internet-related or browser or search history evidence," Howe says. "Most of the other leading tools pull that data, but none of them pulls it quite as well. People use their phones for everything. They're searching for everything on them."



USING MAGNET FORENSICS' TOOLS TO GO DEEPER

This ability came into play on two recent cases Howe worked. “An individual was robbed and murdered one night. We arrested the suspect after tracking him through a phone number. We seized his phone. I did the exam on the suspect’s phone using another mobile forensics tool. He had used an app that [the other software was able to] pull the information from.”

However, the app data wasn’t all that turned out to be relevant. “We ran [the phone’s image] back through [Magnet ACQUIRE] and [Magnet] IEF, and it pulled search history from the phone that I didn’t get through the other tool. It showed the suspect right after the homicide, conducting Google-related searches regarding details of the homicide, and prosecutors really liked that information.” The killer was later found guilty.

Magnet Forensics’ crucial role in Howe’s smartphone examinations demonstrates how the ability to validate evidence found with other forensic tools can improve solve rates and lead to more substantial cases.

In the second case, another jurisdiction approached Howe with a mobile device that contained evidence of contraband photographic activity. Using Magnet IEF, Howe was able to locate one contraband photo that no other tool had pulled. “I don’t know why none of the other tools had pulled it, but we were able to locate it using IEF. [We also found] search history, which didn’t show up anywhere else on any other tools that I used, [so it sparked] a child abuse image investigation.”

Magnet Forensics’ crucial role in Howe’s smartphone examinations demonstrates how the ability to validate evidence found with other forensic tools can improve solve rates and lead to more substantial cases. Today’s digital investigations are about more than recovering evidence, though. As Howe’s experience further shows, tools like Magnet Forensics software must also be easy enough to use to enable communication and collaboration with both technical and non-technical investigators. By offering these kinds of capabilities, Magnet Forensics software empowers investigators to build stronger cases.

SEE MAGNET AXIOM IN ACTION FOR YOURSELF

If you'd like to learn more about Magnet AXIOM and how it can help find evidence you may be missing with other solutions, visit magnetaxiom.com. While you're there, you can learn more about the product, request an in-depth personal demo from an AXIOM expert, and request a free 30-day trial version.

Learn more at magnetforensics.com

For more information call us at 1-844-638-7884
or email sales@magnetforensics.com

© 2017 Magnet Forensics Inc. All rights reserved. Magnet Forensics®, Internet Evidence Finder®, IEF®, Magnet™, AXIOM™, ACQUIRE™, Magnet. AI™ and related trademarks, names and logos are the property of Magnet Forensics and are registered and/or used in the U.S. and countries around the world.

