

# Digital Evidence and the U.S. Criminal Justice System

## Identifying Technology and Other Needs to More Effectively Acquire and Utilize Digital Evidence

Sean E. Goodison, Robert C. Davis, Brian A. Jackson

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**T**his report describes the results of a National Institute of Justice (NIJ)-sponsored research effort to identify and prioritize criminal justice needs related to digital evidence collection, management, analysis, and use. With digital devices becoming ubiquitous, digital evidence is increasingly important to the investigation and prosecution of many types of crimes. These devices often contain information about crimes committed, movement of suspects, and criminal associates. However, there are significant challenges to successfully using digital evidence in prosecutions, including inexperience of patrol officers and detectives in preserving and collecting digital evidence, lack of familiarity with digital evidence on the part of court officials, and an overwhelming volume of work for digital evidence examiners. Through structured interaction with police digital forensic experts, prosecuting attorneys, a privacy advocate, and industry representatives, the effort identified and prioritized specific needs to improve utilization of digital evidence in criminal justice. Several top-tier needs emerged from the analysis, including education of prosecutors and judges regarding digital evidence opportunities and challenges; training for patrol officers and investigators to promote better collection and preservation of digital evidence; tools for detectives to triage analysis of digital evidence in the field; development of regional models to make digital evidence analysis capability available to small departments; and training to address concerns about maintaining the currency of training and technology available to digital forensic examiners.

# Key Findings

## Tactical Issues

- Law enforcement attendees were unanimous in noting the considerable quantity of evidence analyzed by examiners and challenges in obtaining the necessary support, in terms of both funding and staffing.

## Legal and Courtroom Issues

- Both law enforcement and courtroom participants in our workshop noted potential difficulties with prosecutors not understanding elements of digital evidence. Judges, juries, and defense attorneys also have a stake in appropriate use of digital evidence. Of these, defense attorneys appear to be farthest behind the curve, but are likely to catch up quickly.

## Prioritizing Digital Evidence Needs

- The discussions of the panel identified 34 different needs that, if filled, could improve the capabilities of the criminal justice system with respect to digital evidence. Nine top-tier needs were identified through the Delphi process as highest priority.

# Recommendations

- *Educate prosecutors and judges.* Including prosecuting attorneys in federal training programs would give them a greater understanding of what data is necessary, reducing data requests and workload for examiners. Expanding these programs to include judges would help give them a better foundation in issues surrounding this type of evidence.
- *Enable first-responding patrol officers and detectives to be better prepared for incident scenes where digital evidence might be present.* Training on digital evidence handling and preservation at the academy level and as a part of investigator training would promote better evidence preservation.
- *Provide better prioritization and triage analysis of digital evidence given scarce resources.* Departments do not have enough personnel to process the volume of digital evidence, resulting in large backlogs. This situation would be helped by providing tools for detectives in the field to triage evidence and developing guidelines for digital evidence examiners to better prioritize their workload.
- *Develop regional models to make digital evidence analysis capability available to small departments.* Small agencies, in particular, lack resources for effective collection and analysis of digital evidence. Partnerships with larger departments in the area

could provide common resources available across regional agencies.

- *Address concerns about maintaining the currency of training and technology available to digital forensic examiners.* Digital devices and extraction tools change rapidly. Examiners need new tools and frequent training on new technologies to keep current.

## Topics

Court Staffing and Funding

Crime

Criminal Justice

Criminal Law

Cyber and Data Sciences

Law Enforcement

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