



**NIJ**

Special

**REPORT**



**Forensic Examination of Digital Evidence:  
A Guide for Law Enforcement**

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**Forensic Examination of Digital Evidence:  
A Guide for Law Enforcement**

**NCJ 199408**



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This document was prepared under Interagency Agreement #1999-IJ-R-094 between the National Institute of Justice and the National Institute of Standards and Technology, Office of Law Enforcement Standards.

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## Foreword

Developments in the world have shown how simple it is to acquire all sorts of information through the use of computers. This information can be used for a variety of endeavors, and criminal activity is a major one. In an effort to fight this new crime wave, law enforcement agencies, financial institutions, and investment firms are incorporating computer forensics into their infrastructure. From network security breaches to child pornography investigations, the common bridge is the demonstration that the particular electronic media contained the incriminating evidence. Supportive examination procedures and protocols should be in place in order to show that the electronic media contains the incriminating evidence.

To assist law enforcement agencies and prosecutorial offices, a series of guides dealing with digital evidence has been selected to address the complete investigation process. This process expands from the crime scene through analysis and finally into the courtroom. The guides summarize information from a select group of practitioners who are knowledgeable about the subject matter. These groups are more commonly known as technical working groups.

This guide is the second in a series. The first guide, *Electronic Crime Scene Investigation: A Guide for First Responders*, is available through the National Institute of Justice Web site at <http://www.ojp.usdoj.gov/nij/pubs-sum/187736.htm>.

The remaining guides in the series will address—

- Using high technology to investigate.

- Investigating high technology crimes.
- Creating a digital evidence forensic unit.
- Presenting digital evidence in the courtroom.

Because of the complex issues associated with digital evidence examination, the Technical Working Group for the Examination of Digital Evidence (TWGEDE) recognized that its recommendations may not be feasible in all circumstances. The guide's recommendations are not legal mandates or policy directives, nor do they represent the *only* correct courses of action. Rather, the recommendations represent a consensus of the diverse views and experiences of the technical working group members who have provided valuable insight into these important issues. The National Institute of Justice (NIJ) expects that each jurisdiction will be able to use these recommendations to spark discussions and ensure that its practices and procedures are best suited to its unique environment.

It is our hope that, through these materials, more of our Nation's law enforcement personnel will be trained to work effectively with digital evidence and maximize the reliability of that evidence to the benefit of criminal case prosecutions.

NIJ extends its appreciation to the participants in the TWGEDE for their dedication to the preparation of this guide. Their efforts are particularly commendable given that they were not relieved of their existing duties with their home offices or agencies while they participated in the TWGEDE. What is more, it was necessary for

TWGEDE members to attend numerous (and lengthy) guide preparation meetings that were held at locations far removed from their home offices or agencies. In recognition of this, NIJ expresses great appreciation for the commitment made by

the home offices or agencies of TWGEDE members in suffering the periodic unavailability of their employees.

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## Technical Working Group for the Examination of Digital Evidence

The process of developing the guide was initiated through an invitational process. Invitees for the Technical Working Group for the Examination of Digital Evidence (TWGEDE) were selected initially for their expertise with digital evidence and then by their profession. The intent was to incorporate a medley of individuals with law enforcement, corporate, or legal affiliations to ensure a complete representation of the communities involved with digital evidence.

A small core of individuals was invited to comprise the planning panel. The task of the planning panel was to formulate a basic outline of topics that would be considered for inclusion.

NIJ thanks Michael P. Everitt of the U.S. Postal Service, Office of Inspector General, and Michael J. Menz. Both of these individuals provided their invaluable time and expertise during the guide's review process.

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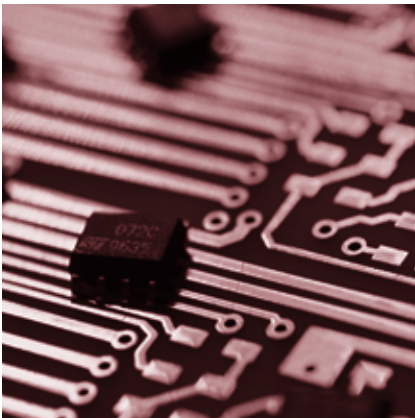
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## Introduction

*Note: Terms that are defined in the glossary appear in **bold italics** on their first appearance in the body of the report.*



This guide is intended for use by law enforcement officers and other members of the law enforcement community who are responsible for the **examination** of **digital evidence**.

This guide is not all-inclusive. Rather, it deals with common situations encountered during the examination of digital evidence. It is **not** a mandate for the law enforcement community; it is a guide agencies can use to help them develop their own policies and procedures.

Technology is advancing at such a rapid rate that the suggestions in this guide are best examined in the context of current technology and practices. Each case is unique and the judgment of the examiner should be given deference in the implementation of the procedures suggested in this guide. Circumstances of individual cases and Federal, State, and local laws/rules may also require actions other than those described in this guide.

When dealing with digital evidence, the following general forensic and procedural principles should be applied:

- Actions taken to secure and collect digital evidence should not affect the integrity of that evidence.
- Persons conducting an examination of digital evidence should be trained for that purpose.
- Activity relating to the seizure, examination, storage, or transfer of digital evidence should be documented, preserved, and available for review.

Through all of this, the examiner should be cognizant of the need to conduct an accurate and impartial examination of the digital evidence.

## How is digital evidence processed?

**Assessment.** Computer forensic examiners should assess digital evidence thoroughly with respect to the scope of the case to determine the course of action to take.

**Acquisition.** Digital evidence, by its very nature, is fragile and can be altered, damaged, or destroyed by improper handling or examination. Examination is best conducted on a **copy** of the **original evidence**. The original evidence should be acquired in a manner that protects and preserves the integrity of the evidence.

**Examination.** The purpose of the examination process is to extract and analyze digital evidence. Extraction refers to the recovery of data from its media. **Analysis** refers to the interpretation of the recovered data and putting it in a logical and useful format.

**Documenting and reporting.** Actions and observations should be documented throughout the forensic processing of evidence. This will conclude with the preparation of a written report of the findings.

## Is your agency prepared to handle digital evidence?

This document recommends that agencies likely to handle digital evidence identify appropriate external resources for the processing of digital evidence before they are needed. These resources should be readily available for situations that are beyond the technical expertise or resources of the department. It is also recommended that agencies develop policies and procedures to ensure compliance with Federal, State, and local laws.

The following five topics describe the necessary basic steps to conduct a computer forensic examination and suggest the order in which they should be conducted. Although documentation is listed as the last step, a well-trained examiner understands that documentation is continuous throughout the entire examination process.

1. Policy and Procedure Development
2. Evidence Assessment
3. Evidence Acquisition
4. Evidence Examination
5. Documenting and Reporting

Each of these steps is explained further in the subsequent chapters. The chapters are further supported by the specialized information provided in the appendixes.

# Chapter 1. Policy and Procedure Development



**Principle:** Computer forensics as a discipline demands specially trained personnel, support from management, and the necessary funding to keep a unit operating. This can be attained by constructing a comprehensive training program for examiners, sound digital evidence recovery techniques, and a commitment to keep any developed unit operating at maximum efficiency.

**Procedure:** Departments should create policies and procedures for the establishment and/or operation of a computer forensics unit.

## Protocols and procedures

### Mission statement

Developing policies and procedures that establish the parameters for operation and function is an important phase of creating a computer forensics unit. An effective way to begin this task is to develop a mission statement that incorporates the core functions of the unit, whether those functions include high-technology crime investigations, evidence collection, or forensic analysis.

### Personnel

The policies and procedures should consider defining the personnel requirements for the unit. Topics that might be included in this section are job descriptions and minimum qualifications, hours of operation, on-call duty status, command structure, and team configuration.

### Administrative considerations

**Software licensing.** Ensure that all software used by the computer forensics unit is properly licensed by the agency or an individual assigned to the unit.

**Resource commitment.** Establishing and operating a computer forensics unit may require *significant* allocation of financial resources and personnel. Many of the expenses are recurring and will have to be budgeted on a yearly basis. Resource allocation should include the type of facility that will house the unit, equipment used by examiners, software and hardware requirements, upgrades, training, and ongoing professional development and retention of examiners.

**Training.** It is important that computer forensics units maintain skilled, competent examiners. This can be accomplished by developing the skills of existing personnel or hiring individuals from specific disciplines. Because of the dynamic nature of the field, a comprehensive

ongoing training plan should be developed based on currently available training resources and should be considered in budget submissions. Consideration may also be given to mentor programs, on-the-job training, and other forms of career development.

### Service request and intake

Guidelines should be developed to establish a process for the submission of forensic service requests and the intake of accepted requests for examination of digital evidence. Topics to consider in these guidelines include request and intake forms, point of contact, required documentation, acceptance criteria,\* and requirements for the submission of physical evidence. Field personnel are expected to know the policies for service request and intake.

### Case management

Once a request for forensic services is approved, criteria for prioritizing and assigning examinations should be determined and implemented. Criteria may include the nature of the crime, court dates, deadlines, potential victims, legal considerations, volatile nature of the evidence, and available resources.

### Evidence handling and retention

Guidelines should be established for receiving, processing, documenting, and handling evidence and work products associated with the examination. The guidelines should be consistent with existing departmental policy. However, criteria for digital evidence handling and retention may exceed established departmental policies. **Note:** Evidence identified as contraband, such as child pornography, may require special consideration, such as obtaining specific contraband-related seizure and search warrants.

It is important to remember that other forensic disciplines might be able to recover other evidence, such as fingerprints on the hard drive, hair or fibers in the keyboard, and handwritten disk labels or printed material. In these instances, procedures should be developed to determine the order and manner in which examinations should be performed to reap full evidentiary value.

### Case processing

Standard operating procedures (SOPs) should be developed for preserving and processing digital evidence. SOPs should be general enough to address the basic steps in a routine forensic examination while providing flexibility to respond to unique circumstances arising from unforeseen situations.

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\*One particular scenario for which an acceptance criteria policy and procedure may be helpful is one in which field personnel have made post-seizure changes to the evidence. This sometimes occurs when field personnel, often unaware of the effects of their actions, attempt to look for files on the original media, thereby changing date and time stamps associated with those files and possibly affecting other data on the media. Although perhaps not fatal to the case, this is one factor that likely would require documentation and should be considered before accepting this service request. One step in this procedure might be to submit the facts to the relevant prosecuting agency to determine whether it would consider the case to be viable, given the post-seizure alteration.

## Developing technical procedures

Established procedures should guide the technical process of the examination of evidence. Procedures should be tested prior to their implementation to ensure that the results obtained are valid and independently reproducible. The steps in the development and validation of the procedures should be documented and include:

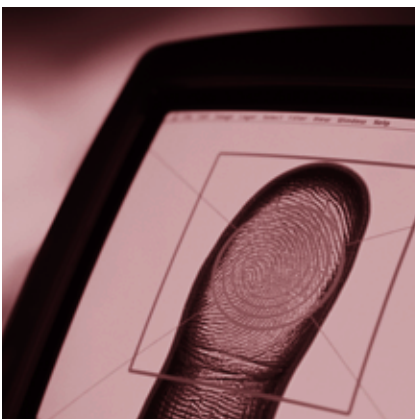
- Identifying the task or problem.
- Proposing possible solutions.
- Testing each solution on a known control sample.
- Evaluating the results of the test.
- Finalizing the procedure.



Original evidence should never be used to develop procedures.



## Chapter 2. Evidence Assessment



**Principle:** The digital evidence should be thoroughly assessed with respect to the scope of the case to determine the course of action.

**Procedure:** Conduct a thorough assessment by reviewing the search warrant or other legal authorization, case detail, nature of hardware and software, potential evidence sought, and the circumstances surrounding the **acquisition** of the evidence to be examined.

### Case assessment

- Review the case investigator's request for service.
  - Identify the legal authority for the forensic examination request.
  - Ensure there is a completed request for assistance (see appendix D for examples).
  - Complete documentation of chain of custody.
- Consult with the case investigator about the case and let him or her know what the forensic examination may or may not discover. When talking with the investigator about the facts of the case, consider the following:
  - Discuss whether other forensic processes need to be performed on the evidence (e.g., DNA analysis, fingerprint, toolmarks, trace, and questioned documents).
  - Discuss the possibility of pursuing other investigative avenues to obtain additional digital evidence (e.g., sending a **preservation order** to an **Internet service provider (ISP)**, identifying remote storage locations, obtaining e-mail).
  - Consider the relevance of peripheral components to the investigation. For example, in forgery or fraud cases consider noncomputer equipment such as laminators, credit card blanks, check paper, scanners, and printers. In child pornography cases consider digital cameras.
  - Determine the potential evidence being sought (e.g., photographs, spreadsheets, documents, databases, financial records).
  - Determine additional information regarding the case (e.g., aliases, e-mail accounts, e-mail addresses, ISP used, names, **network** configuration and users, system logs, passwords, user names). This information may be obtained through interviews with the **system administrator**, users, and employees.

- Assess the skill levels of the computer users involved. Techniques employed by skilled users to conceal or destroy evidence may be more sophisticated (e.g., **encryption**, booby traps, **steganography**).
- Prioritize the order in which evidence is to be examined.
- Determine if additional personnel will be needed.
- Determine the equipment needed.



The assessment might uncover evidence pertaining to other criminal activity (e.g., money laundering in conjunction with narcotics activities).

## Onsite considerations

The following material does not provide complete information on examination of digital evidence; it is a general guide for law enforcement agencies that assess digital evidence at the crime scene. Readers may also want to consult *Electronic Crime Scene Investigation: A Guide for First Responders*, available at <http://www.ojp.usdoj.gov/nij/pubs-sum/187736.htm>.



Consider safety of personnel at the scene. Always ensure the scene is properly secured before and during the search.

In some cases, the examiner may only have the opportunity to do the following while onsite:

- Identify the number and type of computers.
- Determine if a network is present.
- Interview the system administrator and users.
- Identify and document the types and volume of media, including **removable media**. Document the location from which the media was removed.
- Identify offsite storage areas and/or remote computing locations.
- Identify **proprietary software**.

- Evaluate general conditions of the site.
- Determine the operating system in question.



Determine the need for and contact available outside resources, if necessary. Establish and retain a phone list of such resources.

## Processing location assessment

Assess the evidence to determine where the examination should occur. It is preferable to complete an examination in a controlled environment, such as a dedicated forensic work area or laboratory. Whenever circumstances require an onsite examination to be conducted, attempt to control the environment. Assessment considerations might include the following:

- The time needed onsite to accomplish evidence recovery.
- Logistic and personnel concerns associated with long-term deployment.
- The impact on the business due to a lengthy search.
- The suitability of equipment, resources, media, training, and experience for an onsite examination.

## Legal considerations

- Determine the extent of the authority to search.
- Identify possible concerns related to applicable Federal statutes (such as the Electronic Communications Privacy Act of 1986 (ECPA) and the Cable Communications Policy Act (CCPA), both as amended by the USA PATRIOT ACT of 2001, and/or the Privacy Protection Act of 1980 (PPA)), State statutes, and local policies and laws.



If evidence is located that was not authorized in the original search authority, determine what additional legal process may be necessary to continue the search (e.g., warrant, amended consent form). Contact legal advisors for assistance if needed.

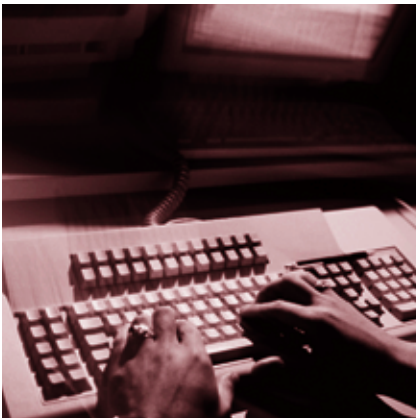
## Evidence assessment

- Prioritize the evidence (e.g., distribution CDs versus user-created CDs).
  - Location where evidence is found.
  - Stability of media to be examined.

- Determine how to document the evidence (e.g., photograph, sketch, notes).
- Evaluate storage locations for ***electromagnetic interference***.
- Ascertain the condition of the evidence as a result of packaging, transport, or storage.
- Assess the need to provide continuous electric power to battery-operated devices.

**Note:** The procedures outlined are based on a compilation of generally accepted practices. Consult individual agency policy and seek legal advice, if necessary, before initiating an examination. Actual conditions may require alternative steps to those outlined in this guide. A thorough case assessment is a foundation for subsequent procedures.

## Chapter 3. Evidence Acquisition



**Principle:** Digital evidence, by its very nature, is fragile and can be altered, damaged, or destroyed by improper handling or examination. For these reasons special precautions should be taken to preserve this type of evidence. Failure to do so may render it unusable or lead to an inaccurate conclusion.

**Procedure:** Acquire the original digital evidence in a manner that protects and preserves the evidence. The following bullets outline the basic steps:

- Secure digital evidence in accordance with departmental guidelines. In the absence of such guidelines, useful information can be found in *Electronic Crime Scene Investigation: A Guide for First Responders* (<http://www.ojp.usdoj.gov/nij/pubs-sum/187736.htm>).
- Document hardware and software configuration of the examiner's system.
- Verify operation of the examiner's computer system to include hardware and software.
- Disassemble the case of the computer to be examined to permit physical access to the storage devices.
  - Take care to ensure equipment is protected from static electricity and magnetic fields.
- Identify storage devices that need to be acquired. These devices can be internal, external, or both.
- Document internal storage devices and hardware configuration.
  - Drive condition (e.g., make, model, geometry, size, jumper settings, location, drive interface).
  - Internal components (e.g., sound card; video card; network card, including **media access control (MAC)** address; personal computer memory card international association (PCMCIA) cards).
- Disconnect storage devices (using the power connector or data cable from the back of the drive or from the motherboard) to prevent the destruction, damage, or alteration of data.

- Retrieve configuration information from the suspect's system through controlled boots.
  - Perform a controlled boot to capture **CMOS/BIOS** information and test functionality.
    - Boot sequence (this may mean changing the BIOS to ensure the system boots from the floppy or CD-ROM drive).
    - Time and date.
    - Power on passwords.
  - Perform a second controlled boot to test the computer's functionality and the forensic boot disk.
    - Ensure the power and data cables are properly connected to the floppy or CD-ROM drive, and ensure the power and data cables to the storage devices are still disconnected.
    - Place the forensic boot disk into the floppy or CD-ROM drive. Boot the computer and ensure the computer will boot from the forensic boot disk.
  - Reconnect the storage devices and perform a third controlled boot to capture the drive configuration information from the CMOS/BIOS.
    - Ensure there is a forensic boot disk in the floppy or CD-ROM drive to prevent the computer from accidentally booting from the storage devices.
    - Drive configuration information includes logical block addressing (LBA); large disk; cylinders, heads, and sectors (CHS); or auto-detect.
- Power system down.
- Whenever possible, remove the subject storage device and perform the acquisition using the examiner's system. When attaching the subject device to the examiner's system, configure the storage device so that it will be recognized.
- Exceptional circumstances, including the following, may result in a decision not to remove the storage devices from the subject system:
  - RAID (redundant array of inexpensive disks). Removing the disks and acquiring them individually may not yield usable results.
  - Laptop systems. The system drive may be difficult to access or may be unusable when detached from the original system.
  - Hardware dependency (legacy equipment). Older drives may not be readable in newer systems.
  - Equipment availability. The examiner does not have access to necessary equipment.

— Network storage. It may be necessary to use the network equipment to acquire the data.

When using the subject computer to acquire digital evidence, reattach the subject storage device and attach the examiner's evidence storage device (e.g., hard drive, tape drive, **CD-RW, MO**).

- Ensure that the examiner's storage device is **forensically** clean when acquiring the evidence.



**Write protection** should be initiated, if available, to preserve and protect original evidence.

**Note:** The examiner should consider creating a known value for the subject evidence prior to acquiring the evidence (e.g., performing an independent cyclic redundancy check (CRC), **hashing**). Depending on the selected acquisition method, this process may already be completed.

- If hardware write protection is used:
  - Install a write protection device.
  - Boot system with the examiner's controlled operating system.
- If software write protection is used:
  - Boot system with the examiner-controlled operating system.
  - Activate write protection.
- Investigate the geometry of any storage devices to ensure that all space is accounted for, including host-protected data areas (e.g., nonhost specific data such as the partition table matches the physical geometry of the drive).
- Capture the electronic serial number of the drive and other user-accessible, host-specific data.
- Acquire the subject evidence to the examiner's storage device using the appropriate software and hardware tools, such as:
  - Stand-alone duplication software.
  - Forensic analysis software suite.
  - Dedicated hardware devices.
- Verify successful acquisition by comparing known values of the original and the copy or by doing a sector-by-sector comparison of the original to the copy.

## Chapter 4. Evidence Examination



**Principle:** General forensic principles apply when examining digital evidence. Different types of cases and media may require different methods of examination. Persons conducting an examination of digital evidence should be trained for this purpose.

**Procedure:** Conduct the examination on data that have been acquired using accepted forensic procedures. Whenever possible, the examination should not be conducted on original evidence.

This chapter discusses the extraction and the analysis of digital evidence. Extraction refers to the recovery of data from the media. Analysis refers to the interpretation of the recovered data and placement of it in a logical and useful format (e.g., how did it get there, where did it come from, and what does it mean?). The concepts offered are intended to assist the examiner in developing procedures and structuring the examination of the digital evidence. These concepts are not intended to be all-inclusive and recognize that not all of the following techniques may be used in a case. It is up to the discretion of the examiner to select the appropriate approach.

When conducting evidence examination, consider using the following steps:

### Step 1. Preparation

Prepare working directory/directories on separate media to which evidentiary files and data can be recovered and/or extracted.

### Step 2. Extraction

Discussed below are two different types of extraction, physical and logical. The physical extraction phase identifies and recovers data across the entire physical drive without regard to **file system**. The logical extraction phase identifies and recovers files and data based on the installed operating system(s), file system(s), and/or application(s).

#### Physical extraction

During this stage the extraction of the data from the drive occurs at the physical level regardless of file systems present on the drive. This may include the following methods: keyword searching, file carving, and extraction of the partition table and unused space on the physical drive.

- Performing a keyword search across the physical drive may be useful as it allows the examiner to extract data that may not be accounted for by the operating system and file system.



- File carving utilities processed across the physical drive may assist in recovering and extracting useable files and data that may not be accounted for by the operating system and file system.
- Examining the partition structure may identify the file systems present and determine if the entire physical size of the hard drive is accounted for.

### Logical extraction

During this stage the extraction of the data from the drive is based on the file system(s) present on the drive and may include data from such areas as active files, **deleted files**, **file slack**, and unallocated file space. Steps may include:

- Extraction of the file system information to reveal characteristics such as directory structure, file attributes, file names, date and time stamps, file size, and file location.
- Data reduction to identify and eliminate known files through the comparison of calculated hash values to authenticated hash values.
- Extraction of files pertinent to the examination. Methods to accomplish this may be based on file name and extension, file header, file content, and location on the drive.
- Recovery of deleted files.
- Extraction of **password-protected**, encrypted, and compressed data.
- Extraction of file slack.
- Extraction of the **unallocated space**.

## Step 3. Analysis of extracted data

Analysis is the process of interpreting the extracted data to determine their significance to the case. Some examples of analysis that may be performed include timeframe, data hiding, application and file, and ownership and possession. Analysis may require a review of the request for service, legal authority for the search of the digital evidence, investigative leads, and/or analytical leads.

### Timeframe analysis

Timeframe analysis can be useful in determining when events occurred on a computer system, which can be used as a part of associating usage of the computer to an individual(s) at the time the events occurred. Two methods that can be used are:

- Reviewing the time and date stamps contained in the file system metadata (e.g., last modified, last accessed, created, change of status) to link files of interest to the timeframes relevant to the investigation. An example of this analysis would be using the last modified date and time to establish when the contents of a file were last changed.

- Reviewing system and application logs that may be present. These may include error logs, installation logs, connection logs, security logs, etc. For example, examination of a security log may indicate when a user name/password combination was used to log into a system.

**Note:** Take into consideration any differences in the individual's computer date and time as reported in the BIOS.

### Data hiding analysis

Data can be concealed on a computer system. Data hiding analysis can be useful in detecting and recovering such data and may indicate knowledge, ownership, or intent. Methods that can be used include:

- Correlating the file headers to the corresponding file extensions to identify any mismatches. Presence of mismatches may indicate that the user intentionally hid data.
- Gaining access to all password-protected, encrypted, and **compressed files**, which may indicate an attempt to conceal the data from unauthorized users. A password itself may be as relevant as the contents of the file.
- Steganography.
- Gaining access to a **host-protected area (HPA)**. The presence of user-created data in an HPA may indicate an attempt to conceal data.

### Application and file analysis

Many programs and files identified may contain information relevant to the investigation and provide insight into the capability of the system and the knowledge of the user. Results of this analysis may indicate additional steps that need to be taken in the extraction and analysis processes. Some examples include:

- Reviewing file names for relevance and patterns.
- Examining file content.
- Identifying the number and type of operating system(s).
- Correlating the files to the installed applications.
- Considering relationships between files. For example, correlating Internet history to cache files and e-mail files to e-mail attachments.
- Identifying unknown file types to determine their value to the investigation.
- Examining the users' default storage location(s) for applications and the **file structure** of the drive to determine if files have been stored in their default or an alternate location(s).
- Examining user-configuration settings.

- Analyzing file metadata, the content of the user-created file containing data additional to that presented to the user, typically viewed through the application that created it. For example, files created with word processing applications may include authorship, time last edited, number of times edited, and where they were printed or saved.

### **Ownership and possession**

In some instances it may be essential to identify the individual(s) who created, modified, or accessed a file. It may also be important to determine ownership and knowledgeable possession of the questioned data. Elements of knowledgeable possession may be based on the analysis described above, including one or more of the following factors.

- Placing the subject at the computer at a particular date and time may help determine ownership and possession (timeframe analysis).
- Files of interest may be located in nondefault locations (e.g., user-created directory named "child porn") (application and file analysis).
- The file name itself may be of evidentiary value and also may indicate the contents of the file (application and file analysis).
- Hidden data may indicate a deliberate attempt to avoid detection (hidden data analysis).
- If the passwords needed to gain access to encrypted and password-protected files are recovered, the passwords themselves may indicate possession or ownership (hidden data analysis).
- Contents of a file may indicate ownership or possession by containing information specific to a user (application and file analysis).

### **Step 4. Conclusion**

In and of themselves, results obtained from any one of these steps may not be sufficient to draw a conclusion. When viewed as a whole, however, associations between individual results may provide a more complete picture. As a final step in the examination process, be sure to consider the results of the extraction and analysis in their entirety.

## Chapter 5. Documenting and Reporting



**Principle:** The examiner is responsible for completely and accurately reporting his or her findings and the results of the analysis of the digital evidence examination. Documentation is an ongoing process throughout the examination. It is important to accurately record the steps taken during the digital evidence examination.

**Procedure:** All documentation should be complete, accurate, and comprehensive. The resulting report should be written for the intended audience.

### Examiner's notes

Documentation should be contemporaneous with the examination, and retention of notes should be consistent with departmental policies. The following is a list of general considerations that may assist the examiner throughout the documentation process.

- Take notes when consulting with the case investigator and/or prosecutor.
- Maintain a copy of the search authority with the case notes.
- Maintain the initial request for assistance with the case file.
- Maintain a copy of chain of custody documentation.
- Take notes detailed enough to allow complete duplication of actions.
- Include in the notes dates, times, and descriptions and results of actions taken.
- Document irregularities encountered and any actions taken regarding the irregularities during the examination.
- Include additional information, such as network topology, list of authorized users, user agreements, and/or passwords.
- Document changes made to the system or network by or at the direction of law enforcement or the examiner.
- Document the operating system and relevant software version and current, installed patches.
- Document information obtained at the scene regarding remote storage, remote user access, and offsite backups.



During the course of an examination, information of evidentiary value may be found that is beyond the scope of the current legal authority. Document this information and bring it to the attention of the case agent because the information may be needed to obtain additional search authorities.

## Examiner's report

This section provides guidance in preparing the report that will be submitted to the investigator, prosecutor, and others. These are general suggestions; departmental policy may dictate report writing specifics, such as its order and contents. The report may include:

- Identity of the reporting agency.
- Case identifier or submission number.
- Case investigator.
- Identity of the submitter.
- Date of receipt.
- Date of report.
- Descriptive list of items submitted for examination, including serial number, make, and model.
- Identity and signature of the examiner.
- Brief description of steps taken during examination, such as string searches, graphics image searches, and recovering erased files.
- Results/conclusions.

**The following sections have been found to be useful in other report formats. See appendix A for sample reports.**

### Summary of findings

This section may consist of a brief summary of the results of the examinations performed on the items submitted for analysis. All findings listed in the summary should also be contained in the details of findings section of the report.

## Details of findings

This section should describe in greater detail the results of the examinations and may include:

- Specific files related to the request.
- Other files, including deleted files, that support the findings.
- String searches, keyword searches, and text string searches.
- Internet-related evidence, such as Web site traffic analysis, chat logs, cache files, e-mail, and news group activity.
- Graphic image analysis.
- Indicators of ownership, which could include program registration data.
- Data analysis.
- Description of relevant programs on the examined items.
- Techniques used to hide or mask data, such as encryption, steganography, hidden attributes, hidden partitions, and **file name anomalies**.

## Supporting materials

List supporting materials that are included with the report, such as printouts of particular items of evidence, digital copies of evidence, and chain of custody documentation.

## Glossary

A glossary may be included with the report to assist the reader in understanding any technical terms used. Use a generally accepted source for the definition of the terms and include appropriate references.

## Appendix A. Case Examples

The following two case briefs are examples of what could be involved in case analysis.

**Disclaimer:** The chosen case scenarios are for instructional purposes only and any association to an actual case and litigation is purely coincidental. Names and locations presented in the case scenarios are fictitious and are not intended to reflect actual people or places. Reference herein to any specific commercial products, processes, or services by trade name, trademark, manufacturer, or otherwise does not constitute or imply its endorsement, recommendation, or favoring by the U.S., State, or local governments, and the information and statements shall not be used for the purposes of advertising.

### Case brief 1

SUBJECT owned a roofing company. SUBJECT gave his laptop computer to an employee to take to Mom & Pop's Computer Repair for monitor problems. Upon repairing the laptop, Mom of Mom & Pop's started the laptop to ensure the monitor had been fixed. A standard procedure of Mom & Pop's was to go to the *Recent* menu on the *Start Bar* of Windows® 98 systems and select files for viewing. Mom was presented with what appeared to be an image of a young child depicted in a sexually explicit manner. Mom telephoned the county sheriff. A sheriff's deputy responded and observed the image and confirmed it to be a violation of a State statute. The laptop was seized because it contained contraband. The seizure was performed in a manner consistent with recommendations found in *Electronic Crime Scene Investigation: A Guide for First Responders*. The laptop was entered into evidence according to agency policy, and a search warrant was obtained for the examination of the computer. The computer was submitted for examination.

**Objective:** To determine whether SUBJECT possessed child pornography. This was complicated by the number of people who handled the laptop.

**Computer type:** Generic laptop, serial # 123456789.

**Operating system:** Microsoft® Windows® 98.

**Offense:** Possession of child pornography.

**Case agent:** Investigator Johnson.

**Evidence number:** 012345.

**Chain of custody:** See attached form.

**Where examination took place:** Criminal investigations unit.

**Tools used:** Disk acquisition utility, universal graphic viewer, command line.

## Processing

**Assessment:** Reviewed the case investigator's request for service. The search warrant provided legal authority. The investigator was interested in finding all information pertaining to child pornography, access dates, and ownership of the computer. It was determined that the equipment needed was available in the forensic lab.

**Acquisition:** The hardware configuration was documented and a **duplicate** of the hard drive was created in a manner that protected and preserved the evidence. The CMOS information, including the time and date, was documented.

**Examination:** The directory and file structures, including file dates and times, were recorded. A file header search was conducted to locate all graphic images. The image files were reviewed and those files containing images of what appeared to be children depicted in a sexually explicit manner were preserved. Shortcut files were recovered that pointed to files on floppy disks with sexually explicit file names involving children. The last accessed time and date of the files indicated the files were last accessed 10 days before the laptop was delivered to Mom & Pop's.

**Documentation and reporting:** The investigator was given a report describing the findings of the examination. The investigator determined that he needed to conduct interviews.

**Next step:** The employee who delivered the laptop computer to Mom & Pop's Computer Repair was interviewed, and he indicated that he had never operated the computer. Further, the employee stated SUBJECT had shown him images of a sexual nature involving children on the laptop. SUBJECT told the employee that he keeps his pictures on floppy disks at home; he just forgot this one image on the laptop.

The State's Attorney's Office was briefed in hope of obtaining a search warrant for SUBJECT's home based on the examination of the digital evidence and the interview of the employee. A warrant was drafted, presented to a judicial officer, and signed. During the subsequent search, floppy disks were discovered at SUBJECT's house. Forensic examination of the floppies revealed additional child pornography, including images in which SUBJECT was a participant. This resulted in the arrest of SUBJECT.



## Case brief 1 report

### REPORT OF MEDIA ANALYSIS

**MEMORANDUM FOR:** County Sheriff's Police  
Investigator Johnson  
Anytown, USA 01234

**SUBJECT:** Forensic Media Analysis Report  
SUBJECT: DOE, JOHN  
Case Number: 012345

**1. Status:** Closed.

#### 2. Summary of Findings:

- 327 files containing images of what appeared to be children depicted in a sexually explicit manner were recovered.
- 34 shortcut files that pointed to files on floppy disks with sexually explicit file names involving children were recovered.

#### 3. Items Analyzed:

<u>TAG NUMBER:</u>	<u>ITEM DESCRIPTION:</u>
012345	One Generic laptop, Serial # 123456789

#### 4. Details of Findings:

- Findings in this paragraph related to the Generic Hard Drive, Model ABCDE, Serial # 3456ABCD, recovered from Tag Number 012345, One Generic laptop, Serial # 123456789.
  - 1) The examined hard drive was found to contain a Microsoft® Windows® 98 operating system.
  - 2) The directory and file listing for the media was saved to the Microsoft® Access Database TAG012345.MDB.
  - 3) The directory C:\JOHN DOE\PERSONAL\FAV PICS\, was found to contain 327 files containing images of what appeared to be children depicted in a sexually explicit manner. The file directory for 327 files disclosed that the files' creation date and times are 5 July 2001 between 11:33 p.m. and 11:45 p.m., and the last access date for 326 files listed is 27 December 2001. In addition, the file directory information for one file disclosed the last access date as 6 January 2002.
  - 4) The directory C:\JOHN DOE\PERSONAL\FAV PICS TO DISK\ contained 34 shortcut files that pointed to files on floppy disks with sexually explicit file names involving children. The file directory information for the 34 shortcut files disclosed

the files' creation date and times are 5 July 2001 between 11:23 p.m. and 11:57 p.m., and the last access date for the 34 shortcut files was listed as 5 July 2001.

- 5) The directory C:\JOHN DOE\LEGAL\ contained five Microsoft® Word documents related to various contract relationships John Doe Roofing had with other entities.
- 6) The directory C:\JOHN DOE\JOHN DOE ROOFING\ contained files related to operation of John Doe Roofing.
- 7) No further user-created files were present on the media.

#### **5. Glossary:**

**Shortcut File:** A file created that links to another file.

**6. Items Provided:** In addition to this hard copy report, one compact disk (CD) was submitted with an electronic copy of this report. The report on CD contains hyperlinks to the above-mentioned files and directories.

IMA D. EXAMINER  
Computer Forensic Examiner

Released by \_\_\_\_\_

## Case brief 2

A concerned citizen contacted the police department regarding possible stolen property. He told police that while he was searching the Internet, hoping to find a motorcycle for a reasonable price, he found an ad that met his requirements. This ad listed a Honda motorcycle for a low price, so he contacted the seller. Upon meeting the seller he became suspicious that the motorcycle was stolen. After hearing this information, police alerted the Auto Theft Unit. The Auto Theft Unit conducted a sting operation to purchase the motorcycle. Undercover officers met with the suspect, who, after receiving payment, provided them with the vehicle, a vehicle title, registration card, and insurance card. The suspect was arrested and the vehicle he was driving was searched incident to his arrest. During the search, a notebook computer was seized. Although the documents provided by the suspect looked authentic, document examiners determined that the documents were counterfeit. The auto theft investigator contacted the computer forensic laboratory for assistance in examining the seized computer. The investigator obtained a search warrant to analyze the computer and search for materials used in making counterfeit documents and other evidence related to the auto theft charges. The laptop computer was submitted to the computer forensic laboratory for analysis.

**Objective:** Determine if the suspect used the laptop computer as an instrument of the crimes of Auto Theft, Fraud, Forgery, Uttering False Documents, and Possession of Counterfeit Vehicle Titles and/or as a repository of data related to those crimes.

**Computer type:** Gateway Solo® 9100 notebook computer.

**Operating system:** Microsoft® Windows® 98.

**Offenses:** Auto Theft, Fraud, Forgery, Uttering False Documents, and Possession of Counterfeit Vehicle Titles.

**Case agent:** Auto Theft Unit Investigator.

**Where examination took place:** Computer Forensic Laboratory.

**Tools used:** Guidance Software™ EnCase®, DIGit®, Jasc Software™ Quick View Plus®, and AccessData™ Password Recovery Tool Kit™.

## Processing

### Assessment

1. Documentation provided by the investigator was reviewed.
  - a. Legal authority was established by a search warrant obtained specifically for the examination of the computer in a laboratory setting.
  - b. Chain of custody was properly documented on the appropriate departmental forms.
  - c. The request for service and a detailed summary explained the investigation, provided keyword lists, and provided information about the suspect, the stolen vehicle, the counterfeit documents, and the Internet advertisement. The investigator also provided photocopies of the counterfeit documents.

2. The computer forensic investigator met with the case agent and discussed additional investigative avenues and potential evidence being sought in the investigation.
3. Evidence intake was completed.
  - a. The evidence was marked and photographed.
  - b. A file was created and the case information was entered into the laboratory database.
  - c. The computer was stored in the laboratory's property room.
4. The case was assigned to a computer forensic investigator.

### **Imaging**

1. The notebook computer was examined and photographed.
  - a. The hardware was examined and documented.
  - b. A controlled boot disk was placed in the computer's floppy drive. The computer was powered on and the BIOS setup program was entered. The BIOS information was documented and the system time was compared to a trusted time source and documented. The boot sequence was checked and documented; the system was already set to boot from the floppy drive first.
  - c. The notebook computer was powered off without making any changes to the BIOS.
2. EnCase® was used to create an evidence file containing the **image** of the notebook computer's hard drive.
  - a. The notebook computer was connected to a laboratory computer through a null-modem cable, which connected to the computers' parallel ports.
  - b. The notebook computer was booted to the DOS prompt with a controlled boot disk and EnCase® was started in server mode.
  - c. The laboratory computer, equipped with a magneto-optical drive for file storage, was booted to the DOS prompt with a controlled boot disk. EnCase® was started in server mode and evidence files for the notebook computer were acquired and written to magneto-optical disks.
  - d. When the imaging process was completed, the computers were powered off.
    - i. The notebook computer was returned to the laboratory property room.
    - ii. The magneto-optical disks containing the EnCase® evidence files were write-protected and entered into evidence.

## Analysis

1. A laboratory computer was prepared with Windows® 98, EnCase® for Windows, and other forensic software programs.
2. The EnCase® evidence files from the notebook computer were copied to the laboratory computer's hard drive.
3. A new EnCase® case file was opened and the notebook computer's evidence files were examined using EnCase®.
  - a. Deleted files were recovered by EnCase®.
  - b. File data, including file names, dates and times, physical and logical size, and complete path, were recorded.
  - c. Keyword text searches were conducted based on information provided by the investigator. All hits were reviewed.
  - d. Graphics files were opened and viewed.
  - e. HTML files were opened and viewed.
  - f. Data files were opened and viewed; two password-protected and encrypted files were located.
  - g. Unallocated and slack space were searched.
  - h. Files of evidentiary value or investigative interest were copied/unerased from the EnCase® evidence file and copied to a compact disk.
4. Unallocated clusters were copied/unerased from the EnCase® evidence file to a clean hard drive, wiped to U.S. Department of Defense recommendations (DoD 5200.28-STD). DIGit® was then used to carve images from unallocated space. The carved images were extracted from DIGit®, opened, and viewed. A total of 8,476 images were extracted.
5. The password-protected files were copied/unerased to a 1.44 MB floppy disk. AccessData™ Password Recovery Tool Kit™ was run on the files and passwords were recovered for both files. The files were opened using the passwords and viewed.

## Findings

The analysis of the notebook computer resulted in the recovery of 176 files of evidentiary value or investigative interest. The recovered files included:

1. 59 document files including documents containing the suspect's name and personal information; text included in the counterfeit documents; scanned payroll, corporate, and certified checks; text concerning and describing stolen items; and text describing the recovered motorcycle.

2. 38 graphics files including high-resolution image files depicting payroll, corporate, and certified checks; U.S. currency; vehicle titles; registration cards and driver's license templates from Georgia and other States; insurance cards from various companies; and counterfeit certified checks payable to a computer company ranging from \$25,000 to \$40,000 for the purchase of notebook computers. Most graphics were scanned.
3. 63 HTML files including Hotmail® and Yahoo® e-mail and classified advertisements for the recovered motorcycle, other vehicles, and several brands of notebook computers; e-mail text, including e-mails between the suspect and the concerned citizen concerning the sale of the recovered motorcycle; and e-mails between the suspect and a computer company concerning the purchase of notebook computers.
4. 14 graphics files carved from unallocated space depicting checks at various stages of completion and scanned images of U.S. currency.
5. Two password-protected and encrypted files.
  - a. WordPerfect® document containing a list of personal information on several individuals including names, addresses, dates of birth, credit card and bank account numbers and expiration dates, checking account information, and other information. Password [**nomoresecrets**].
  - b. Microsoft® Word document containing vehicle title information for the recovered motorcycle. Password [**HELLO**].

### **Documentation**

1. Forensic Report – All actions, processes, and findings were described in a detailed Forensic Report, which is maintained in the laboratory case file.
2. Police Report – The case agent was provided with a police report describing the evidence examined, techniques used, and the findings.
3. Work Product – A compact disk containing files and file data of evidentiary value or investigative interest was created. The original was stored in the laboratory case file. Copies were provided to the case agent and the prosecutor.

### **Summary**

Based on the information revealed by the computer analysis, several new avenues of investigation were opened.

- ✓ By contacting the victims listed in the password-protected WordPerfect® document, investigators learned that the victims had all been robbed in the same city during the previous summer by an individual meeting the description of the suspect.

- ✓ Contact with the computer company revealed the counterfeit checks found on the suspect's computer had been accepted for the purchase of computers, and that the computers were shipped to him and were the subject of an ongoing investigation. Model numbers and serial numbers provided by the computer company matched several of the Hotmail® and Yahoo® classified ads found on the suspect's computer.
- ✓ Several of the counterfeit checks found on the suspect's computer were already the subject of ongoing investigations.
- ✓ Information recovered concerning other vehicles led to the recovery of additional stolen vehicles.
- ✓ The specific information sought in the search warrant concerning the sale of the stolen motorcycle and the counterfeit documents was recovered from the suspect's computer.

**Conclusion**

The suspect eventually plead guilty and is now incarcerated.

## Case brief 2 report

**Department of State Police  
Computer Crimes Unit  
Computer Forensics Laboratory  
7155-C Columbia Gateway Drive  
Columbia, MD 21046  
(410) 290-0000**

**April 19, 1999**

### MEMO TO FILE

**FORENSIC EXAMINER PROCESSING NOTES:** **SGT. David B. Smith (5555)**  
**FORENSIC CASE NUMBER:** **99-03-333-A**

REQUESTER:	TFC. Brian Jones State Police Auto Theft Unit (310-288-8433)
OFFENSE:	Auto Theft, Forgery
CASE NUMBER:	01-39-00333
RECEIVED:	March 19, 1999
OPENED:	March 24, 1999
COMPLETED:	April 19, 1999
FORENSIC HOURS:	40 hours
OS EXAMINED:	Microsoft® Windows® 98
FILE SYSTEM:	[FAT32]
DATA ANALYZED:	7,782 MB

**Evidence Description: Item 1:** One Gateway Solo® 9100 Notebook Computer, Serial Number 555-Z3025-00-002-0433.

### Action Taken:

#### March 24, 1999

- 1600 hours:** I retrieved the original digital evidence from the CCU Property Room. I inventoried, marked, and cataloged the evidence described on the MSP Form 67. All original evidence listed on the Chain of Custody Form was accounted for.
- 1620 hours:** I examined the Gateway Solo® 9100 notebook computer and completed an **Initial Computer Evidence Processing** form (see attached). The computer contained one fixed disk. The notebook case was not opened to expose the drive (Original Digital Evidence# hdd01). I inserted a controlled boot disk in the notebook computer floppy drive and powered on the computer. I pressed F1 to enter the setup utility. I documented the BIOS settings:



State Police - Computer Forensics Laboratory  
 Forensic Report - Laboratory Case Number 99-03-333-A

BIOS	System Date	System Time	Memory	Boot Order
Award 4.5 pg	3/24/1999	16:30:03	128 MB	Floppy Drive Hard Drive
	Actual Date 3/24/1999	Actual Time 16:30:08	CPU Intel PII 300	

EnCase® (1.998) (DOS Version 7.10)

1 Physical Disks					1 Logical Volumes				
Disk 0	Size 7.6GB		CHS 7480:16:63		IP	LABEL	SYSTEM	FREE	SIZE
Lock	Code	Type	Sectors	Size	C0	NONAME	FAT32	5.5GB	7.6GB
80	0B	FAT32	16,000,740	7.6GB					

Server Mode  
Connected...!

En.exe was executed on the laboratory computer; EnCase® reported:

EnCase® (1.998) Client Mode (DOS Version 7.10)

1 Physical Disks					1 Logical Volumes				
Disk 0	Size 7.6GB		CHS 7480:16:63		IP	LABEL	SYSTEM	FREE	SIZE
Lock	Code	Type	Sectors	Size	C0	NONAME	FAT32	5.5GB	7.6GB
80	0B	FAT32	16,000,740	7.6GB					

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Initials **DBS**

**1750 hours:** Acquisition of a compressed evidence file was started.

File Name & Path: F:\hdd01  
Case #: 01-39-00333  
Examiner: Sgt. David B. Smith  
Evidence #: 99-03-333-A  
Description: 555-Z3025-00-002-0433.

### **March 25, 1999**

**0900 hours:** EnCase® reported: "An evidence file for drive 0 was successfully created . . . ElapsedTime 11:14:00, 7.6GB read, 0 errors, 11:14:00 elapsed, 0:00:00 remaining."

**0910 hours:** I exited EnCase® on the laboratory computer and returned to the A:\ prompt. The computer was powered off, the Sony MO disk containing the evidence files was removed from the MO drive unit and write protected and placed into evidence. A State Police Chain of Custody Form was completed.

### **March 30, 1999**

**1400 hours:** The laboratory Gateway GX-450XL computer was equipped with a Sony MO drive unit connected to an AHA 2940UW SCSI adapter card. A controlled boot disk was placed in drive A:. The computer was powered on and the system booted to the A:\ prompt. The DOS copy command was used to copy the EnCase® evidence files from the Sony MO Dsk drive F: to "Data" hard drive, E:. The files were successfully copied. The computer was powered down and the Sony MO disk was returned to evidence.

### **April 1, 1999**

**0800 hours:** The laboratory Gateway GX-450XL computer was booted to Windows® 98. EnCase® for Windows® 98 (version 1.999) was launched. I opened a new EnCase® case, titled 99-03-333-A. I added the previously acquired evidence file into the case. EnCase® file Signatures was run.

**0900 hours:** I began a logical analysis of the data contained in the EnCase® case.

**1000 hours:** A data wiping utility was used to wipe removable drive I: on the laboratory Gateway GX-450XL computer. The drive was wiped to U.S. Department of Defense recommendations (DoD 5200.28-STD). Unallocated clusters and file slack from the evidence file space were then copied from the EnCase® case to drive I:. The files were divided into seven folders, each folder holding a maximum of 1,048MB. 575 files containing 5,944MB were copied.



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 Forensic Report - Laboratory Case Number 99-03-333-A  
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Initials **DBS**

**April 6, 1999**

**0800 hours:** I used EnCase® version 1.999 to perform a keyword text string search of the entire case. All hits were examined and text with possible evidentiary value was extracted.

<b>Search 4:</b>	<b>Keywords:</b>	<b><u>suzuki gsxr</u></b>	<b>Hits: 2</b>
<b>Search 5:</b>	<b>Keyword:</b>	<b><u>brandell</u></b>	<b>Hits: 125</b>
<b>Search 6:</b>	<b>Keywords:</b>	<b><u>jh2sc3307wm20333</u></b>	<b>Hits: 5</b>
		<b><u>..#.####.#####(Grep)</u></b>	<b>0</b>
<b>Search 7:</b>	<b>Keyword:</b>	<b><u>Jn8hd17y5nw011333</u></b>	<b>Hits: 0</b>

**April 7, 1999**

**0800 hours:** I continued the examination of the search results.

**1333 hours:** I used EnCase® version 1.999 to perform a keyword text string search of the entire case. All hits were examined and text with possible evidentiary value was extracted.

<b>Search 8:</b>	<b>Keywords:</b>	<b><u>9998##(Grep)</u></b>	<b>Hits: 5</b>
		<b><u>hotmail</u></b>	<b>19,465</b>
		<b><u>chyma</u></b>	<b>27,453</b>
		<b><u>suzuki</u></b>	<b>20</b>

**April 19, 1999**

**0700 hours:** I continued the file-by-file examination of the evidence files.

**0900 hours:** I completed the forensic examination. Documents, pictures, HTML files, and text fragments of investigative interest were located by utilizing individual file-by-file examination, EnCase® Keyword Text Searches, and NCIS DIGit®. The Keyword Text Searches are defined in the EnCase® Report. Files believed to be of investigative interest were bookmarked into categories as defined below. The files associated with the information described below were copied/unerased from the EnCase® case.

**FINDINGS**

The analysis of the notebook computer resulted in the recovery of 176 files of evidentiary value or investigative interest. The recovered files included:

1. 59 document files including documents containing the suspect's name and personal information; text included in the counterfeit documents; scanned payroll, corporate, and certified checks; text concerning and describing stolen items; and text describing the recovered motorcycle.
2. 38 graphics files including high-resolution image files depicting payroll, corporate, and certified checks; U.S. currency; vehicle titles; registration cards and driver's license templates from Georgia and other States; insurance cards from various

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Initials **DBS**

companies; and counterfeit certified checks payable to a computer company ranging from \$25,000 to \$40,000 for the purchase of notebook computers. Most graphics were scanned.

3. 63 HTML files including Hotmail® and Yahoo® e-mail and classified advertisements for the recovered motorcycle, other vehicles, and several brands of notebook computers; e-mail text, including e-mails between the suspect and the concerned citizen about the sale of the recovered motorcycle; e-mails between the suspect and a computer company concerning the purchase of notebook computers.
4. 14 graphics files carved from unallocated space depicting checks at various stages of completion and scanned images of U.S. currency.
5. Two password-protected and encrypted files.
  - a. WordPerfect® document containing a list of personal information on several individuals including names, addresses, dates of birth, credit card and bank account numbers and expiration dates, checking account information, and other information. Password [**nomoresecrets**].
  - b. Microsoft® Word document containing vehicle title information for the recovered motorcycle. Password [**HELLO**].

I created one compact disk containing copies of the above-described files, which will be maintained in the CFL case file. A copy of the compact disk was labeled and provided to the investigator.

**1800 hours:** The forensic examination was completed.

---

Sgt. David B. Smith (5555) [Signature]

## Appendix B. Glossary

The following terms are included to assist the reader in understanding this guide.

**Acquisition:** A process by which digital evidence is duplicated, copied, or imaged.

**Analysis:** To look at the results of an examination for its significance and probative value to the case.

**BIOS:** Basic Input Output System. The set of routines stored in read-only memory that enables a computer to start the operating system and to communicate with the various devices in the system such as disk drives, keyboard, monitor, printer, and communication ports.

**CD-RW:** Compact disk-rewritable. A disk to which data can be written and erased.

**CMOS:** Complementary metal oxide semiconductor. A type of chip used to store BIOS configuration information.

**Compressed file:** A file that has been reduced in size through a compression algorithm to save disk space. The act of compressing a file will make it unreadable to most programs until the file is uncompressed. Most common compression utilities are PKZIP with an extension of .zip.

**Copy:** An accurate reproduction of information contained on an original physical item, independent of the electronic storage device (e.g., logical file copy). Maintains contents, but attributes may change during the reproduction.

**Deleted files:** If a subject knows there are incriminating files on the computer, he or she may delete them in an effort to eliminate the evidence. Many computer users think that this actually eliminates the information. However, depending on how the files are deleted, in many instances a forensic examiner is able to recover all or part of the original data.

**Digital evidence:** Information stored or transmitted in binary form that may be relied on in court.

**Duplicate:** An accurate digital reproduction of all data contained on a digital storage device (e.g., hard drive, CD-ROM, flash memory, floppy disk, Zip®, Jaz®). Maintains contents and attributes (e.g., bit stream, bit copy, and sector dump).

**Electromagnetic interference:** An electromagnetic disturbance that interrupts, obstructs, or otherwise degrades or limits the effective performance of electronics/electrical equipment.

**Encryption:** Any procedure used in cryptography to convert plain text into cipher text in order to prevent anyone but the intended recipient from reading that data.

**Examination:** Technical review that makes the evidence visible and suitable for analysis; tests performed on the evidence to determine the presence or absence of specific data.

**File name anomaly:** Header/extension mismatch; file name inconsistent with the content of the file.

**File slack:** Space between the logical end of the file and the end of the last allocation unit for that file.

**File structure:** How an application program stores the contents of a file.

**File system:** The way the operating system keeps track of the files on the drive.

**Forensically clean:** Digital media that are completely wiped of nonessential and residual data, scanned for viruses, and verified before use.

**Hashing:** The process of using a mathematical algorithm against data to produce a numeric value that is representative of that data.

**Host protected area:** An area that can be defined on *IDE* drives that meets the technical specifications as defined by ATA4 and later. If a Max Address has been set that is less than a Native Max Address, then a host protected area is present.

**IDE:** Integrated drive electronics. A type of data communications interface generally associated with storage devices.

**Image:** An accurate digital representation of all data contained on a digital storage device (e.g., hard drive, CD-ROM, flash memory, floppy disk, Zip®, Jaz®). Maintains contents and attributes, but may include metadata such as CRCs, hash value, and audit information.

**ISP:** Internet service provider. An organization that provides access to the Internet. Small Internet service providers provide service via modem and an integrated services digital network (ISDN), while the larger ones also offer private line hookups (e.g., T1, fractional T1).

**MAC address:** Media access control address. A unique identifying number built (or “burned”) into a network interface card by the manufacturer.

**MO:** Magneto-optical. A drive used to back up files on a personal computer using magnetic and optical technologies.

**Network:** A group of computers connected to one another to share information and resources.

**Original evidence:** Physical items and the data objects that are associated with those items at the time of seizure.

**Password protected:** Many software programs include the ability to protect a file using a password. One type of password protection is sometimes called “access denial.” If this feature is used, the data will be present on the disk in the normal manner, but the software program will not open or display the file without the user entering the password. In many cases, forensic examiners are able to bypass this feature.

**Preservation Order:** A document ordering a person or company to preserve potential evidence. The authority for preservation letters to ISPs is in 18 USC 2703(f).

**Proprietary software:** Software that is owned by an individual or company and that requires the purchase of a license.

**Removable media:** Items (e.g., floppy disks, CDs, DVDs, cartridges, tape) that store data and can be easily removed.

**SCSI:** Small Computer System Interface. A type of data communications interface.

**Steganography:** The art and science of communicating in a way that hides the existence of the communication. It is used to hide a file inside another. For example, a child pornography image can be hidden inside another graphic image file, audio file, or other file format.

**System administrator:** The individual who has legitimate supervisory rights over a computer system. The administrator

maintains the highest access to the system. Also can be known as sysop, sysadmin, and system operator.

**Unallocated space:** Allocation units not assigned to active files within a file system.

**Write protection:** Hardware or software methods of preventing data from being written to a disk or other medium.



## **Appendix C. Sample Worksheets**

These worksheets are specific to the Drug Enforcement Administration and are provided as examples.

# Computer Evidence Worksheet

Case Number: \_\_\_\_\_ Exhibit Number: \_\_\_\_\_

Laboratory Number: \_\_\_\_\_ Control Number: \_\_\_\_\_

## Computer Information

Manufacturer: _____		Model: _____	
Serial Number: _____			
Examiner Markings: _____			
Computer Type:	Desktop <input type="checkbox"/>	Laptop <input type="checkbox"/>	Other: _____
Computer Condition:	Good <input type="checkbox"/>	Damaged <input type="checkbox"/> (See Remarks)	
Number of Hard Drives: _____	3.5" Floppy Drive <input type="checkbox"/>	5.25" Floppy Drive <input type="checkbox"/>	
Modem <input type="checkbox"/>	Network Card <input type="checkbox"/>	Tape Drive <input type="checkbox"/>	Tape Drive Type: _____
100 MB Zip <input type="checkbox"/>	250 MB Zip <input type="checkbox"/>	CD Reader <input type="checkbox"/>	CD Read/Write <input type="checkbox"/>
DVD <input type="checkbox"/>	Other: _____		

<b>CMOS Information</b>	Not Available <input type="checkbox"/>		
Password Logon:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Password = _____
Current Time:	_____ AM <input type="checkbox"/>	_____ PM <input type="checkbox"/>	Current Date: _____ / _____ / _____
CMOS Time:	_____ AM <input type="checkbox"/>	_____ PM <input type="checkbox"/>	CMOS Date: _____ / _____ / _____

<b>CMOS Hard Drive #1 Settings</b>	Auto <input type="checkbox"/>		
Capacity: _____	Cylinders: _____	Heads: _____	Sectors: _____
Mode:	LBA <input type="checkbox"/>	Normal <input type="checkbox"/>	Auto <input type="checkbox"/> Legacy CHS <input type="checkbox"/>
<b>CMOS Hard Drive #2 Settings</b>	Auto <input type="checkbox"/>		
Capacity: _____	Cylinders: _____	Heads: _____	Sectors: _____
Mode:	LBA <input type="checkbox"/>	Normal <input type="checkbox"/>	Auto <input type="checkbox"/> Legacy CHS <input type="checkbox"/>

**Sub Exhibits Split From This Computer**

<b>Sub Number</b>	<b>Type</b>	<b>Where Found</b>

<b>Remarks</b>

# Hard Drive Evidence Worksheet

Case Number: \_\_\_\_\_ Exhibit Number: \_\_\_\_\_

Laboratory Number: \_\_\_\_\_ Control Number: \_\_\_\_\_

**Hard Drive #1 Label Information** [Not Available

**Hard Drive #2 Label Information** [Not Available

Manufacturer: _____ Model: _____ Serial Number: _____ Capacity: _____ Cylinders: _____ Heads: _____ Sectors: _____ Controller Rev. _____ IDE <input type="checkbox"/> 50 Pin SCSI <input type="checkbox"/> 68 Pin SCSI <input type="checkbox"/> 80 Pin SCSI <input type="checkbox"/> Other <input type="checkbox"/>	Manufacturer: _____ Model: _____ Serial Number: _____ Capacity: _____ Cylinders: _____ Heads: _____ Sectors: _____ Controller Rev. _____ IDE <input type="checkbox"/> 50 Pin SCSI <input type="checkbox"/> 68 Pin SCSI <input type="checkbox"/> 80 Pin SCSI <input type="checkbox"/> Other <input type="checkbox"/>
Jumper: Master <input type="checkbox"/> Slave <input type="checkbox"/> Cable Select <input type="checkbox"/> Undetermined <input type="checkbox"/>	Jumper: Master <input type="checkbox"/> Slave <input type="checkbox"/> Cable Select <input type="checkbox"/> Undetermined <input type="checkbox"/>

**Hard Drive #1 Parameter Information**

DOS FDisk <input type="checkbox"/> PTable <input type="checkbox"/> PartInfo <input type="checkbox"/> Linux FDisk <input type="checkbox"/> SafeBack <input type="checkbox"/> EnCase <input type="checkbox"/> Other: _____						
Capacity: _____		Cylinders: _____		Heads: _____		Sectors: _____
LBA Addressable Sectors: _____			Formatted Drive Capacity: _____			
Volume Label: _____						
<b>Partitions</b>						
Name:	Bootable?	Start:	End:	Type:		
_____	<input type="checkbox"/>	_____	_____	_____		
_____	<input type="checkbox"/>	_____	_____	_____		
_____	<input type="checkbox"/>	_____	_____	_____		
_____	<input type="checkbox"/>	_____	_____	_____		

**Hard Drive #2 Parameter Information**

DOS FDisk <input type="checkbox"/> PTable <input type="checkbox"/> PartInfo <input type="checkbox"/> Linux FDisk <input type="checkbox"/> SafeBack <input type="checkbox"/> EnCase <input type="checkbox"/> Other: _____						
Capacity: _____		Cylinders: _____		Heads: _____		Sectors: _____
LBA Addressable Sectors: _____			Formatted Drive Capacity: _____			
Volume Label: _____						
<b>Partitions</b>						
Name:	Bootable?	Start:	End:	Type:		
_____	<input type="checkbox"/>	_____	_____	_____		
_____	<input type="checkbox"/>	_____	_____	_____		
_____	<input type="checkbox"/>	_____	_____	_____		
_____	<input type="checkbox"/>	_____	_____	_____		

**Image Archive Information**

Archive Method: Direct to Tape  NTBackup  Tar  Other :\* \_\_\_\_\_ Compressed?   
*Attach appropriate worksheet for backup method used.*  
 Tape Type: DAT 24  Dat 40  DLT \* Other \*:  
 Number Used:

*\*Requires Lab Director Approval*

**Analysis Platform Information**

Operating Systems Used: DOS  Windows  Mac  \*nix  Other: \_\_\_\_\_  
 Version: \_\_\_\_\_  
 Analysis Software Base: I-Look  EnCase  DOS Utilities  \*nix Utilities  Other:\*  
 Version: \_\_\_\_\_

**Restored Work Copy/Image Validated:** Yes  No

**List of utilities used other than base**

Utility	Version	Purpose

**Analysis Milestones**

Milestone	Remarks	Initials
Run Anti-Virus Scan		
Full File List with Meta Data		
Identify Users/Logons/ISP Accounts, etc.		
Browse File System		
Keyword/String Search		
Web/E-mail Header Recovery		
Recover & Examine Free/Slack Space		
Examine Swap		
Unerase/Recover Deleted Files		
Execute Programs as Needed		
Examine/Recover Mail/Chat		
Crack Passwords		

# Removable Media Worksheet

Case Number: \_\_\_\_\_ Exhibit Number: \_\_\_\_\_

Laboratory Number: \_\_\_\_\_ Control Number: \_\_\_\_\_

**Media Type / Quantity**

Diskette [ ]	LS-120 [ ]	100 MB Zip [ ]	250 MB Zip [ ]
1 GB Jaz [ ]	2 GB Jaz [ ]	Magneto-Optical [ ]	Tape [ ]
CD [ ]	DVD [ ]	Other [ ]	

**Examination**

Exhibit # Sub-Exhibit #	Triage	Duplicated	Browse	Unerase	Keyword Search
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner \_\_\_\_\_ Date \_\_\_\_\_ Supervisor Review \_\_\_\_\_ Date \_\_\_\_\_



## **Appendix D. Examples of Request for Service Forms**



**Example 1: Regional Computer Forensics Lab •  
4455 Genesee Street, Cheektowaga, NY 14225**

**REQUEST FOR SERVICE**

<b>CASE INFORMATION:</b>		<b>RCFL Case #:</b>
Submitting Person/ID#:	Date:	Agency Case #:
Submitting Agency:	Service: <b>Field Lab Tech</b>	Case Title:
Agency Property Tag #:	Suspect's Name:	
Case Agent:	Phone #:	
DDA/AUSA Assigned:	Phone #:	
Date Seized:	Case/Crime Type:	
Location Seized:	Pending Court Dates:	
Site #:	Date Analysis Needed:	
Suspect In Custody:	<b>Yes/No</b>	Expected Evidence Return Date:
Narcotics Related:	<b>Yes/No</b>	Number of Computers Anticipated:
Type of Seizure: (Circle) <b>Search Warrant Probation Parole Consent Admin Fed. Grand Jury Other:</b>		
Has this evidence been previously viewed and/or accessed by anyone? (Explain)		
Are you aware of any privileged information contained within evidence? (Explain)		
Do you want Standard Case Related Search Strings run against evidence? <b>Yes/No</b>		
(Circle Requested Searches) <b>Child Porn Narcotics Financial Crimes Internet Crimes Extortion Other:</b>		

**SERVICE REQUESTED:** *(Requests for Field Service must be received at least 2 business days prior to the search.)*

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**INSTRUCTIONS:**

- a. Please prepare one form for each search site (address).
- b. Please provide **ALL** requested information and note any unusual circumstances in the Service Request area.
- c. Please attach an Evidence Custody Form listing each individual container or package of submitted evidence.

<b>RCFL USE ONLY</b>	
<b>Date Case</b>	<b>Received By:</b>
<b>Case Priority:</b>	<b>Priority Established By:</b>

## Example 2: DoD Computer Forensics Laboratory (DCFL) Intake Form

(Form has been edited)



**DEPARTMENT OF THE AIR FORCE**

AIR FORCE OFFICE OF SPECIAL INVESTIGATIONS

(USE YOUR OWN LETTER HEAD)

MEMORANDUM FOR RECORD DoD Computer Forensics Laboratory  
12 June 2000

**TO:** DoD Computer Forensics Laboratory (DCFL)  
911 Elkridge Landing Road, Suite 300  
Linthicum, MD 21090

**FROM:** Self-Explanatory

**SUBJECT:** Request Forensic Media Analysis (Complete Unit Investigation Number)

**NOTE:** Do not remove the captions (the bold face lettering only. Please remove the explanations.). If no information can be applied to a certain caption, then state N/A or unknown.

**1. \*\*\*FULL NAME OF SUBJECT:** (If unknown, then state "Unknown.")

JOHN JIM DOE

**2. \*\*\*PRIORITY:** Explain if there is publicity, high-level interest, or other reasons to justify placing this investigation ahead of others (e.g., court date, etc.).

**3. CLASSIFICATION:** Unclassified–Secret–Specialized Compartmented Information, as it pertains to the investigation, and properly mark all documents.

**4. \*\*\*CASE AGENT:** (This is the "Lead" investigator. For example, if this is a joint investigation, then provide the identification of the "Lead Investigator" of the "Lead Investigating Agency." Provide complete identification and where they are located.) SA Max Factor, AFOSI Detachment 998, Home AFB, WV, DSN: 234–2345 or Commercial: (234) 234–2345.

**NOTE:** The DCFL does not have DSN service yet. Please provide commercial telephone numbers.

**5. \*\*\*SYNOPSIS OF THE CASE FACTS:** (Brief description of allegation, situation, and background surrounding the investigation. Provide information that will be useful to the

examiner so they can better understand the investigation and provide a better examination). You can provide an already completed document or a pending report to cover this step.

#### **6. \*\*\*ITEMS TO BE ANALYZED: (NOTE: IF NOT EVIDENCE, STATE THAT FACT)**

**NOTE:** It is only required to list the items to be analyzed, not to answer all the questions.

This must be a complete list of all items that need analysis. An evidence listing must completely identify all items. The following is just a sample of how to list evidence:

<b><u>Tag #'s</u></b>	<b><u>Description</u></b>
Tag # XX	Western Digital Caviar 31600 Hard Drive, Serial #: WT2891586134 taken from AST Computer Serial # 186AUZ022348.
Tag # XX	Fujitsu M1636TAU Hard Drive, Serial #: 08613105, Size: 1226MB.
Tag # XX	Gateway 2000, 386/33 MHz, Serial #: 302557386-330XC. Computer System with a Western Digital 125 MB internal hard drive, a Seagate 107 MB internal hard drive, internal 3.5-inch high-density floppy drive, one internal 5.25-inch floppy drive, internal sound card.  Gateway 2000 101 Keyboard, Serial #: 9208572226f7. Computer Mouse Device, Serial #: 850753.
Tag # XX	198 each 3.5-inch floppy diskettes 1 each 5.25-inch floppy diskettes

**7. \*\*\*SUPPORT REQUESTED:** (Specific and detailed request. Do not just cut and paste what is listed below. These are just some sample statements. If you do not know what one of these items is, then don't include it. Also, don't just say "give me everything" and expect DCFL to take it from there. List items you need the DCFL to find and how you need it produced and provided to you.)

e.g. **Computer Media**

- Extract all system logs, graphic files, text, documents, etc.
- Examine file system for modification to operating system software or configuration.
- Examine file system for back doors, check for setuid and setgid files.
- Examine file system for any sign of a sniffer program.
- Extract data from this 8-mm tape and convert to readable format, cut to CD.
- Backup hard drives and place backup on a CD, tape, or other format.
- Analyze for deleted files and restore deleted files, cut findings to CD.
- If possible, correlate sexually explicit images to the Internet history file.
- Extract sexually explicit images from logical, slack space, free space, cut to CD.
- Extract all pertinent text files of a sexual nature.
- Provide an analysis report and cut all findings to CD (specify).
- Conduct string search on physical level of media (provide list of words).

**8. PERTINENT DATA:** (e.g., provide passwords, keyword lists, operating system, nicknames, computer types, network information, Internet Protocol Address, and any other information that will assist with the analysis.)

**NOTE: If network intrusion detection logs or other detection type logs are associated with the respective investigation (e.g., ASIM logs, Government Sniffer Logs, etc.), they should be provided (electronic form preferable, paper is acceptable). This will enhance the examiner's ability to provide a better product and to interpret the logs in an effort to search for the right items.**

**NOTE:** The examiner will conduct only the specific tasks requested. If not specified, then it will not be done. If obvious items are left off the request, the DCFL will call to verify. The more detail you provide, the better and more analysis we conduct.

**NOTE:** Contact your servicing computer expert to aid in creation of this request, if necessary.

**9. \*\*\*AUTHORITY:** Please indicate the legal basis for DCFL conducting the search you are requesting. There are generally three bases in criminal cases that would allow DCFL to perform your request:

1. Search Warrant/Military Search Authority [include supporting affidavits].
2. Consent.
  - DoD Banner.
  - Unit User Agreement.
  - Written Consent Signed by Authorizer.
  - Written Record of the Designated Approval Authority or Other Official who has the Right to Consent to the Search of the Media.
  - Memorandum of oral consent with special emphasis as to the scope of the consent granted.
3. Written Memo from servicing legal office stating that there is no reasonable expectation of privacy in the media submitted.

Inclusion of a copy of documents listed above is mandatory along with the request and will speed the analysis. Failure to include the same will result in a delay until such time as DCFL is satisfied that there is a legal basis for conducting the analysis.

**10. \*\*\*OTHER DOCUMENTS:** Requestors **MUST** provide the form used to open the investigation within their organization (e.g., provide a copy of an ACISS report, Army Form 66, or Navy ALS, etc.).

**11. INSTRUCTIONS:** Let the DCFL know if you have specific instructions. Please send copy of analysis report to both ? and ? Please return all evidence to ?

**12. \*\*\*POC is:** (This is the Requestor's contacting information, i.e., the person who authored this request. It could be the same as the "Lead Agent," and, if so, just state "Same.>"). Provide complete identification and contacting information: SA Jane Doe, AFOSI Detachment 999 at DSN: 123-1234 or Commercial: (123) 123-1234.

**NOTE:** If the required information (marked by \*\*\*) is not outlined in or not with this request, then the request for examination will be placed on hold until ALL information is provided.

JANE DOE, SA, USAF  
Computer Crime Investigations

### Example 3: Department of Maryland State Police Computer Forensic Laboratory

## Department of Maryland State Police Computer Forensic Laboratory

TELEPHONE 410-290-1620 FAX 410-290-1831

7155 C Columbia Gateway Drive, Columbia, Maryland 21046

### REQUEST FOR SERVICE

Date Submitted:						MSP Complaint Control #:	
Submitting Agency:		Address:		County:	Agency Case #:		
Submitting Officer			ID#:	E-mail Address:		Telephone:	
Location Seized:				Date Seized:		Agency Property #:	
Case Title:		Suspect's Last Name, First Name, MI:			Sex: <b>M F</b>	Age:	Tracking Number:
Crime:		Date of Offense:	Date Charges Filed:	Court Date:		Court / Location:	
Owner of Property - Name:			Address:			Telephone:	

Type of Seizure: (Circle)    **Search Warrant**    **Consent**    **Administrative**    **Federal Grand Jury**    **Other:**

Number of Computers:	CCU Consulted Reference Seizure:	<b>(Attach a copy of the Search Warrant Affidavit and the Inventory/Return)</b>					
Has this evidence been previously viewed, accessed, and/or examined by anyone? (Explain)							<b>Yes</b> <b>No</b>
Are you aware of any privileged information contained within the evidence being submitted for examination? Explain)							<b>Yes</b> <b>No</b>
Are you aware of any other information related to the evidence being submitted? (Explain)							<b>Yes</b> <b>No</b>

**Urgent Request for Examination**

Date Request Received:	Person Making Request - Name / Title	Telephone # where you can be reached:	Date Analysis Needed:
Reason for Request: <b>(Except for Imminent Court dates, ALL Urgent requests must be accompanied by a letter of justification.)</b>			

**SERVICE REQUESTED: (Requests for field service must be received at least 2 business days prior to search)**


#### INSTRUCTIONS

- Please prepare one form for each search site (address).
- Please provide **ALL** requested information and note any unusual circumstance in the "Service Requested" area.
- Please attach a **Request for Laboratory Examination Chain of Custody Log** (MSP Form 67) and a copy of your agency /installation **Property Record**, listing each container or package submitted as evidence.
- Please attach a **Detailed Summary** of suspect information, which includes personal data, e-mail addresses, nicknames, screen names, passwords, target websites, accomplices, and a list of unique keywords relevant to your investigation.

<b>LABORATORY USE ONLY:</b>		Case Priority: <b>1 2 3 4 5</b>				
LabCASE #:	Date Case Received: _____	Priority Established by: _____				
	Received by: _____					

## Appendix E. Legal Resources List

### Publications

*Searching and Seizing Computers and Obtaining Electronic Evidence in Criminal Investigations*. Washington, D.C.: U.S. Department of Justice, Computer Crime and Intellectual Property Section, July 2002. (Online under <http://www.cybercrime.gov/searching.html#A>.)

*Prosecuting Cases That Involve Computers: A Resource for State and Local Prosecutors* (CD-ROM), National White Collar Crime Center, 2001. (See <http://www.nctp.org> and <http://www.training.nw3c.org> for information).

*Forward Edge: Computer Training on Seizing Electronic Evidence* (CD-ROM), U.S. Secret Service, 2001. (Contact your local U.S. Secret Service office.)

### Legislation

Electronic Communications Privacy Act (ECPA). 18 USC 2510 et seq.; 18 USC 2701 et seq.; 18 USC 3121 et seq.

Privacy Protection Act (PPA). 42 USC 2000aa et seq.

USA PATRIOT ACT of 2001, Public Law 107-56, amended statutes relevant to computer investigations. Statutes amended include 18 USC 1030; 18 USC 2510 et seq.; 18 USC 2701 et seq.; 18 USC 3121 et seq.; and 47 USC 551.

### Web sites

Computer Crime and Intellectual Property Section of the U.S. Department of Justice, 202-514-1026, <http://www.cybercrime.gov>.

National Cybercrime Training Partnership, 877-628-7674, <http://www.nctp.org>.

<http://www.forensicsweb.com/downloads/cfid/isplist/isplist.htm>

## Appendix F. Technical Resources List

### National

#### Computer Analysis Response Team FBI Laboratory

935 Pennsylvania Avenue N.W.  
Washington, DC 20535  
Phone: 202-324-9307  
<http://www.fbi.gov/hq/lab/org/cart.htm>

#### High Tech Crime Consortium

International Headquarters  
1506 North Stevens Street  
Tacoma, WA 98406-3826  
Phone: 253-752-2427  
Fax: 253-752-2430  
E-mail: [admin@hightechcrimecops.org](mailto:admin@hightechcrimecops.org)  
<http://www.HighTechCrimeCops.org>

#### Information Systems Security Association (ISSA)

7044 South 13th Street  
Oak Creek, WI 53154  
Phone: 800-370-4772  
<http://www.issa.org>

#### Internal Revenue Service

Criminal Investigation Division  
2433 South Kirkwood Court  
Denver, CO 80222  
Phone: 303-756-0646  
<http://www.treas.gov/irs/ci/index.htm>

#### National Aeronautics and Space Administration

Office of Inspector General  
Computer Crimes Division  
300 E Street S.W.  
Washington, DC 20546  
Phone: 202-358-2573  
<http://www.hq.nasa.gov/office/oig/hq>

#### National Association of Attorneys General

Computer Crime Point of Contact  
750 First Street N.E.  
Suite 1100  
Washington, DC 20002  
Phone: 202-326-6000  
[http://www.naag.org/issues/  
20010724-cc\\_list\\_bg.php](http://www.naag.org/issues/20010724-cc_list_bg.php)

#### National Center for Forensic Science

University of Central Florida  
P.O. Box 162367  
Orlando, FL 32816  
Phone: 407-823-6469  
Fax: 407-823-3162  
<http://www.ncfs.ucf.org>

#### National Criminal Justice Computer Laboratory and Training Center

SEARCH Group, Inc.  
7311 Greenhaven Drive, Suite 145  
Sacramento, CA 95831  
Phone: 916-392-2550  
<http://www.search.org>

#### National Law Enforcement and Corrections Technology Center (NLECTC)-Northeast

26 Electronic Parkway  
Rome, NY 13441  
Phone: 888-338-0584  
Fax: 315-330-4315  
<http://www.justnet.org>



**National Law Enforcement and Corrections Technology Center (NLECTC)–West**

c/o The Aerospace Corporation  
2350 East El Segundo Boulevard  
El Segundo, CA 90245  
Phone: 888–548–1618  
Fax: 310–336–2227  
<http://www.justnet.org>

**National Railroad Passenger Corporation (NRP) (AMTRAK)**

Office of Inspector General  
Office of Investigations  
10 G Street N.E., Suite 3E–400  
Washington, DC 20002  
Phone: 202–906–4318  
E-mail: [oigagent@aol.com](mailto:oigagent@aol.com)

**National White Collar Crime Center**

Computer Crime Section  
1000 Technology Drive, Suite 2130  
Fairmont, WV 26554  
Phone: 877–628–7674  
<http://www.cybercrime.org>

**Scientific Working Group for Digital Evidence**

<http://www.swgde.org>

**Social Security Administration**

Office of Inspector General  
Electronic Crimes Team  
4–S–1 Operations Building  
6401 Security Boulevard  
Baltimore, MD 21235  
Phone: 410–966–4225  
Fax: 410–965–5705  
<http://www.ssa.gov/oig>

**U.S. Army Criminal Investigation Laboratory**

U.S. Army Criminal Investigation  
Command  
4553 N. 2d Street  
Forest Park, GA 30297–5122  
Phone: 404–469–7486

**U.S. Customs Service CyberSmuggling Center**

11320 Random Hills, Suite 400  
Fairfax, VA 22030  
Phone: 703–293–8005  
Fax: 703–293–9127  
[http://www.customs.ustreas.gov/xp/cgov/enforcement/investigative\\_priorities/c3fact\\_sheet.xml](http://www.customs.ustreas.gov/xp/cgov/enforcement/investigative_priorities/c3fact_sheet.xml)

**U.S. Department of Defense**

DoD Computer Forensics Laboratory  
911 Elkridge Landing Road, Suite 300  
Linthicum, MD 21090  
Phone: 410–981–0100/877–981–3235  
<http://www.dodig.doe.gov>

**U.S. Department of Defense**

Office of Inspector General  
Defense Criminal Investigative Service  
Computer Forensics Analysis Program  
400 Army Navy Drive, Suite 901  
Arlington, VA 22202  
Phone: 703–604–8733  
<http://www.dodig.osd.mil/dcis/dcismain.html>  
<http://www.dodig.osd.mil/dcis/CFAP>

**U.S. Department of Energy**

Office of the Inspector General  
Technology Crimes Section  
1000 Independence Avenue, 5A–235  
Washington, DC 20585  
Phone: 202–586–9939  
Fax: 202–586–0754  
E-mail: [tech.crime@hq.doe.gov](mailto:tech.crime@hq.doe.gov)  
<http://www.ig.doe.gov>

**U.S. Department of Justice**

Bureau of Alcohol, Tobacco, Firearms  
and Explosives  
Technical Support Division  
Visual Information Branch  
650 Massachusetts Avenue N.W.  
Room 3220  
Washington, DC 20226–0013  
Phone: 202–927–8037  
Fax: 202–927–8682

**U.S. Department of Justice**

Criminal Division  
Computer Crime and Intellectual Property  
Section (CCIPS)  
10th and Constitution Avenue N.W.  
John C. Keeney Building, Suite 600  
Washington, DC 20530  
Phone: 202-514-1026  
<http://www.cybercrime.gov>

**U.S. Department of Justice**

Drug Enforcement Administration  
Digital Evidence Laboratory  
10555 Furnace Road  
Lorton, VA 22079  
Phone: 703-495-6787  
Fax: 703-495-6794

**U.S. Department of Transportation**

Office of Inspector General  
200 West Adams, Suite 300  
Chicago, IL 60606  
Phone: 312-353-0106  
Fax: 312-353-7032

**U.S. Postal Inspection Service**

Forensic and Technical Services Division  
Digital Evidence  
22433 Randolph Drive  
Dulles, VA 20104-1000  
Phone: 703-406-7927  
<http://www.usps.com/postalinspectors/crimelab.htm>

**U.S. Postal Service**

Office of Inspector General  
Technical Crime Unit  
1735 North Lynn Street  
Arlington, VA 22209-2020  
Phone: 703-248-2100  
<http://www.uspsoig.gov>

**U.S. Secret Service**

Electronic Crimes Branch  
950 H Street N.W.  
Washington, DC 20223  
Phone: 202-406-5850  
Fax: 202-406-9233  
<http://www.treas.gov/usss>

**Veterans Affairs**

Office of the Inspector General  
Computer Crimes and Forensics  
801 I Street N.W., Suite 1064  
Washington, DC 20001  
Phone: 202-565-5701  
<http://www.va.gov/oig/homepage.htm>

**By State****Alabama****Alabama Attorney General's Office**

Donna White  
Special Agent  
11 South Union Street  
Montgomery, AL 36130  
Phone: 334-242-7345  
Fax: 334-242-0928  
E-mail: [dwhite@ago.state.al.us](mailto:dwhite@ago.state.al.us)  
<http://www.ago.state.al.us>

**Alabama Bureau of Investigation**

Internet Crimes Against Children Unit  
Glenn Taylor  
Agent  
716 Arcadia Circle  
Huntsville, AL 35801  
Phone: 256-539-4028  
E-mail: [tgtjr@aol.com](mailto:tgtjr@aol.com)

**Homewood Police Department**

Wade Morgan  
1833 29th Avenue South  
Homewood, AL 35209  
Phone: 205-877-8637  
E-mail: [morgan64@bellsouth.net](mailto:morgan64@bellsouth.net)

**Hoover Police Department**

Sgt. Harry Long  
100 Municipal Drive  
Hoover, AL 35216  
Phone: 205-444-7533  
E-mail: longh@ci.hoover.al.us  
<http://www.hooveral.org/content/police/policeand911.htm>

**Alaska****Alaska State Troopers**

Sgt. Curt Harris  
White Collar Crime Section  
5700 East Tudor Road  
Anchorage, AK 99507  
Phone: 907-269-5627  
Fax: 907-269-5493  
E-mail: curtis\_harris@dps.state.ak.us  
<http://www.dps.state.ak.us/ast>

**Anchorage Police Department**

Det. Glen Klinkhart/Sgt. Ross Plummer  
4501 South Bragaw Street  
Anchorage, AK 99507-1599  
Phone: 907-786-8767/907-786-8778  
E-mail: gklinkhart@ci.anchorage.ak.us  
rplummer@ci.us.ak.gov  
<http://www.ci.anchorage.ak.us/apd>

**University of Alaska at Fairbanks Police Department**

Officer Marc Poeschel  
Interior Alaska FORCES (IAF) Task  
Coordinator  
P.O. Box 755560  
Fairbanks, AK 99775-5560  
Phone: 907-474-6200  
E-mail: fyglock@uaf.edu  
<http://www.akforces.uaf.edu>

**Arizona****Arizona Attorney General's Office**

Gail Thackeray  
Assistant Attorney General  
Technology Crimes Unit  
1275 West Washington Street  
Phoenix, AZ 85007  
Phone: 602-542-3881  
Fax: 602-542-5997  
E-mail: gail.thackeray@ag.state.az.us  
Special Agent William Sutter, CFCE  
Phone: 602-542-4853  
Fax: 602-542-4882  
E-mail: william.sutter@ag.state.az.us  
<http://www.ag.state.az.us>

**Arizona Regional Computer Forensic Laboratory**

Sgt. R. Hopper  
P.O. Box 6638  
Phoenix, AZ 85005  
Phone: 602-223-2698  
Fax: 602-223-2332

**Arkansas****University of Arkansas at Little Rock Police Department**

William (Bill) Reardon/Bobby Floyd  
2801 South University Avenue  
Little Rock, AR 72204  
Phone: 501-569-8793/501-569-8794  
E-mail: wcreardon@ualr.edu  
bcfloyd@ualr.edu

**California****Bay Area Electronic Crimes Task Force**

Don Wilborn/SA Susan Broad  
345 Spear Street  
San Francisco, CA 94105  
Phone: 415-744-9026  
Fax: 415-744-9051  
E-mail: dwilborn@ussf.treas.gov

**California Department of Justice**

Bureau of Medi-Cal Fraud and Elder Abuse  
Luis Salazar  
Senior Legal Analyst/Computer Forensic  
Examiner  
1455 Frazee Road, Suite 315  
San Diego, CA 92108  
Phone: 619-688-6182  
Fax: 619-688-4200  
E-mail: Luis.Salazar@doj.ca.gov  
<http://www.caag.state.ca.us/bmfea>

**California Franchise Tax Board**

Investigations Bureau  
Ashraf L. Massoud  
Senior Special Agent  
100 North Barranca Street, Suite 500  
West Covina, CA 91791-1600  
Phone: 626-859-4678  
E-mail: ashraf\_massoud@ftb.ca.gov

**Kern County Sheriff's Department**

Tom Fugitt  
1350 Norris Road  
Bakersfield, CA 93308  
Phone: 661-391-7453  
E-mail: fugitt@co.kern.ca.us  
<http://www.co.kern.ca.us/sheriff/rcfl.htm>

**Los Angeles Police Department**

Computer Crime Unit  
Det. Terry D. Willis  
150 North Los Angeles Street  
Los Angeles, CA 90012  
Phone: 213-485-3795  
<http://www.lapd.org>

**Modesto Police Department**

Computer Forensics Unit  
600 10th Street  
Modesto, CA 95354  
Phone: 209-572-9500, ext. 29119  
<http://www.ci.modesto.ca.us/mpd/departments/computer%5Ffor.htm>

**Northern California Computer Crimes  
Task Force**

Sgt. Dave Bettin  
455 Devlin Road, Suite 207  
Napa, CA 94559  
Phone: 707-253-4500

**Regional Computer Forensic Laboratory  
at San Diego**

Sgt. Rusty Sargent  
Operations Manager  
9797 Aero Drive  
San Diego, CA 92123-1800  
Phone: 858-499-7799  
Fax: 858-499-7798  
E-mail: rcfl@rcfl.org  
<http://www.rcfl.org>

**Sacramento Valley Hi-Tech Crimes  
Task Force**

Hi-Tech Crimes Division  
Sacramento County Sheriff's Department  
Lt. Mike Tsuchida  
4510 Orange Grove Avenue  
Sacramento, CA 95841  
Phone: 916-874-3030  
E-mail: mtsuchida@sacsheriff.com  
<http://www.sacsheriff.com>

**San Diego High Technology Crimes  
Economic Fraud Division**

David Decker  
District Attorney's Office, County of  
San Diego  
Suite 750  
San Diego, CA 92101  
Phone: 619-531-3660  
E-mail: ddecke@sdcca.org

**Silicon Valley High Tech Crime  
Task Force**

Rapid Enforcement Allied Computer Team  
(REACT)  
c/o Federal Bureau of Investigation  
Nick Muyo  
950 South Bascom Avenue, Suite 3011  
San Jose, CA 95128  
Phone: 408-494-7161  
Pager: 408-994-3264  
E-mail: sharx91@aol.com

**Southern California High Technology Task Force**

Lt. Rick Craig  
Commercial Crimes Bureau  
Los Angeles County Sheriff's Department  
12440 East Imperial Highway, Suite B130  
Norwalk, CA 90650  
Phone: 562-345-4260

**United States Secret Service  
Los Angeles Electronic Crimes Task Force**

725 South Figueroa Street, Suite 1300  
Los Angeles, CA 90017-5418  
Phone: 213-894-4830 or 213-533-4650  
Fax: 213-533-4729  
E-mail: laxectf@usss.treas.gov  
ATSAIC Donald Masters  
Phone: 213-533-4691  
E-mail: laxectf@usss.treas.gov  
ATSAIC John "Keith" Helton  
Phone: 213-533-4651  
E-mail: jhelton@usss.treas.gov

**U.S. Customs Service**

Frank Day  
Senior Special Agent  
Computer Investigative Specialist  
3403 10th Street, Suite 600  
Riverside, CA 92501  
Phone: 909-276-6664, ext. 231  
E-mail: FDay@usa.net

**Colorado****Colorado Regional Computer Forensic Laboratory**

John Davis  
Operations Manager  
9350 Heritage Hills Circle  
Lone Tree, CO 80124  
Phone: 303-784-7814  
Fax: 303-790-4124  
E-mail: jtdavis@douglas.co.us

**Denver District Attorney's Office**

Henry R. Reeve  
General Counsel/Deputy D.A.  
201 West Colfax Avenue, Dept. 801  
Denver, CO 80202  
Phone: 720-913-9000  
E-mail: htr@denverdq.org  
<http://www.denverda.org>

**Department of Public Safety**

Colorado Bureau of Investigation  
Computer Crime Investigation  
710 Kipling Street, Suite 200  
Denver, CO 80215  
Phone: 303-239-4292  
Fax: 303-239-5788  
E-mail: Collin.Reese@cdps.state.co.us  
<http://cbi.state.co.us>

**Connecticut****Connecticut Department of Public Safety**

Division of Scientific Services  
Forensic Science Laboratory  
Computer Crimes and Electronic  
Evidence Unit  
278 Colony Street  
Meriden, CT 06451  
Phone: 203-639-6492  
Fax: 203-630-3760  
E-mail: agr.ccu@snet.net  
[http://www.state.ct.us/DPS/DSS/  
ComputerCrimes.htm](http://www.state.ct.us/DPS/DSS/ComputerCrimes.htm)

**Connecticut Department of Revenue Services**

Special Investigations Section  
25 Sigourney Street  
Hartford, CT 06106  
Phone: 860-297-5877  
Fax: 860-297-5625  
<http://www.drs.state.ct.us>

**Yale University Police Department**

Sgt. Dan Rainville  
98-100 Sachem Street  
New Haven, CT 06511  
Phone: 203-432-7958  
E-mail: daniel.rainville@yale.edu  
<http://www.yale.edu/police>

**Delaware****Delaware State Police**

High Technology Crimes Unit  
1575 McKee Road, Suite 204  
Dover, DE 19904  
Det. Steve Whalen  
Phone: 302-739-2761  
E-mail: Steve.Whalen@state.de.us  
Det. Daniel Willey  
Phone: 302-739-8020  
E-mail: Daniel.Willey@state.de.us  
Sgt. Robert Moses  
Phone: 302-739-2467  
E-mail: Bob.Moses@state.de.us  
Sgt. Kevin Perna  
Phone: 302-739-1399  
E-mail: kperna@state.de.us  
<http://www.state.de.us/dsp>

**New Castle County Police Department**

Criminal Investigations Unit  
Det. Christopher M. Shanahan/  
Det. Edward E. Whatley/Det. Joseph Trala  
3601 North DuPont Highway  
New Castle, DE 19720  
Phone: 302-395-8110  
E-mail: cshanahan@co.new-castle.de.us  
eewhatley@co.new-castle.de.us  
jtrala@co.new-castle.de.us  
<http://www.nccpd.com>

**University of Delaware Police Department**

Capt. Stephen M. Bunting  
101 MOB  
700 Pilottown Road  
Lewes, DE 19958  
Phone: 302-645-4334  
E-mail: sbunting@udel.edu

**District of Columbia****Metropolitan Police Department**

Special Investigations Branch  
Computer Crimes and Forensics Unit  
Investigator Tim Milloff  
300 Indiana Avenue N.W., Room 3019  
Washington, DC 20001  
Phone: 202-727-4723/202-727-1010  
Fax: 202-727-2398  
E-mail: tmilloff@mpdc.org  
<http://mpdc.dc.gov>

**Washington Metropolitan Electronic Crimes Task Force**

1100 L Street N.W.  
Washington, DC 20003  
Phone: 202-406-8500  
Fax: 202-406-8503

**Florida****Florida Atlantic University Police Department**

Det. Wilfredo Hernandez  
777 Glades Road, #49  
Boca Raton, FL 33431  
Phone: 561-297-2371  
Fax: 561-297-0144  
E-mail: hernande@fau.edu  
<http://www.fau.edu/police>

**Gainesville Police Department**

Criminal Investigations/Computer Unit  
721 N.W. Sixth Street  
Gainesville, FL 32601  
Phone: 352-334-2471  
Fax: 352-334-3232  
<http://www.gainesvillepd.org>

**Institute of Police Technology and Management**

Computer Forensics Laboratory  
University of North Florida  
12000 Alumni Drive  
Jacksonville, FL 32224-2678  
Phone: 904-620-4786  
Fax: 904-620-2453  
<http://www.ipitm.org>

**Miami Electronic Crimes Task Force**

ATSAIC Alex Echo  
8375 N.W. 53rd Street  
Miami, FL 33166  
Phone: 305-629-1800  
Fax: 305-629-1830  
E-mail: [aecho@usss.treas.gov](mailto:aecho@usss.treas.gov)

**Office of Statewide Prosecution**

High Technology Crimes  
Thomas A. Sadaka  
Special Counsel  
135 West Central Boulevard, Suite 1000  
Orlando, FL 32801  
Phone: 407-245-0893  
Fax: 407-245-0356  
E-mail: [thomas\\_sadaka@oag.state.fl.us](mailto:thomas_sadaka@oag.state.fl.us)  
<http://legal.firn.edu/swp/index.html>

**Pinellas County Sheriff's Office**

Det. Matthew Miller  
10750 Ulmerton Road  
Largo, FL 33778  
Phone: 727-582-6345  
E-mail: [mmiller@pcsonet.com](mailto:mmiller@pcsonet.com)  
<http://www.co.pinellas.fl.us/sheriff>

**Georgia****Georgia Bureau of Investigation**

Financial Investigations Unit  
Steve Edwards  
Special Agent in Charge  
5255 Snapfinger Drive, Suite 150  
Decatur, GA 30035  
Phone: 770-987-2323  
Fax: 770-987-9775  
E-mail: [steve.edwards@gbj.state.ga.us](mailto:steve.edwards@gbj.state.ga.us)  
<http://www.ganet.org/gbi>

**Hawaii****Honolulu Police Department**

White Collar Crime Unit  
Det. Chris Duque  
801 South Beretania Street  
Honolulu, HI 96813  
Phone: 808-529-3112

**Idaho****Ada County Sheriff's Office**

Det. Lon Anderson, CFCE  
7200 Barrister Drive  
Boise, ID 83704  
Phone: 208-377-6691  
<http://www.adasheriff.org>

**Illinois****Chicago Electronic Crimes Task Force (CECTF)**

Paul Wattay  
Supervisor  
Assistant to the Special Agent in Charge  
525 West Van Buren Street, Suite 900  
Chicago, IL 60607  
Phone: 312-353-5431  
Fax: 312-353-1225  
E-mail: [pwattay@usss.treas.gov](mailto:pwattay@usss.treas.gov)

**Chicago Regional Computer Forensics Laboratory**

610 South Canal Street, Fifth Floor  
Chicago, IL 60607  
Phone: 312-913-9270  
Fax: 312-913-9408  
<http://www.chicagorcfl.org>

**Illinois Attorney General's Office**

High Tech Crimes Bureau  
Keith Chval, Chief  
188 West Randolph  
Chicago, IL 60601  
Phone: 312-814-3762  
Fax: 312-814-8283  
E-mail: [kchval@atg.state.il.us](mailto:kchval@atg.state.il.us)

**Illinois State Police**

Electronic Investigation Unit  
Division of Operations  
Operational Services Command  
Statewide Support Bureau  
500 Illes Park Place, Suite 104  
Springfield, IL 62718  
Phone: 217-785-0631  
Fax: 217-785-6793  
<http://www.isp.state.il.us>

**Illinois State Police**

Electronic Investigations Section  
Master Sgt. James Murray  
8151 West 183rd Street, Suite F  
Tinley Park, IL 60477  
Phone: 708-633-5561  
E-mail: [murrayj@isp.state.il.us](mailto:murrayj@isp.state.il.us)  
<http://www.isp.state.il.us>

**Tazewell County State's Attorney CID**

Det. Dave Frank  
342 Court Street, Suite 6  
Pekin, IL 61554-3298  
Phone: 309-477-2205, ext. 400  
Fax: 309-477-2729  
E-mail: [sainv@tazewell.com](mailto:sainv@tazewell.com)

**Indiana****Evansville Police Department**

Det. J. Walker/Det. Craig Jordan  
15 N.W. Martin Luther King, Jr., Boulevard  
Evansville, IN 47708  
Phone: 812-436-7995/812-436-7994  
E-mail: [Jwalker@evansvillepolice.com](mailto:Jwalker@evansvillepolice.com)  
[cjordan@evansvillepolice.com](mailto:cjordan@evansvillepolice.com)  
<http://www.evansvillepolice.com>

**Indiana State Police**

Det. David L. Lloyd  
Computer Crime Unit  
5811 Ellison Road  
Fort Wayne, IN 46750  
Phone: 765-662-9864, ext. 174  
E-mail: [ispdet@aol.com](mailto:ispdet@aol.com)  
<http://www.ai.org/isp>

**Indianapolis Police Department**

Det. William J. Howard  
901 North Post Road, Room 115  
Indianapolis, IN 46219  
Phone: 317-327-3461  
E-mail: [vulcan@netdirect.net](mailto:vulcan@netdirect.net)  
<http://www.indygov.org/ipd>

**Iowa****Iowa Division of Criminal Investigation**

920 Southwest Morgan Street, Suite G  
Des Moines, IA 50309  
Phone: 515-281-7671  
Fax: 515-281-7638  
<http://www.state.ia.us/government/dps/dci>

**Kansas****Kansas Bureau of Investigation**

High Technology Crime Investigation Unit  
(HTCIU)  
David J. Schroeder  
Senior Special Agent  
1620 S.W. Tyler Street  
Topeka, KS 66612-1837  
Phone: 785-296-8222  
Fax: 785-296-0525  
E-mail: [dave.schroeder@kbi.state.ks.us](mailto:dave.schroeder@kbi.state.ks.us)  
<http://www.accesskansas.org/kbi/main.html>

**Olathe Police Department**

Det. Patrick Foster  
501 East 56 Highway  
Olathe, KS 66061  
Phone: 913-971-6542  
Fax: 913-782-3127  
E-mail: [PFoster@olatheks.org](mailto:PFoster@olatheks.org)  
[http://www.olatheks.org/Public\\_Safety/Police/index.cfm](http://www.olatheks.org/Public_Safety/Police/index.cfm)



**Wichita Police Department**

Forensic Computer Crimes Unit  
Det. Shaun Price/Det. Brett Eisenman  
130 South Market Street  
Wichita, KS 67202  
Phone: 316-337-6124  
E-mail: sprice@sedgwick.gov  
beisenma@sedgwick.gov  
<http://www.wichitapolice.com>

**Kentucky****Boone County Sheriff**

Capt. Jack Prindle  
P.O. Box 198  
Burlington, KY 41005  
Phone: 859-334-2175  
E-mail: jprindle@boonecountyky.org

**Louisiana****Gonzales Police Department**

Officer Dan Crummey  
120 South Irma Boulevard  
Gonzales, LA 70737  
Phone: 225-647-9535  
Fax: 225-647-9544

**Louisiana Department of Justice**

Criminal Division  
High Technology Crime Unit  
339 Florida Street, Suite 402  
Baton Rouge, LA 70801  
James L. Piker, Assistant Attorney General  
Section Chief, High Technology Crime Unit  
Investigator Clayton Rives  
Phone: 225-342-7552  
Fax: 225-342-7893  
E-mail: PikerJ@ag.state.la.us  
RivesCS@ag.state.la.us  
Scott Turner, Computer Forensic Examiner  
Phone: 225-342-4060  
Fax: 225-342-3482  
E-mail: TurnerS@ag.state.la.us  
<http://www.ag.state.la.us>

**Maine****Maine Computer Crimes Task Force**

171 Park Street  
Lewiston, ME 04240  
Det. James C. Rioux  
Phone: 207-784-6422, ext. 250  
Investigator Mike Webber  
Phone: 207-784-6422, ext. 255  
Det. Thomas Bureau  
Phone: 207-784-6422, ext. 256  
<http://www.mcctf.org>

**Maryland****Anne Arundel County Police Department**

Computer Analysis Unit  
Det. Bob Reyes  
41 Community Place  
Crownsville, MD 21032  
Phone: 410-222-3409  
E-mail: breyesjr1@yahoo.com  
<http://www.aacopd.org>

**Department of Maryland State Police**

Technical Assistance and Computer  
Crimes Division  
Lt. Barry E. Leese  
Division Commander  
7155-C Columbia Gateway Drive  
Columbia, MD 21046  
Phone: 410-290-1620  
Fax: 410-290-1831  
E-mail: bleese@mdsp.org

**Montgomery County Police**

Computer Crime Unit  
2350 Research Boulevard  
Rockville, MD 20850  
Phone: 301-840-2590  
E-mail: mcpdccu@montgomery  
countymd.gov  
[http://www.co.mo.md.us/services/police/  
ccu/computercrime.htm](http://www.co.mo.md.us/services/police/ccu/computercrime.htm)

## Massachusetts

### Massachusetts Office of the Attorney General

Corruption, Fraud, and Computer Crime Division

John Grossman, Chief  
Assistant Attorney General  
One Ashburton Place  
Boston, MA 02108  
Phone: 617-727-2200  
<http://www.ago.state.ma.us>

### New England Electronic Crimes Task Force

10 Causeway Street, No. 791  
Boston, MA 02222  
Phone: 617-565-6642 or 617-565-5640  
Fax: 617-565-5103  
<http://www.neectf.org>

## Michigan

### Michigan Department of Attorney General

High Tech Crime Unit  
18050 Deering  
Livonia, MI 48152  
Phone: 734-525-4151  
Fax: 734-525-4372  
E-mail: [miag-htu@michigan.gov](mailto:miag-htu@michigan.gov)  
<http://www.ag.state.mi.us>

### Oakland County Sheriff's Department

Computer Crimes Unit  
Det. Carol Liposky  
1201 North Telegraph Road  
Pontiac, MI 48341  
Phone: 248-452-9843  
Fax: 248-858-9565  
[http://www.co.oakland.mi.us/c\\_serv/ocsd](http://www.co.oakland.mi.us/c_serv/ocsd)

## Minnesota

### Ramsey County Sheriff's Department

Deputy Mike O'Neill  
14 West Kellogg Boulevard  
St. Paul, MN 55102  
Phone: 651-266-2797  
E-mail: [mike.oneill@co.ramsey.mn.us](mailto:mike.oneill@co.ramsey.mn.us)  
<http://www.ramseycountysheriff.org>

## Mississippi

### Biloxi Police Department

Investigator Donnie G. Dobbs  
170 Porter Avenue  
Biloxi, MS 39530  
Phone: 228-435-6112  
E-mail: [mgc2d11@aol.com](mailto:mgc2d11@aol.com)  
[http://www.biloxi.ms.us/police\\_department.html](http://www.biloxi.ms.us/police_department.html)

## Missouri

### St. Louis Metropolitan Police Department

High Tech Crimes Unit  
Det. Sgt. Robert Muffler  
1200 Clark  
St. Louis, MO 63102  
Phone: 314-444-5441  
Fax: 314-444-5432  
E-mail: [rjmuffler@slmpd.org](mailto:rjmuffler@slmpd.org)  
<http://www.stlouiscitypolicedept.org>

## Montana

### Montana Division of Criminal Investigation

Computer Crime Unit  
Jimmy Weg, CFCE  
Agent in Charge  
303 North Roberts, Room 371  
Helena, MT 59620  
Phone: 406-444-6681  
Cell phone: 406-439-6185  
E-mail: [jweg@state.mt.us](mailto:jweg@state.mt.us)  
<http://www.doj.state.mt.us/enforcement/default.asp>

## Nebraska

### Lincoln Police Department

Investigator Ed Sexton  
575 South 10th Street  
Lincoln, NE 68508  
Phone: 402-441-7587  
E-mail: [lpd358@cjis.ci.lincoln.ne.us](mailto:lpd358@cjis.ci.lincoln.ne.us)  
<http://www.ci.lincoln.ne.us/city/police/>

### Nebraska State Patrol

Internet Crimes Against Children Unit  
Sgt. Scott Christensen  
Coordinator  
4411 South 108th Street  
Omaha, NE 68137  
Phone: 402-595-2410  
Fax: 402-595-3303  
E-mail: [schrste@nsp.state.ne.us](mailto:schrste@nsp.state.ne.us)  
<http://www.nsp.state.ne.us>

## Nevada

### City of Reno, Nevada, Police Department

Computer Crimes Unit  
455 East Second Street  
Reno, NV 89502  
P.O. Box 1900 (mailing address)  
Reno, NV 89505  
Phone: 775-334-2107  
Fax: 775-785-4026  
[http://www.cityofreno.com/pub\\_safety/police](http://www.cityofreno.com/pub_safety/police)

### Las Vegas Electronic Crimes Task Force

SA James Darnell  
600 Las Vegas Boulevard South, Suite 700  
Las Vegas, NV 89101  
Phone: 702-388-6571  
Fax: 702-388-6668  
E-mail: [jdarnell@usss.treas.gov](mailto:jdarnell@usss.treas.gov)

## Nevada Attorney General's Office

John Lusak  
Senior Computer Forensic Tech  
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Reno, NV 89501  
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E-mail: [jlusak@govmail.state.nv.us](mailto:jlusak@govmail.state.nv.us)  
<http://www.ag.state.nv.us>

## New Hampshire

### New Hampshire State Police Forensic Laboratory

Computer Crimes Unit  
10 Hazen Drive  
Concord, NH 03305  
Phone: 603-271-0300  
<http://www.state.nh.us/safety/nhsp>

## New Jersey

### New Jersey Division of Criminal Justice

Computer Analysis and Technology Unit  
(CATU)  
James Parolski  
Supervising State Investigator  
P.O. Box 085  
25 Market Street  
Trenton, NJ 08625-0085  
Phone: 609-984-5256/609-984-6500  
Pager: 888-819-1292  
E-mail: [parolskij@njdj.org](mailto:parolskij@njdj.org)  
<http://www.state.nj.us/lps/dcj/catunit.htm>

### Ocean County Prosecutor's Office

Special Investigations Unit/Computer Crimes  
Investigator Mike Nevil  
P.O. Box 2191  
Toms River, NJ 08753  
Phone: 732-929-2027, ext. 4014  
Fax: 732-349-4291  
E-mail: [mnevil@co.ocean.nj.us](mailto:mnevil@co.ocean.nj.us)  
<http://www.co.ocean.nj.us/prosecutor/main.htm>

## New Mexico

### New Mexico Gaming Control Board

Information Systems Division  
Donovan Lieurance  
6400 Uptown Boulevard N.E., Suite 100E  
Albuquerque, NM 87110  
Phone: 505-841-9719  
Fax: 505-841-9773  
E-mail: [dlieurance@nmgcb.org](mailto:dlieurance@nmgcb.org)  
<http://www.nmgcb.org>

### Twelfth Judicial District Attorney's Office

Investigator Jack Henderson  
1000 New York Avenue, Room 301  
Alamogordo, NM 88310  
Phone: 505-437-1313, ext. 110  
E-mail: [jdh@zianet.com](mailto:jdh@zianet.com)

## New York

### Erie County Sheriff's Office

Computer Crime Unit  
10 Delaware Avenue  
Buffalo, NY 14202  
Phone: 716-662-6150  
[http://www.erie.gov/sheriff/  
CCU\\_contact.asp](http://www.erie.gov/sheriff/CCU_contact.asp)

### John Jay College of Criminal Justice

The City University of New York  
Stephen E. Smith Center for Cyber Crime  
555 West 57th Street, Suite 601  
New York, NY 10019  
Phone: 212-237-8489  
E-mail: [wmoylan@jjay.cuny.edu](mailto:wmoylan@jjay.cuny.edu)  
[http://www.jjay.cuny.edu/  
centersInstitutes/cyberctr/](http://www.jjay.cuny.edu/centersInstitutes/cyberctr/)

### Nassau County Police Department

Computer Crime Section  
Det. Bill Moylan  
970 Brush Hollow Road  
Westbury, NY 11590  
Phone: 516-573-5275  
E-mail: [billyfm@aol.com](mailto:billyfm@aol.com)  
<http://www.co.nassau.ny.us/police/>

### New York Electronic Crimes Task Force

United States Secret Service  
Robert Weaver  
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335 Adams Street, 32nd Floor  
Brooklyn, NY 11201  
Phone: 718-625-1385  
Fax: 718-625-6708  
E-mail: [rweaver@uss.s.treas.gov](mailto:rweaver@uss.s.treas.gov)

### New York Police Department

Computer Investigation and Technology  
Unit  
1 Police Plaza, Room 1112  
New York, NY 10038  
Phone: 646-610-5397  
Fax: 646-610-6216  
E-mail: [citu@nypd.org](mailto:citu@nypd.org)  
[http://NYC.gov/html/nypd/html/db/citujd.  
html](http://NYC.gov/html/nypd/html/db/citujd.html)

### New York State Attorney General's Office

Internet Bureau  
120 Broadway  
New York, NY 10271  
Phone: 212-416-8433  
<http://www.oag.state.ny.us>

### New York State Department of Taxation and Finance

Office of Deputy Inspector General  
W.A. Harriman Campus  
Building 9, Room 481  
Albany, NY 12227  
Phone: 518-485-8698  
<http://www.tax.state.ny.us>

**New York State Police**

Computer Crime Unit  
Lt. Ronald R. Stevens  
Forensic Investigation Center  
Building 30, State Campus  
1220 Washington Avenue  
Albany, NY 12226  
Phone: 518-457-5712  
Fax: 518-402-2773  
E-mail: nyspccu@troopers.state.ny.us  
[http://www.troopers.state.ny.us/  
CrimInv/ComputerCrime.html](http://www.troopers.state.ny.us/CrimInv/ComputerCrime.html)

**Regional Computer Forensics  
Lab—Western New York**

4455 Genesee Street  
Cheektowaga, NY 14225  
Phone: 716-631-0261  
<http://www.rcflwny.org>

**Rockland County Sheriff's Department**

Computer Crime Task Force  
Det. Lt. John J. Gould  
55 New Hempstead Road  
New City, NY 10956  
Phone: 845-708-7860/845-638-5836  
Fax: 845-708-7821  
E-mail: [gouldjo@co.rockland.ny.us](mailto:gouldjo@co.rockland.ny.us)  
[http://www.co.rockland.ny.us/Sheriff/  
default.htm](http://www.co.rockland.ny.us/Sheriff/default.htm)

**North Carolina****Charlotte Metro Electronic Financial  
Crimes Task Force**

ATSAIC Ignacio Marino  
One Fairview Center  
6302 Fairview Road  
Charlotte, NC 28210  
Phone: 704-442-8370  
Fax: 704-442-8369  
E-mail: [imarino@usss.treas.gov](mailto:imarino@usss.treas.gov)

**Raleigh Police Department**

Investigator Patrick Niemann  
110 South McDowell Street  
Raleigh, NC 27601  
Phone: 919-890-3555  
E-mail: [niemannp@raleigh-nc.org](mailto:niemannp@raleigh-nc.org)  
<http://www.raleigh-nc.org/police/index.htm>

**North Dakota****North Dakota Bureau of Criminal  
Investigation**

Tim J. Erickson  
Special Agent  
P.O. Box 1054  
Bismarck, ND 58502-1054  
Phone: 701-328-5500  
E-mail: [te409@state.nd.us](mailto:te409@state.nd.us)  
<http://www.ag.state.nd.us/BCI/BCI.html>

**Ohio****Hamilton County Ohio Sheriff's Office**

Maj. Bruce Knox  
Justice Center  
1000 Sycamore Street, Room 110  
Cincinnati, OH 45202  
Phone: 513-946-6651  
Fax: 513-946-6690  
<http://www.hcso.org>  
(under the Administration Division)

**Ohio Attorney General's Office**

Bureau of Criminal Investigation  
Computer Crime Unit  
Kathleen Barch  
Criminal Investigation Administrator  
1560 State Route 56  
London, OH 43140  
Phone: 740-845-2410  
E-mail: [KBarch@ag.state.oh.us](mailto:KBarch@ag.state.oh.us)  
<http://www.ag.state.oh.us>

**Riverside Police Department**

Officer Harold Jones  
MCSE/Computer Crime Specialist  
1791 Harshman Road  
Riverside, OH 45424  
Phone: 937-238-8064/937-233-1820  
E-mail: hjones@cops.org  
harold@search.org

**Oklahoma****Oklahoma Attorney General**

4545 North Lincoln Boulevard  
Suite 260  
Oklahoma City, OK 73105-3498  
Phone: 405-521-4274  
E-mail: jim\_powell@oag.state.ok.us  
<http://www.oag.state.ok.us>

**Oklahoma State Bureau of Investigation**

Mark R. McCoy, Ed.D., CFCE  
Deputy Inspector  
6600 North Harvey  
Oklahoma City, OK 73116  
Phone: 405-848-6724  
Fax: 405-879-2622  
E-mail: markm@osbi.state.ok.us  
<http://www.osbi.state.ok.us>

**Oregon****Deschutes County Sheriff's Office**

Computer Crimes Detail  
Sgt. Tom Nelson  
Computer Forensics Specialist  
63333 West Highway 20  
Bend, OR 97701  
Phone: 541-322-4811  
E-mail: Tom\_Nelson@co.deschutes.or.us

**Gresham Police Department**

Rich Boyd  
Computer Forensic Investigator  
1333 N.W. Eastman Parkway  
Gresham, OR 97030  
Phone: 503-666-1997  
Fax: 503-665-1693  
E-mail: boyd\_r@ci.gresham.or.us

**Oregon High-Tech Team**

Joel Brillhart  
Special Agent  
FBI  
20795 N.W. Cornell, Suite 100  
Hillsboro, OR 97124  
Phone: 503-615-6627  
E-mail: joelb@ci.hillsboro.or.us

**Oregon State Police**

Det. Steve Payne  
4760 Portland Road N.E.  
Salem, OR 97305  
Phone: 503-378-2110, ext. 409  
Det. Randy Becker  
4500 Rogue Valley Highway, Suite B  
Central Point, OR 97502  
Phone: 541-776-6114, ext. 243  
<http://www.osp.state.or.us>

**Portland Police Bureau**

Computer Forensics Detail  
Sgt. Randy Day  
Supervisor  
1111 S.W. Second Avenue, Room 1326  
Portland, OR 97204  
Phone: 503-823-0400  
E-mail: rday@police.ci.portland.or.us  
<http://www.portlandpolicebureau.com/>

**Washington County Sheriff's Office**

Computer Forensic Investigations  
Brian Budlong  
215 S.W. Adams Avenue, MS32  
Hillsboro, OR 97123  
Phone: 503-846-2573  
Fax: 503-846-2637  
E-mail: [brian\\_budlong@co.washington.or.us](mailto:brian_budlong@co.washington.or.us)  
<http://www.co.washington.or.us/cgi/sheriff/lec.pl>

**Pennsylvania****Allegheny County Police Department**

High Tech Crime Unit  
Det. T. Haney  
400 North Lexington Street  
Pittsburgh, PA 15208  
Phone: 412-473-1304  
Fax: 412-473-1377  
E-mail: [thaney@county.allegheny.pa.us](mailto:thaney@county.allegheny.pa.us)  
<http://www.county.allegheny.pa.us/police/>

**Erie County District Attorney's Office**

Erie County Courthouse  
140 West Sixth Street  
Erie, PA 16501  
Phone: 814-451-6349  
Fax: 814-451-6419

**Rhode Island****Warwick Police Department**

Detective Division  
Det. Edmund Pierce  
99 Veterans Memorial Drive  
Warwick, RI 02886  
Phone: 401-468-4200 (main)/  
401-468-4263 (direct)  
Fax: 401-468-4265  
E-mail: [WPDDetectives@cox.com](mailto:WPDDetectives@cox.com)  
[efp31@cox.net](mailto:efp31@cox.net)  
<http://www.warwickpd.org>

**South Carolina****South Carolina Law Enforcement Division (SLED)**

South Carolina Computer Crime Center  
Lt. L.J. "Chip" Johnson  
Supervisory Special Agent  
P.O. Box 21398  
Columbia, SC 29221-1398  
Phone: 803-737-9000  
<http://www.sled.state.sc.us/>

**Winthrop University**

Winthrop Police Department  
Daniel R. Yeargin  
Assistant Chief of Police  
2 Crawford Building  
Rock Hill, SC 29733  
Phone: 803-323-3496  
E-mail: [yeargind@winthrop.edu](mailto:yeargind@winthrop.edu)  
<http://www.winthrop.edu/publicsafety/>

**South Dakota****South Dakota Internet Crimes Enforcement**

Robert Grandpre  
Assistant Director DCI  
Office of the Attorney General  
Division of Criminal Investigation  
3444 East Highway 34  
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Pierre, SD 57501-5070  
Phone: 605-773-3331  
Fax: 605-773-4629  
E-mail: [robertgrandpre@state.sd.us](mailto:robertgrandpre@state.sd.us)

## Tennessee

### Harriman Police Department

130 Pansy Hill Road  
P.O. Drawer 433 (mailing address)  
Harriman, TN 37748  
Phone: 865-882-3383  
Fax: 865-882-0700  
E-mail: harrimanpd@comcast.net

### Knox County Sheriff's Office

Carleton Bryant  
Staff Attorney  
400 West Main Avenue  
Knoxville, TN 37902  
Phone: 865-971-3911  
E-mail: sheriff@esper.com  
<http://www.knoxsheriff.org/>

### Tennessee Attorney General's Office

David Neal  
Forensic Technology Investigator  
425 Fifth Avenue, North  
Nashville, TN 37243  
Phone: 615-532-9658  
E-mail: david.neal@state.tn.us  
<http://www.attorneygeneral.state.tn.us/>

## Texas

### Austin Police Department

715 East Eighth Street  
Austin, TX 78701  
<http://www.ci.austin.tx.us/police>

### Bexar County District Attorney's Office

Russ Brandau/David Getrost  
300 Dolorosa  
San Antonio, TX 78205  
Phone: 210-335-2368/210-335-2991  
E-mail: rbrandau@co.bexar.tx.us  
dgetrost@co.bexar.tx.us  
<http://www.co.bexar.tx.us/da/>

### Dallas Police Department

2014 Main Street  
Dallas, TX 75201  
<http://www.dallaspolice.net>

### Federal Bureau of Investigation

#### Dallas Field Office

One Justice Way  
J. Gordon Shanklin Building  
Dallas, TX 75220  
Phone: 972-559-5000  
<http://dallas.fbi.gov>

### Houston Police Department

1200 Travis Street  
Houston, TX 77002  
[http://www.ci.houston.tx.us/departme/  
police](http://www.ci.houston.tx.us/departme/police)

### Office of the Attorney General

Internet Bureau  
P.O. Box 12548  
Austin, TX 78711-2548  
Phone: 512-936-2899  
<http://www.oag.state.tx.us>  
<http://www.texasinternetbureau.com>

### Portland Police Department

Det. Terrell Elliott  
902 Moore Avenue  
Portland, TX 78374  
Phone: 361-643-2546  
Fax: 361-643-5689  
E-mail: telliott@portlandpd.com  
<http://www.portlandpd.com>

### Texas Department of Public Safety

5805 North Lamar Boulevard  
Austin, TX 78752-4422  
P.O. Box 4087 (mailing address)  
Austin, TX 78773-0001  
Phone: 512-424-2200/800-252-5402  
E-mail: specialcrimes@txdps.state.tx.us  
<http://www.txdps.state.tx.us>



## Utah

### Utah Department of Public Safety

State Bureau of Investigations, Forensic  
Computer Lab  
Daniel D. Hooper  
Special Agent  
3888 West 5400 South  
Kearns, UT 84118  
Phone: 801-955-2121  
E-mail: dhooper@utah.gov

## Vermont

### State of Vermont Department of Public Safety

Bureau of Criminal Investigation  
Sgt. Mark Lauer  
103 South Main Street  
Waterbury, VT 05671-2101  
Phone: 802-241-5367  
Fax: 802-241-5349  
E-mail: mlauer@dps.state.vt.us  
<http://www.dps.state.vt.us/vtsp>

### Vermont Internet Crimes Task Force

Lt. Michael Schirling  
Burlington Police  
1 North Avenue  
Burlington, VT 05401  
Phone: 802-658-2704, ext. 131  
E-mail: mschirling@bpdvt.org

## Virginia

### Arlington County Police Department

Criminal Investigations Division  
Computer Forensics  
Det. Ray Rimer  
1425 North Courthouse Road  
Arlington, VA 22201  
Phone: 703-228-7994  
Pager: 703-866-8965  
E-mail: rimer550@erols.com  
cfu550@aol.com  
<http://www.co.arlington.va.us/police/>

### Fairfax County Police Department

Computer Forensics Section  
Lt. Dave Russell  
4100 Chain Bridge Road  
Fairfax, VA 22030  
Phone: 703-246-7867  
Fax: 703-246-4253  
[http://www.co.fairfax.va.us/ps/police/  
homepage.htm](http://www.co.fairfax.va.us/ps/police/homepage.htm)

### Richmond Police Department

Technology Crimes Section  
Det. Jeff Deem  
200 West Grace Street  
Richmond, VA 23220  
Phone: 804-646-3949  
Fax: 804-646-4880  
E-mail: jdeem@ci.richmond.va.us  
<http://www.ci.richmond.va.us/police/>

### Virginia Beach Police Department

Det. Michael Encarnacao  
Special Investigations CERU  
2509 Princess Anne Road  
Virginia Beach, VA 23456  
Phone: 757-427-1749  
E-mail: mikee@cops.org  
<http://www.vbgov.com>

### Virginia Department of Motor Vehicles

Law Enforcement Section  
Larry L. Barnett  
Assistant Special Agent in Charge  
945 Edwards Ferry Road N.E.  
Leesburg, VA 20176  
Phone: 703-771-4757  
E-mail: lbtrip@erols.com

### Virginia Office of the Attorney General

Addison L. Cheeseman  
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900 East Main Street  
Richmond, VA 23219  
Phone: 804-786-6554  
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**Virginia State Police**

Andrew Clark, CFCE  
Computer Technology Specialist 3  
Richmond, VA 23236  
Phone: 804-323-2040  
E-mail: AndyClark@att.net  
<http://www.vsp.state.va.us>

**Washington****King County Sheriff's Office**

Fraud/Computer Investigations Unit  
Sgt. Steve Davis/Det. Brian Palmer  
401 Fourth Avenue North, RJC 104  
Kent, WA 98032-4429  
Phone: 206-296-4280  
E-mail: steven.davis@metrokc.gov  
bk.palmer@metrokc.gov  
<http://www.metrokc.gov/sheriff>

**Lynnwood Police Department**

High Tech Property Crimes  
Det. Douglas J. Teachworth  
19321 44th Avenue West  
P.O. Box 5008 (mailing address)  
Lynnwood, WA 98046-5008  
Phone: 425-744-6916  
E-mail: dteachworth@ci.lynnwood.wa.us  
<http://www.ci.lynnwood.wa.us/police/default.asp>

**Tacoma Police Department**

Pierce County Data Recovery Unit  
Det. Richard Voce  
930 Tacoma Avenue South  
Tacoma, WA 98402  
Phone: 253-591-5679/253-594-7906  
E-mail: rvoce@ci.tacoma.wa.us  
<http://www.TacomaPolice.org>

**Vancouver Police Department**

Maggi Holbrook, CFCE  
Computer Forensics Investigator  
605 East Evergreen Boulevard  
Vancouver, WA 98661  
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E-mail: ecrimes@ci.vancouver.wa.us  
<http://www.ci.vancouver.wa.us>

**Washington State Department of Fish and Wildlife**

John D. Flanagan  
Computer Forensics Examiner  
600 Capitol Way North  
Olympia, WA 98501  
Phone: 360-902-2210  
Cell phone: 360-556-0195  
E-mail: flanjdf@dfw.wa.gov  
<http://www.wa.gov/wdfw>

**Washington State Patrol**

Computer Crimes Unit  
Sgt. Keith Huntley  
Supervisor  
Airdustrial Way, Building 17  
Olympia, WA 98507-2347  
Phone: 360-753-3277  
E-mail: khuntle@wsp.wa.gov

**West Virginia****National White Collar Crime Center**

1000 Technology Drive, Suite 2130  
Fairmont, WV 26554  
Phone: 877-628-7674  
<http://www.cybercrime.org>

**Wisconsin****Green Bay Police Department**

Lt. Rick Dekker  
307 South Adams Street  
Green Bay, WI 54301  
Phone: 920-448-3200  
E-mail: rickdk@ci.green-bay.wi.us  
<http://www.gbpolice.org>

**Wisconsin Department of Justice**

P.O. Box 7857  
Madison, WI 53707-7857  
Phone: 608-266-1221  
<http://www.doj.state.wi.us>

**Wood County Sheriff's Department**

400 Market Street  
Wis Rapids, WI 54495  
Phone: 715-421-8700  
E-mail: wcsd@tznet.com  
<http://www.tznet.com/wcsd>

**Wyoming****Casper Police Department**

210 North David  
Casper, WY 82601  
Phone: 307-235-8489  
<http://www.cityofcasperwy.com/services/police.html>

**Gillette Police Department**

Sgt. Dave Adsit, CCNA  
201 East Fifth Street  
Gillette, WY 82716  
Phone: 307-682-5109  
E-mail: davea@www.ci.gillette.wy.us  
<http://www.ci.gillette.wy.us>

**Green River Police Department**

Corp. Tom Jarvie/Sgt. David Hyer  
50 East Second North  
Green River, WY 82935  
Phone: 307-872-0555  
E-mail: tjarvie@cityofgreenriver.org  
dhyer@cityofgreenriver.org  
<http://www.cityofgreenriver.org/police/>

**Natrona County Sheriff's Office**

Investigator Chris Poldervaart  
201 North David Street  
Casper, WY 82601  
Phone: 307-235-9282  
E-mail: poldc@natrona.net

**Wyoming Division of Criminal Investigation**

316 West 22nd Street  
Cheyenne, WY 82002  
Phone: 307-777-7183  
Fax: 307-777-7252  
Patrick Seals, Special Agent  
E-mail: pseals@state.wy.us  
Michael B. Curran, Special Agent  
E-mail: mcurra@state.wy.us  
Flint Waters, Special Agent  
E-mail: fwater@state.wy.us  
Bob Leazenby, Special Agent  
E-mail: rleaze@state.wy.us  
<http://www.attorneygeneral.state.wy.us/dci>

**International****Australia****Western Australia Police**

Det./Sgt. Ted Wisniewski  
Computer Crime Investigation  
Commercial Crime Division  
Level 7 Eastpoint Plaza  
233 Adelaide Tce  
Perth WA 6000  
Phone: +61 8 92200700  
Fax: +61 8 92254489  
E-mail: Computer.Crime@police.wa.gov.au

**Brazil****Instituto De Criminalística - Polícia Civil Do Distrito Federal**

SAISO - Lote 23 - Bloco "C" Complexo de Policia Civil  
70610-200  
Brasilia, Brazil  
Phone: 55 +61 362-5948/55  
+61 233-9530  
E-mail: perint@pcdf.df.gov.br

## Canada

### **Royal Canadian Mounted Police**

Technical Operations Directorate  
Technological Crime Branch  
1426 St. Joseph Boulevard  
Gloucester, Ontario  
Canada K1A 0R2  
Phone: 613-993-1777

## Switzerland

### **Computer Crime Unit (GCI)**

Det. Pascal Seeger/Det. Didiser Frezza  
5, ch. de la Graviere  
1227 Acacias, Geneva  
Switzerland  
Phone: +41 22 42780.16 (17)  
Fax: +41 22 820.30.16  
E-mail: [gci@police.ge.ch](mailto:gci@police.ge.ch)

## United Kingdom

### **HM Inland Revenue**

Special Compliance Office  
Forensic Computing Team  
Barkley House  
P.O. Box 20  
Castle Meadow Road  
Nottingham  
NG2 1BA  
UK  
Phone: +44 (0)115 974 0887  
Fax: +44 (0)115 974 0890  
E-mail: [lindsay.j.scrimshaw@ir.gsi.gov.uk](mailto:lindsay.j.scrimshaw@ir.gsi.gov.uk)

### **National High-Tech Crime Unit**

P.O. Box 10101  
London  
E14 9NF  
UK  
Phone: +44 (0) 870-241-0549  
Fax: +44 (0) 870-241-5729  
E-mail: [admin@nhtcu.org](mailto:admin@nhtcu.org)

## Appendix G. Training Resources List

The following list of nonprofit agencies, organizations, and institutions includes Federal, law enforcement, and academia sources that provide computer forensic training.

### **Arizona Regional Computer Forensic Laboratory**

Sgt. R. Hopper  
P.O. Box 6638  
Phoenix, AZ 85005  
Phone: 602-223-2698  
Fax: 602-223-2332

### **Canadian Police College**

P.O. Box 8900  
Ottawa, Ontario  
Canada K1G 3J2  
Phone: 613-993-9500  
E-mail: [cpc@cpc.gc.ca](mailto:cpc@cpc.gc.ca)  
<http://www.cpc.gc.ca>

### **DoD Computer Investigations Training Program**

911 Elkridge Landing Road  
Airport Square 11 Building  
Suite 200  
Linthicum, MD 21090  
Phone: 410-981-1604  
Fax: 410-850-8906  
E-mail: [info@dcitp.gov](mailto:info@dcitp.gov)  
<http://www.dcitp.gov>

### **FBI Academy at Quantico**

U.S. Marine Corps Base  
Quantico, VA  
Phone: 703-640-6131  
<http://www.fbi.gov/hq/td/academy/academy.htm>

### **Federal Law Enforcement Training Center**

Headquarters Facility  
120 Chapel Crossing Road  
Glynco, GA 31524  
Phone: 912-267-2100  
<http://www.fletc.gov>

### **Federal Law Enforcement Training Center**

Artesia Facility  
1300 West Richey Avenue  
Artesia, NM 88210  
Phone: 505-748-8000  
<http://www.fletc.gov>

### **Federal Law Enforcement Training Center**

Charleston Facility  
2000 Bainbridge Avenue  
Charleston, SC 29405-2607  
Phone: 843-743-8858  
<http://www.fletc.gov>

### **Florida Association of Computer Crime Investigators, Inc.**

P.O. Box 1503  
Bartow, FL 33831-1503  
Phone: 352-357-0500  
E-mail: [info@facci.org](mailto:info@facci.org)  
<http://www.facci.org>

### **Forensic Association of Computer Technologists**

P.O. Box 703  
Des Moines, IA 50303  
Phone: 515-281-7671  
<http://www.byteoutofcrime.org>

**High Technology Crime Investigation Association (International)**

1474 Freeman Drive  
Amissville, VA 20106  
Phone: 540-937-5019  
<http://www.htcia.org>

**Hilbert College**

Economic Crime Investigation Program  
5200 South Park Avenue  
Hamburg, NY 14075  
Phone: 716-649-7900  
<http://www.hilbert.edu>

**Information Systems Security Association (ISSA)**

7044 South 13th Street  
Oak Creek, WI 53154  
Phone: 800-370-4772  
<http://www.issa.org>

**Institute of Police Technology and Management**

University of North Florida  
12000 Alumni Drive  
Jacksonville, FL 32224-2678  
Phone: 904-620-4786  
Fax: 904-620-2453  
<http://www.iptm.org>

**International Association of Computer Investigative Specialists (IACIS)**

P.O. Box 140  
Donahue, IA 52746-0140  
Phone: 877-890-6130  
E-mail: [iadmin@cops.org](mailto:iadmin@cops.org)  
<http://www.cops.org>

**International Organization on Computer Evidence**

Phone: +44 (0) 207-230-6485  
E-mail: [lwr@fss.org.uk](mailto:lwr@fss.org.uk)  
<http://www.ioce.org>

**James Madison University**

800 South Main Street  
Harrisonburg, VA 22807  
Phone: 540-568-6211  
[http://www.cs.jmu.edu/  
currentcourses.htm](http://www.cs.jmu.edu/currentcourses.htm)

**Kennesaw State University**

Southeast Cybercrime Institute  
1000 Chastain Road  
Kennesaw, GA 30144  
Phone: 770-423-6965  
<http://cybercrime.kennesaw.edu>

**National Center for Forensic Science**

University of Central Florida  
P.O. Box 162367  
Orlando, FL 32816-2367  
Phone: 407-823-6469  
E-mail: [natlctr@mail.ucf.edu](mailto:natlctr@mail.ucf.edu)  
<http://www.ncfs.ucf.edu>

**National Criminal Justice Computer Laboratory and Training Center SEARCH Group, Inc.**

7311 Greenhaven Drive, Suite 145  
Sacramento, CA 95831  
Phone: 916-392-2550  
<http://www.search.org>

**National High Tech Crime Training Centre**

National Specialist Law Enforcement Centre  
Wyboston Lakes Business and Leisure Centre  
Great North Road  
Wyboston, Bedfordshire  
England MK44 3AL  
Phone: +44 (0)01480 401872  
Fax: +44 (0)1480 401950

**National White Collar Crime Center**

1000 Technology Drive, Suite 2130  
Fairmont, WV 26554  
Phone: 877-628-7674  
<http://www.cybercrime.org>

**Purdue University**

CERIAS (Center for Education and  
Research in Information Assurance and  
Security)  
Recitation Building  
Purdue University  
West Lafayette, IN 47907-1315  
Phone: 765-494-7806  
<http://www.cerias.purdue.edu>

**Redlands Community College**

Clayton Hoskinson, CFCE  
Program Coordinator  
Criminal Justice and Forensic Computer  
Science  
1300 South Country Club Road  
El Reno, OK 73036-5304  
Phone: 405-262-2552, ext. 2517  
E-mail: [hoskinsonc@redlandsccl.net](mailto:hoskinsonc@redlandsccl.net)

**University of New Haven**

School of Public Safety and Professional  
Studies  
300 Orange Avenue  
West Haven, CT 06516  
Phone: 800-342-5864  
<http://www.newhaven.edu>

**University of New Haven-California  
Campus**

Forensic Computer Investigation Program  
6060 Sunrise Vista Drive  
Citrus Heights, CA 95610  
<http://unhca.com>

**U.S. Department of Justice**

Criminal Division  
Computer Crime and Intellectual Property  
Section (CCIPS)  
10th and Constitution Avenue N.W.  
John C. Keeney Building, Suite 600  
Washington, DC 20530  
Phone: 202-514-1026  
<http://www.cybercrime.gov>

**Utica College**

Economic Crime Investigative Institute  
1600 Burrstone Road  
Utica, NY 13502  
Phone: 508-247-9504  
<http://www.ecii.edu>

**Wisconsin Association of Computer  
Crime Investigators**

P.O. Box 510212  
New Berlin, WI 53151-0212  
<http://www.wacci.org>

## Appendix H. List of Organizations

The following is a list of organizations to which a draft copy of this document was mailed.

Alaska Criminal Laboratory  
American Bar Association  
American Society of Law Enforcement Trainers  
Anchorage, Alaska, Police Department  
Arapahoe County, Colorado, Sheriff's Office  
Association of Federal Defense Attorneys  
Bridgeport, Michigan, Forensic Laboratory  
Bureau of Justice Assistance  
Canadian Police Research Center  
Cleveland State College Basic Police Academy  
Commission of Accreditation for Law Enforcement Agencies  
Connecticut Department of Public Safety  
Criminal Justice Institute  
Dallas County District Attorney's Office  
Drug Enforcement Administration  
Computer Forensics  
Fairbanks, Alaska, Police Department  
Federal Bureau of Investigation  
Federal Law Enforcement Training Center  
Florida Department of Law Enforcement  
Florida Department of Law Enforcement–  
Jacksonville Regional Operations Center  
Florida Office of Statewide Prosecution  
Frederick County, Maryland, State's Attorney's Office  
Georgia Bureau of Investigation  
Harlingen, Texas, Police Department  
Illinois State Police  
Indiana State Police Laboratory  
Institute for Intergovernmental Research  
Institute of Police Technology and Management  
Institute for Security Technology Studies  
Internal Revenue Service, Criminal Investigations  
International Association of Chiefs of Police  
International Association for Identification  
Joint Council on Information Age Crime  
Juneau, Alaska, Police Department  
LaGrange, Georgia, Police Department  
Law Enforcement Training Institute  
Maine State Police Crime Laboratory  
Massachusetts State Police Crime Laboratory  
Metro Nashville Police Academy  
Metro Nashville Police Department  
Middletown Township, New Jersey, Police Department  
MITRE Corporation  
National Advocacy Center  
National Aeronautics and Space Administration, Office of Inspector General, Computer Crimes Division  
National Association of Attorneys General  
National CyberScience Center  
National District Attorneys Association  
National Law Enforcement and Corrections Technology Center–Rocky Mountain  
National Law Enforcement and Corrections Technology Center–Southeast  
National Law Enforcement Council  
National Sheriff's Association  
National White Collar Crime Center  
Naval Criminal Investigative Service  
New Hampshire State Police Forensic Laboratory  
North Carolina Justice Academy



Office of the District Attorney General–  
Nashville, Tennessee  
Office of Law Enforcement Technology  
Commercialization  
Ohio Bureau of Criminal ID and  
Investigation  
Orange County, California, Sheriff’s  
Department–Forensic Science Services  
Orange County, New York, Community  
College–Criminal Justice Department  
Peace Officers Standards and Training  
Pharr, Texas, Police Department  
Regional Computer Forensic Laboratory  
(San Diego, California)  
Sedgwick County, Kansas, District  
Attorney’s Office  
Sitka, Alaska, Police Department  
Social Security Administration–Office of  
the Inspector General  
State of Florida Crime Laboratory  
TASC, Inc.

Tennessee Bureau of Investigation  
Tennessee Law Enforcement Training  
Academy  
Texas Rangers Department of Public  
Safety  
Town of Goshen, New York, Police  
Department  
U.S. Army Criminal Investigation  
Laboratory  
U.S. Attorney’s Office–Western District of  
New York  
U.S. Department of Justice–Computer  
Crime and Intellectual Property Section  
U.S. Department of Justice–Fraud Section  
U.S. Department of Justice–Office of  
Overseas Prosecutorial Development  
U.S. Department of Justice–Western  
District of Michigan  
Virginia State Police Academy

## About the National Institute of Justice

NIJ is the research, development, and evaluation agency of the U.S. Department of Justice. The Institute provides objective, independent, evidence-based knowledge and tools to enhance the administration of justice and public safety. NIJ's principal authorities are derived from the Omnibus Crime Control and Safe Streets Act of 1968, as amended (see 42 U.S.C. §§ 3721–3723).

The NIJ Director is appointed by the President and confirmed by the Senate. The Director establishes the Institute's objectives, guided by the priorities of the Office of Justice Programs, the U.S. Department of Justice, and the needs of the field. The Institute actively solicits the views of criminal justice and other professionals and researchers to inform its search for the knowledge and tools to guide policy and practice.

### Strategic Goals

NIJ has seven strategic goals grouped into three categories:

#### Creating relevant knowledge and tools

1. Partner with State and local practitioners and policymakers to identify social science research and technology needs.
2. Create scientific, relevant, and reliable knowledge—with a particular emphasis on terrorism, violent crime, drugs and crime, cost-effectiveness, and community-based efforts—to enhance the administration of justice and public safety.
3. Develop affordable and effective tools and technologies to enhance the administration of justice and public safety.

#### Dissemination

4. Disseminate relevant knowledge and information to practitioners and policymakers in an understandable, timely, and concise manner.
5. Act as an honest broker to identify the information, tools, and technologies that respond to the needs of stakeholders.

#### Agency management

6. Practice fairness and openness in the research and development process.
7. Ensure professionalism, excellence, accountability, cost-effectiveness, and integrity in the management and conduct of NIJ activities and programs.

### Program Areas

In addressing these strategic challenges, the Institute is involved in the following program areas: crime control and prevention, including policing; drugs and crime; justice systems and offender behavior, including corrections; violence and victimization; communications and information technologies; critical incident response; investigative and forensic sciences, including DNA; less-than-lethal technologies; officer protection; education and training technologies; testing and standards; technology assistance to law enforcement and corrections agencies; field testing of promising programs; and international crime control.

In addition to sponsoring research and development and technology assistance, NIJ evaluates programs, policies, and technologies. NIJ communicates its research and evaluation findings through conferences and print and electronic media.

To find out more about the National Institute of Justice, please visit:

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or contact:

National Criminal Justice  
Reference Service  
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Rockville, MD 20849–6000  
800–851–3420  
e-mail: [askncjrs@ncjrs.org](mailto:askncjrs@ncjrs.org)

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