

# FY14 JUSTICE ASSISTANCE GRANT (JAG) Addendum

Submission Instructions: Email completed addendum file to [cjapplications@nctcog.org](mailto:cjapplications@nctcog.org) by February 28, 2013  
To download addendum: [http://www.nctcog.org/cs/cj/forms/registration\\_JAG.asp](http://www.nctcog.org/cs/cj/forms/registration_JAG.asp)

**Agency Name:** Collin County  
**Application title:** Digital Forensic Training and Equipment  
**Application #:** 2687001

## **AGENCY HISTORY (THIS SECTION WILL NOT BE SCORED):**

Location of Agency Headquarters:  
Collin County Sheriff's Office  
4300 Community Avenue  
McKinney, TX 75071

### **Mission Statement:**

We, the men and women of the Collin County Sheriff's Office, believe that our fundamental duty is to serve and protect the citizens of Collin County with fairness, compassion, and respect. We demand excellence in the quality of our law enforcement, stressing professionalism, integrity, and timeliness, so that those we serve may feel secure. We provide equal enforcement and protection of the law without prejudice or favor. We promote the setting of goals in partnership with the community, and prioritize and address problems based on the concerns of the community. Committed to continuous improvement in law enforcement, we promote and utilize the most modern techniques available.

**Experience in providing this service:** Explain how your agency is qualified to provide this service.

The Collin County Sheriff's Office (CCSO) is a full service law enforcement agency that includes the responsibilities of patrol, criminal investigations, detention, warrants, and civil process, as well as other necessary law enforcement functions to the citizens of Collin County and the municipalities therein.

**If this project is currently in existence in any capacity, how long has your agency been providing this service?**

CCSO currently has one investigator, serving on the Internet Crimes Against Children (ICAC) Task Force, who is trained in digital forensics. He has been performing exams on digital evidence since August 2008 for CCSO and other local law enforcement agencies; however, his primary focus is on CAC investigations.

- 1. LOCAL PRIORITIES (Up to 5 points):** Describe how the project supports drug and human trafficking initiatives; supports a disruption of adult gangs; promotes technology for the electronic discovery for defense counsel; supports regional information-sharing systems for law enforcement; supports the conversion of crime data from UCR to the NIBRS format; enhances patrols along and near the Texas-Mexico border, or promotes cost effective programs that complement the criminal justice system.

If project will fund criminal intelligence sharing databases, describe how your agency will comply with 28 CFR Part 23.

Training an additional investigator in digital forensics will allow more evidence to be collected during investigations leading to arrest, prosecution, and conviction of criminals associated with all types of crime including drug and human trafficking, adult gang activity, and personal and property crime. Additionally, this project promotes cost effective programs through the training of an existing investigator who will double the CCSO digital forensics capacity and will be an additional resource for other local law enforcement agency requests.

- 2. PROBLEM STATEMENT: The Problem Statement should thoroughly and specifically describe the area and individuals to be served, the problem, and support the problem with data specific to the target area.**

2a. Describe the target area and target population to be served by this project. (Up to 5 points)

All county residents will benefit from this project.

2b. Describe the negative impact the problem has on the target area you propose to serve with this project. (Up to 15 points)

With the advent and popularity of digital technology, electronically stored data is becoming more prevalent in criminal investigations. Digital storage devices, and their increasing portability, have infiltrated all aspects of our everyday lives, including of those persons involved in criminal activities. Paper trails have become electronic trails in all types of crimes. Criminals have been identified and prosecuted through digital evidence such as cell phone videos and photos, text and email communications, internet search history, GPS tagging, and social media "bragging". Analysis of desk and laptop computers, digital cameras, cell phones, electronic game devices, music players, and memory devices (CDs, USB flash drives, memory cards, etc.) can not only identify direct evidence of a crime, but also provide information for additional suspects and/or victims, develop leads, confirm alibis or statements, determine intent, and/or reconstruct events/build a timeline.

Unfortunately, the rapidity of technological advancement and its public distribution has far outpaced law enforcement's ability to acquire, process, and assemble digital evidence for investigations and prosecution. Investigations are time-consuming and –sensitive, as digital evidence can be easily destroyed, hidden, or altered. It is imperative that law enforcement officers have the training and tools necessary to analyze numerous kinds of devices, operating systems, and applications for evidence to apprehend suspects and prevent future crimes.

Collin County Sheriff's Office (CCSO) only has one investigator, whose primary assignment is crimes against children, trained in digital forensics. Currently, digital forensics is being requested on both child and non-child cases, causing a backlog, longer processing times, and refusal of external requests. This may result in cases that are not solved and suspects that avoid prosecution. The need for investigators trained in the latest digital forensic techniques and legal evidentiary practices has never been greater to protect the public safety of residents.

2c. To support the significance of the problem please provide local data relevant to the target area. NOTE: All data must be cited and verifiable. Only use state and/or national data when comparing/contrasting with local data. (Up to 5 points)

Collin County's population increased 65.2% since 2000; correspondingly, criminal offenses have also increased. The number of narcotics cases investigated by CCSO increased by 57%, and narcotics arrests increased by 33% from FY 2009 to 2012. During the same time period, crimes against children cases increased from 2,327 to 2,750 (18%). Overall, during FY 2012, CCSO investigated 5,824 cases with a 20% arrest rate.

Four years ago, one CCSO Crimes Against Children (CAC) investigator received training in digital forensics to conduct computer and mobile examinations related to child cases. Since 2009, the investigator has completed 722 exams on 282 cases. Of these cases, approximately 68% are related to crimes against children with the remainder made of all other case types – narcotics trafficking; homicide, suicide, assault, and other personal crime; and theft and property crime. Of the 282 cases, 56% (157) were CCSO investigations, 31% (88) were requests by city police departments within Collin County, and 13% (37) were for agencies external to Collin County.

The investigator, who works active cases as well as performing digital forensics, is currently backlogged by approximately 3 months as his investigation caseload has increased. Requests for analysis are received almost weekly, and the problem has become significant during the past 8 months. The investigator expends roughly 30% of time performing digital forensics; however, the amount of evidence CAC cases is far greater than can be handled by one person, much less other CCSO divisions or external agencies. Phone exams can take 30 minutes to 3 hours, with the current smartphones taking even longer; and depending on the type of data retrieval, computers can take anywhere from one hour (email only) to 2 weeks (full exam). Currently, all computer requests are being referred to either the Secret Service or FBI labs unless they are urgent.

#### Sources

1. "Collin County QuickFacts." State and County QuickFacts. US Census Bureau, 10 Jan 2013. [Accessed Jan 18, 2013]. <http://quickfacts.census.gov/qfd/states/48/48085.html>
2. Collin County. CAC Forensic Lab Log. 2009 – 2012.
3. Collin County. Sheriff's Office Field Operations reports. 2005 – 2012.

**3. PROJECT DESCRIPTION: Should state thoroughly what the project is about, so that reviewers have no doubt about why there is a request to fund this particular project, what the project will do, for whom it will operate, when it will start and end, and in what location it will operate.**

3a. List activity(ies) that would be funded through this application. (See eGrants Activity Tab.) (Up to 5 points)

Equipment  
Investigation

3b. Describe each activity as it relates to this project. NOTE: Do not copy and paste the CJD definition of the activity. (Up to 10 points)

Computer and mobile device training and equipment will be provided to an existing CCSO investigator to conduct digital forensic examinations on electronic evidence for non-child related crimes including narcotics and human trafficking, organized/gang activity, and personal and property offenses. Digital evidence will be used to confirm crimes, provide information for additional suspects and/or victims, verify alibis or statements, determine intent, reconstruct events/timeline, and/or prosecute offenders.

3c. Describe the planned flow of services for the individuals to be served by the project. (up to 20 points)

Digital forensic science encompasses acquisition/imaging and analysis of digital media and the production of a written evidence report for prosecution. However, the vast array of potential media devices, operating systems, and file formats with their proprietary nature; large memory size of most personal devices; wide availability of encryption to consumers; and ever-changing market-driven technical evolution make digital analysis complex and comprehensive training necessary.

The CCSO investigator will first need to be trained in both computer and mobile device forensics. A one-year, unlimited, live and online training pass will be purchased for two leading computer forensic programs. The two programs complement each other; and, when used in conjunction, ensure that efficient, preeminent, and comprehensive computer forensics tools are available. The passes will allow access to all training courses, from beginner to advanced techniques and regulation and litigation compliance, and provide greater scheduling flexibility through both online and traditional classroom (both in Houston, TX) availability. In addition to computer forensic training, the investigator will also attend a one-week mobile device training course in Virginia held at the Federal Law Enforcement Training Center. This essential course, not only certifies the investigator in the two most commonly used mobile forensic tools nationwide, but also provides the necessary equipment and software licensure at no cost. These two items can cost in excess of \$10,000. Grant funds will be used for all training registration costs, but only in-state travel costs. Out-of-state travel expenditures will be paid using CCSO funds.

During digital forensics, exact images are made of the device, and forensic exams are conducted on the imaged copies. A forensic recovery evidence device workstation with integrated write blocked ports designed to duplicate data directly from hard drives, flash media, and mass storage devices and save images to CDs, DVDs, or Blu-ray discs or external hard drives is required to run examinations. With the rapidly increasing number and storage capacity of personal devices, an external Blu-ray burner and numerous external hard drives will be needed to copy large quantities of data. Additionally, an Apple iOS computer with appropriate forensic software will be necessary to conduct exams on Apple devices, as the platform is proprietary. Multiple monitors will be needed as part of the digital forensics workstation to increase efficiency while using multiple programs simultaneously and sharing data between applications, and a printer will be required to produce written evidence reports for prosecution.

In conjunction with the equipment, the necessary analysis tools will be purchased. Software licenses for the two primary digital forensic programs, in which training was received, will be acquired. These programs include the tools necessary to search, collect, preserve, and analyze digital information including imaging, file indexing and searching, examining complex structures, and recovering files from unallocated and slack space. In addition, the acquisition of other software applications, such as screen capture, Internet-specific (social networks, IM, cloud files, etc.), and platform-specific (e.g., for Apple iOS) software, will supplement and complete the two primary digital forensic programs.

Upon acquisition of training, equipment, and analysis tools, the investigator will begin conducting digital forensic exams on computers and other data storage devices obtained during non-child related investigations, starting with the items currently on hold. Once the backlog has been cleared, the investigator will continue to conduct digital examinations for CCSO investigations, as well as those requested by external law enforcement within Collin County. Because digital forensics must adapt quickly to new products and innovations with valid and reliable examination and analysis techniques, comprehensive training and up-to-date equipment and analysis tools are essential. CCSO will continue training, support software maintenance, and update technology as needed once the grant period has ended.

**4. GOALS AND OBJECTIVES - Should relate to the Project Description and must be reasonable, relevant and attainable within the 12-month grant period.**

4a. Describe the overall project goal. (Up to 5 points)

Protect public safety through increased digital forensic examinations leading to arrest, prosecution, and conviction of criminals associated with all types of crime.

4b. Objectives: Provide at least one objective for this project. For each objective, provide relevant outputs AND outcomes, including numerical target data. You may use your own measures and/or those found in eGrants. (up to 10 points)

Objective	Output and Target Level	Outcome and Target Level
Enhance the capacity of the CCSO to conduct digital forensics	1. Provide 1 existing CCSO investigator with digital (computer and mobile device) forensic training	1. Increase the number of cases for which digital examinations are performed by 35%
	2. Obtain necessary equipment and supplies to perform digital forensics for CCSO investigations and at other local agency requests	2. Increase the number of digital examinations conducted by 35%
	3. Purchase licenses for two leading computer forensic software programs plus annual maintenance for the first year	3. Refer 90% of CCSO cases for prosecution
		4. 85% prosecuted cases result in conviction

4c. For each output and outcome, describe how it will be measured. (up to 5 points)

Output 1 will be measured using travel and training completion documentation.

Outputs 2 and 3 will be measured using POs, invoices, and receipt documentation.

Outcomes 1 – 4 will be measured using forensic lab log spreadsheets maintained by both digital forensics investigators.

**ADDENDUM CANNOT EXCEED 7 PAGES BEFORE YOU INSERT THE BUDGET**

**5. BUDGET: INSERT EGRANTS BUDGET HERE. Do not provide additional narrative other than what is included in eGrants budget table. Once the budget is complete in eGrants, click on “printer friendly” link at top right. A new window will open with budget information. Select, copy, and paste the entire budget table here. The budget in this addendum must be identical to the one you placed in eGrants.**

5a. All budget line items must have sufficient detail to justify the item to be included in the project. Budget line items should be relevant and reasonable to carrying out the project. (Up to 10 points)

5b. The budget must be consistent with proposed activities. (Up to 5 points)

**NOTE:** Grant-Funded Personnel: Budget line item description must include a brief summary of responsibilities and qualifications of grant-funded project personnel. Include fringe benefit amount in description, if applicable.

CATEGORY	SUB CATEGORY	DESCRIPTION	CJD	CASH MATCH	IN-KIND MATCH	GPI	TOTAL	UNIT /%
Travel and Training	In-State Registration Fees, Training, and/or Travel	One year, unlimited training pass (registration) for two complementary, leading digital forensic programs (\$5,500 each x2 = \$11,000). Various devices, formats, and levels of training can be obtained online or in traditional classroom setting using the pass; both program training facilities are located in the same city so classes can be stacked, creating flexibility in scheduling. When used in conjunction, these programs ensure that efficient, preeminent, and inclusive computer forensics tools are available to the investigator. Travel expenditures to Houston for 5 day training (hotel \$125/night including taxes; per diem \$10 breakfast, \$15 lunch, \$25 dinner; use County vehicle for travel to and around Houston) = \$875 per training, 10 trainings (5 per forensic program) = \$8,750. Amounts are based on Collin County travel policy.	\$19,750.00	\$0.00	\$0.00	\$0.00	\$19,750.00	0
Travel and Training	Out-of-State Registration Fees, Training, and/or Travel	One-week mobile device/cellular training held at the Federal Law Enforcement Training Center in Virginia, which not only certifies the investigator in the two most commonly used mobile forensic tools nationwide, but also provides the necessary equipment and software licensure at no cost. These two items can cost in excess of \$10,000. Funds will only be used for registration/training costs; travel expenses will be funded through the CCSO.	\$5,750.00	\$0.00	\$0.00	\$0.00	\$5,750.00	0
Equipment	Desktop System and Accessories	Forensic evidence recovery device (FRED) with hardware write blocking; forensic media card reader; read-only and read/write switchable; removable hard drive bays. Ability to acquire data directly from IDE/EIDE/ATA/SATA/ATAPI/SAS/Firewire/USB hard drives and storage devices and save forensic images to Blu-Ray, DVD, CD or hard drive. Also acquire data from Blu-Ray, CD-ROM, DVD-ROM, Compact Flash, Micro Drives, Smart Media, Memory Stick, Memory Stick Pro, xD Cards, Secure Digital Media	\$14,000.00	\$0.00	\$0.00	\$0.00	\$14,000.00	1

		and Multimedia Cards. Should meet or exceed the system specifications for the two primary digital forensic software program platforms. Include battery backup.						
Equipment	Laptop System and Accessories	Computer with at least 16GB RAM and 1 TB hard drive for processing Apple iOS devices	\$1,850.00	\$0.00	\$0.00	\$0.00	\$1,850.00	1
Equipment	Specialized Computer Software	Software license and annual maintenance fee for the two primary digital forensic programs in which training was received. These programs include the tools necessary to search, collect, preserve, and analyze digital information including imaging, file indexing and searching, examining complex structures, and recovering files from unallocated and slack space.	\$7,500.00	\$0.00	\$0.00	\$0.00	\$7,500.00	2
Supplies and Direct Operating Expenses	Printer, Fax, Scanner and/or Camera (Valued Under \$1,000)	County standard printer to print written evidence reports for prosecution	\$750.00	\$0.00	\$0.00	\$0.00	\$750.00	0
Supplies and Direct Operating Expenses	Project Supplies (e.g., binocular, battery, flexicuff, drug testing kit)	Multiple monitors (x4) to increase efficiency while using multiple programs simultaneously and sharing data between applications	\$1,800.00	\$0.00	\$0.00	\$0.00	\$1,800.00	0
Supplies and Direct Operating Expenses	Computer Software and Media	Software applications, such as screen capture, Internet-specific, and platform specific (e.g., for Apple iOS) software, to supplement and round out the two primary digital forensic programs	\$1,500.00	\$0.00	\$0.00	\$0.00	\$1,500.00	0
Supplies and Direct Operating Expenses	Computer Software and Media	External Blu-ray burner to copy, transfer, and store large quantities of data from acquired digital forensic images	\$200.00	\$0.00	\$0.00	\$0.00	\$200.00	0
Supplies and Direct Operating Expenses	Computer Software and Media	CDs, DVDs and Blu-ray discs; flash drives, and external hard drives to save data imaged during forensic examinations	\$3,000.00	\$0.00	\$0.00	\$0.00	\$3,000.00	0
Supplies and Direct Operating Expenses	Project Supplies (e.g., binocular, battery, flexicuff, drug testing kit)	Tool kit for dismantling digital devices to retrieve hard drives/mass storage; compartmentalized storage containers to hold various dismantled hardware components	\$350.00	\$0.00	\$0.00	\$0.00	\$350.00	0