



2024-25 GRAND JURY REPORT  
EL DORADO COUNTY  
FEBRUARY 11, 2025 - CASE #25-03

## EDSO: PREVENTING INTERNET CRIMES AGAINST CHILDREN

*The Grand Jury investigated the capabilities and resources of this critically important Sheriff unit focused on the increasing number of high-tech crimes.*

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*Cover Caption: Google Gemini AI-generated image of a girl and hacker. Created 2/5/25 by G. Kinghorn*

# SUMMARY

## Summary

*“Amateurs hack systems; Professionals hack people.”*

- Bruce Schneier, Cybersecurity researcher and author

### HIGHLIGHTS

The El Dorado County Sheriff's Office (EDSO) has a well-equipped High Tech Crimes Unit (HTCU) that supports a wide range of investigations that involve the recovery of digital forensic evidence, such as data from cell phones, hard drives, and cloud storage. The underlying criminal activity can range from financial fraud, narcotics, and industrial espionage. The unit is primarily responsible for coordination with regional and federal task forces that investigate crimes against children, including creating and consuming child pornography, as well as child trafficking.

Human trafficking is the fastest-growing organized crime activity in the United States, estimating that 250,000 children per year are victims of trafficking for sex and forced labor. HTCU receives approximately 200 leads per year from the International Crimes Against Children (ICAC) task force and from online service providers such as Google, Discord, and Reddit. It has a backlog of about 250 leads within the County that need to be followed up currently, more than a year's worth. The unit has state-of-the-art technology and highly skilled resources to apply to these classes of investigations, but the problem is quickly outpacing the County's ability to fully address.

The Grand Jury learned that there is a shocking amount of child trafficking occurring in the County. Highway 50 is a common corridor for moving children between Nevada and Sacramento, a known hub for child trafficking activity and a gateway to other regions.

### RECOMMENDATIONS SUMMARY

The Grand Jury was deeply impressed with HTCU capabilities and resources, but more can be done, including ensuring additional training time for dedicated detectives to stay abreast of current technologies and trends, and leveraging ICAC resources more fully.

# BACKGROUND

## Background

The Grand Jury learned about the El Dorado Sheriff's Office (EDSO) High Tech Crimes Unit (HTCU) from our members' participation in the EDSO Citizen's Academy. With the proliferation of technology-related crimes and the need to discover digital evidence from a wide variety of devices, we wanted to learn more. This is a critical aspect of EDSO activities that the public is generally not aware of, and we wanted to research and document the current resources and capabilities of this unit.

A large part of the HTCU case load is dedicated to crimes against children, including child pornography and child trafficking. The Grand Jury learned during interviews from high-level law enforcement that there is a shocking amount of child trafficking occurring in the County. Sacramento is a known hub for child trafficking activity and a gateway to other regions for moving children. Highway 50 is a common corridor for moving children between Nevada and Sacramento. The County may also have a reputation as having more places to hide out for nefarious actors than denser urban counties.

There is an urgent need across the nation to address and eliminate these crimes against humanity and El Dorado County (County) and HTCU is a primary resource to that end. It's important to raise awareness of the problem and understand what the County is currently doing about it.

# METHODOLOGY

## Methodology

### INTERVIEWS

- HTCUC staff
- County Sheriff
- Tour of the EDSO data center

### DOCUMENTS REVIEWED

- EDSO web site
- ICAC and other agency partner websites
- Digital forensic tool vendor websites
- HTCUC prepared PowerPoint presentation

## Discussion

The Sheriff's Office High-Tech Crimes Unit (HTCU) is a two-person team of sworn officers (both detectives) that investigate computer or technology-related criminal activity within the County. This includes conducting the relevant computer forensic analysis and evidence collection needed to support crime investigation. While there are many exclusively high-tech crime categories, criminal activity can have a high-tech component with the use of electronic communication and cellular phones that can hold incriminating evidence. HTCU is frequently involved in sexual assault and rape investigations, narcotics investigations, violent crimes, and domestic terrorism.

High-tech crimes can include identity theft, financial fraud, cyber-bullying, cryptocurrency scams, digital information theft, industrial espionage, network and computer system intrusion, as well as various hacking, phishing, malware, and ransomware attacks. Currently the most heinous and rapidly increasing crimes are crimes against children, which includes child abuse, child pornography, and child trafficking. HTCU has a strong relationship with the regional Internet Crimes Against Children (ICAC) task force program in Sacramento that coordinates cross-county and agency efforts in Northern California and the Central Valley. In addition to ICAC, HTCU partners with regional, statewide and federal agencies such as the Sacramento Valley High-Tech Crimes Taskforce, the U.S. Secret Service, and the FBI.

As we learned more about HTCU capabilities, we grouped their activity into two main categories: the digital forensic investigations that they perform on a wide variety of criminal activity, and the work they do in conjunction with ICAC investigating crimes against children, including child pornography and trafficking. Each of these areas is discussed further below.

### A GROWING NEED FOR DIGITAL FORENSIC RESEARCH

Digital forensic research is often a critical component of many crime investigations. With the proliferation of technology, particularly cell phone use, HTCU is asked to support a wide range of investigations. Digital forensics is defined as, "*the application of forensically sound investigation and analysis techniques to gather and preserve evidence from a particular computing device in a way that is suitable for presentation in a court of law*" (source: [TechTarget](#)). Digital forensics

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can cover computer devices, cloud computing assets, hard drives, mobile devices, and network infrastructure.

With the proper tools (and skills), digital information that has been hidden or deleted can be recovered from many systems, particularly hard drives and cell phones. Criminal activity can also be identified and traced over the internet and cloud service providers using cloud-based forensic tools and techniques. Internet service providers and social media companies coordinate with local law enforcement teams to identify and refer suspected crimes for further investigation. Forensic investigations can now be conducted across wide geographic areas involving multiple agencies, including across states or even countries.

The Federal Bureau of Investigation (FBI) Internet Crime Complaint Center (IC3) reports that financial losses nationwide have been increasing by roughly 30-50% per year with the number of reported complaints holding steady at about 800,000 per year since 2020. The largest number of complaints continues to be “phishing,” a technique for attempting to acquire sensitive data, such as bank account numbers, through a fraudulent solicitation in email or on a web site, in which the perpetrator masquerades as a legitimate business or reputable person (source: [NIST Computer Security Research Center](#)).

The technology used by hackers and other criminals is easily available on the Internet, along with YouTube videos and open-source tools, that make high-tech crimes easy, profitable and challenging to trace. Hackers can effectively obscure their location, internet address, and identity through commercially available network services like the [TOR network](#), a secure, encrypted protocol that can ensure privacy for data and communications on the web, or several virtual private network (VPN) providers and products. These technologies help make up the Dark Web, a part of the World Wide Web that is only accessible by means of a special layered VPN, allowing users to remain anonymous and untraceable. Over 50% of Dark Web content has been found to be illegal or illicit content, which includes virtually all of the online pornography, drug, and child trafficking sites. The TOR network alone hosts roughly 30,000 hidden sites today.

The HTCU’s job is further complicated by the vast amounts of data that a single investigation can entail. Finding relevant evidence on a single hard-drive or cell phone, let alone across a

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large cloud network, can be a tedious, time-consuming effort, even using state-of-the-art forensic tools. HTCUC is a modern, high-tech approach to law enforcement that can support even the most challenging cases. HTCUC is the digital equivalent to the physical evidence gathering and analysis capabilities of the Sheriff's Crime Scene Investigation (CSI) unit.

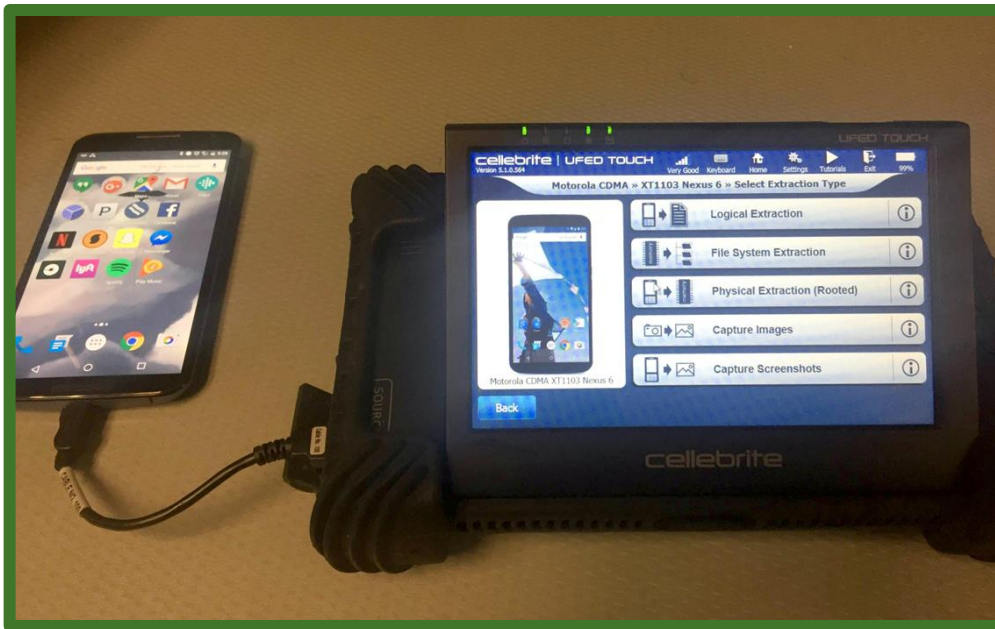
HTCUC has its own digital crime lab (shown below) with two full-time detectives and state-of-the-art digital forensic capabilities. The lab has five forensic computer workstations, a physical evidence storage locker, a stainless steel hardware workspace, a soldering station, a mobile device imaging workstation, one Petabyte of digital evidence storage (that's  $10^6$  or one million Gigabytes), with offsite backup, all running on a 10GB/sec high-speed network.



*Figure – The EDSO HTCUC crime lab. Photo courtesy of EDSO.*

The lab uses leading digital forensic software tools. Cellebrite is an Israeli company that sells the most widely used mobile phone forensic tool, including the ability to recover deleted data and decipher encrypted and password protected contents. Cellebrite UFED (Universal Forensic Extraction Device) has become the standard in lawful mobile device extraction and forensics. It has now expanded to cover digital cameras, drones, SIM cards, and other mobile/removable media.

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*Figure – An early model of Cellebrite UFED used by HTC. Details of later models and current capabilities are confidential and only available under non-disclosure agreements (NDA). Photo courtesy of EDSO.*

For computers and mass storage devices, HTC uses Magnet Axiom, a similar tool to Cellebrite, but which excels at hard drive images. Magnet Axiom processes the file evidence into a searchable case file, allowing law enforcement to retrieve browser histories, deleted files, chat dialogs, and cloud-based data. It has the ability to bypass some passwords and encrypted data to retrieve raw evidence.

The other main custom tool used by HTC is Sumuri Forensics, a Delaware-based leading provider of unique and relevant digital forensic solutions in both hardware and software. Sumuri PALADIN Forensic is a modified “live” Linux distribution that simplifies various forensics tasks in a forensically sound manner. The Sumuri TALINO KA workstation is custom built on the most reliable and stable platform designed by Certified Forensic Computer Examiners for use in specialized forensic applications. The TALINO workstation runs Magnet Axiom and other forensic tools with specialized hardware that is needed for forensic extraction, password cracking, and other forensic processes. Sumuri has made it their mission to help law enforcement organizations to fight human slavery, child exploitation, and terrorism. They

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annually donate workstations to small law enforcement organizations and agencies in the U.S. and internationally.

HTCU detectives provided us with statistics of the number of forensic investigations they have performed and case types they have supported since their lab was fully established in October 2020. Using the above tools, with stats collected through October 2024, they were able to successfully forensically image over 80% of the device images they attempted, processing nearly 85 Terabytes of information in 368 cases and nearly 650 individual devices. About 70% of the device images were cell phones. None of the other device types (internal hard disk drives, SIM cards, thumb drives, and tablets) accounted for more than 5 or 6% of the total devices forensically analyzed.

One-third of the cases HTCUC supported primarily involved narcotics. 25% of all cases were related to child exploitation. Burglary, assault (including sexual assault and assault with a deadly weapon), grand theft, and homicide cases together accounted for about half of HTCUC cases.

**Finding 1** – The EDSO HTCUC is a well-resourced unit that assists in a wide-variety of criminal investigations and coordinates with several regional and federal agencies on high-tech crimes. The small staff have the required industry expertise in IT and forensics technology, coupled with a law enforcement background to ensure the County has the skills and tools required to support the growing number of investigations and case requirements.

### INVESTIGATING CRIMES AGAINST CHILDREN

HTCU is part of a nationwide integrated program, the Internet Crimes Against Children (ICAC) task force. ICAC consists of 61 coordinated local task forces representing over 5,400 federal, state, and law enforcement agencies dedicated to investigating, prosecuting, and developing effective responses to online child exploitation. ICAC training providers are essential in providing the federal, state, and local agencies that make up the ICAC Task Force Program the tools and techniques necessary to develop an effective response to technology-facilitated child sexual exploitation and internet crimes against children.

## DISCUSSION

The ICAC Program was developed in response to the increasing number of children and teenagers using the Internet and other technology, the proliferation of child sexual abuse images available electronically, and the heightened online activity by predators seeking unsupervised contact with potential underage victims. The ICAC Task Force agencies are engaged in both proactive and reactive investigations, forensic examinations, and criminal prosecutions. By helping state and local agencies develop effective, sustainable responses to online child victimization, including responses to child sexual abuse images, the ICAC Program has increased law enforcement's capacity to combat technology-facilitated crimes against children at every level.

EDSO is an active member of the Sacramento Valley ICAC Task Force. Overall, EDSO has five detectives dedicated to investigating sex crimes including those involving children, including the two detectives in HTCUC that take the lead in ICAC case referrals. From June 2023, until November 2024 (17 months), ICAC referred 222 cases to EDSO and HTCUC. Of those, 88 were closed or referred to other agencies and 134 are currently under investigation.

Those 222 cases were given a standard prioritization, based on urgency and imminent danger to a child. Twenty of the cases involved a child in danger, with two of them in imminent or ongoing danger. The remaining 202 cases involved child sexual abuse material (CSAM). ICAC referrals are initially generated by online service providers and social media communities where offending material is shared or stored. The National Center for Missing and Exploited Children (NCMEC) is also a referral source to ICAC and may come across child exploitation material in the absence of a designated online service provider.

Roughly half of the ICAC referrals come from either Synchronoss or Discord. Synchronoss is a very large cloud provider used by telecom organizations and other communication and service providers to build personalized cloud environments that are in turn used by individuals. It provides enough flexibility and privacy of content that makes it an ideal platform to host, share, and sell illicit content. Unlike the Dark Web, Synchronoss makes every attempt to police its platform, identify this illicit content, and refer it to ICAC and local law enforcement agencies. Discord is an instant messaging, content sharing and community building platform primarily used by gamers, but has many other communities of interest, including apparently child

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exploitation activities. Other messaging and community building platforms, such as Reddit, Snapchat, and Google account for less than 10% of ICAC referrals each.



*Figure – Outcome of successful case arrest initiated through ICAC and processed by HTCUC. Photo courtesy of EDSO.*

The referral process starts when one of these messaging platforms identifies CSAM and flags it for review. NCMEC receives a report on the material who may perform an initial investigation, including background checks on users and other available open-source information. An attempt is made to localize the illicit user and refer it to the appropriate regional ICAC task force. The regional task force will likely do additional research before involving the local law enforcement agency, in our case EDSO and HTCUC.

HTCU conducts its investigation further collecting information on the location of the user, including computer IP address and the illicit nature of the content. Once the address of the potential offender is confirmed, law enforcement must request a warrant from a judge after

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establishing probable cause for the search. Then a court order can be issued authorizing a search of the target residence and all electronic devices found within. A team of EDSO deputies and detectives will conduct the search, conduct interviews, and initiate appropriate legal action.

The Grand Jury learned that HTCUC is an “Affiliate Member” of the Sacramento ICAC Task Force, but not “Full Members.” As Affiliates, HTCUC has a strong relationship with the team and can request resources (bodies) for their own investigations as needed or voluntarily participate in their investigations when possible. The requirement is that full members contribute a minimum of two days per week directly to the Task Force to work cases potentially out of their local jurisdiction. In return, full members receive direct benefit from ICAC grants and funding opportunities (paid training and equipment for their own office) as well as direct access to all equipment and tools available in the Sacramento office. At present, HTCUC does not have the staff resources to contribute two days per week to ICAC activities, although they could benefit from the additional funding and resources available to full members.

At present, ICAC refers approximately 200 cases per year to HTCUC. HTCUC has a backlog of 250 cases pending review or action, more than a year’s worth. They close out about 100 ICAC tips a year, with about half of those resulting in an arrest or field case. If HTCUC could investigate the current backlog of ICAC tips, at the corresponding rate of arrests or field cases, EDSO could take approximately 100 more child predators or conveyers and consumers of CSAM off the streets that are otherwise going to remain at large.

Both detectives in HTCUC also have skills in other areas that reduce their ability to focus exclusively on high-tech and ICAC investigations. One detective is a member of the Explosive Ordinance Division (EOD) bomb squad, including being trained and able to respond to any chemical, biological or radioactive attacks within the County. The second detective is a skilled drone pilot and also serves on the Unmanned Aerial Systems (UAS) team in EDSO. It’s great that EDSO can leverage broad technical skills in multiple areas, and that we have so much expertise within the County without hiring specialized talent, but it does mean that we are slower to work through the ICAC backlog.

Even if you can legitimately say that an impending chemical or radiological terrorist attack, for example, should take precedence above an ICAC lead, each of these workloads requires

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additional annual training, education, and coordination with state and federal agencies on an ongoing basis in the absence of an active incident that take time. The Grand Jury did not learn what percentage of time the detectives split between their secondary units on an annual basis.

There are no plans to increase the number of detectives in HTCUC in the foreseeable future despite the ICAC backlog and the need to prioritize investigations. The Grand Jury cannot speculate on overall staffing priorities across all EDSO, and we assume the staffing resources in HTCUC are appropriate. There is, however, more work that can be done, and there are important leads to CSAM investigations that are not being addressed.

**Finding 2** – Current staffing levels in HTCUC do not allow EDSO to be a “full” member of ICAC, limiting the County’s ability to receive additional grants and leverage ICAC resources. HTCUC also has a significant backlog of leads from ICAC that could lead to as many as 100 consumers of CSAM or other crimes against children. While two detectives are currently assigned to HTCUC, their commitment to other units means they are less than full time on HTCUC investigations.

The Grand Jury is aware that the rare skills of the HTCUC detectives are in high demand in industry where salaries are considerably higher than EDC. The County is fortunate that HTCUC staff appear satisfied and are fully committed to their work of focusing on the growing problems of child abuse and trafficking. They would be very difficult to replace and a loss of even one person would be devastating to EDSO efforts in this area.

The HTCUC crime lab and available desk space have been designed for future expansion and the possibility of adding one or two more detectives. Evidence storage was recently migrated to the EDSO data center from the lab to make more space available and to reduce equipment noise.

### A CHILD RECOVERY AND TREATMENT EFFORT IN NORTHERN CALIFORNIA

While not specifically addressed to EDSO or County activity, to complete the picture of the scope of child abuse activity and the need for attention in this area, the Grand Jury learned

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about a project in Live Oak, California (Sutter County) called [Peace of Heaven](#). The Church of Glad Tidings in nearby Yuba City was approached in early 2024 by a task force that asked for help in finding safe housing for over 800(!) trafficked children that had been recently rescued in the Bay Area. The church had no solution but have since embarked on acquiring a ten-acre property that was once a low-security woman's prison and is converting it into a healing center for rescued and traumatized youth. They are partnering with [Mission Safe Harbour](#), the most aggressive child rescue operation in the world, on the conversion of the facility and future treatment programs.

The County should be aware of child rescue programs like this and continue to coordinate efforts with regional organizations to end this scourge of child exploitation and trafficking.

# FINDINGS

## Findings

**Finding 1** – The EDSO HTCUC is a well-resourced unit that assists in a wide variety of criminal investigations and coordinates with several regional and federal agencies on high-tech crimes. The small staff have the required industry expertise in IT and forensics technology, coupled with a law enforcement background to ensure the County has the skills and tools required to support the growing number of investigations and case requirements.

**Finding 2** – Current staffing levels in HTCUC do not allow EDSO to be a “full” member of ICAC, limiting the County’s ability to receive additional grants and leverage ICAC resources. HTCUC also has a significant backlog of leads from ICAC that could lead to as many as 100 consumers of CSAM or other crimes against children. While two detectives are currently assigned to HTCUC, their commitment to other units means they are less than full time on HTCUC investigations.

# RECOMMENDATIONS

## Recommendations

The Grand Jury recommends to the Sheriff of El Dorado County that:

**Recommendation 1** – By the start of the 2025-2026 budget year, the HTCUC should take advantage of additional training and industry conferences to stay abreast of the latest technologies and cybersecurity trends, including attending the Black Hat conference, and technology vendor user group meetings, such as the Cellebrite user summit.

**Recommendation 2** – By the start of the 2025-2026 budget year, identify an EDSO resource that can coordinate with the Sacramento regional ICAC task force roughly two days per week and allow HTCUC to become a “full member” of ICAC in order to leverage available grant money and additional regional resources.

# REQUEST FOR RESPONSES

## Request for Responses

A Civil Grand Jury report details a single investigation. Each report lists FINDINGS and RECOMMENDATIONS. The responsible organization is notified and is required to respond to the report.

The California Penal Code § 933(c) specifies response times.

- PUBLIC AGENCIES. The governing body of any public agency (also referring to a department) must respond within 90 days from the release of the report to the public.
- ELECTED OFFICERS OR AGENCY HEADS. All elected officers or heads of agencies/departments are required to respond within 60 days of the release of the report to the public.
- FAILURE TO RESPOND. Failure to respond to a Grand Jury report violates California Penal Code Section 933.05 and is subject to further action that may include additional investigation on the subject matter of the report by the Jury.

The following responses are required pursuant to Penal Code § 933 and § 933.05:

From the following elected officer:

- Sheriff of El Dorado County
  - All Findings and Recommendations

For more information refer to [How to Respond to an El Dorado County Grand Jury Report](#) available on the El Dorado County Grand Jury webpage.