



Hi-Tech Investigations, LLC  
<https://www.hi-techinvestigations.com>

## Mobile Phone Investigations & Cellular Record Analysis (3 days)

Law Enforcement Officers will first learn about the proper way to seize, preserve, and analyze Mobile Phones. Mobile Forensic Tools such as Graykey, Cellebrite, and Axiom will be discussed. Students will be instructed on data that is stored on Apple and Android devices and how to use Cellebrite and Magnet to review phone extraction data. Students will be introduced to Cellular Network Technology and how Cell Site Location Information obtained from Cellular providers can be used in Criminal Investigations to locate a device historically and during live tracking. Tower dumps and area dumps will be discussed along with Cellular Network Analysis Drive Testing. This course will be a hands-on class where students will work with a forensic mapping tool to analyze geolocation data. **Students will need a laptop with internet capability and Google Earth Pro for Desktop installed on their laptop. Bring a mouse to use with the laptop.**

### Day 1

8-8:30	Registration
8:30-9:30	Seizing cell phones
9:30-10:00	Introduction to Phone Forensics (Cellebrite, Graykey, etc)
10:00-10:45	Data stored on Apple devices and Android devices
10:45-11:30	Apple iCloud & 3 <sup>rd</sup> Party Geolocation Tracking
11:30-12:30	Lunch (On your own)
12:30-2:00	Hands-on practical using Cellebrite Reader
2:00-4:00	Hands-on practical using Magnet Axiom Portable Case

### Day 2

8:00-10:30	Introduction to Cellular Networks
10:30-11:00	Mobile Network Operators and Mobile Virtual Network Operators
10:30-11:15	Obtaining Provider records with Search Warrants
11:15-12:00	Analyzing Cellular Records
12:00-1:00	Lunch (On your own)
1:00-2:00	Paid Phone Lookup Tools
2:00-4:00	Forensic Mapping of Cellular Records Hands-on practical

### Day 3

8:00-9:00	Specialized Location records/Best Practices
9:00-10:00	Cell Tower Dumps/Area searches/Drive Testing/Fugitive Tracking
10:00-12:00	Forensic Mapping of Verizon RTT hands-on practical
12:00-1:00	Lunch (On your own)
1:00-1:30	Using LPR data and video surveillance in Geolocation Analysis.
1:30-2:00	Motor Vehicle Digital Evidence
2:00-4:00	Forensic Mapping of Timing Advance hands-on practical



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**Upon Completion:**

Participants will be able to seize and handle cell phones properly to allow for the best evidence to be extracted using forensic tools. Participants will be introduced to different methods and tools to extract data from cell phones along with knowing the most efficient techniques to analyze phone records using Cellebrite. Participants will have a better understanding of how cell phones collect and store data and how cellular networks operate. Participants will know how to identify and obtain cellular records and how to forensically map the records to identify historical locations of the phone. Participants will understand the device location information that iOS devices store along with data that Google stores in their own servers which can be obtained with a court order. Participants will learn the best way to leverage Google Device Locations using Geofence Warrants which can be used in current and Cold Case Investigations.

**Instructor Biography:**

Jeffrey German is a Detective with the City of Joliet, Illinois Police Department. Detective German has over 20 years' experience as a Police Officer and over 8 years' experience as a Detective and an Investigator for the Will/Grundy Major Crimes Task Force. Detective German is currently tasked with High-Tech Criminal Investigations for the Joliet Police Department Investigations Division where his duties are cell phone forensics, video forensics, major crimes investigations, and Geolocation analysis of mobile devices. Detective German is a subject matter expert in Call Detail Records and Geolocation Analysis and a LEVA Certified Forensic Video Technician. He is a Cellebrite Certified Mobile Examiner and a Magnet Certified Forensic Examiner. Detective German was awarded the VFW Officer of the Year award for 2009 and 2013. He was also awarded the State of Illinois VFW Officer of the Year in 2013. Detective German is the owner of Hi-Tech Investigations LLC which provides training to Law Enforcement, Prosecutors, and Corporate Security Personnel. Detective German is an Adjunct Faculty Instructor for the College of DuPage Homeland Security Training Institute and a Contract Trainer for the Public Agency Training Center (PATC) and the National White Collar Crime Center (NW3C).