

**A SPECIAL INVITATION**  
**HOSTED BY**  
**WEST CHESTER, OH POLICE DEPARTMENT**  
**OCTOBER 11 – 13, 2022**



**SUBSENTIO**  **ACADEMY**

The logo for Subsentio Academy features the word "SUBSENTIO" in blue and red, followed by a stylized blue and red graphic element, and the word "ACADEMY" in blue.

**FUNDAMENTALS OF CELL PHONE ANALYSIS**  
**TRAINING**

**Location**

**West Chester Police Department**  
**9577 Beckett Rd.**

**West Chester, OH 45069**

**<https://academy.subsentio.com>**



## FUNDAMENTALS OF CELL PHONE ANALYSIS

### **COURSE OVERVIEW:**

Students will obtain a basic understanding of cellular network operations, radio frequency propagation, and cell phone provider operations. Students will learn what information is available from each cell phone provider, how to obtain that information, and how that information appears in their respective records. Training will be provided on additional sources of information related to phones but not specifically from cell phone providers such as Google, Apple, and various Apps. Instruction on using this information in realistic investigative scenarios and practical exercises enable course graduates to immediately utilize their skills to advance investigations.

### **PROJECTED TRAINING TIME:**

This course includes 24 hours of instruction and practical exercises. Allowing for administrative and other matters, the course will occupy 3 full (8 hour) duty days.

### **INSTRUCTORS:**

Standard sized class will be taught by two former FBI CAST Certified Instructors with multiple years of experience in Cellular Investigations, Testimony, and Law Enforcement Instruction.

### **INSTRUCTION PHILOSOPHY:**

We believe the best learning occurs by doing. Our course begins with classroom instruction and real-world examples of how to employ the techniques that prepare students for multiple practical exercises. The exercises form the corner stone of our course and provide the repetitions and experience investigators can utilize immediately.

### **NETWORK OPERATIONS:**

- Familiarization with Cellular Radio Frequency Technology
- Physical Cell Towers
- Cell Tower Sectors and Identifiers
- How a Cell Phone selects a tower
- Cell Phone Tower Interactions and factors that affect coverage areas

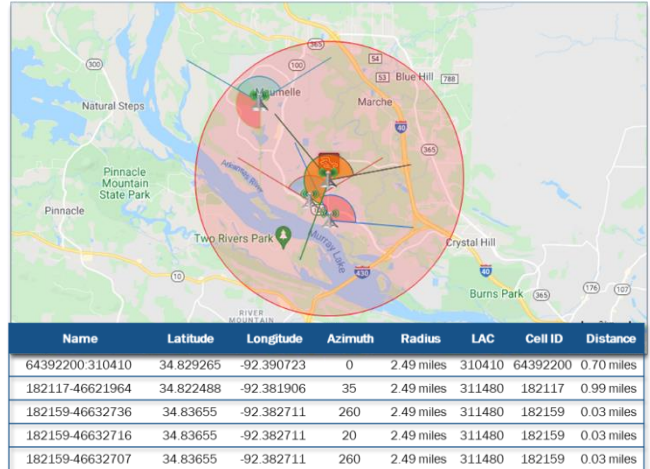


## EXCEL SKILLS

- Basic excel functions useful in records analysis

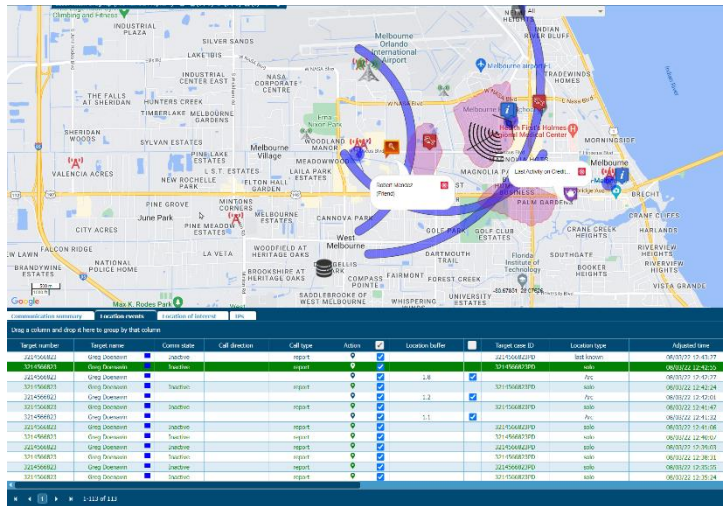
## CELL PHONE RECORDS GENERAL OVERVIEW

- Call Detail Records (CDR's)
  - Voice
  - SMS/MMS
  - Data Sessions
  - Tower Lists
  - NDCAC and Cell Site Database
- How long CDR's are maintained
- Time Zone Issues and Conversions



## ANALYTICAL SOFTWARE

- Instruction on how to load records into software
- How to filter and sort
- Basic analytical functions within the software



## VERIZON WIRELESS

- Verizon CDR's
- Verizon Tower Lists
- Verizon SMS Content
- Verizon Timing Advance (RTT)
- Verizon Practical Exercises

## T-MOBILE

- T-Mobile CDR's
- T-Mobile Tower Lists
- T-Mobile SMS Content
- T-Mobile Timing Advance (True Call)
- T-Mobile Practical Exercises

## AT&T

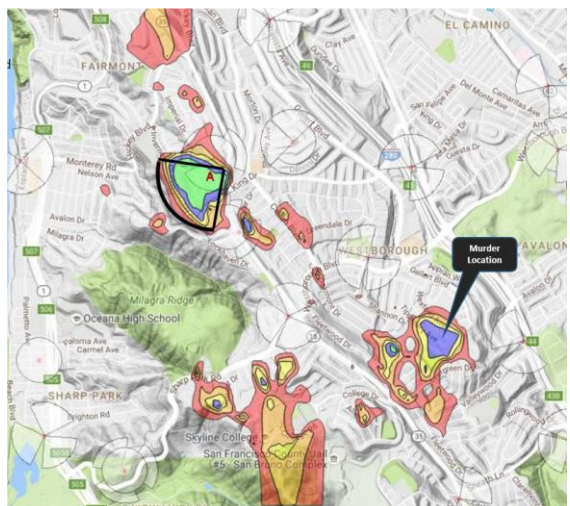
- AT&T CDR's
- AT&T Tower Lists
- AT&T SMS Content (None)
- AT&T Timing Advance (LOCDBOR – formerly NELOS)
- AT&T Practical Exercises

## INTRODUCTION TO REPORT ILLUSTRATION

- Power Point Basic Functions
- Elements of an Effective Report Slide

## GOOGLE/APPLE/CELLEBRITE/APP GEO-LOCATION

- What you can find
- How to import the records into software
- How to use the analysis
- Geo-location Practical Exercises



## **TOWER DUMPS**

- When and how to use them
- CDR Tower Dump
- Tower Dump Timing Advance
- Practical Exercises

## **VEHICLE TELEMATICS**

- VIN to IMEI
- CDRs

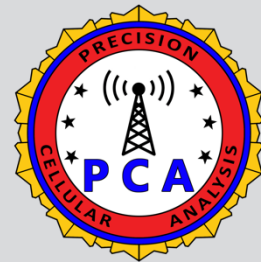
## **APPS AND IPs TO PHONES**

- IPV4 vs IPV6
- Where you find IPV's
- What to do with IPV's
- VOIP Apps

# **INSTRUCTOR BIOS**



**KEVIN HORAN**  
**TEAM MEMBER**  
**PRECISION CELLULAR ANALYSIS**  
**PARTNER & CO-FOUNDER**  
FBI Supervisory Special Agent (Retired)



After 26 years of government service, Kevin retired from the Federal Bureau of Investigation as a Supervisory Special Agent for the Cellular Analysis Survey Team (CAST). He has an undergraduate degree from Syracuse University and a law degree from the University of Dayton. Prior to joining the FBI, Kevin was an Assistant Prosecuting Attorney for the Montgomery County Prosecutor's Office in Dayton, Ohio. During his time there he gained a unique understanding of the legal system, having worked juvenile crimes, preliminary hearings, grand jury and adult felonies as a criminal trial attorney. After joining the FBI in 1995, he was assigned to the Cincinnati Division, Columbus Resident Agency where he investigated violent crimes, specializing in fugitives and homicides while serving on several task forces. Given the tactical nature of his work, he was selected as a FBI SWAT team member and later an Assistant Team Leader, having served in that capacity for 22 years (the longest in division history). In 2006 he was chosen to become a founding member of the CAST unit and became a certified expert in the field of cellular record analysis and live tracking of cell phones. Since that time he has testified over 110 times in state and federal courts in 22 states and has gained national attention in numerous high profile investigations. As a certified FBI Instructor, Kevin has taught hundreds of law enforcement officers (both nationally and internationally) how to interpret, analyze and plot cellular records. As a FBI CAST Supervisor, Kevin managed 26 CAST agents between Ohio and California ensuring that critical, often lifesaving information was provided to police and prosecutors in a timely fashion. Kevin is the recipient of multiple law enforcement awards and honors, most notably the FBI Director's Award for Distinguished Service to the Law Enforcement Community



**LANCE KEPPLÉ**  
**TEAM MEMBER**  
**PRECISION CELLULAR ANALYSIS**  
**PARTNER & CO-FOUNDER**  
FBI Supervisory Special Agent (Retired)



Lance Kepple served 22 years as an FBI Special Agent. He has successfully investigated organized crime, violent crime, drugs, public corruption, domestic terrorism, international terrorism, and piracy. He also spent seven years as an operator on the FBI Hostage Rescue Team (HRT) where he was involved in some of the highest profile and most complex operations conducted by the FBI. During his time at HRT, Lance also served as a Supervisory Special Agent, team leader for deployments, and lead planner for an operational deployment to Puerto Rico involving 900 FBI personnel.

His last five years were spent in training for and as a member of the FBI's Cellular Analysis Survey Team (CAST). Like all members of CAST, he became a court certified "expert" in cellular record analysis and historical cell site analysis. During that time, Lance successfully recovered numerous missing and kidnapped persons, responded to emergencies, was key in solving dozens of homicides, and testified in state and federal courts. Lance has analyzed thousands of records and had been recognized as an expert witness in both state and federal courts.

During his FBI career, Lance was awarded the FBI Meritorious Achievement Medal, the FBI Medal of Excellence, and the International Association of Chiefs of Police TOP COP Award (International Honorable Mention).

Previously, Lance served as an Officer in the US Air Force as a Combat Controller and Special Tactics Team Leader. He also holds a bachelor's degree in electrical engineering from Penn State University.

**SUBSENTIO ACADEMY**  
"We're The Gold Standard" for Cellular Analysis

**Learning Together  
and Saving Lives**  
**Register Today!**

Register for courses at <https://academy.subsentio.com/>

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