

# TURNING CELL PHONE DATA INTO CONFESSIONS AND COOPERATION

## AGENCY TYPE

Sheriff's Office

## AGENCY SIZE

850 employees, 440 sworn officers

## AGENCY NEED

A fast, defensible way to analyze large volumes of cell phone records, identify connections between individuals, and establish investigative timelines in major crimes and homicide investigations.

## PRODUCT OFFERING

- **CellHawk™** for cell phone mapping and timeline analysis.

## RESULTS AT A GLANCE

- Identified previously unknown suspects through call record analysis.
- Connected individuals who initially denied involvement.
- Accelerated mapping and timeline reconstruction.
- Supported successful homicide prosecutions.

## ABOUT THE VOLUSIA SHERIFF'S OFFICE

The Volusia Sheriff's Office serves one of the largest counties in Florida, encompassing residential communities, commercial corridors, and a highly mobile population. The agency's Major Case Unit predominantly handles homicide investigations, suspicious deaths, mass casualty incidents, and officer-involved shootings. Volusia County sees between 12 and 20 homicides per year.

## CHALLENGES

For investigators working major crimes, digital evidence frequently plays a central role in developing leads and validating investigative theories. Major crimes investigations routinely generate large volumes of digital evidence, requiring detectives to analyze thousands of call detail records, identify relevant timelines, and determine how individuals are connected within complex cases.

Prior to modern mapping tools, this process required extensive manual analysis. "There's so much effort and time to go through thousands of different records," explains Major Case Unit Detective Shon McGuire. Investigators needed a faster, more reliable way to interpret carrier data, confirm or eliminate suspects, and uncover hidden relationships between individuals.

## SOLUTION

For McGuire and the Major Case Unit, **CellHawk** has become central to the investigative workflow. "**CellHawk**, I use probably on every single case that I get," he says.

By converting raw carrier data into maps, timelines, and link analysis, **CellHawk** allows investigators to quickly establish context, test hypotheses, and identify patterns that would be difficult to detect through manual review. "**CellHawk** helps map a lot quicker than how I could do it by hand," McGuire confirms.

“CellHawk helped put everything together. And then when this person was confronted with ‘Hey, you lied to us. We can put you here,’ they actually became a witness in the case.”

**Detective Shon McGuire**  
Volusia Sheriff's Office



## IDENTIFYING CONNECTIONS BETWEEN SUSPECTS

**CellHawk** plays a critical role in helping investigators determine who is truly involved in a case. “If we have multiple phone numbers in a case, we’re able to see if some of the phone numbers connect with one another,” McGuire explains.

For investigators, this capability is often decisive. “It’ll help us either put a suspect there, or not put them at the scene.”

## BUILDING A HOMICIDE CASE THROUGH CELL PHONE ANALYSIS

In one homicide investigation from 2020, McGuire and his team were initially aware of a primary suspect connected to the murder of a victim who had been shot inside a vehicle that was later burned.

Investigators initially identified one suspect through GPS data, but evidence suggested additional individuals were involved. **CellHawk** proved instrumental in uncovering those connections. “We got a search warrant for his historical cell records. We mapped it, and it confirmed the GPS points,” McGuire recalls.

However, mapping analysis quickly revealed anomalies in call activity that pointed to *another* individual who had denied involvement. “When we got a search warrant for his records and mapped it, it actually put him with our suspect.”

That discovery ultimately reshaped the investigation.

## TURNING DATA INTO WITNESS COOPERATION

**CellHawk**’s mapping results provided investigators with decisive leverage during interviews with this newly discovered individual. McGuire explains, “When this person was confronted with ‘Hey, you lied to us. We can put you here,’ they actually became a witness in the case.”

The cooperation proved critical. According to McGuire, the witness provided all the details he needed to identify the three suspects that were ultimately arrested. All three later pled out to first or second-degree murder.

## RECONSTRUCTING TIMELINES IN MISSING PERSONS INVESTIGATIONS

**CellHawk** has also proven invaluable in complex missing person investigations. In one ongoing case discussed by McGuire, “the timeline analysis and heat map helped us actually narrow the time down when we can for sure say that she was last alive.”

Cell phone analysis also revealed inconsistencies in statements provided by a person of interest. “We’ve caught him in a bunch of lies,” McGuire explains.

## A TOOL INVESTIGATORS RELY ON

For McGuire, **CellHawk**’s value lies in both speed and simplicity. He frequently assists other investigators as well.

“**CellHawk** is actually an easy program to use,” McGuire says. “I mapped most of the people’s cases at our agency. If they had issues in a case, they called me.”

## A BROADER IMPACT ON MAJOR CRIMES INVESTIGATIONS

By utilizing **CellHawk**, Volusia’s Major Case Unit accelerates digital evidence analysis, identifies hidden connections, and builds defensible cases in some of the agency’s most serious investigations.

“I’ve even testified for other agencies after mapping for their cases as well,” McGuire says. “So I always recommend **CellHawk** to them. I personally would recommend **CellHawk** to every agency.”