



## F30 Historical Cell-Site Location Basics

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**Learning Overview:** The goal of this presentation is to teach attendees the basic principles of historical cell-site location information and the current state of the law on cell-site location. This presentation will introduce attendees to various types of cell-site location data, the various records that comprise cell-site location data, and the legal issues implicated by the introduction of cell-site location into evidence in court.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by spreading knowledge of, and building competence in, a relatively unknown field of forensic science. The case example will serve as a cautionary tale for both cell phone location surveillance practitioners and attorneys as to the potential consequences of not fully understanding this discipline.

Cell phones rely on stationary cellular antennae (cell sites, also commonly referred to as “cell towers”) that relay phones’ radio signals over long distances. Cellular service providers keep records of which specific cell sites transmit their subscriber’s calls and text messages for the purposes of both billing and network analysis. Law enforcement can obtain these records via warrant to determine individuals’ past locations for use in investigation or prosecution. These records include Call Detail Records (CDRs), tower lists, and CDR keys, and are commonly referred to as Historical Cell-Site Location Information (HCSLI). Inadequately trained law enforcement officers can make errors in their analysis and often overstate the precision and, therefore, the probative value, of this evidence. It is important that practitioners and attorneys are aware of these potential pitfalls in order to avoid miscarriages of justice.

The legal landscape of HCSLI is evolving rapidly. Prior to June 2018, law enforcement commonly obtained HCSLI via a “d-order” under the federal Stored Communications Act (SCA). This statute allowed law enforcement to obtain these records with a court order issued on an evidentiary standard lower than probable cause. In a landmark ruling, *Carpenter v. United States*, the United States Supreme Court declared that individuals possess a reasonable expectation of privacy in their past locations as revealed through HCSLI.<sup>1</sup> The Supreme Court also held the SCA procedure for obtaining HCSLI to be invalid and ruled that law enforcement must generally get a warrant to obtain these records. While the privacy interest in these records is now established, the lower federal courts and state courts are still developing the law around other aspects of cell-site location, such as the exclusionary rule, real-time cell-site location, and tower dumps.

In 2016, while investigating a near-fatal shooting, Evanston, IL, police officers obtained the HCSLI of a suspect, C.L., by his consent. In analyzing C.L.’s HCSLI, a detective made a crucial error that resulted in C.L. being arrested and charged with attempted murder. C.L.’s defense attorneys were able to identify this error and referred the case to an independent expert who was able to refute the erroneous analysis. This presentation will explain the error made in C.L.’s case, discuss other common errors in cell-site location analysis, and prepare attorneys to identify and counteract these errors.

### Reference(s):

<sup>1</sup>. *Carpenter v. United States*, No. 16-402, 585 U.S. \_\_\_\_ (2018).

### Cell Phone, Cell Site, Surveillance