

MAPPING AND TRACKING

Mobile Device Investigations Program

Technical Operations Division



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OBJECTIVE

Given a hypothetical investigative scenario involving cellular telephones and location information provided by the Cellular Service Provider, the learner will map the location of the subject on specific dates and times in order successfully complete the assigned investigation.



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CELL PHONE MAPPING

“Cell Phone Mapping” is the process of reviewing Call Detail Records to determine the specific location of a cell phone at a given date and time.



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CELL PHONE TRACKING

“Cell phone tracking” is the process of using cell technology to identify the current and immediate location of a specific cell phone. Unlike “mapping”, which coordinates historical data, “tracking” is done in real-time.



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Cell Phone Towers

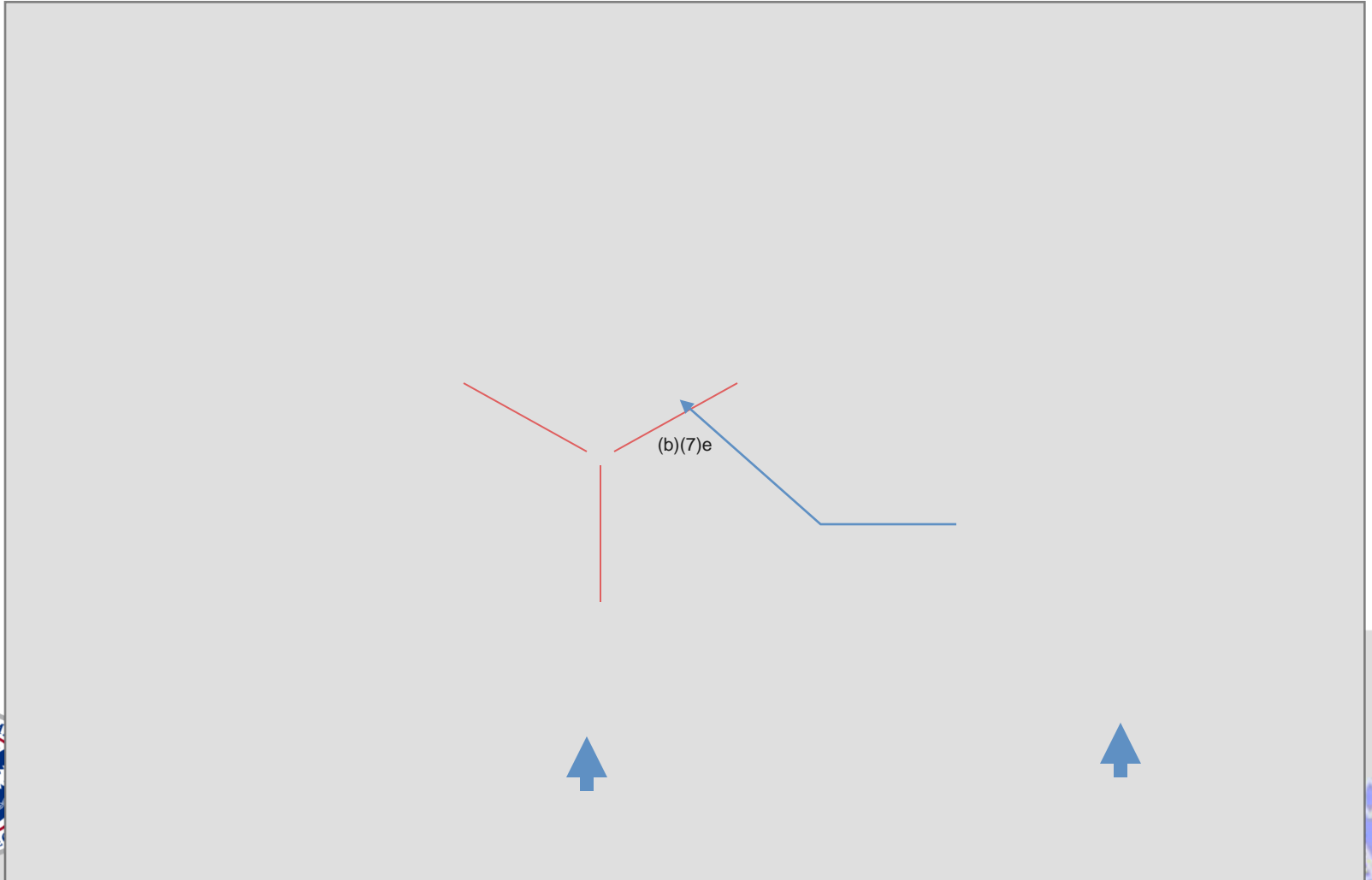
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Tower Technology



But There Is More...

- A cell phone that is powered on is always communicating.
- Every few minutes, it sends a signal to a tower which reads the
- The signal is received by a tower which reads the
 - Your personal information
- The MTR knows...
 - Where the phone is physically located.
- When someone calls, the service provider knows where to find you.

How can law enforcement apply this information?



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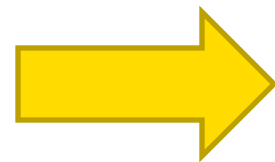


Applying Wireless Technology in 'Real Time'

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What you have seen is a less-than-outlandish application of 'Cell Phone Mapping'.

It is an available tool for you to use in a number of crisis situations.



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Mapping v. Tracking

- 'Mapping' is the analysis of historical detail records, applying GPS mapping to associated user tower locations
- 'Tracking' is the real-time location, via triangulation, of the source of cell phone transmissions



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Tracking

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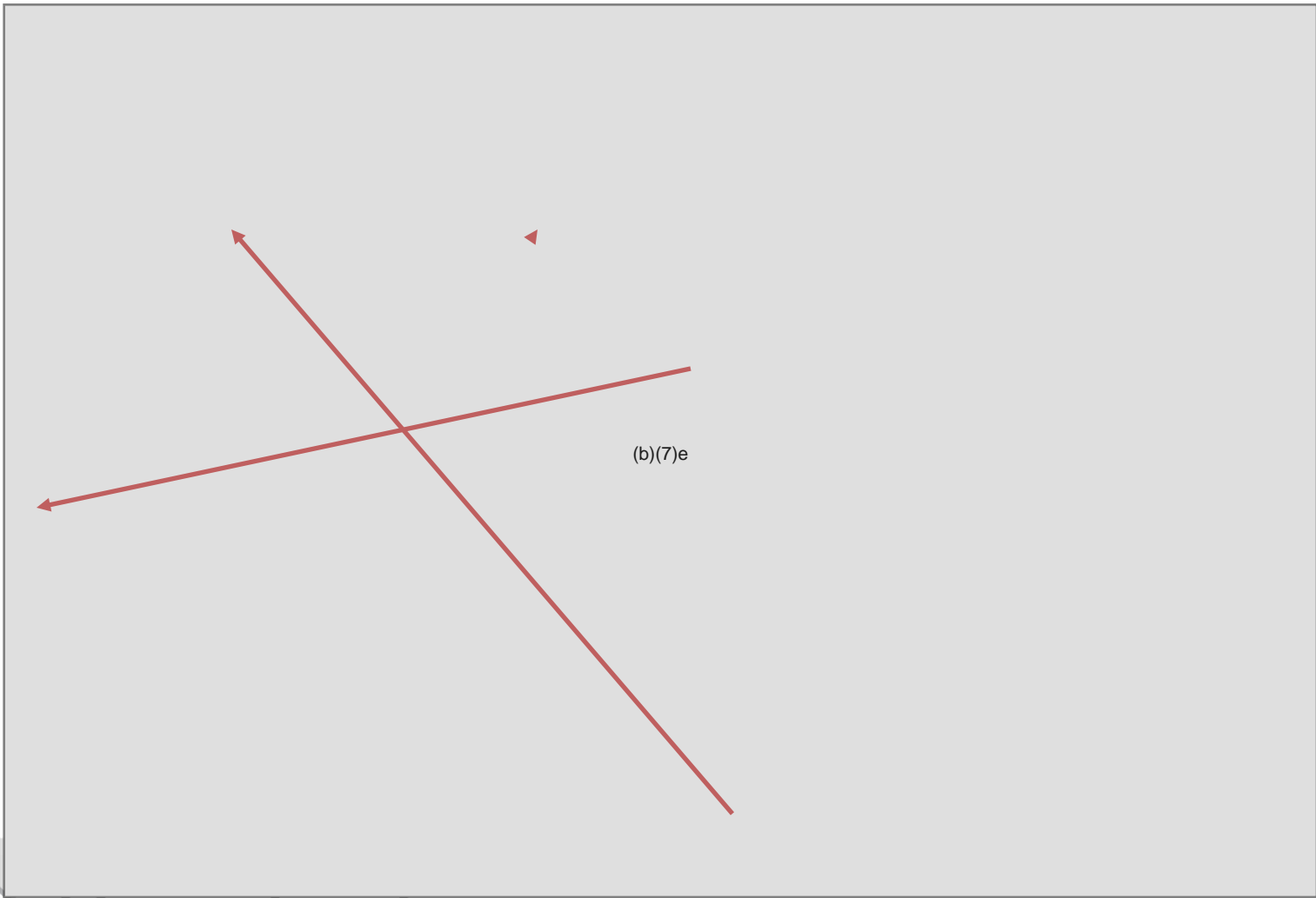


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Some Basic, Up-Front Information



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Where Did That Call Come From?

<http://www.fonefinder.net/>

From Primeris, this site can provide the following information regarding any cell phone number:

Home Cell Location

Cell Service Provider

Area Code Maps

Census Data

International Cell Phone Data



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Where's The Nearest Tower

www.cellreception.com

- **Select a tower in any city (or by zip):**
 - GPA Coordinates
 - Owner
 - Contact Information
 - Google.Earth Graphic



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Keep Up With The Industry...

www.ctia.org

- **Cellular Technology Industry Association**
 - State of the Industry
 - Virtually all carriers are members
 - Statistics, pending legislation
 - Emerging technologies



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Legal Issues?

<http://www.cybercrime.gov>

- **The Dept. of Justice Guidelines for Electronic Search and Seizure**
- **Still the best legal resource for electronic evidentiary issues**
- **Thorough discussion of ECPA**
- **Sample warrants, subpoenas, letters, etc.**



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