

Graphic Detail

Geographic Information Systems (GIS) organize and clarify the patterns of human activities on the Earth's surface and their interaction with each other. GIS data, in the form of maps, can quickly and powerfully convey relationships to policymakers and the public. This department of Cityscape includes maps that convey important housing or community development policy issues or solutions. If you have made such a map and are willing to share it in a future issue of Cityscape, please contact ronald.e.wilson@hud.gov.

Tracking Criminals With Cell Tower Analysis

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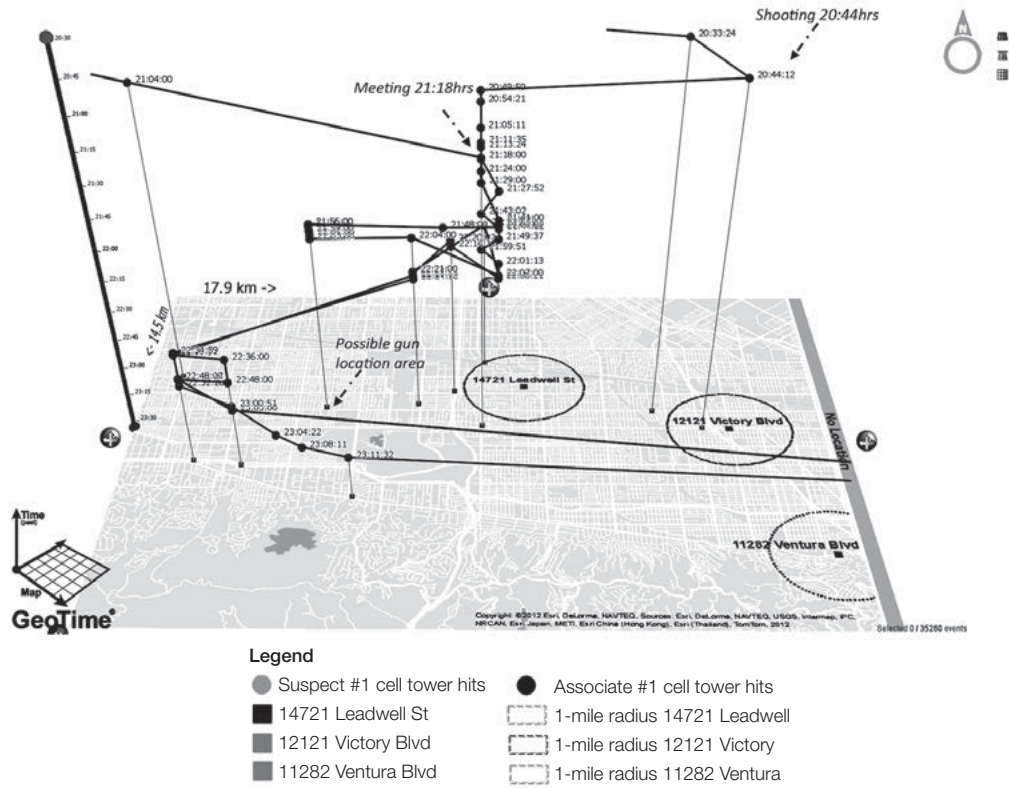
Los Angeles Clearinghouse

Detectives investigating a homicide case wanted to corroborate a witness's statements that the suspect handed off the murder weapon to an associate sometime after the shooting. They wanted to primarily confirm (1) who that associate was and (2) where the associate traveled after the meeting so an attempt could be made to recover the gun. Using GeoTime 5.5 and ArcMap 10.1, we developed a 3-D (three-dimensional) GeoTime map that enabled us to see the direction of travel of the two cell phones, when and approximately where they met, and where they each traveled following the meeting. We can suggest the two cell phones are "meeting" when they are hitting towers within 500 meters and 5 minutes of each other (see exhibit 1). A 2-D map does not enable us to visualize travel and time in this 3-D fashion.

We see the Suspect #1 cell phone hitting a tower near the homicide location about the time of the shooting, 20:44hrs. The Suspect #1 cell phone "meets" with Associate #1 at 21:18hrs. The two cell phones separate and Associate #1 tower hits indicate possible drop areas for the murder weapon.

Exhibit 1

3-D Map Showing the Area Where Suspect #1 Met Associate #1 To Hand Off the Murder Weapon



Data source: AT&T Wireless

Map source: Canvas/World Light Gray retrieved from [www. arcgis.com](http://www.arcgis.com)

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