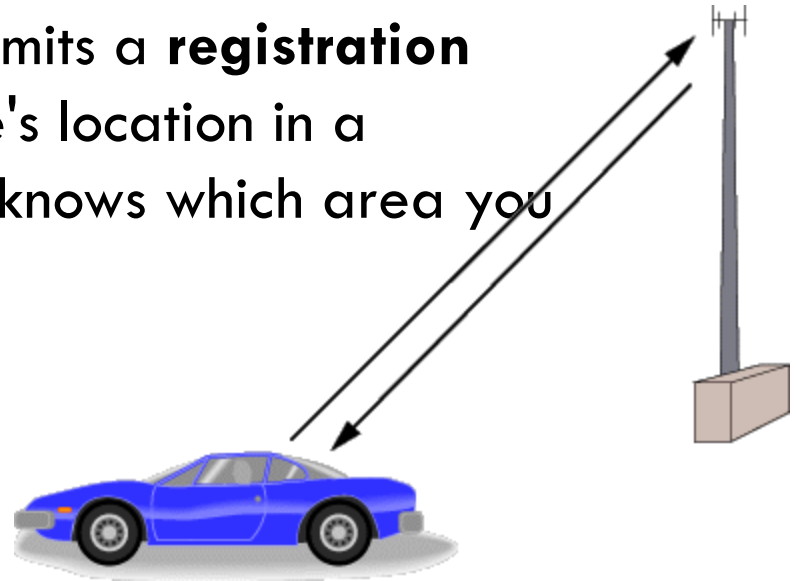


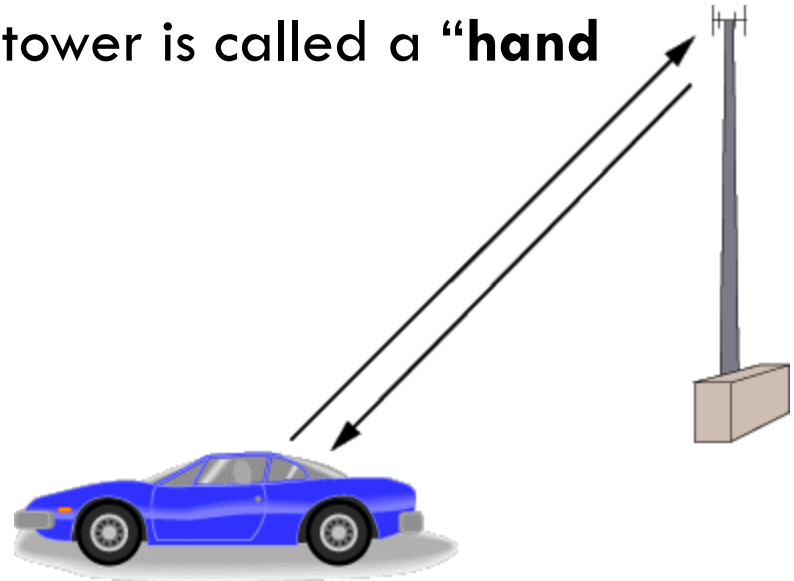
Understanding Cellular Telephones

- A good way to understand a cell phone is to compare it to a walkie-talkie.
- howstuffworks.com example:
- When you first power up the phone, it listens for a **System Identification Code (SID)** and logs the tower and phone contact.
- Along with the SID, the phone also transmits a **registration request**, and keeps track of your phone's location in a database -- this way, the cell company knows which area you are in, and which cell tower was used.



Understanding Cellular Telephones cont.

- As you move away from the cell tower, the towers **base station** notes the cell phone signal strength is diminishing. At the same time, the next base station and tower sees your signal strength increasing as you move toward it.
- The two base stations then coordinate with each other, and at some point, your cell phone gets a signal telling it to change towers.
- This change from cell tower to cell tower is called a “**hand off.**”



What do cell sites look like?

□ Some are on buildings

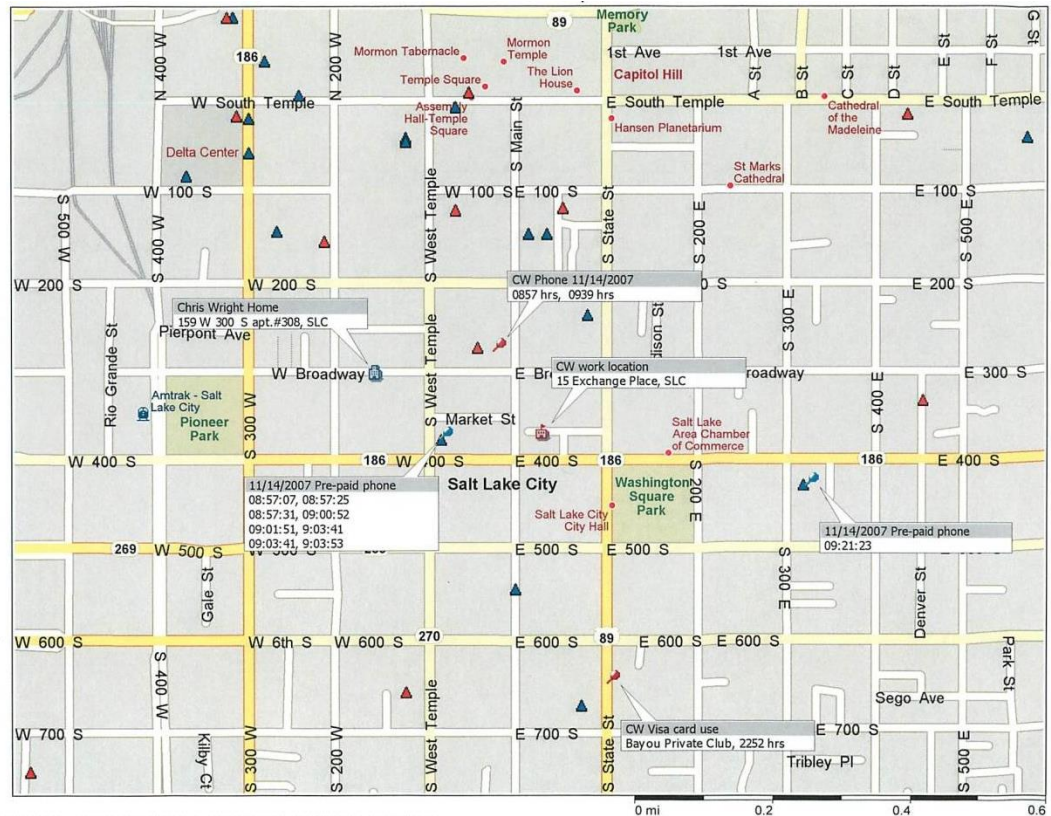


□ Some are actual towers



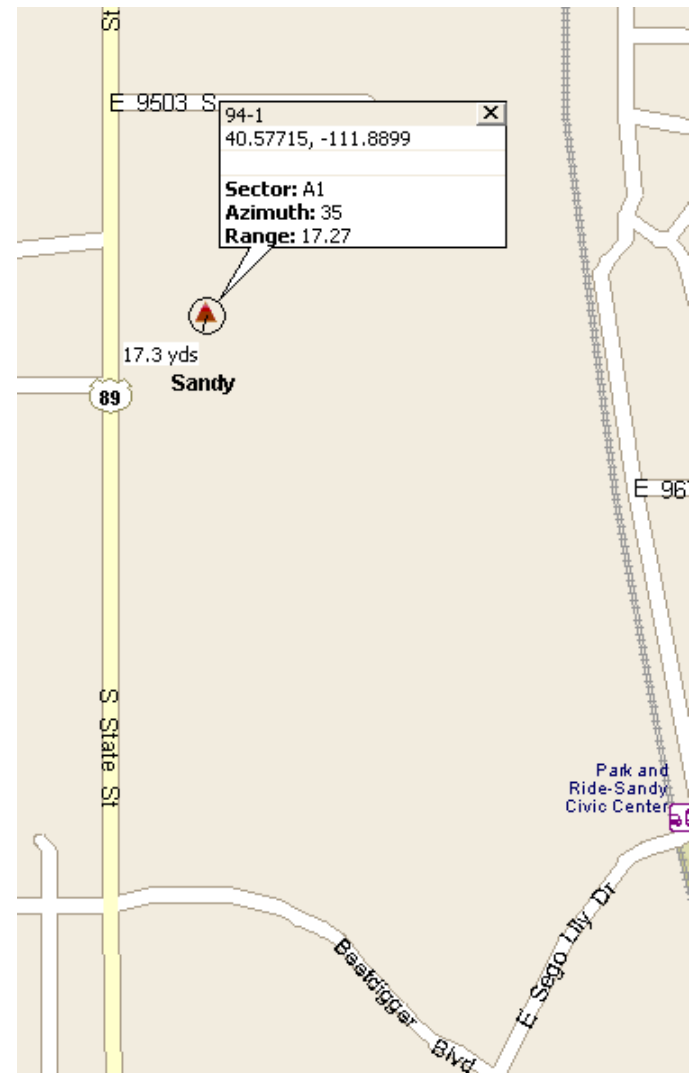
What information do data records provide?

- Contact Lists
- Date and time of calls
- Phone number called
- Phone company
- Location of the cell site
- General location of calls made from personal cell phones
- SMS and MMS
- Photographs
- Videos



Obtaining information for locating

- Cell phones contain numerous clues to locate runaway juveniles, or people in general
 - ▣ Check with parents / friends and determine if they have a cell phone
 - ▣ Send Preservation Request to cellular provider for data associated with phone number
 - ▣ Obtain investigative subpoena or search warrant for information about cellular phone records including cellular sites and sectors of site location
 - ▣ Map where phone is relative to cell site location, strike arc if available from phone info and start looking for known friends or associates by checking call history near the location
 - ▣ Old fashioned investigation from there
 - Interesting when they are located where they should be i.e. school or work



Obtaining Metadata from device

- ❑ Suspect's phone seized during arrest
- ❑ Processed for information, including pictures
- ❑ Latitude and Longitude metadata from pictures on phones provided locations of other grows



How this information was used in the Ken Dolezsar homicide case

- ❑ Cell phone records of people involved in the case were obtained to show their locations.
- ❑ The archived business records also indicated how frequently calls were made to one another.
- ❑ The records also support or refute statements given to police by people involved.
- ❑ Prime example: Victim Ken Dolezsar's cell phone was recovered from the crime scene.
- ❑ The last phone call received on Ken Dolezsar's phone was from an [AT&T pre-paid phone](#) which accessed a cell tower near the crime scene.



Point of purchase and activation of the AT&T pre-paid phone.

- Defendant Chris Wright purchased a [pre-paid phone \(647-3927\)](#) at the AT&T wireless store located at 611 South Main on 11/09/07.
- AT&T employees Oscar Johnson and Angela Smith witnessed the transaction.



Activity of the pre-paid phone 11/14 - 11/15/2007

- 11/14/2007 The pre-paid phone was transmitting to a cell tower at 400 S West Temple until 9:03 am
- 11/14/2007 The pre-paid phone was transmitting to a cell tower at 400 S 400 E at 9:21 am
- 11/15/2007 The pre-paid phone was transmitting to a cell tower at 1700 South 200 West at 5:25 am
- 11/15/2007 The pre-paid phone made it's last transmission at the Southtowne Mall at 6:31 am approximately 30 minutes before Ken Dolezsar's murder

