**Search Warrant**

**Glossary of Technical Terms**

**Automatic Number Identification (ANI)**- A telecommunication feature that automatically determines the originating telephone number, even if a caller ID device or process is activated.

**Azimuth -** the central point of a cell sector given in degrees (off North) which is determined differently for each cell site. The azimuth of a particular cell site depends on the population and usage.

**Call Detail Records (CDR) - a/k/a Toll Records or Tolls.** CDR is a data record from any mobile device which contains information specific to a communications transmission, e.g., text messages and voice calls. These records are raw data, usually in a spreadsheet type format.

**Cell Simulator Electronic Investigative Device**- A device that electronically forces a cellular telephone to register its mobile identification number, and electronic serial number assigned by the manufacturer to the investigative device.

 **AKA**- IMSI Catcher, Trigger Fish, Stingray

**Active Mode**- The device will mimic a cellular tower and force all nearby cellular devices to connect to the cell simulator device.

**Passive Mode**- The device acts as a digital analyzer and receives and analyzes signals being transmitted by cellular devices.

**Cell Site** - **a/k/a Cell Tower.** An array of antennae which perform as wireless transmitters and receivers. The cell site translates incoming communication from the switch and translates it into a language that your mobile handset can understand.

Conversely, the cell site uses the communication from your handset and translates it into a language that the Public Telephone Network can understand.

**Cell Site Sector** - a cell site is divided into sectors to enhance coverage areas. Each sector operates independently of the other sectors. A cell site can have 1 through 6 sectors.

**Code Division Multiple Access (CDMA) -** a type of digital wireless protocol that increases the capacity of the communications system by assigning unique, secure codes for each wireless transmission. CDMA protocol allows numerous transmissions to operate on the same radio frequency.

**Communications Assistance for Law Enforcement Act** - a/k/a CALEA. A US wiretapping law enacted in 1994 which mandates telecommunication carriers to have the equipment, facilities and services which allow law enforcement agencies to conduct court-ordered electronic surveillances.

**E911 Repeat Locator Information**- A system used to automictically provide the location of a cellular phone when the device calls 911.

**Electronic Serial Number (ESN)** - factory-installed unique 32-digit electronic identification number for a mobile device.

**Global Positioning System (GPS) - a/k/a Pings or Precision Location.** A satellite- based system that computes the latitude/longitude coordinates of a device. Most phones with GPS in fact use A-GPS technology. GPS results are provided in meters.

* + - **GPS** is **real-time** and provides latitude and longitude of either the handset or a cell tower.
		- **Historical** **Call Detail Records (CDR) with cell sites -** Identifies only the cell tower latitude and longitude.
		- **Per Call Measurement Data (PCMD)** - Identifies location approximation of one to three towers to provide a latitude and longitude.

**Global System for Mobile Communications (GSM)** - digital cell phone system which allows global travelers to use a cell phone in over 100 countries

**Intercept** - the content of any wire or electronic communications through the use of any electronic, mechanical or other device.

**International Mobile Subscriber Identity (IMSI)** - Used by the network to verify subscriber identity. The subscriber can request changes to the IMSI.

**International Mobile Equipment Identify (IMEI)** - Used by a GSM network to verify if that phone is authorized to access that network. This is a factory-installed unique identifier to that phone.

* ESNs are mainly used with CDMA phones and are comparable to an IMEI.

**Internet Protocol Address (IP Address)** - used to relay data across network boundaries, i.e. it allows information to be transmitted between devices, the web and other Internet-based programs.

* + - Every device must have a unique IP address during an Internet session. The IP address will either have a permanent (static) address or one that is temporary (dynamic) assigned during each dial-up session. IP addresses are written in four sets of numbers separated by periods e.g. 204.171.64.2.

**Internet Service Provider (ISP)** - the company that a user must subscribe to in order to have access to the Internet.

**Mobile Equipment Identifier (MEID) -** globally unique number identifying a physical piece of CDMA mobile station equipment.

**Mobile Identification Number (MIN) or Mobile Station Identifier (MSID) -** Sprint refers to this number as MSID, while other carriers refer to this number as MIN.The number is used by the PCS network to locate and route calls to the handset. Electronic Surveillance uses the MSID to provision surveillances, but the MSID is **NOT** an identifier.

* + - If a subscriber changes their PTN (Personal Telephone Number), but keeps the same handset or vice versa, the MSID will usually stay the same. If the subscriber changes their PTN **and** handset, the MSID will usually change.

**Multimedia Messaging Service (MMS) –** send messages that include content to and from mobile phones. It extends the core SMS capability past the 160 character length.

**Network Event Location System (NELOS)** – Provides location information for cellular devices within the AT&T network.

**Per Call Measurement Data (PCMD)** – A measurement of the distance of the phone from the cell tower site using Round Trip Delay (RTD). Used to help locate the cellular telephone device.

**Pen Register Trap and Trace (PEN) –** electronic device (or process) which captures incoming and outgoing call data.

**Ping** – a pulse of sound in active sonar. See GPS

**Precision Location** - see GPS

**Preservation Requests –** Requests made by LEA or customers to save communication records and stored content until they are able to obtain a legal demand authorizing the release of these records.

**Personal Telephone Number (PTN)**- A unique number assigned to a specific device.

**Range to Tower Location Information (RTT)**- Antiquated language making reference to locating the cellular telephone device by determining distance from the cellular tower. This language is no longer used by most cellular providers.

**Roving Order** - Orders in which the target is an individual name and not a specific device or target number.

**Roving Target** - A subscriber who routinely buys, activates and changes or discards handsets or has multiple numbers or devices with the same or different carriers.

**Telephone/Telecommunications Service Provider (TSP)** – Provide access to telephone and related communication services.

**Short Messaging Service (SMS**)- is the most widely used type of text messaging. With a SMS, you can send a message of up to 160 characters to another device. Longer messages are normally split up into multiple messages (MMS).

**Subscriber -** individual or business who subscribes to a telephone service.

**Subscriber Identity Module (SIM) –** a “smart” card installed in a cell phone containing all subscriber-related data. This facilitates a telephone call from a valid cell phone since the subscriber data is used to complete the call rather than the phones internal serial number.

# Subscriber Information - a/k/a Account or Billing information- Usually includes the name, street address, telephone number, email address or similar contact information provided by the subscriber to the provider to establish and maintain an account.

**Triangulation** - collects data and traces the approximate location of a cell phone. This requires tracking the strength of the signal from a cell site. Once the information is gathered, the coordinates will pinpoint a position (within a certain confidence rate) of a cell phone.

**User** - individual who utilizes a cellular telephone device but is not necessarily the subscriber

**Virtual Private Network (VPN)** - a network in which some parts are connected using the Internet, but the actual data which is being sent is encrypted.

**Voice Over Internet Protocol (VOIP)** – Any technology for transmitting voice, such as ordinary telephone calls, over packet-switched data networks, such as the Internet.

**Wiretap** - **a/k/a Title 3 (T3) or Wire:** captures incoming and outgoing audio and data (SMS/MMS) content.

* Pen Data is normally included in a wiretap order.