TRACKING INTELLIGENCE

U n i v e r s a l   M o n i t o r i n g   S y s t e m
M o d e l   #   H S S D 3
F o r   G S M   N e t w o r k s

Tracking & Monitoring Technologies of GSM Handsets for Lawful Interception

The GSM Universal Monitoring System is a Feature Rich technology, with several monitoring layers that help provide intelligence of suspected criminal and terrorist organization who use mobile phones.

In addition to Voice Interception, more and more Law Enforcement Agencies have been looking on how to gain additional information on their targets during an investigation. The system build consists of a Team Server Laptop, a GSM NAT Stimulator / Masquerade Unit (NAM Unit), a GSM Decryption Processor, and a Field Unit with remote interface capabilities.

The following are highlights of the Universal Monitoring System:

• 6 independent 40 MHz digital tuners for 240 MHz of constant RF monitoring – more than enough for complete simultaneous coverage of forward and reverse, high and low ETSI GSM bands
• 64 ARFCNs of continuous and comprehensive GSM monitoring and storage (512 signaling and traffic timeslots / channels)

• Powerful GSM environment characterization (traditional passive as well as advanced Non-Alerting Techniques)
• Real-time phone number to TMSI correlation
• Automated Pattern of Life data collection for large number of simultaneous targets
• Automated TMSI to Phone Number correlation
• Automated Human Language processing for area of operation – Speaker Activity Detection, Speaker Identification Language, Identification and Gender Identification
• Automated mass CDR generation for all monitored cells
• State of the art targeting – TMSI, IMSI, IMEI, Phone Number, Voice Print Match, Language Match, Gender Match

• Powerful pattern of life, link analysis and situational awareness analysis tools with intuitive, walkup usability GUI
• Post-event forensic search capability
• Interconnect via private IP connection, cloud or radio connection
• Receiver System can be remotely operated
• Extensible additional remote receiving systems can be added and networked allowing a single operator to view an entire city or small country, no additional operators are needed
• Voiceprint targeting across all collected sensor audio and formats (GSM, CDMA, etc.)

For more information, presentations to Authorized Government users and their approved vendors, contact an HSS Support Center via email or on the web at www.trackingintelligence.com

* This is not an offer to sell. For information purposes only. This informative document represents a technology that is be subject to local laws and regulations in the country of use.
For more information, an End User certificate would be required.

HSS DEVELOPMENT

Note: All Specifications are subject to change without notice.

Universal Monitoring System   Model # HSSD3
For GSM Networks

The system can tune up to 64 ARFCN's in a combination of forward (downlink) and reverse (uplink) simultaneously. Each ARFCN has 8 time slots so the max is 512 GSM channels. Depending on the operational scenario, the operator may choose to only tune the forward (sitting at a long distance so too far away to see the handset).

This is a passive system that is tuned: It records raw IQ for all of the tuned ARFCN's (combination of control and traffic channels) and processes the control channel interactions in real time.

Calls are not processed until the call is complete (unlike an active system where the operator does not know all of the call setup parameters like frequency hoping etc. a priori.) The system collects all transactions and processes. The system is also run HLT on all audio, i.e. Speaker ID, Language ID and Gender ID. Everything is databased and searchable. The operator may target based on a voiceprint (making it very effective to find a target who has a stolen or disposable phone with a secret or new unknown SIM card).
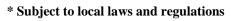
The system associates any and all information collected over time, so if the operator sees an IMSI attach or detach, the system will collect a registration ; The system can also grab the IMEI. For any unknown TMSI, the system would follow a unique procedure (optional) to produce the MS-ISDN (public phone number) of the target.

In addition to GSM Networks, the system can be configured to acquire CDMA2000 and EvDO similar to GSM.

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