P - Catch
Smart Cellular Jamming
for Prisons
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GENERAL DESCRIPTION

Prisoners have mobile phones that they utilize to run gangs, call friends, and intimidate witnesses.

One of the methods to fight the use of illegal phones is to jam the phones by flooding the airwaves with the appropriate technology. In some countries, the telecom law's makes such jamming illegal.

The **ALMENTA P-CATCH – GSM Mobile CATCHER** is a powerful '**smart' jamming** solution specially designed for Prison applications fighting against the use of illegal or unauthorized mobile phones. The **P-CATCH** is based on a 'smart' **GSM IMSI CATCHER**. It is the only IMSI catcher in the market today with capabilities to serve the unique requirements of Prison 'smart' detecting and jamming requirements.

The **ALMENTA P-CATCH** is used mainly to detect the identity of any GSM mobile device that is being used by the prisoners. The system identifies the GSM based device from their IMSI or IMEI number, detects its location and is capable to block its operation.

The Principle of the **P-CATCH** lies on a simulation of a GSM Base Station inspired by stations of a real network. It allows acquisition of all GSM Mobile Stations within the range of the **P-CATCH** BTS. The user can define whether to locate the GSM unit or to block it.

The **ALMENTA P-CATCH** is designed to work in fixed indoor and outdoor installations inside a particular prison building or outside in the yard. The standard unit output power is 10 watts while a high power unit of 50 watts can be ordered. The operator can modify the coverage area by changing the transmitted power up to 10 watts. The coverage area is up to 100 meters.

The **P-CATCH** is a network based unit. The concept of installing some **P-CATCH** units provides the flexibility to cover any required area in the prison compound. While the individual units gather the information in its internal database, all the operations is controlled from a central computer in a command and control room.

The software includes a black and white list, indicating people who will be able to continue to use their phones (the prison guards, etc…) and prisoners that will be blocked / jammed.

The system has a 'smart' alarm feature in order to alert when a phone of any prisoner is turned on.

The **P-CATCH** software also permits locating the prisoners' phone. By using a silent call the system activates and isolates the phone and with the included GSM locator unit the guards can locate the particular jail cell where the phone is hidden.

The **P-CATCH** performs some manipulation functions on the target phones, jams, blocks, silent calls, makes a call or sends SMS from the control center to the target phone.

The GUI (user interface) is designed to change the various modes, depending on the user's requirement and technical background. The two modes offered are:

- Automatic mode with fully automatic operation
- A manual mode where the user is able to configure all parameters

The **ALMENTA P-CATCH** is a Dual channel dual band unit that supports the ability to capture phones from two GSM operators simultaneously. The system is working in the 900 MHz and 1800 MHz bands. It employs a unique technology whereby it is able to capture the mobile handset from a long distance, but with very low power.
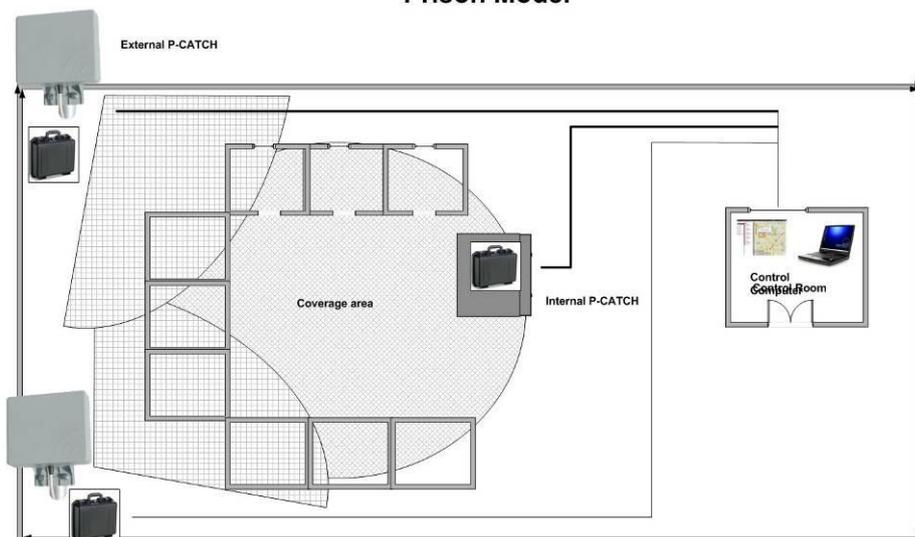
The **P-CATCH** is a compact, lightweight and easily installed device. An external power input is available to connect to 90-230VAC and 12 VDC.

CONCEPT

The system can be used in a fixed installation and also as a tactical mobile unit. The fixed installation will be in areas that will cover the places where the prisoners may use the phones: inside the cells, near the windows or in the yards. In the fixed installation, all detection and blocking control will be performed from a command and control center.

The mobile installation will be used periodically when the scenario calls for a tactical solution. The team may scan the required zone, mark the detected phone and block them. After blocking, the prisoner will receive a message that their phone is not registered. The detection/blocking operation must repeat itself every few days.

Prison Model

OPERATION

The system performs the following functions:
1. BTS scan
2. IMSI/IMEI extraction
3. Silent activation
4. Blocking/jamming

BTS scan:
To improve the performance of the equipments processing time, a complex cloning algorithm enables to choose the best cloned BTS. The **ALMENTA P-CATCH** grabs the information that is broadcast on the GSM network: MCC, MNC, LAC, Cell Identification, ARFCN, POWER level, BA neighbored cell list and more.
The Cell list information is presented to the operator but it is mainly used to automatically select (or can be modified manually) the cloned BTS channel.

IMSI/IMEI extraction:
Then the **ALMENTA P-CATCH** emulates a BTS that forces the GSM mobile devices to introduce themselves. The system captures the IMSI/IMEI that are present for verification as well as some other useful information about the mobile unit.
Along with the IMSI information, the also system presents the reception level which indicates the distance of the element from the **ALMENTA P-CATCH** unit.

Silent activation:
The **ALMENTA P-CATCH** can also be used to detect the location of the device. Through the use of silent activation a target can be for located by working together with the GSM Direction Finder or GSM Homing device.

Blocking Jamming:
After identifying the device the operator of the **P-CATCH** can decide to jam/block the target device from operating. The operation of the mobile device will be disabled until its power is reset (battery taken off the equipment).

SPECIFICATIONS:

No of Channels	2
Freq bands	Dual band - GSM 900Mhz and DCS 1800Mhz Optional: 850 Mhz/1900Mhz
Housing	Pelican case model Optional: Rack mount model Optional : Outdoor housing
Control	Internal mini computer + VPN Controlled by remote Central Computer
Communication	Ethernet RJ45 and Wifi LAN/ VPN connectivity
Power	220 VAC and 12 VDC
Power	Up to 10 Watts
Optional high power	50 watts
Antennas	Internal Directional antennas Or External Omni directional or external directional antennas
Operational distance	Up to 100 meters
Operational temperature	0°C - 50°C
Dimension	11.81" x 8.87" x 5.18" (30 x 22.5 x 13.2 cm)
Scanning BTS information	√
IMSI /IMEI display	√
Locate target – silent activation	√
Block target phone	√
White / black list support	√
Target database	√
Make internal call /SMS	√
SQL database	√
Import/export database	√
Multi BTS support - central control	√
Maintain operators LOGIN password	√