

MOBILE CRUSHER

¹Varsha Ahire, ²Prof. Garima Pathak,

¹Student, ²Assist. Processor,

^{1,2}Department of MCA, Parul Institute of Engineering and Technology,

^{1,2}Parul University, Waghodia, India

Email – ¹imvarsha001@gmail.com, ²garima.pathak42076@paruluniversity.ac.in,

Abstract: A device that transfers signals on the same frequency at which the system controls the crushing success when the cellular phones in the area where the crusher is located are disabled is called a mobile crusher. Military first developed and used Communication crushing devices, where tactical commanders use RF communications to exercise control of their forces, an enemy has interest in those communications. This interest comes from the fundamental area of opposing the successful transport of the information from the sender to the receiver. Today the mobile jammer devices are becoming standard products alternatively electronic exchange devices, since with the inflating number of the cellular phones users the need to disable cellular phones in particular places where the ringing of cell phones would be disruptive has increased. Worship places, University lecture rooms, Libraries, Concert halls, Meeting rooms, and other places are included where silence is cherished.

Keywords: Crusher, Mobile, Signal, Transmit, Frequency, Mobile Crusher.

1. INTRODUCTION:

An instrument used to hamper mobile phones from receiving signals from base stations is known as mobile phone crusher. It is a device that transfer signal on the same frequency at which the GSM system manages, the crushing success when the cellular phones in the area where crusher is located are disabled. To interrupt communications by criminals and terrorists mobile crusher was originally developed for law enforcement and the military. Some were also designed to prevent the use of certain remotely detonated explosives.

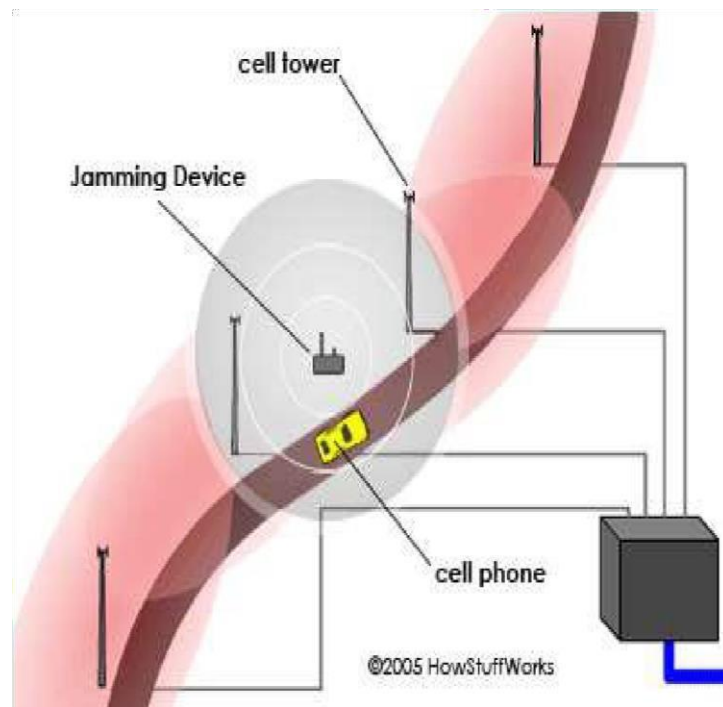
1.1 History of Mobile Crusher

After the first cell phones emerged, mobile phone scramblers began to be developed very quickly. Even the most progressive civilians who follow the novelties of electronics do not always know about all the possibilities of these devices. Modern cellular devices are used not only in daily life, but also not for peaceful purposes. Industrial surveillance, blackmail - not all illegal activities, it is just a small part of the actions in which cellular phones are involved. In the 21st century humankind was faced with the problem of excessive "flooding" of mobile devices. Owners of concerts and conference halls, theaters, etc. are forced to use the phone jammers in those places where it is required to evidence complete silence.

It will be informative to perceive some information about the fact of history of mobile crusher. An interesting assumption exists, that the ruling king of Jordan significantly influenced on the creation of mobile blockers. He became one of the first people who decided to ask the major developers to try to design a mobile signal breaker. The thing is that the king Hussein was continuously disturbed by provoking mobile calls and long talks of his wards, which were heard even during the prayers in the palace. As a result, he instructed a major US corporation to develop a blocker for cell phones that could block the signal. A necessary condition was that the radius of the device should cover the full area of the palace.

1.2 How Mobile crusher works?

A crushing device communicate same radio frequencies of greater power as the cell phone, interrupts the communication between the phone and the cell-phone base station in the tower. It's a called a denial-of service attack.



[Figure 1: Working of Mobile Crusher]

This causes interference with communication of mobile phones and towers to provide the phones unusable. On most mobile phones, the network would be out of range. So Jammers work by either interrupting phone to tower frequencies or tower to phone frequencies.

Types of Mobile Crusher

- 1) Remote Control Mobile Crusher
- 2) Adjustable Mobile Crusher
- 3) School & Prison Mobile Crusher
- 4) Explosion - Proof Mobile Crusher
- 5) Police & Military Mobile Crusher

1) Remote Control Mobile Crusher

The high power military crusher is designed with the remote control so that when one have the need do not come near to manage the high power cell phone signal crusher one can just use the remote control. Apart from as the high power cell phone jammer EIRP up to 50 W/ per band, so that according to the signal strength in the given area, the crushing distance of this remote managed crusher is up to 60 meters at most.

2) Adjustable Mobile Crusher

The crusher is capable of efficient blocking GSM/CDMA/DCS/PCS/3G/WIFI adjustably at range of 1-25m depending on the signal given area. It can continuously work for 24 hours as it is made of thermal aluminum. The crusher comes with an in-built directional antenna to ignore interference.

3) School & Prison Mobile Crusher

These crushers are capable of ending cell phone communications and may seem technically complex, one may be surprised by their simplicity, which requires nothing more than the push of a button. For those teachers that are troubled by students distracting others by using their phones during class, a classroom crusher may be exactly what one needs? With these devices, one can stop the conversations instantly; prevent students from cheating on exams, and stop class disturbance caused by cell phone ringing.

4) Explosion - Proof Mobile Crusher

Explosion-proof mobile phone signal crushers are mostly used in gas stations, oil depots, liquefied gas, chemical plants and other inflammable and explosive places. Imported devices, soft-start circuit design to create the ignition switch to avoid the phenomenon of mechanical work and good stability.

5) Police & Military Mobile Crusher

This transmits high power radio signals to cut-off communication between cell phone and cellular base-station. It does not interfere with any communication other than cellular within the defined regulated zone. Upon activity Phone Crusher, all idle phones will indicate "NO SERVICE". Incoming calls are blocked as when the cellular hand phone is OFF. When Phone Crusher, is turns off, all cell hand phones will automatically re-establish communications and provide full service.

2. APPLICATION AREA:

- 1) To support complete silence in library and lecture hall.
- 2) To avoid cheating in examination hall.
- 3) To avoid distraction in class room.
- 4) For assigning security in business conference, board of directors rooms, seminars, etc.,
- 5) For providing calm and pleasant atmosphere in Hospitals.
- 6) Church/Mosques/Temple/Religious establishment.

3. TECHNIQUES:

Mobile Crusher has five types of techniques:

Type "A" Device: CRUSHERS

- 1) Type "B" Device: INTELLIGENT CELLULAR DISABLERS
- 2) Type "C" Device: INTELLIGENT BEACON DISABLERS
- 3) Type "D" Device: DIRECT RECEIVE & TRANSMIT CRUSHERS
- 4) Type "E" Device: EMI SHIELD- PASSIVE CRUSHERS.

1) Type "A" Device: CRUSHERS

This kind of device comes provided with many individualistic oscillators, transmitting „jamming signals“ capable of blocking frequencies used by cellular systems for call formation.

2) Type "B" Device: INTELLIGENT CELLULAR DISABLERS

Type-"B" devices don't communicate an interfering signal on the control channels. The device, when detected in a selected "quite" area, functions as a "detector".

When the device discovers the existence of a mobile phone in the "silent" room; a prevention of authorization of call formation is done by the software at the base station.

3) Type "C" Device: INTELLIGENT BEACON DISABLERS

Unlike crushers, Type C devices do not communicate an interfering signal on the control channels. The device, once detected in a designated "quiet" area, functions as a "beacon" and some compatible terminal is ordered to disable its operation, while within the coverage area of beacon.

4) Type "D" Device: DIRECT RECEIVE & TRANSMIT CRUSHERS

This crusher behaves like a small, independent and transportable base station, which can directly interact with the operation of the local mobile phone. The jammer is be in the majority in deriving mode and will intelligently choose to interact and block the cell Phone directly if it is within close proximity of the crusher.

5) Type "E" Device: EMI SHIELD- PASSIVE CRUSHERS

This technique is using EMI suppression techniques to make a space into what is called Faraday cage. However labor thorough to establish, the Faraday cage fundamentally Blocks or greatly attenuates, virtually all electromagnetic radiation from entering or leaving the cage - or in this case a target room.

4. CURRENT R&D WORKS IN THE FIELD

This is one of the current & most popular GSM crushers. It can block a various frequencies including all cell phone signals, GPS, WIFI, Lo-jack, etc.



[Figure 2: GSM Crusher]

This product has a separate jammer band switch that allows one to select the frequency band one wants to block. Due to its compact size, easy to carry and large crusher range, this product is much favored by the customers.

5. CONCLUSION:

The aim of the project which was to build a simple-mobile-phone- crusher is achieved. Crushing- technique is potentially very-useful to disable cell-phone in a particular-range, but it should-not affect the other base station transmission-systems. Mobile- crusher can be used in any-location, but, practically, in places where a mobile-phone-use would-be, on the whole, harmful, disruptive, and even dangerous, like in prisons. Therefore, deeper-research is needed to produce better- crushing-devices, so as to not affect the other base station transmission systems.

REFERENCES:

1. <https://www.slideshare.net/komalambedika/mobile-jammer-43418528>
2. <http://studymafia.org/wp-content/uploads/2015/05/CSE-Mobile-jammer-Report.pdf>
3. <https://www.perfectjammer.com/handheld-cell-phone-jammers-2g-3g-gps.html>
4. <https://www.slideshare.net/mehul53/mobile-jammer-report>
5. "Handshaking Protocols and Jamming Mechanisms for Blind Rendezvous in a Dynamic Spectrum Access Environment" by Aaron A Gross.