

The PROS & CONS of Cell Phone Detection Methods

Contraband cell phones are one of the fastest-growing problems faced by corrections officers and prison officials. Prison systems in California saw annual cell phone confiscations increase from 1,400 to over 15,000 from 2007 to 2009. A basic cell phone that sells for \$15 to the general public can go for 100 times that amount on the inside, creating a massive incentive for trafficking cellular devices. Smartphones pose an even bigger threat, allowing inmates to take photographs, create video and access Internet resources such as online maps, social networking and phone directories.

Inmates use these unmonitored phones to threaten lawmakers, prosecutors and prison staff, intimidate victims and witnesses, run their criminal enterprises and communicate with associates both inside and outside the penal system. In 2008, Texas death row inmate Richard Tabler called state senator John Whitmire from a contraband phone and told him he knew personal information about the senator's family. In 2005, Tennessee inmate George Hyatte used a cell phone concealed in a jar of peanut butter to orchestrate an escape attempted that resulted in the murder of corrections officer Wayne Morgan.

The Challenges of Dealing with Contraband Phones

As cell phones become smaller in response to consumer demand, they also become easier to hide and smuggle into the prison system. Prison officials have found cell phones concealed in bars of soap, shoes and even footballs. Phones also make their way into prisons thanks to visitors and staff. Prison employees have been charged with selling phones to their inmates. A California correctional officer resigned in 2008 after he admitted pocketing more than \$100,000 selling contraband cell phones to inmates.

Once a cell phone is on the inside, preventing their use is very difficult. The Federal Communications Commission bars the use of cell-phone jamming equipment because it can interfere with 911 calls and disrupt public safety radio communications. Cellular dead zones in a prison would also make it difficult for corrections officers to communicate during emergencies.

The only solution is keeping contraband



phones out of the hands of inmates. Prison officials must intercept phones making their way into the prison and confiscate any phones that have managed to make it through security. Let's look at some of the methods penal systems are using to tackle this problem, and the pros and cons of each.

Cell-Phone Sniffing Dogs

Cellular phones have a distinctive scent thanks to certain materials commonly used in their construction. These scents can be picked up by specially-trained search dogs, similar to dogs trained in sniffing out narcotics. Some inmates store their contraband phones and drugs in the same location, so occasionally dogs will find both items together. While dogs are very effective at finding cell phones, they have several drawbacks.

News travels fast in prison, and there's really no way to hide the presence of a search dog. As soon as word gets out, prisoners squirrel away their devices in the hopes of keeping them secret. The canines require lengthy and expensive training. The Florida Department of Corrections paid \$6,500 each to train two cell-phone sniffing dogs in 2009. The process can take up to nine weeks, and not all dogs will pass the training. The dogs also require a handler, adding to personnel costs.



Managed Access Systems

A managed access system consists of a network of localized cell sites placed around the prison grounds. Since cell phones prefer the compatible site with the strongest signal, phones within the prison will automatically lock onto the signal originating from inside the prison instead of the nearest cellular tower. Authorized phones are whitelisted and passed off to the cellular carrier, while unauthorized devices are rejected or redirected. These systems are still in an experimental phase, and there are several downsides that make them unsuitable as the only method of countering the problem.

Every part of the prison must have adequate coverage. If an inmate with a cell phone discovers an out-of-the-way corner where the signal from the system is weak or nonexistent, their phone will connect to



the carrier's tower. Improperly placed transmitters can "leak" outside the prison, interfering with legitimate cell phones on the outside. If the system goes down or one of the sites malfunctions, all of the cell phones in the area will revert to working off the carrier's tower. Even if the system is functional, if an inmate has access to a whitelisted phone they can still make calls.

Metal Detectors and X-Ray Systems

The major advantage of metal detectors and x-ray systems is they are already installed at most correctional facilities. While these devices excel at finding metal objects such as knives, they are not as effective at finding cell phones.



Many cellular devices are made almost entirely out of plastic and may not have enough metal components to trip metal detectors. X-ray operators might accidentally overlook a cell phone concealed inside another electronic device. For the best results, correctional facilities should turn to devices made specifically to detect cellular phones.

BVS Cell Phone Detection Devices

Berkeley Varitronics Systems (BVS) offers a full line of cellular phone detection equipment for keeping visitors and employees from smuggling phones in, and finding devices already inside the prison. BVS devices are designed and manufactured in-house in the USA, and can detect cellular devices using both domestic and global frequencies. They are low-cost compared to other detection methods, and do not require extensive training to use. The SentryHound, Mastiff and Manta Ray can detect phones ON or OFF, even with the battery removed.

The **SentryHound™** is a stationary walk-through system, similar to a standard metal detector. It can differentiate between phones and non-target items such as keys, belt buckles and watches. LED lights show where phone is located on the subject, eliminating guesswork and reducing search time.

The **WatchHound™** acts as a silent witness to anyone entering the

facility with a cell phone that's powered ON. Officials have the option of disguising the unit as a thermostat, and can network multiple WatchHounds to set up a wireless-free perimeter. The WatchHound keeps track of each reading, and the logs can be reviewed via optional PC software. The software also gives time stamps for each detection event.

The **Mastiff™** is a stationary chair that can quickly scan seated visitors and inmates. The Mastiff can sniff out devices concealed inside body cavities, reducing the need for time-intensive strip searches and expense of body x-rays.

The **Manta Ray™** is a portable close-proximity handheld unit, useful for scanning people in areas where permanently installed detection devices are impractical. It can also be used to scan personal belongings and packages, and locate cellular devices hidden under mattresses and inside briefcases, backpacks and purses.

The **PocketHound™** alerts the user to the presence of cell phones that are powered on or in use. Its small size and vibration alert make it ideal for the stealth approach. An employee can walk the prison with the PocketHound concealed in their clothing and detect active cell phones within 50 feet, without anyone realizing a cell phone detector is in use.

The **WolfHound-PRO™** is the ultimate long-range cell phone detector coupled with a direction finding antenna for pinpointing cell phones. This portable unit can find powered-ON cell phones indoors in a 150 foot radius. Outdoors it has a line-of-sight detection range of up to a mile. It can differentiate phones by frequency, and point the user in the direction of the detected device.



Penal Systems Trust BVS

Since 2010, Berkeley Varitronics Systems has experienced a 30% growth year over year in sales to correctional institutions. Local, state and federal correctional facilities across the United States and around the world have purchased more than 2,000 BVS cell phone detection systems. Contact BVS at +1 732-548-3737 or info@bvsystems.com for more information.

Resource Links:

www.newyorker.com/talk/2009/10/19/091019ta_talk_frazier
www.dc.state.fl.us/secretary/press/2009/cell-phonesniffingdog2.html
www.nytimes.com/2011/01/03/us/03prisoners.html?pagewanted=all
www.takepart.com/2012/05/15/dogs-help-az-prisons-crack-down-cell-phone-use
www.cleveland.com/metro/index.ssf/2013/08/ohio_prison_system_sees_spike.html
www.foxnews.com/printer_friendly_wires/2009Apr14/0,4675,CaliforniaPrisonsCellPhones,00.html
www.fbi.gov/stats-services/publications/law-enforcement-bulletin/july-2010/cell-phones-as-prison-contraband
www.kget.com/news/local/story/Dogs-take-bite-out-of-big-cell-phone-business-in/Xkp31wxbj0WNwZagStQcxQ.csp
www.correctionsone.com/corrections/articles/1841618-Texas-prisons-locked-down-after-death-row-inmate-found-with-phone/

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