Controlling Contraband Cell Phones

Interception and Detection in Prisons, Correctional and Secured Facilities

By Scott Schober

Wireless Detection and Cybersecurity Expert
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Contraband smart phones present challenges to wardens

Contraband has been around as long as there have been prisoners, but contraband cell phones are a relatively new phenomenon. Cell phones started out as bulky devices the size of a brick, but market forces and evolving technology have made them progressively smaller and smarter. Cell phones first started to make their way into prison systems in the 1990s, but the number of contraband phones exploded in the 2000s. Now many correctional systems seize thousands of phones per year.

Even basic phones offer unmonitored communication with associates on the outside. Smartphones also allow inmates to access the Internet and social media platforms.

In 2014 a routine sweep at a prison in New Mexico uncovered a smart watch.
Some inmates use contraband phones to talk with their families and avoid charges from the pay phones installed in correctional facilities. Other users are not so benign. They also use contraband phones to pass orders to accomplices inside or outside the prison. Inmates have used cell phones to orchestrate escape attempts, run identity theft and drug rings, intimidate witnesses, run scams, extort money, coordinate riots and protests and take out contract hits on members of the public and other inmates.

Click on this link to watch the actual video: http://krqe.com/2014/10/24/watch-phone-found-in-prison-lockdown-search
Think twice before "Jamming"

Can’t prisons just “Jam” cell phone transmissions?
No, it’s illegal.

Jamming causes more problems than it solves. Under current law, the use of technologies that block (or “jam”) mobile calls are illegal in the United States. Cell phone jamming doesn’t just block inmate calls -- it can also interfere with mobile 9-1-1 emergency calls and public safety communication. Plus if “jammers” were legalized for any purpose, the department of Homeland Security, would be worried that if put in the hands of terrorists, they could “jam” an area after an attack. It’s a very complicated issue. Therefore, we don’t see “jamming signals” as an alternative any time in the near future.

Plus a single “jamming” act can generate a $100,000 fine.
According to the FCC, the unlawful use of a jammer is a criminal offense, and can result in various sanctions, including (ironically), a jail sentence. More specifically, the unlawful marketing, sale or operation of cell phone, GPS, or other signal jammers in the U.S. can result in significant fines. Up to $16,000 for each violation or each day of a continuing violation, and as high as $112,500 for any single act. So if anyone tries to sell you a jamming device - run!

Possibly 10% of prisoners have cell phones

The California Department of Corrections and Rehabilitation found 12,151 phones in 2013. A writer for The Atlantic estimated that number represented 10% of the phones in the system, meaning almost all of the state’s 135,600 inmates had a phone. Sources from other prisons estimate higher catch rates, but the number of phones getting into inmates’ hands is far too high.
In today’s “instant news internet,” as soon as a story breaks, it is everywhere, in spite of excellent security records. The more “sensational” the story that faster it travels, damaging public perception and internal effectiveness. Here are just a few examples:

**How Gangs Took Over Prisons**

In 2015 approximately 7,600 cell phones were seized in Georgia prisons, and the director the Office of Investigations and Compliance estimated they were only able to catch half of the phones. Link to article in The Atlantic:

http://www.theatlantic.com/magazine/archive/2014/10/how-gangs-took-over-prisons/379330/

**Half of all contraband cell phones make it into prisons**

The article later explains an incident of how contraband cell phones entered a prison by throwing a cell phone over the wall inside a dead cat. Link to CBS 46 story:


**A sex offender in an Oklahoma prison**

Man was caught possessing a cell phone eight times over 21 months starting in early 2012. Read entire story, click on link:

http://newsok.com/article/3885597?embeddedLinkType=article

**Cell phones in the wrong hands...**

Cell phones in the hands of convicted criminals pose a danger to staff, other inmates and the public outside the prison. Unfortunately, far too many of them escape detection. However, in an Indiana prison, a representative reported a single inmate was caught with three phones in under two weeks.

Combating contraband cell phones in correctional facilities effectively takes a comprehensive effort with committed, trained staff and the right equipment.
Blocking Unauthorized Calls?

Cell Phone Detection vs. Managed Access

Managed Access Systems (MAS) route calls through a system that mimics a cell phone tower. Calls from authorized devices are allowed through while unauthorized devices are blocked. Even at facilities using a Managed Access Systems, preventing inmates access to contraband phones is important for the following reasons:

- Managed Access Systems effectiveness depends on coverage in all areas of the facility, while FCC regulations prohibit the Managed Access Systems signal from reaching outside the prison walls. The possibility of undiscovered holes in the Managed Access Systems coverage means inmate could still make calls if they find a spot that allows an unauthorized phone to connect to outside towers.

- It is possible for inmates to get their hands on authorized devices through corruption or manipulating prison staff.

- Cellular technology is constantly evolving. New wireless technology could potentially outpace MAS equipment.

- Several North American wireless carriers advocate using both managed access and detection.

Preventing Contraband Cell Phone Use in Prisons
Report published by Global Tel•Link Corporation before the National Telecommunications and Information Administration.
To read report click on link:

There are few hard statistics on how phones are smuggled in, but here are several broad categories:

1. Employees
   Inmates and prisoner advocate organizations claim most cell phones are brought into correctional facilities by staff or contractors. Unfortunately, corruption is a legitimate problem. In 2009, 300 California prison employees were suspected of trafficking cell phones to prisoners.

   For some, the motive is financial. With inmates or their associates paying up to $1,500 per cell phone, some staff can’t resist taking money on the side. In 2011 two employees at a single California prison boasted they made over $100,000 smuggling contraband. To read article-click link: http://calcoastnews.com/2011/07/cmc-guard-accused-of-smuggling-cell-phones/

   For staff involved in personal relationships with inmates, a cell phone is a communication method to keep in touch while they’re not at work.

2. Deliveries
   Having cell phones delivered requires an inmate coordinate with at least one accomplice outside the facility, a task made easier if the inmate already has access to a phone. The accomplice can stash phones inside the delivery containers or on the delivery vehicles.

   Cell phones have been found in everyday objects pictured here. A cell phone hidden inside the plastic peanut butter jar makes it difficult for dogs to detect. Cell phones have also arrive at correctional facilities through the mail concealed inside everyday objects. Instead of the old file in the cake, an inmate might get a phone inside a hollowed-out loaf of bread.
3. Visitors

The vast majority of visitors do not cause problems, and studies have shown that inmates who stay in contact with family on the outside are less likely to reoffend and have better post-release outcomes.

Some visitors smuggle in contraband, including cell phones. The volume of visitor traffic makes it impractical for most facilities to thoroughly search everyone. Staff must rely on observation, intuition and involuntary guilt cues to determine who to search.

546 visitors arrested

There is no doubt that visitors are a source of contraband phones. In September 2014, a California Department of Corrections representative told the L.A. Times they had arrested 546 visitors for attempting to bring in contraband phones and drugs.

Attorney arrested

Legal representatives are not above suspicion either. A Florida attorney was arrested in March 2015 for smuggling a smartphone into the Seminole County Jail for his client. To read complete news article, click on link: (http://www.wftv.com/news/news/local/attorney-accused-smuggling-cellphone-jail-client/nkYNQ/)
4. Thrown Over Fences

In correctional facilities where total 24-hour surveillance is not possible some contraband phones literally go over the prison walls. When the inmate is allowed outside they retrieve the contraband and it enters the prison economy.

For example, outsiders have been known to cut open a basketball, fill it with contraband, stuff with filler, re-stitch the basketball so it looks normal and throw it over the wall. It fits right in with the athletic equipment. The prisoner knows when to expect it, so he just walks out into the yard and picks it up.

5. Drones drop phones over walls.

This is a new and growing threat whereby drones with “hooks” can literally fly low on the outside of the prison wall unseen, go up and over quickly totally undetected, then fly low to the ground, drop the contraband package, and get back out in a matter of minutes. The civilian drone industry in the US has grown from almost nothing in 2013 to over $1 billion projected in 2016.
Creativity abounds once a cell phone is smuggled into a facility...

Prisoners have stashed phones behind ceilings and walls, inside hollowed-out books and legal briefs, toiletries, loose clothing, electronics and food containers that appear sealed, under and inside mattresses and attached to bed frames. They often hide phones outside their cell in common areas such as the kitchen, yard, library and work areas. For example, an inmate going on work detail might leave their phone in the prison shower during the day and retrieve it when they return. Shower shoes with the soles split open make effective cell phone vehicles.

Prisoners also transport phones inside commissary items, in their clothing or wrapped in plastic and inserted in their body cavities. Overweight inmates can tuck phones under their breasts or folds of body fat. Inmate kitchen workers and janitors often serve as couriers, since they have relatively free movement and easy access to areas with many hiding spots.

Believe It or Not??

Occasionally an inmate with a contraband phone will slip up and give themselves away. A prisoner in a Shri Lanka prison hiding a phone in his rectum was caught when he received a call and the phone rang.
Contraband travels together
Chances are if you find a contraband cell phone, you will also find additional contraband. Sometimes a “ferrous” detected knife, often drugs, cigarettes and cash. So, since the cell phone is easier to “detect” while drugs, cigarettes and cash are not, if you find the contraband cell phone in that container of Ajax, chances are you will find additional contraband as well.

Believe It or Not??
Charles Manson makes call from prison

Cell phones have made their way into the hands of closely-guarded prisoners. Murderous cult leader Charles Manson has been caught with cell phones twice since 2008, and a follower was arrested for trying to smuggle a cell phone to him in 2013.

Did you know?
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There are several methods of uncovering hidden phones, but some are more effective than others. The most effective detection strategy uses a mix of methods that complement each other. Let’s look at the advantages and disadvantages of methods used to find contraband cell phones that have made it into the facility.
Detection Methods Defined

**Cell Phone Sniffing Dogs**

Dogs are a valuable tool for finding many types of contraband. They can quickly sniff out phones, batteries and accessories in both cells and common areas with a high degree of accuracy. The exact scent they key in on is not known, so it is possible a dog may miss phones that do not contain the signature smell.

The major downside comes from the fact that dogs are living animals. Dogs can’t be everywhere at once. Because of the expenses involved multiple facilities usually share the same dog, and word of their presence spreads fast. They require expensive specialized training and ongoing upkeep costs. There is also the possibility the dog may develop health problems that render them unfit for service.

**The Cell Phone needs to be ON, but not in use with the Radio Frequency Detectors (RFD)**

**Radio Frequency Detectors** pick up the radio waves generated when a cell phone communicates with the tower. When a phone is on but not actively on a call or sending/receiving data it “checks in” with the tower every few seconds then shuts down the antenna to conserve power. When on a call or transmitting data the tower communication is sustained until the call ends or the transmission stops. When the phone is off or in flight mode, no transmission occurs.

Radio Frequency Detectors are available in both stationary and portable format. Stationary units are permanently installed and ideal for monitoring common areas such as showers, lunchrooms and outdoor yards for cell phone activity. Portable units vary from small, concealable devices that can be hidden under clothing on foot patrols to powerful handheld devices that can detect a signal from over 100 yards and triangulate a phone’s exact location.

**The Cell Phone does NOT need to be on with Ferromagnetic Detectors (FMD)**

**Ferromagnetic Detectors** pick up the electromagnetic field generated by cell phones and other electronic devices. They are similar to handheld metal detectors, but are not triggered by non-target metals like jewelry, medical implants and clothing studs.

- The phone does not need to be on
- It can pick up phones concealed behind walls
- Can detect cell phones under clothing and in small containers.
- Able to detect phones hidden inside body cavities

This makes the Ferromagnetic Detectors ideal for use in scanning visitors and their belongings, also perfect for scanning the mail and any small-box deliveries. Perfect for scanning purses and briefcases without opening them.

The only downside is their range is extremely short, usually less than a foot. They must be in close proximity to the object being scanned.
## Detection Method Comparison

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<th>Type</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<td><strong>Cell Sniffing Dogs</strong></td>
<td>Phone can be on or off. Can find phone parts, chargers and accessories. Some dogs can alert on multiple types of contraband, like drugs and cigarettes.</td>
<td>Require handlers and expensive training. Cost of upkeep: Food, vet bills, etc. Loss of investment if the dog becomes unfit for service. Search causes disruption and is obvious to other inmates. Not COVERT...Phones are immediately flushed down toilets.</td>
</tr>
<tr>
<td><strong>BUDGET:</strong> Approx. $10,000 ongoing expenses</td>
<td></td>
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<tr>
<td><strong>Radio Frequency Detectors</strong></td>
<td>Long range. Can triangulate phone position. Some units are concealable under clothing. Installed systems can monitor specific areas 24-7.</td>
<td>Phone must be ON and not in airplane mode. Cannot find (smell) other contraband such as drugs or cigarettes.</td>
</tr>
<tr>
<td><strong>BUDGET:</strong> $500-$2,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ferromagnetic Detectors</strong></td>
<td><strong>Phone can be on or off.</strong> Does not alert on non-target metals. Can uncover phones inside containers and behind walls. Inexpensive. Detects cell phones, metal ferrous knives, shanks and guns</td>
<td>Very short range. Cannot find other contraband.</td>
</tr>
<tr>
<td><strong>BUDGET:</strong> $600-$6,500</td>
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It’s better to intercept phones coming in before they can cause any harm. Once contraband phones are on the inside, there is an almost unlimited number of places for inmates to hide them compared to the relatively few routes of entry. In either case it’s important for staff to be observant and alert for anything that breaks routine or seems out of the ordinary.

#1

**Scanning Staff, Visitors and Contractors**

Corrupt staff members who smuggle in phones typically conceal them under their clothes or inside bags or lunch containers. A few have concealed them inside body orifices. They rely on recognition or authority to avoid being subjected to search. Sometimes multiple staff members make up a smuggling ring, so it’s possible the person doing the inspection is part of the problem. Legal representatives and contractors can also bring phones in. They conceal phones on their person as well as on vehicles and inside cargo.

Visitors may conceal phones anywhere on their person or in their belongings. They have been caught bringing in contraband phones concealed in their hair, hidden under clothing, folds of fat, wigs and belt buckles, inside bags, prosthetic limbs and the soles of shoes, inserted into body orifices and even concealed on children.

“Arresting 20-30 visitors and staff per month”

_The problem is widespread and many inmates and prisoner advocates claim the majority of contraband phones are smuggled in by prison workers. Staff and workers certainly have more opportunity than regular visitors. In September 2015 a Georgia prison representative told a local news station they were arresting between 20 and 30 visitors and staff per month for smuggling contraband._

It hasn’t quite worked out that way. More than 100 Aramark employees have been fired for alleged misconduct that included sneaking cell phones into prisons, distributing drugs, and having sexual contact with inmates. On Sept. 23 an Aramark worker at an Ionia prison was fired on suspicion that he’d tried to pay one prisoner to beat up another. The next day a worker at a maximum-security prison, also in Ionia, lost her job after corrections officers found a 65-page love letter she wrote to an inmate with whom she was allegedly having an affair.

“Food service vendors fired”

_In October 2015, Bloomberg Business reported over 100 food-service workers for a food vendor for the Michigan correctional system had been fired over the previous 10 months for having personal relationships with inmates and smuggling in cell phones and other contraband._

Monitor the Mail Room!

Inmates enlist accomplices on the outside to mail in contraband phones disguised inside items of all kinds. Unlike drugs, cell phones cannot be concealed under a stamp or inside greeting cards, but just about anything larger could be used to smuggle in a phone or smartwatch. Contraband phones arrive hidden inside everything from apparel to toiletries. Small food packages and containers that appear factory sealed can in fact hold multiple phones. Accomplices can take apart some phones to make them even smaller and harder to detect.

Scan all packages with an Ferromagnetic Detectors device, no matter how pristine and innocuous the item or packaging looks. Skilled product adulterers can open a box or hollow out a loaf of bread, insert a phone and seal it back up so no one could tell it has been tampered with.
Another way of getting phones inside prison walls is over the fences. A 2014 article by the Associated Press reported a correctional officer walked the grounds and spotted a couple of 2-liter soda bottles floating in a pond near the fence. Most people who saw them would assume they were simply trash. When the officer retrieved them he found they were tied to waterproof bags filled with over two dozen phones. Read the details: http://nypost.com/2014/02/16/prisoners-use-of-smuggled-cellphones-on-the-rise/

An accomplice will sneak up to the outer fence under cover of darkness and attempt to throw packages containing contraband onto the grounds. Accomplices have also used aerial drones to drop phones and other contraband.

Facilities can stop people from throwing phones over by increasing the distance between the inner and outer walls and increasing the height of fences with netting. Improving fencing will not stop drops from drones so surveillance and frequent ground patrols are still important.

The short range of Ferromagnetic Detectors devices makes them ineffective for scanning large areas, but an Radio Frequency Detector is capable of finding phones as long as they are on. Radio Frequency Detectors are also ideal for identifying inmates using their devices both outside and in large common areas.

Stationary Radio Frequency Detectors devices installed in these areas can covertly monitor for contraband phone transmissions at all times. By comparing alert times it is possible to narrow down the field of suspected phone owners. Staff can then use them in conjunction with handheld Radio Frequency Detectors to zero in on the target.
When conducting an active search of either the interior or exterior grounds, it’s important to maintain the element of surprise. Word travels fast in prison, and when inmates receive advance warning they turn off their phones and hide them. This makes the contraband phones more difficult to uncover, especially in minimum and medium security facilities where inmates are housed in open dorms rather than individual cells. There are many places to hide a phone and inmates might move them to a different dorm in rotation as the individual dorms are searched. During mass movements it’s difficult to prevent handoffs.

For the stealth approach, the solution is a small Radio Frequency Detectors device a correctional officer can wear in a pocket or under clothing as they make their rounds. A phone on a call or streaming data will trigger an alert and allow the officer to identify which cells to search or even catch the owner in the act. If a phone is on but not active, the detector may pick up a short transmission when the phone contacts the tower. The phone signal may not last long enough to lead the officer to the device, but it will allow them to confirm a phone is in the general area.

End the RISK of Contraband Cell Phones

Contraband cell phones in the hands of prisoners pose a significant risk to staff, inmates and the public. They are simply too dangerous to take lightly. With the right equipment and training, even correctional facilities without a managed access system can substantially decrease the number of contraband phones.

Berkeley Varitronics Systems manufactures a full line of Radio Frequency Detectors and Ferromagnetic Detectors that assist correctional facility staff in keeping phones out of inmates’ hands.
Manta Ray™
Portable Ferromagnetic Detectors can be used in handheld or mounted to a stationary base. The Manta Ray is ideal for use in the mail room and visitor check-in to scan small packages and containers. It can also be used during cell sweeps to find cell phones hidden inside objects and behind walls.

SentryHound™
A stationary portal Ferromagnetic Detector for quickly scanning visitors and workers without time-consuming searches. The SentryHound can find phones on or off and has both audible alarms and lights to show the location of the hidden phone.

WatchHound™
A fixed cellular RF detector that continuously and covertly monitors for cell phone use in open areas such as yards, lunch rooms and prisoner dorms. The WatchHound creates alert logs that staff can use to identify cell phone users by comparing the trigger times with surveillance footage or other records.
PocketHound™
This covert cellular RF detector is about the size of a pack of cards, making it perfect for covert scanning on foot patrols. It can trigger an LED alert and a silent vibration when it picks up a signal.

WolfHound™
The ultimate in long-range cell phone detection. This directional cellular RF detector can sniff out targets up to 150 feet away and identify multiple phones at the same time. It features a direction finding antenna allowing users to hone in on any phone actively including voice, texts and data. Perfect for sweeping prison yards and catching phone users in the act.
Scott N. Schober is the President and CEO of Berkeley Varitronics Systems (BVS), a forty-year-old New Jersey-based privately held company and leading provider of advanced, world-class wireless test and security solutions. Schober also invented BVS’s cell phone detection tools, used to enforce a “no cell phone policy” in prisons and secure government facilities.

Scott is a highly sought-after expert on the topic of cybersecurity. He is often seen on ABC News, Bloomberg TV, Al Jazeera America, CBS This Morning News, CCTV America, CNBC, CNN, Fox Business, Fox News, Good Morning America, Inside Edition, MSNBC, and many more. His precautionary advice is heard on dozens of radio stations such as XM Sirius Radio, Bloomberg Radio, and The Peggy Smedley Show. Scott has been interviewed in the Wall Street Journal, Forbes, Fortune, Success, Newsweek, USA Today, and The New York Times.

Hacked Again, written by Scott Schober, details the ins and outs of this cybersecurity expert. As a CEO of a top wireless security tech firm, Scott, struggles to understand the motives and mayhem behind his being hacked. Scott realized his worst fears were only a hack away as he fell prey to an invisible enemy. Order his book online to discover helpful tips to prevent you from being HACKED! Visit: www.ScottSchober.com to order.

Looking for specific contraband training and control for your prison?

Berkeley Varitronics Systems has years of experience in helping prisons control contraband cell phones. We can offer an onsite audit to show you the scope of the problem at your facility. And we offer onsite training. When prisoners have cell phones, you lose control. We help you take back control.

Give us a call at 732-548-3737 or email Scott@BVSystems.com to tailor a cell phone detection training program that fits your needs.
Berkeley Varitronics Systems has been designing and manufacturing cell phone detection equipment since 1990.

Our devices can find phones using all of the current cellular technologies and frequencies. Correctional systems around the world rely on BVS equipment to keep cell phones out of the hands of dangerous criminals.

Start making your facility safer for staff, inmates and the public by contacting BVS today.

Call 732-548-3737 or email scott@bvsystems.com for more information

www.BVSystems.com