State Strategies for Preventing Introduction and Use of Contraband Cell Phones in Prisons

Last year, corrections officers seized 2,800 contraband mobile phones in California prisons, 2,000 phones and accessories in South Carolina prisons, 1,861 cell phones in Mississippi, and 947 in Maryland. Texas officials confiscated 700 hidden cell phones, and 20 of those were found in the possession of death row inmates. Each contraband cell phone smuggled into a prison affords inmates with opportunities to commit crimes and circumvent their punishment. And the opportunity for criminal activity and misbehavior is compounded by the fact that inmates often share their contraband cell phones or rent them to other prisoners.

Prisoners use cell phones to engineer escapes, organize gang activity, threaten and kill witnesses, extort money and commit fraud, organize drug deals and riots, track the location of prison guards, and facilitate the trafficking of other contraband. Cell phone use by prisoners also undermines incarceration, because inmates who spend prison time speaking to friends and loved ones are not subject to the type of confinement to which they were sentenced.

Despite the risks posed by contraband cell phones, prison officials struggle to curtail smuggling and find and confiscate cell phones for three main reasons. First of all, cell phones are small, which makes them easy to conceal. Secondly, they are extremely valuable on the prison black market—a buyer will typically pay between $500 and $1,500 for a smuggled cell phone. Lastly, the punishment for smuggling a contraband cell phone into a prison is usually minimal or nonexistent, which makes smuggling a low-risk and high-profit crime. Because cell phones are easy to hide, valuable to prisoners, and unlikely to result in serious punishment for either the smuggler or the possessor, the number of contraband cell phones in prisons will likely increase.

Currently, every legal option for curtailing smuggling and confiscating contraband cell phones from inmates requires significant human effort. Since most departments of corrections are short of staff, the lack of manpower to detect and confiscate cell phones makes jamming, a currently-illegal technology that blocks cell phone signals in a particular area, appear an efficient and attractive solution. Legislation that would allow in-prison jamming is currently pending in the House of Representatives. Because the status of the bill, The Safe Prisons Communications Act, is uncertain, many states will find that utilizing a combination of other strategies to keep cell phones out of prison is advisable.

This backgrounder provides governors and other state policymakers with information on three strategies for preventing the introduction and use of contraband cell phones in prisons: detection, signal blocking, and punishment. The benefits, disadvantages, and costs of the technologies and practices underlying each strategy are outlined below.

Detection Can Use Electronic or Non-Electronic Methods

The ways contraband cell phones are brought into prisons are limited only by the creativity of motivated smugglers. Correctional staffs have many options to root out hidden phones and phone parts, including electronic and non-electronic detection methods.
Electronic Detection to Check People, Places, and Things
Detection of contraband begins at prison entry, and technologies can focus on people, places and things. Electronic detection is quicker than manual searches and reveals metal objects undetected by visual or touch inspection.

Using Electronic Detection to Scan People. The care with which a person is checked for contraband phones often depends on whether he or she is a prison employee, an inmate, or a visitor. For inmates, noninvasive body and cavity searches can be performed with scanning chairs, which check for metals.iii Sensitive enough to detect metals six inches away from the scanning surfaces, these chairs are more effective than traditional metal detectors and are equipped with casters that enable them to be moved between cell blocks or from prison to prison. The mobility of scanning chairs mitigates their high unit cost, which is about $6,000.ivii Maryland, one state that has reported success with this technology, is increasing the number of scanning chairs in its correctional facilities from 4 to 28 this year.

Yet a thorough approach to scanning requires the use of multiple devices. For example, prisons in Florida, Nevada, South Carolina, and Texas, as well as those in the federal prison system, scan visitors and employees with walk-through metal detectors like those used in airports and require these individuals to send their belongings through an X-ray machine. The California Department of Corrections estimates the cost of establishing an airport-like scanning process to be $28,000 per point of entry, exclusive of employee wages.ix

Using Electronic Detection to Scan Places. Despite the technologies that exist for keeping cell phones out of prisons, they continue to be smuggled in because they are extremely valuable to prisoners. When a cell phone makes it into a prison, electronic scanning can be used to detect the phone’s metal components or its signal. Some electronic scanning devices used to detect phones in places are hand-held and others are remote detection systems, which can trace a phone or a phone call to a particular physical location while reporting the information to a computer in real time. These technologies reduce the amount of labor required to uncover contraband phones, but still require significant human effort.

Hand-held Detection. Hand-held or “nonlinear junction technology” uses wands similar to metal detectors to uncover cell phones and other electronic devices. A hand-held wand detects nonlinear junctions, which are signals that are created when electronic devices and metal objects come in contact with one another.x These wands are helpful during searches and they can be used to uncover the devices detected with remote technologies.

Remote Detection. Two basic types of remote detection systems are available. The first type can only detect devices during phone calls. The second type can detect phones that are on. Several different companies have created systems that use sensors to detect cell phones and display their location, sometimes down to the prison cell, on a computer monitor in real time. The software may be monitored continuously or not, depending on the preference of the user, since a report of the phones detected can be created at any time. These remote detection systems greatly reduce the amount of correctional officer effort required to uncover contraband cell phones. However, remote detection is still labor intensive; an officer must go to the detected location then find and confiscate the contraband cell phone, which may have been moved since it was last used or broken apart into its components and hidden in multiple places.

The “calls only” type of system consists of sensors deployed throughout the area to be monitored. These sensors scan for cell phone calls several times per second, analyze the data, and then transmit the predicted location of a contraband cell phone to a computer monitor in real time via Ethernet.

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these systems, the accuracy of the phone location prediction is correlated to the number of sensors installed, and readings are more precise when more sensors are used. With all remote systems, the number of sensors required for use in a facility depends upon the building’s architecture.

The maximum range of the sensors is 300 feet, but this measurement is based on tests in open air and should not be relied upon for two reasons. First of all, the sensors are not tamperproof, so they must be concealed from inmates even though hiding the sensors often reduces their range. Secondly, the range of each sensor is heavily dependent upon the architecture and construction of the prison. As a result, more sensors are required to accurately scan for contraband phones. Depending on the quantity ordered, these sensors typically cost between $600 and $1,000 each.

A similar technology is able to detect all “cell phones that are on,” in contrast to detecting only cell phone calls. Piloted in corrections facilities in Mississippi and Missouri, the detection area of each sensor is between 80 feet and 150 feet, but optimal triangulation of contraband cell phones may require devices to be placed 25 feet apart. Compared with “calls only” sensors, these sensors may be installed as either a wired or wireless system, and they can also be deployed for short-term use in boxes that contain an eight-hour power supply. This system can detect a phone down to the individual cell from which the call is made and can identify the service provider in real time. It can also be programmed to provide e-mail or phone “alerts” to notify the officer monitoring for cell phone use in certain areas, which increases the likelihood that an officer can discover an inmate in the act of making a call.

Some manufacturers of remote detection systems manufacture “jamming capable” sensors which have the added capability of facilitating call monitoring and recording. Should cell phone jamming become legal in the future, this type of system can be activated to prevent wireless calls altogether. In addition, most types of sensors can be integrated with security cameras to enhance the data available to find phones and punish prisoners and smugglers.

Using Electronic Detection to Scan Things: Prison officials in California uncovered a new method of smuggling cell phones into prisons that involved intercepting a “quarterly package,” a type of gift package that family or friends of a prisoner may order from an approved vendor once per quarter. Smugglers were opening these packages, concealing a cell phone among the preapproved contents of the, and resealing the box so it appeared intact. Because of California’s historical relationship with approved quarterly package vendors, the parcels were not scanned unless tampering was evident—that changed once prison officials determined the packages were vectors for cell phone smuggling. Many states now use metal detectors and X-ray machines tailored to scan mail and packages. Some states now scan all incoming parcels, regardless of vendor relationships.

Non-electronic Detection to Check People, Places, and Things: Methods that work for contraband generally can be modified to uncover smuggled cell phones. Trained dogs and manual searches are good examples of non-electronic detection, but these methods are time- and labor-intensive.

Trained Dogs. Prisons in California, Florida, Maryland, Pennsylvania, and Virginia use specially trained dogs to find contraband cell phones. Virginia was the first state to begin using specially trained dogs to find contraband cell phones; the program was established with three dogs in 2007. In Florida, the two dogs used for phone detection cost $6,500 each. The state department of corrections reports that between January 2009 and June 2009, the dogs discovered 19 contraband cell phones. During the same period, 300 total phones were collected from Florida inmates by all combined methods of detection, and many of those phones were discovered when one of eight drug-sniffing dogs found a phone hidden alongside a cache of drugs. Maryland was the first state to train its own cell phone-sniffing dogs, and officials report that the Maryland Canine Training Program saves the state $50,000. The cost of raising a puppy to one year of age is estimated at $1,000.
whereas already-trained dogs purchased as adults cost between $4,000 and $6,000 each. The Maryland dogs recovered 80 phones in the first year of the program, contributing to the 71 percent increase in the number of cell phones confiscated from Maryland inmates between 2006 and 2007.

Manual Searches. The California Department of Corrections launched “Project Disconnect,” a surprise two-day systematic search of housing units, employees, visitors, and vehicles driven onto prison grounds. Various contraband items were collected, including 50 cell phones in the vehicle of a single prison employee that were labeled with inmate names. As with all types of contraband, prisoner and employee pat downs and cell searches are also used to uncover concealed cell phones and cell phone parts.

Signal Blocking and Control to Stop Contraband Cell Phone Use in Prisons

For states that lack the human resources to listen to phone calls, monitor detection software, or perform more cell searches and other searches continuously, prison administrators favor technologies that keep cell phone calls from being made or received in the first place. Several methods for blocking calls are available, including jamming, access control, shielding, and “spoofing.” Of these methods, only shielding is currently legal. The other technologies have significant support from corrections officials and, in the case of jamming, the support of many governors.

Jamming

“Jamming” is a technology that disrupts communication between cell phones and cellular communication towers by blocking the radio spectrum within the range of the jamming device. The jammer transmits a signal strong enough to drown out the signal of cell phones in range or causes the receiver to fail.

The use of jamming technology is proscribed by the Federal Communications Act of 1934. The Safe Prisons Communications Act of 2009, which was approved by the U.S. Senate Committee on Commerce, Science and Transportation August 6, 2009 and approved unanimously by the Senate on October 5, 2009, would amend some provisions of the Federal Communications Act and add a waiver provision enabling the state director of prisons or governor to petition the Federal Communications Commission (FCC) for permission to install jamming devices in individual prison facilities. Waivers granted would allow jamming for ten years and be subject to renewal. The proposed legislation is supported by 20 governors as well as prison chiefs and corrections directors in at least 26 states, the District of Columbia, and the city of Philadelphia. Jamming is estimated to cost $20,000 or more per facility, meaning that, if legalized, jamming will cost significantly less than methods of remote detection.

Proponents of jamming favor the technology because it is effective in keeping inmates from conducting criminal activities by phone and from spending time on contraband cell phone calls, is comparatively inexpensive, and requires no prison worker effort. Opponents of jamming, however, make two arguments against the technology—that the tool is a blunt instrument capable of interfering with calls outside of prisons including emergency 911 calls, and that the jammers will interfere with the radio communications of first responders. Manufacturers of jamming technology insist that the devices can be used “surgically” as a narrow tool that can jam signals in a highly localized area. However, reliable data about the accuracy of jammers is extremely limited since both owning and using jammers are forbidden by the Federal Communications Act.

Managed Access

At least one prison in the territory of Puerto Rico uses a managed access system, which allows prison officials to register approved cell phone numbers. When calls are made from within a prison, valid numbers go to the commercial network for services but signals from unauthorized numbers remain on the managed access system and calls do not go out. In addition to allowing or proscribing calls on a

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subscriber-by-subscriber basis, managed access also eliminate the costs associated with installing multiple detection sensors, and avoids the all-or-nothing block associated with jamming. The system has the added benefit of capturing and saving details for inbound and outbound calls that can be used in criminal investigations or for lawful call monitoring. States considering managed access technology should note that using a managed access system requires FCC permission because, like jamming, managed access systems interfere with radio waves, so their use is illegal under the Federal Communications Act subject to the exceptions for federal agencies and those with FCC waivers.

**Shielding**
Shielding uses special films and fabrics as construction materials or window coverings that stop the transmission of cell phone calls. Shielding materials are approved for use by the FCC and do not violate the Federal Communications Act of 1934. At least one old prison without central air conditioning was dissuaded from shielding because the materials used can affect interior temperatures.

**Spoofing**
Cell phones can be also “tricked” or “spoofed” so they fail to register a signal from a cell phone tower. The cell phone screen on a spoofed phone appears the same way that it would when out of range, which means that inmates might not realize that a tool was being used to block their calls, decreasing the likelihood of tampering. In contrast to jamming, spoofing phone signals does not interfere with radio communications.

**Punishment as a Deterrent to Contraband Cell Phone Smuggling**
A few states have recently enacted criminal penalties to deter the smuggling and possession of contraband cell phones in prison. The state laws are aimed at prisoners, smugglers, or both prisoners and smugglers. The effects of the criminal penalties are not yet known because the laws are so new.

**Enacting Punishments for Prisoners**
An Illinois law penalizes inmates who commit fraud, theft, and any other unlawful practices from jail using cell phones. House Bill 4066 makes it a class 4 felony for an inmate to commit a phone scam or other crime committed by electronic communication from a jail or prison. The law was enacted following the discovery that 20 jail inmates charged more than $50,000 in illegal phone calls to state residents.

**Enacting Punishments for Smugglers**
Oklahoma law 57 Okl.St.Ann. § 21 makes bringing a cell phone into a secure area of a prison “willfully, knowingly, and without permission” punishable by up to two years in prison, a fine of up to $2,500, or both. Florida and New Jersey have made smuggling a felony.

**Enacting Punishments for Prisoners and Smugglers**
In California, legislation is pending that would fine smugglers and prisoners who use cell phones up to $5,000. Senate Bill 434 is strongly backed by the California Department of Corrections, which reported confiscating 2,800 mobile phones in 2008—twice as many as were discovered in 2007.

In Michigan, furnishing an inmate with a cell phone carries a maximum sentence of five years. This is the same penalty imposed on an inmate who is caught with a cell phone.

**The Outlook for Keeping Contraband Cell Phones out of Prisons**

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The Safe Prisons Communications Act, focuses on allowing jamming, is moving very quickly through Congress—the bill was approved unanimously by the Senate October 5, 2009 and is now before the House Subcommittee on Crime, Terrorism and Homeland Security. But not knowing the outcome of the pending legislation or its final form, states are advised to consider all options for keeping cell phones out of prisons.

If approved by the Congress and signed into law by the President, governors could petition the FCC for authority to use jamming. Pursuant to the Act, waivers must be obtained for each separate prison site to be jammed. But jamming may not provide an ideal solution for every state and, even if it does, there may be some delay in the granting of the waivers. For example, the Act requires rulemaking by the FCC completed with input from the National Telecommunications and Information Administration, and “one or more outside technical bodies with expertise in standards setting.” Another protection would require the FCC to field test and approve all devices that would be used. The Act also mandates that the FCC consider all available technologies capable of preventing the use of unauthorized wireless communications in correctional facilities.

Two other requirements added to the legislation as it has moved forward may produce delays in granting of waivers. One is that prison officials in states that would seek a waiver must first notify the FCC of their intent so that the FCC can coordinate with first responders and commercial wireless providers and provide them with an opportunity to inspect the jammers. The other requires states to have in place a documented shut-down procedure that can be used in case of emergency.

Given the prospect that legislation may make jamming a less attractive option than once thought, states are wise to consider all options--many of them discussed in this backgrounder--for keeping cell phones out of prisons.

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iv In fact, a Texas death row inmate placed a cell phone call to Texas Senator John Whitmire from within his cell to complain about the conditions of his confinement . The call to Senator Whitmire was one of 2,800 calls made by Richard Tabler and nine other death row inmates in the month preceding the call. Murray, Lynn “Jamming on the Inside” Corrections.com [online]. 8 December 2008. [cited 20 October 2009]. Available at: http://www.corrections.com/news/article/20179.

v The scanner, which looks like a chair, detects metals hidden in five bodily “zones”—the oral/nasal cavity, the abdominal cavity, anal and vaginal cavities, the legs, and feet. The device does not require contact with prisoners and is considered noninvasive. The Source New York Body Orifice Security Scanner [online] [cited 20 October 2009]. Available at http://www.boss2chair.com/Site_Map.html.

vi For example, the chairs can detect metal dental work, shrapnel, and surgical plates and screws; items that are undetectable by visual inspection and, often, by traditional metal detectors. Of course, a finding of such items should be confirmed by prison medical staff and the prisoner’s medical and dental histories records to ensure the medical and dental devices are legitimate. National Law Enforcement and Corrections Technology Center

http://www.oig.ca.gov/media/reports/BAI/reports/Special%20Report%20of%20Inmate%20Cell%20Phone%20Use.pdf. Note also, the Federal Bureau of Prisons reports that these screening efforts require three prison
officers and a supervisor to facilitate each shift change, so staff costs could be substantial.

Cellular News, Locating Cellphones Inside Prisons 31 July 2006 [cited 20 October 2009]. Available at:

Sensors may be placed in “chases,” the architectural location of plumbing pipes, so they are difficult to find
and disable.

One benefit of a wireless system is that no Ethernet cable can be disabled by tampering.

These quarterly packages are defined in the California Inspector General’s Special Report on Cell Phones in
Prisons as follows: “Inmates are allowed to receive quarterly packages purchased by outside family members.
There are restrictions on how much and what can be purchased. Approved items include food, clothing, hygiene
items, shoes, televisions, and radios. Family members must purchase the items through approved vendors.”

http://www.time.com/time/nation/article/0,8599,1900859,00.html See also Florida Department of Corrections,
“Florida Prisons Fight to Keep Cell Phones out of Prison Cells,” news release (October 2, 2008). Available at:
http://www.dc.state.fl.us/secretary/press/2008/cellphones.html; and Florida Department of Corrections, “Florida
Department of Corrections Introduces a Second Cell Phone Sniffing Dog,” news release (June 24, 2009).
Available at: http://www.dc.state.fl.us/secretary/press/2009/Cell-PhoneSniffingDog2.html.

Virginia Department of Corrections Management Information Summary Annual Report, Year Ended June 30,

25. Hagerstown, Maryland. Transcript available at:

Maryland Department of Public Safety and Correctional Services “Maryland Department of Corrections
Secretary’s 2008 Annual Report.” (March 2009). Available at:

http://www.oig.ca.gov/media/reports/BAI/reports/Special%20Report%20of%20Inmate%20Cell%20Phone%20Use.pdf.

In 47 U.S.C. § 333, the act prohibits interference with radio communication: “[n]o person shall willfully or
maliciously interfere with or cause interference with any radio communications of any station licensed or
authorized by or under this chapter or operated by the United States government.” An exception to this
 provision is made for the federal government, but not state or local governments. (Section 302(c)) The use of
jamming and certain other technologies are also contravened 47 U.S.C. § 301, which says, “[n]o personal shall
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Jammers also contravene 47 U.S.C. § 301, which says, “[n]o personal shall use or operate any apparatus for the
transmission of energy or communications or signals by radio . . . except in accordance with this chapter and
with a license in that behalf granted under the provisions of this chapter.”

Meg Kinnard, “Prison Chiefs Petition FCC on Cell Phone Jamming.” Wireless Week [online]. 14 June
2009. Available at: http://www.wirelessweek.com/Archives/2009/07/Prison-Chiefs-Petition-FCC-on-Cell-
Phone-Jamming/. Those supporting the Safe Prisons Communication Act as of August 9, 2009 include the
governors of Alabama, California, Connecticut, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maryland,
Mississippi, Nevada, New Hampshire, North Dakota, Oregon, Rhode Island, South Carolina, South Dakota,
Utah, Virgin Islands, and West Virginia. These governors signed a letter supporting the act that was sent to
Senate Majority Leader Harry Reid, Speaker of the House Nancy Pelosi, Senator Mitch McConnell, and
Representative John A. Boehner September 8, 2009.

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It is difficult to estimate the costs associated with jamming accurately. However, corrections officers across the United States agree that jamming, signal blocking, and methods of electronic detection are all costly.


See 47 U.S.C. 302(c) regarding an exception that allows federal agencies, but not state agencies, to jam cell phone signals. Despite the proscription, a demonstration of cell phone jamming was provided in a South Carolina prison on November 21, 2008. Both the director of the South Carolina Department of Corrections and the provider of the demonstration (Cell Antenna) insist that the jamming was precise. Other states, including Texas expressed interest in similar demonstrations, and the District of Columbia arranged for a demonstration of jamming and secured the approval of the Wireless Telecommunications Bureau (WTB) before the CTIA-the Wireless Association (CTIA) asked the FCC for a stay and alleged that the demonstration violated § 333 of Federal Communications Act of 1934. CTIA also filed a writ of mandamus (a command) asking for a stay or reversal of the WTB order authorizing the demonstration, which the D.C. Department of Corrections promptly cancelled.


More than other kinds of contraband, cell phones can provide data for criminal investigations. Maryland has taken advantage of this opportunity by using warranted wiretapping: Baltimore law enforcement officers obtained wiretaps on contraband cell phones used by inmates with known gang affiliations, resulting in drug and weapons charges for two dozen people, four of whom were state prison officers. Wiretapping is a narrow tool that has the benefit, as in this case, of isolating and terminating criminal activity. Charges against those indicted in this case included gang activity, drug smuggling and trafficking, extortion, and acts of violence committed both in and outside Maryland prisons. Evidence and contraband were collected from 16 separate prison cells and extra-prison locations and included 676 grams of raw heroin, 4 guns, 4 vehicles, and 13 homemade knives.


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