

UPDATED

# Controlling Contraband Cell Phones



Interception and Detection in Prisons,  
Correctional and Secured Facilities



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## Contraband smart phones present challenges to wardens

Contraband has been around as long as there have been prisoners. 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 has exploded. 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 to the Internet and social media platforms.

Some inmates use contraband phones to talk with their families and avoid charges from the pay phones installed in correctional facilities.

The harsh reality is they also use contraband cell phones to:

- pass orders to accomplices inside or
- use as a form of prison currency
- orchestrate escape attempts
- run identity theft and drug rings
- intimidate witnesses
- run scams and extort money
- coordinate riots and protests
- take out contract hits
- even stream LIVE video.

***“Unauthorized cell phones in prisons are often used to conduct further illegal activity and can create serious security concerns,” said Chris Hacker, Special Agent in Charge of FBI Atlanta.***

***“We will continue to use our resources and investigate how contraband is smuggled into any federal prison.”***



Read complete article:

<https://www.justice.gov/usao-ndga/pr/federal-inmate-charged-using-cell-phone-post-facebook-live-videos-prison>

***The challenge now is to LOCATE the many cell phones that have made there way inside our prisons!***

## 4 Why Jamming Doesn't Work

### "Jamming" cell phone transmissions is illegal!

So no... prisons can't just "jam" a cell phone!



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!

SECTIONS THE BALTIMORE SUN

CRIME NEWS

### Cellphone jamming system tested at Maryland prison

By MEG KINNARD  
ASSOCIATED PRESS | JAN 17, 2018 | COLUMBIA, S.C.

Federal prisons officials on Wednesday tested a jamming technology inside the walls of a federal prison, a rare move that authorities said they hope will help combat the danger posed by inmates with cellphones.

The test was conducted over several hours Wednesday morning at a federal prison in Cumberland, Maryland, Assistant Attorney General Beth Williams told

*Maryland federal prison in Cumberland is testing their own internal RF jamming system on a limited basis but there are still years of federal hurdles to overcome.*

Link to read the story:

<https://www.baltimoresun.com/news/crime/bs-md-cellphone-jamming-system-tested-at-maryland-prison-20180117-story.html>



## Media coverage of contraband use damages public perception and internal effectiveness

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. 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: "If I hadn't of ran it through the machine, we would have thought that it was just pop tarts," Cannon said.

Link to CBS 46 story:

(<http://www.cbs46.com/story/29996400/prisoners-kill-cat-use-carcass-to-sneak-cell-phone-inside-prison>)

### Cell Extortion: Inmate Phones Leading to Violence, Fraud

...prisoners have used mobile phones to extort the families of fellow inmates, texting pictures of bloodied inmates to their relatives outside and threatening harm unless families send cash..

Read entire story, click on link:

<https://www.nbcnews.com/news/us-news/cell-phones-n327311>

### 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.



## Managed Access Systems have holes



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.
- 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.



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

## #1 - 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. 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 inside a hollowed-out loaf of bread.



### Attorney arrested

A Florida attorney was arrested in March 2015 for smuggling a smartphone into the Seminole County Jail for his client. Visit link: <https://www.baltimoresun.com/news/crime/bs-md-cellphone-jamming-system-tested-at-maryland-prison-20180117-story.html>

## #2 - 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.

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**

<http://www.latimes.com/local/politics/la-me-pol-prisons-20140925-story.html>

## #3 - 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.







## #4 - 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.

## #5 - 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 California, two employees at a single prison boasted they made over \$100,000 smuggling contraband. To read the complete 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.



### CMC guard accused of smuggling cell phones

July 18, 2011

By JOSH FRIEDMAN



After surveillance video at the California Men's Colony (CMC) in San Luis Obispo County allegedly captured a correctional officer smuggling a cell phone into the prison, the accused guard retired immediately and allegedly boasted that he made more than \$100,000 a year selling mobile devices to inmates.

Lt. Dean Spears, CMC's information officer, said that he was unable to provide details about allegations that correctional officer Miguel Mendes had been videotaped smuggling cell phones into the prison because of an ongoing criminal investigation into Mendes' activities.

Mendes, who retired on June 10 after 17 years at the prison and a previously clean record, said he was also unable to speak about the matter.

Even so, several CMC guards, who prefer to remain unnamed to protect their employment, said that some guards, upon reaching retirement age, routinely smuggle cell phones and tobacco into the prison. When caught, they quickly retire and generally do not face criminal action, the employees said.

On his way out Mendes bragged not only about his profits, but also that he had been running the scheme over a multi-year span, the employees said. Cell phones in prison, which are frequently used to direct criminal activity, sell for hundreds, sometimes even thousands, of dollars if they arrive Internet-ready.

# Believe It or Not??

Due to the value of certain contraband, inmates can be tempted to swallow it in the hopes of later retrieving it to avoid getting caught during contraband inspections. This contraband can even include small cellular phones which sometimes go in easier than come back out.

When an inmate complains of a stomach ache, it could just be an upset stomach or it could be something more serious involving an obstacle such as a cellular phone blocking intestinal tracts. Once the medical teams get involved, medical scans and resources add up to thousands of dollars per incident whether the inmate is harboring contraband internally or not. ***This is where ferrous detection can not only save money but lives.*** Whether a phone is on or not, ferrous detectors will instantly determine if an inmate has smuggled one internally. From there, medical experts can decide the next course of action.



Occasionally an inmate with a contraband phone will slip up and give themselves away. A prisoner in a Sri Lanka prison hiding a phone in his rectum was caught when he received a call and the phone rang.



### 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.

### Did you know?

#### 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.



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. It's important for staff to be observant for anything that seems out of the ordinary.

## 10 Detection Method Comparison



### Cell Phone Sniffing Dogs

Dogs are a valuable tool for finding many types of contraband. They can quickly sniff out phones, batteries and all types of contraband with a relatively high degree of success. But dogs are living animals and need handlers. 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 with a limited service lifespan.



### Detecting radio waves to cell towers

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

Radio Frequency Detectors pick up 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 anywhere from every few seconds to every few minutes in order to conserve power. When on a call or transmitting data, the tower communication is sustained until the call or data transmission ends. When the phone is off or in airplane mode, no transmission occurs.



### Detecting the electromagnetic field

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

Ferromagnetic Detectors pick up the electromagnetic field generated by cell phones (even ones powered OFF with battery removed), tablets, MP3 players, earbuds and any ferrous metals including those contained in knives and guns. They are similar to metal detectors but even more sensitive. They excel at detecting tiny ferrous materials used in modern cell phones (which are mostly plastic) which most metal detectors miss. In addition, ferrous detectors are not prone to false triggers by aluminum, jewelry, medical implants or clothing studs. So an empty (harmless) Coke can will not trigger a ferromagnetic detector but a Coke can concealing a contraband phone or weapon will.

Meanwhile, standard metal detectors cannot even be used to check Coke cans for contraband since all aluminum cans will trigger a metal detector regardless of their contents.

Handheld ferrous wand scanners are used for quick sweeps of visitors and their bags, mail, any small-box deliveries, plus purses and briefcases without opening them. Full body ferrous scanners are even more sensitive and harmless to anyone passing through them including pregnant women. The only downside to all ferrous and metal detection is that detection range is fairly close (less than a foot for handheld scanners and about 3 feet for walk-through portal scanners).



### Detecting metallic components

#### Metal Detectors - Finds metals but not cell phones

We’ve all experienced long lines of people waiting as one person is forced to go through a metal detector repeatedly. Metal is so common that we sometimes forget all of the metal we carry on our person. This leads to many false detections and wasted time. In prison, metal detectors are vital to keep metal objects (which can be fashioned into weapons) out of the hands of inmates. Unfortunately, these same detectors have difficulty screening for contraband cell phones made mostly from undetectable plastic.

TYPE	ADVANTAGES	DISADVANTAGES
<b>Cell Sniffing Dogs</b> <b>BUDGET:</b> <b>Approx. \$10,000</b> <b>ongoing expenses</b>	<ul style="list-style-type: none"> <li>• Phone can be on or off.</li> <li>• Can find phone parts, chargers and accessories.</li> <li>• Some dogs can alert on multiple types of contraband, like drugs and cigarettes.</li> </ul>	<ul style="list-style-type: none"> <li>• Require handlers and expensive training.</li> <li>• Cost of upkeep: Food, vet bills, etc.</li> <li>• Loss of investment if the dog becomes unfit for service.</li> <li>• Search causes disruption and is obvious to other inmates.</li> <li>• Not COVERT: Phones are immediately flushed down toilets.</li> </ul>
<b>Radio Frequency Detectors</b> <b>BUDGET:</b> <b>\$500-\$2,500</b>	<ul style="list-style-type: none"> <li>• Long range.</li> <li>• Can triangulate phone position.</li> <li>• Some units are concealable under clothing.</li> <li>• Installed systems can monitor specific areas 24-7.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Phone must be ON and not in airplane mode.</b></li> <li>• Cannot find (smell) other contraband such as drugs or cigarettes.</li> </ul>
<b>Ferromagnetic Detectors</b> <b>BUDGET:</b> <b>\$600-\$6,500</b>	<ul style="list-style-type: none"> <li>• <b>Phone can be ON or OFF.</b></li> <li>• Does not alert on non-target metals-no false triggers.</li> <li>• Uncovers cell phones inside containers and behind walls.</li> <li>* Inexpensive.</li> <li>• Detects cell phones under clothes and hidden inside body cavities.</li> <li>* Detects concealed guns and knives comprised of steel, iron, nickel or titanium.</li> </ul>	<ul style="list-style-type: none"> <li>• Short range</li> </ul>
<b>Metal Detectors</b> <b>BUDGET:</b> <b>\$250-\$10,000</b>	<ul style="list-style-type: none"> <li>• Non-invasive way to detect metallic weapons.</li> <li>• Wide variety of short range wands and walk through portals.</li> </ul>	<ul style="list-style-type: none"> <li>• Short range</li> <li>• Detects all metal making it more prone to false triggers from harmless items.</li> <li>• Cannot detect most cell phones.</li> </ul>



## #1 Scanning Staff, Visitors and Contractors

### ***“Food service vendors fired”***

*Bloomberg Business reported that over 100 food-service workers had been fired in a 10 month period for having personal relationships with inmates and smuggling in cell phones and other contraband.*

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, belt buckles, inside bags, prosthetic limbs and the soles of shoes, inserted into body orifices and even concealed on children.

## #2 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 can tell it has been tampered with.

## #3 Police Outdoor and Common Areas

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-cell-phones-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.

## #3 Police Outdoor and Common Areas (continued)

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.



## #4 Covert Detection on Foot Patrols

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 hand-offs.

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 in use, either on a call or streaming data, will trigger an alert and allow the officer to identify which cells to search or even catch the person 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.





## 14 Comparison of 5 Detection Devices

### Yorkie™

This is a pocket-sized cell phone detector used by correctional facilities and wireless TSCM (Technical Surveillance Counter Measures) security experts. It detects cellular activity such as text, voice and data signals up to 125 feet away. It also includes a touchscreen allowing easy operation by anyone. <http://bit.ly/yorkie-pro>



### wireless intrusion



*"I am thoroughly impressed with Yorkie - it's a great device to add to my counter surveillance equipment."*

Michael K., TSCM Expert

### SentryHound-Pro™

A ferromagnetic walkthrough scanner (single pole or dual pole setup) that detects cell phones on or off as well as knives, guns and other contraband. The security pole sets up anywhere in less than 30 seconds and is ideal for rapid, non-invasive inspection of any inmate, visitor, staff member and even body cavities.



### point-of-entry

### WolfHound-Pro™

This device detects and isolates active contraband phones using a built-in direction finding antenna. This allows security personnel to detect and distinguish between the strongest cellular activity and then pinpoint its location up to 150 feet away indoors and up to 1 mile outdoors line-of-sight.

<http://bit.ly/wolfHoundPRO>



### long range scanning



*"I just received the WolfHound and could not be more pleased. The first time we used it we found four cellphones inside a Federal Prison."*

SIS Technician, Federal Bureau of Prisons



## manual sweeping



## Manta Ray™

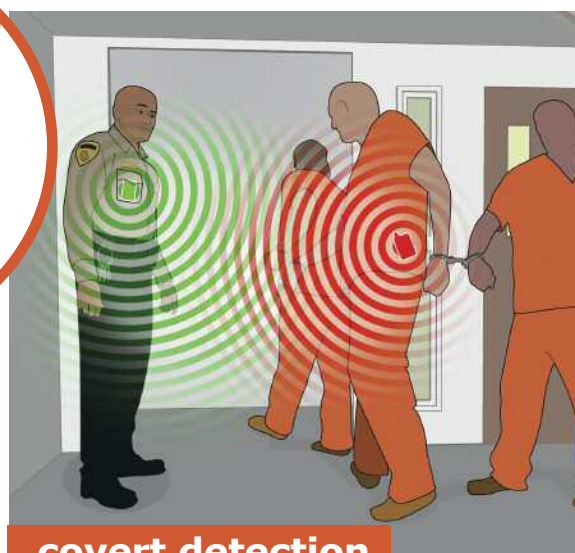
The Manta Ray is a versatile, ferrous detecting wand that can be used in security checkpoints, cell sweeps and even non-invasive package inspections. It can detect contraband cell phones whether they are on or off. Standard metal detecting wands cannot do this because of the increasing use of plastic in most modern cell phones.

<http://bit.ly/manta-ray>



## PocketHound™

The PocketHound is the world's most sensitive covert cell phone detector. Its simple interface allows it to alert security personnel to nearby cell phone use without even having to remove it from their pocket. Thousands of PocketHounds are regularly used in correctional, government, military and any facility that frowns upon or does not allow cell phone use at all. <http://bit.ly/pockethound>



## covert detection

*"My facility recently purchased four of the PocketHound cell phone detectors. They were immediately beneficial at helping staff locate and reduce the number of cellular phones possessed by offenders inside our institution."*

Lead Captain, Michael Biddle  
Miami Correctional Facility

All our products  
are available at:



OR, buy directly  
from Berkeley at:



# About Scott Schober

Author, Inventor and CEO of Berkeley Varitronics Systems



*"Ever since I was a child, I've always been fascinated with how things work. That same curiosity that drove my early exploration has made me a relentless scientist, engineer and innovator who sees challenges as opportunities."*

Scott Schober

## Award Winning Inventor



PocketHound™ wins Govies Wireless Security Award



Yorkie-Pro™ wins Espionage Research Institute International's 2019 Glenn H. Whidden Award For Excellence



## Acclaimed Author of "Hacked Again" and "Cyber Security is Everybody's Business"

Read about Scott's personal experiences as well as his advice to global brands and the Department of Defense. If you are connected to the internet (as we all are), both of Scott's book are "must reads."

Scott describes the reality of cyber threats and provides tips and techniques that will help protect you and your business interests from a devastating cyber security breach.

Feel free to reach out to Scott Schober directly at [Scott@BVsystems.com](mailto:Scott@BVsystems.com) or call 732-548-3737

For more information visit [www.ScottSchober.com](http://www.ScottSchober.com)

## Cybersecurity Expert on TV & Radio

Scott is a highly sought after Cybersecurity subject matter expert for media appearances and commentary. 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.

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