LOUROE ELECTRONICS®

World Leader in Audio Monitoring Technology Since 1979

A SOUND SOLUTION IN CORRECTIONS

white paper

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THE CURRENT STATE OF CORRECTIONS

There are approximately 1,821 state and federal prisons,[1] 3,163 local jails,[2] 79 Indian Country jails,[3] and several other types of detention centers throughout the United States. The Bureau of Justice Statistics reports that more than two million people are behind bars today,[4] making America's inmate population the largest in the world.

Providing basic necessities and resources for so many inmates presents key challenges for correctional administrators, many resulting from overcrowding. Several years ago, California state facilities operated at 200 percent capacity with thousands of inmates sleeping on makeshift beds in gymnasiums.[5] Overpopulated prisons not only create poor conditions, but also increase operational stress for staff. Inmates outnumber correctional officers four to one.

More than 2 Million behind bars in USA

In addition to reducing overcrowding, maximizing security for both inmates and correctional officers is a top priority. An analysis of the Federal Bureau of Prisons' Chronological Disciplinary Records indicates that there were approximately 289 serious assaults per 5,000 inmates in federal prisons recorded in 2015.[6] This averages to about 24 documented instances per month. Similarly, the records also show about 12 serious assaults on staff per 5,000 inmates in 2015, or about one incident per month.[7]

289 Serious Assaults PER 5,000 Inmates

These statistics highlight just how critical security is for prisons and jails. As a result, many facilities have invested more time, money and resources into improving training for staff and enacting workplace violence prevention programs. Although these protocols are effective, they are much more successful when deployed with advanced technologies designed for early detection and deterrence.

Currently, most prisons deploy some type of surveillance and access control system. One technology that many detention centers have not fully tapped into is audio. For wardens looking to enhance a current security solution at a cost-effective price, deploying audio monitoring through microphones and sound sensors is the answer.

IMPROVING SECURITY WITH AUDIO

Deploying audio monitoring with surveillance adds value for administrators because it adds another sensory technology to the overall security solution. With audio, systems aggregate more data, yield higher situational awareness, provide greater accountability and increase intervention capability.
Consider the following questions for your facility:

- Do you have sufficient security staff at the facility?
- What are the most high-risk areas?
- What key areas are most prone to violent outbursts or crimes?
- Have you had issues with inmate assaults?
- What supplementary security does your facility have in place currently?

Audio monitoring addresses all of the above challenges and is a vital resource for correctional and security officers. In the past, staff would limit themselves by only installing video surveillance. Today, the industry has shifted and has adopted the new standard of deploying both sight and sound capture in order to achieve the most effective turnkey solution.

The five key advantages of audio-video integrated systems for correctional staff are as follows:

• **Improving Coverage** – Correctional facilities often span thousands of square feet and there is simply not enough staff to observe all that occurs in these large complexes. Audio addresses staff limitations by expanding their monitoring ability. By installing microphones alongside nearly every camera, managers can know what is happening throughout an entire facility.

• **Greater Evidence** – When security officers are reviewing video footage to determine which inmate instigated the fight, audio provides the missing information of what really happened. The sound recording provides a verbal record of what transpired, eliminating “he said, she said” arguments and validating or disproving the incident report.

• **Monitoring Efficiency** – Sound is often one of the first senses to warn you of risk or danger. The same is true for the audio component in a security system. Rather than security operators needing to watch several camera feeds at all times, in the event of a threat, specific sound patterns will alert them of what camera zone to observe. Alarms can also be triggered when a specified sound pattern is identified.

• **Assault Reduction** – Fights occur regularly in correctional facilities, and the primary challenge is how to prevent them. Audio monitoring increases deterrence by enabling security staff to listen to inmate interactions. When a conversation becomes hostile, administrators are the first to know and can send officers to the area to de-escalate the conflict before it erupts into a physical brawl.

• **Remote Notifications & Automated Alerts** – Authorized personnel can receive alerts as they happen. Alarms can be triggered automatically reducing reaction time and risk of staff not being able to reach one in time.

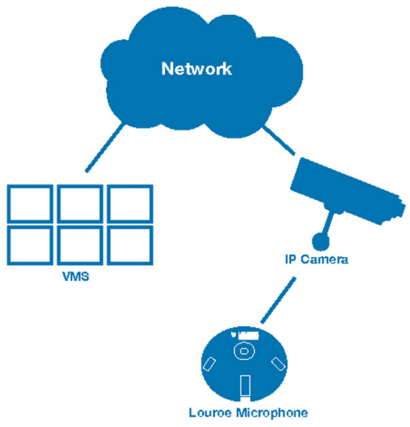
TECHNOLOGY THAT WORKS

Implementing audio monitoring inside correctional facilities is most effectively achieved through two products, the first of which is the microphone. For one California detention facility, who will remain anonymous for confidentiality reasons, installing a microphone and implementing audio played an important role resolving an inmate assault.

The incident began when one inmate walked into a cell that had a group of inmates already inside. The leader of the inmates inside the cell directed everyone to assault the inmate who had just walked in. However, one inmate in the group refused to participate. He did not want to fight, but the leader of the group said that if he didn't help, he would be the one who was attacked next. The inmate reluctantly complied. The video later showed the inmate randomly swinging his fists in the air, but not touching the other person. The audio later corroborated this inmate's story that he did not want to fight, but was forced to, which was instrumental in proving his innocence. Had there not been audio to verify the truth, the victimized inmate may have been wrongly accused, faced severe consequences or had time added to his sentence. Additionally, the audio was also used to convict the instigator who initiated the attack. Audio is critical to showcase the full story of an event and substantiate witness claims.

The other essential audio product for correctional facilities is the aggression detector. With an aggression detector, wardens gain a valuable prevention tool for assault deterrence as the solution identifies and provides early warnings for verbal aggression, which precedes physical aggression most of the time. Similar to how the human ear processes noise, an aggression detector analyzes sound through advanced algorithms to identify stressed voices, fear, anger and duress. Upon identification, the system sends an automatic notification to security and correctional staff, allowing them to quickly intervene before the situation escalates into physical violence.

By using an aggression detector to prevent an assault from taking place, correctional facilities save thousands of dollars in investigation costs, medical bills, and court fees. This technology has a clear ROI and more than pays for itself by deterring just one incident. Over the last decade, jails around the world have begun to deploy aggression detectors and have seen tangible results. The Detention Concept Lelystad (DCL), a corrections facility in the Netherlands, is one of them.



TECHNOLOGY THAT WORKS

DCL wanted to increase safety for its 150 detainees and prison staff. The facility had 72 aggression detectors installed throughout its facility, which were provided by Louroe Electronics' technology partner in the Netherlands, Sound Intelligence. The sensors were placed in multiple inmate cells and common rooms. Since being installed, staff have felt safer and operations have become more efficient.

"It is a very effective system that enables us to also supervise cells in the evenings and at night," said Tom Vorstermans, director at DCL. "In addition, security staff can be deployed more efficiently because the situation in the cells can also be remotely monitored. In the event of an incident, prison officers arrive at the right spot quickly, and physical violence can be prevented. The system could certainly also prove very effective in other prisons."

The solution generates a number of notifications per day at DCL and about once a month, there is an incident that warrants intervention.

GETTING PRACTICAL

The benefits of audio monitoring and audio analytics are evident. The question then becomes what solution is best for the various prison environments. Below are recommendations for solution selection and deployment for specific areas in correctional facilities. For additional consultation on facility design and security product placement, refer to the National Institute of Correction's Jail Design Guide.[8]

1. Intake Rooms – Mount a vandal-resistant microphone in the booking room, one of the highest traffic areas in a jail, to monitor all conversations for threats and verify proper protocols are followed. Make sure to place the microphone as close to the sound source as possible, avoiding air vents, fluorescent lighting and other ambient interferences.

2. Interview Rooms – Use an audio monitoring system, comprising an external microphone, base station and wall mounted mute switch plate (or on/off button), for interview rooms. The system records all verbal communication, capturing a suspect's quietest comments. However, when the mute function is turned on, the system will not record such as when an inmate is speaking with an attorney.

3. Inmate Cells – Deploy microphones in cells that house multiple inmates. Confined by close quarters, tensions can rise between prisoners. If they do, staff will know in real-time and can act quickly.

4. Bathroom – Set up microphones in the shower and toilet areas. Inmates are most vulnerable to assault in these areas, and for that reason, should be closely monitored.

5. Communal Areas – Install aggression detectors in high inmate concentrated areas including housing blocks, staircases and shower rooms. When using an aggression detector in areas where background noise levels are high, make sure to adjust the aggression detector's sensitivity accordingly.

6. Visitation Areas – Implement microphones in visitation areas to provide another layer of security and accountability for guests and inmates.

BEYOND THE PRISON CELL

When evaluating security upgrades and audio deployment for a particular detention center, administrators should also consider areas outside of the inmate cell or common area. Therapy rooms and infirmaries are prime examples. From 2011-2012, the Bureau of Justice Statistics reported that 19 percent of state and federal prisoners and 31 percent of jail inmates had a cognitive disability.[9] For the times when healthcare professionals are working with inmates whose disability prevents them from making rational decisions or having self-control, it is wise to place security safeguards. An aggression detector installed in a medical ward ensures that security and staff will come to the area immediately should a patient become too rowdy for the caretaker to manage alone.

Courthouses are another correctional setting in need of heightened security. The number of court-targeted attacks– knifings, assaults, bombings, or arson– has increased over the last several years. The National Center for State Courts cited research from the Center for Judicial and Executive Security, which documented 10 incidents of violence in courts in 2006. By 2011, the number rose to 67.[10] Mounting an omnidirectional microphone and an aggression detector in a hallway provides additional situational awareness as the prisoner moves from a holding cell to the courtroom.

CONCLUSION

Ensuring correctional environments are safe and secure is no easy task. Limited staffing, high inmate turnover, tense relations and vast facilities all add to the challenge. Sensory technologies like audio significantly help administrators assess, deter and resolve crime, and for this reason, should be part of the overall security plan.

END NOTES

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6 "Serious Assaults on Inmates," ***Federal Bureau of Prisons (Chronological Disciplinary Records)***, last modified November 17, 2016, last accessed November 17, 2016, https://www.bop.gov/about/statistics/statistics_inmate_safety.jsp?month=Nov&year=2016.

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ADDITIONAL LINKS

Louroe Electronics' solutions for the corrections market.

- **Verifact® DV:**
http://www.louroe.com/product/verifact-dv/

- **Verifact® A:**
http://www.louroe.com/product/verifact-a/

- **ASK-4® #631:**
http://www.louroe.com/product/ask-4631/

- **Aggression Detector:**
http://www.louroe.com/product/aggression-detector/

- **LE-802 Intelligent Audio Analytics System:**
http://www.louroe.com/product/intelligentaudioanalyticssystem/

ABOUT LOUROE ELECTRONICS

Located in Van Nuys, California, Louroe Electronics® has been the world leader in audio monitoring technology since its inception in 1979. Recognized globally, Louroe Electronics' products are used in over 50 countries and are utilized by both the private sector and government.

The company's Verifact® line of microphones, complementing base stations, and communication accessories, provide line level output to interface with various digital electronics. For over three decades, Louroe Electronics has maintained rigorous standards to ensure their products provide reliability, durability, and excellent performance for their customers' needs.

For more information about Louroe's audio solutions, visit www.louroe.com or call 800-927-6498.

Louroe Electronics®
6955 Valjean Ave., Van Nuys, CA 91406
Tel: (800) 927-6498 Fax: (818) 994-6458
www.louroe.com