inovonics®

White paper

Wireless monitoring and intrusion detection in banking

Table of Contents

Wireless vs. Traditional Hardwired Approaches to Security

Physical security systems are essential for the safety of financial institutions. Without proper electronic monitoring and intrusion detection, the lives of employees and customers can be put at risk, along with millions of dollars in assets.

Financial institutions have traditionally relied on an array of security sensors. These sensors are hardwired into security panels to monitor the physical space inside facilities and sometimes areas outside. The array of sensors can include motion detectors, safe and door contacts, glass break detectors, billtraps, and fixed-location panic buttons.

The security panel used in traditional hardwired systems is typically the same panel used in a wireless approach. Wireless solutions have evolved to work with almost any commercially available security panel.

Wireless security approaches provide the same sensor options of a hardwired system, without the expensive and cumbersome wiring, and they can offer additional flexibility. Wireless security systems have been used in financial institutions for decades.

As bank management teams became convinced of the reliability, value and dependability of a wireless approach, they continued to expand the use of wireless to additional detection devices. Over time, they embraced the complete range of wireless security devices and electronically monitor their entire premises with wireless security technology.

Some of the biggest names in the banking industry have adopted wireless security systems for hundreds of their branches, providing a testament to the maturity and proven performance of the underlying wireless technology.

Functional Advantages of a Wireless Security Approach

Security systems that rely solely on wired connections perform satisfactorily on stationary objects but not on mobile objects or employees. Stringing wiring can be difficult in many areas and once the wire is fixed in place, it is nearly impossible to easily and quickly adapt to changing floorplans or furniture arrangements. Similarly, when a security system is upgraded — during a branch remodel for example — the

installation cost of a wireless approach provides significant savings compared to a hardwired solution. The following sections highlight some of the benefits of a wireless approach.

Avoid Costly or Unsightly Installs

Hardwiring a security system can be cumbersome. Hardwiring security devices in hard-to-reach points of access can cause wiring to run across floors, up glass, and into entryways, ruining the sense of security and professionalism that a financial institution must convey to its clientele. Some areas are difficult if not impossible to wire, such as ATMs, glass windows and foyers. Historic facilities can present additional wiring challenges due to thick walls and high ceilings.

The wireless approach presents an excellent alternative to the difficulties presented by traditional hardwiring. Wireless devices are simply mounted where they are needed, significantly reducing installation costs, while maintaining the necessary effective security of the financial institution.

Reduce Maintenance

Multiple failure modes can cause any security system to fail. It is highly recommended for life-saving applications that periodic manual testing, in addition to automatic supervision, be performed to ensure system reliability.

In addition to aesthetic concerns created by wiring, some applications are best addressed with a wireless solution. Hardwiring a drawer for a billtrap, for example, can be a challenge. Not only is wiring difficult to install in a drawer's tight space, but wire can be distressed by the opening and closing of the drawer hundreds or thousands of times. Distressed wire potentially leads to failures. In addition, hardwired billtraps are often connected on a single looped wire, making testing and troubleshooting of the individual billtraps difficult and time consuming.

Supervision is the ability of a security system to monitor the health of the connection between the security sensor and the security panel. Wireless supervision automatically monitors the wireless link between the sensor and the security panel to ensure the devices are operational and ready when and if needed without manual intervention.

Provide Additional Functionality

Wireless approaches also offer additional functionality advantages compared to traditional hardwired security systems. To return to the bill trap example, false alarms can be prevented with a programmed ten-second delay, which allows a teller to replace the bills before the alarm condition is initiated.

Another advantage relates to the mobility of pendants. A pendant gives a teller or personal banker the ability to trigger an alarm from anywhere in the bank, lobby, parking lot, or even nearby locations, without the encumbrance of a wire. Pendants are an ideal wireless application because employees are mobile by nature. In many cases it is possible for on-the-go employees to move from branch to branch with their pendants and continue to ensure their personally security as well as institutional security.[1]

Economic Advantages of a Wireless Security Approach

The economic advantages of a wireless security approach can be demonstrated through a cost comparison of the hardware and labor costs of a hardwired solution and a wireless solution. The examples are a typical small branch and a typical large branch at a retail bank.

Financial institutions pay either an electrical contractor or an alarm installer for the installation of hardwired security systems. In either case, the banks can eliminate this cost by specifying a wireless security system.

The following examples are based on real world scenarios, and may or may not reflect your specific experience. However, the general conclusions about the difference in labor cost should be applicable to any situation.

Although the following analysis focuses on two specific examples, large and small, the conclusions are generally applicable to branches or retail locations of almost any size. Financial institutions can have one or more large facilities with many smaller facilities or branches. While these locations have security systems in place, sizable institutions are usually performing a security upgrade somewhere, whether in the course of a major remodeling of a branch or the construction of a new branch. This continuous renewal of the underlying security systems presents an excellent

1.This requires careful management of supervision events and processes.

opportunity for bank security personnel to examine the merits of wireless security solutions.

While the number and types of burglary and intrusion detection devices vary from branch to branch, the goal of each installation remains the same: to keep employees and customers safe and secure and to reduce losses from robberies and break-ins.

Economic Advantages for a Typical Small Branch

Smaller branches use a lower number of monitored points than larger branches. For the purpose of discussion, we've used an example of a branch that has 20 monitored points as shown below.

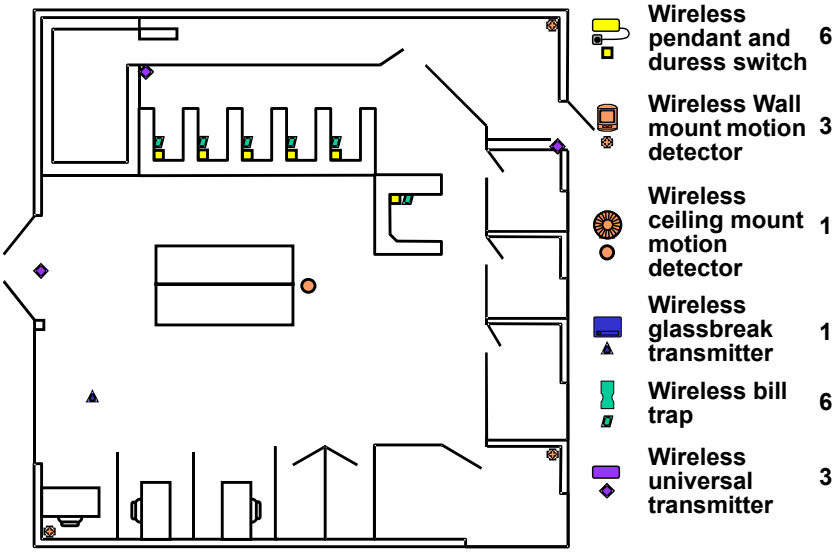


Figure 1 A typical small branch

For a small branch, the implementation of a wireless security solution compared to a hardwired solution can save from $3,500 to more than $7,500, due to the difficulty of running cables for a hardwired solution. This example illustrates a possible 38 percent cost saving for a single branch. Multiply this cost saving over a number of new or remodeled branches, and the savings can be significant. After the

wireless system is in place, each added point becomes all the more cost effective.

Table 1: Breakdown of small branch wireless savings

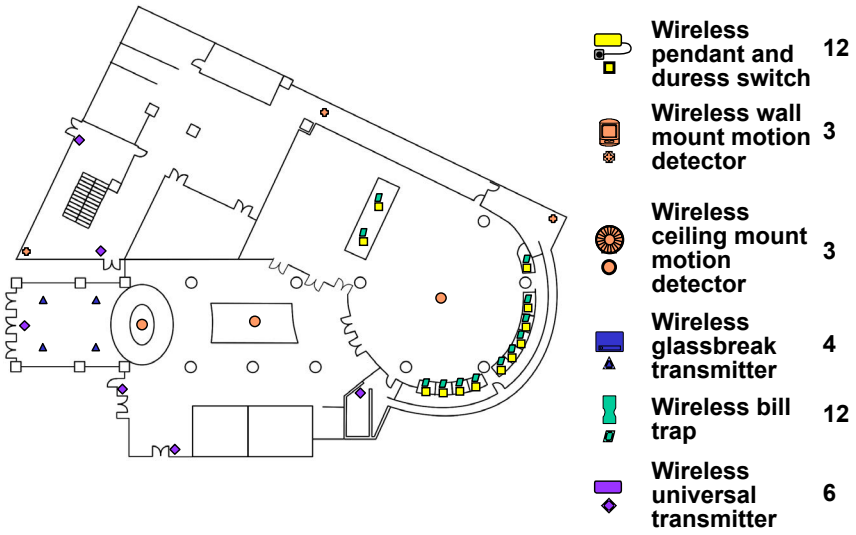
	Hardwired security system (20 points)				Wireless security system (20 points)			
	Equipment	**Labor hours**	**Labor**	**Total**	**Equipment**	**Labor hours**	**Labor**	**Total**
Complex	$4,000	107	$16,050	$20,050	$5,300	48	$7,200	$12,500
Typical	$4,000	76	$11,400	$15,400	$5,300	44	$6,600	$11,900

Table 2: Total small branch wireless savings

	Labor hours	**Dollars**	**Percentage**
Complex	59	$7550	38%
Typical	32	$3,500	23%

Economic Advantages for a Typical Large Branch

Larger branches use a higher number of detection points than smaller branches. For the purpose of discussion, the example branch has 40 monitored points as shown below.



Any mixture of wireless security devices should provide the same financial advantages. In fact, difficult-to-wire locations can provide even greater savings.

Figure 2 A typical large branch

For a large branch, the implementation of a wireless security solution compared to a hardwired solution can save from more than $6,000 to more than $14,000 per location. These savings result primarily from labor efficiencies yielded by the wireless solution due to ease of deployment. In the case of large facilities with complex wiring, the analysis shows a 41 percent cost savings. A typical large facility installation can yield a 24 percent savings.

Table 3: Breakdown of large branch wireless savings

	Hardwired security system (40 points)				Wireless security system (40 points)			
	Equipment	Labor hours	Labor	Total	Equipment	Labor hours	Labor	Total
Complex	$5,700	194	$29,100	$34,800	$9,100	77	$11,550	$20,650
Typical	$5,700	133	$19,950	$25,650	$9,100	70	$10,500	$19,600

Table 4: Total large branch wireless savings

	Labor hours	Dollars	Percentage
Complex	117	$14,150	41%
Typical	63	$6,050	24%

Reasons to Choose Inovonics as Your Wireless Security Provider

Wireless security solutions provide significant functional and economic advantages. Now consider some reasons why Inovonics is the wireless security provider of choice.

Market Leadership

For decades, Inovonics has been a pioneer and the market leader in the field of wireless sensor networks. Millions of Inovonics transmitters, repeaters, and receivers are installed in commercial installations throughout the world, including retail outlets, banks, hospitals, government buildings and other protected sites. Some of the most respected and well-known facilities in the world trust their safety and security to Inovonics.

Proven, Reliable Record

Inovonics offers the best range, reliability, sophisticated self-diagnostics, and scalability in the market today — all of which help to ensure reliable operation. The Inovonics system conducts periodic battery tests and provides a two-week advance notice if battery replacement is required. If a transmitter malfunctions, our system has the capability to provide an intelligent alert message so that security personnel can quickly and easily resolve the problem.

Solutions Known for Superior Performance

Inovonics security solutions use a 900 MHz, frequency-hopping, spread spectrum radio technology for superior reliability and performance. This is the same wireless technology approach adopted by the U.S. military due to its incomparable resistance to noise, interference and interception.

Flexibility

Inovonics security solutions are designed to provide maximum flexibility. They can be installed in conjunction with any major control panel from leading manufacturers such as

Honeywell, Bosch, Pacom, ICT and Sonitrol. Because Inovonics solutions can be deployed on virtually any security control panel, users are free to choose the security integrators with which they are most comfortable, including industry leaders like Johnson Controls, Everon, Securitas and Convergint.

Summary

Hardwired solutions present problems in the form of difficult or impossible deployments. The resulting cost of installation can be a primary drawback for hardwired security systems.

The examples of a small branch bank and a large branch bank demonstrate that wireless security solutions can provide savings of up to 41 percent per location compared to hardwired security solutions. These examples yield savings of $3,500 to more than $14,000 per branch, depending on the size of the location and the number of monitored detection points. With labor costs on the rise, these savings are likely to increase over time.

Wireless security has existed in the financial industry for decades. Early adopters started with wireless pendants and evolved their solutions over time. Banks are finding that after they adopt the infrastructure to accommodate wireless pendants, they can easily scale the security system by adding bill traps, motion detectors, glassbreaks and door contacts to the existing platform and reap greater economic benefits.

As commercial enterprises deploy wireless systems and experience their value, reliability, and dependability, more and more financial institutions are upgrading to Inovonics wireless security solutions for all of their security system needs.

For more information, contact us at 800.782.2709, option 1 or at www.inovonics.com.