

Designing and Building a UL Central Station with In-House Engineers

We chose 999 E. Touhy in Des Plaines, IL, for a number of reasons — primarily for its robustness and ability to house our operations. Secondly, it's a great location with several options for public transportation and its proximity to both business and personal services is one of the best in the Chicagoland area.

Once we secured space, the foremost requirements were to design a central station to satisfy our business needs and code requirements while minimizing environmental impact. That was a stated objective — to be the most efficient central station possible.

The next step was to create a space plan is unique in that our engineering staff designed and installed the operations and data center infrastructure, meaning the servers, telephony and data equipment ... the hardware we use to run our operations. Using our in-house engineers gave us ultimate control over the end product and intimate knowledge of the infrastructure, which allows us tremendous flexibility for the future,"

Larson explained. "The central station was purpose-built to enhance several aspects of EMERgency24's internal and customer-facing operations. The enhancements cover a wide range of areas, each with a focus on increasing operational efficiency, flexibility and accommodating future growth."

Below is a narrative by Larson explaining the planning and process to build a UL central station in this manner. To tackle a project of this magnitude, the first step was to set our goals then find the best location to help facilitate these.

Setting Goals
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Alarm Dealers can Earn Nine Percent More Each Year

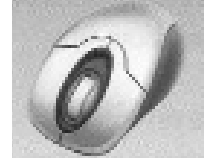
When a security professional plants their own flag and opens shop, one of the most common goals is to build a subscriber base to produce a reliable source of recurring revenue through monitored accounts.

Ideally, this constant cash flow pays the rent, covers payroll/insurance and stocks the service vehicle with salable product to generate even more revenue down the road.

Once a company gets into the comfortable zone where the ledgers show all black, there is opportunity to squeeze out even more revenue with the same number of accounts by paying EM24 monitoring fees annually instead of quarterly.

Here's how it works. EM24 offers two payment schedules — quarterly and annual. For the former, a dealer pays for three months at a time for all active accounts. A dealer set up to pay annually, however, is only responsible for 11 months of service for the year. That means EM24 dealers earn an extra nine percent from their revenue stream by paying the sum up front. This adds up to a significant sum. Below is a payment comparison using 150 accounts with 3 to 18 conditions.

Quarterly Plan
150 accounts X \$6.25 a month = \$2,812.50 per Q
X 4 = \$11,250
Annual Plan
150 accounts X \$6.25 X 11 = \$10,312.50
Annual Savings: \$937.50



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It's dramatic — the layout focuses on security and the seriousness of the task at hand. We set it up amphitheater-style using a tiered and raised cement floor grid system. All monitors face forward with the focal point being a video wall that shows data like calls in the cue, weather updates and national signal trends — we're building an interactive map for the video wall now. Using standard video components tied to our systems gives us ultimate flexibility to show whatever we want. We can display as one screen or use all of them as independent monitors to direct the monitors' attention to the most pertinent information at any given time.

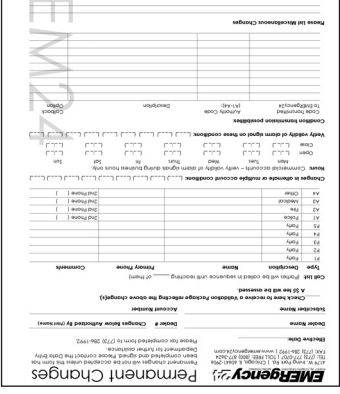
There is a command center in back from which management and supervisors can see everything. The orientation of the central station adds to its security too. No one can enter unseen as everyone faces the door up front. We implemented other security measures like access control redundancy with biometrics, plus you have to go through several locked doors to get to the central station. On top of that, we have video surveillance everywhere. This is very secure space designed for optimum functionality.

Functionality was the primary goal for each work station that has three computer screens and lots of space to work. The stations are solid-steel construction and other materials that will hold up for 24-hour use. We also have upright stations for monitors who prefer to stand, and soon, we will experiment with three treadmill stations for staff members to get exercise during their shift. Those will run at just one mile per hour, so it will not impact breathing or speaking clarity whatsoever.

For monitor comfort, each station is equipped with forced air ducts so everyone can control their environment. That ties into the key component of the entire operation — the people. The objective and focus of the new central station was to create an atmosphere where people perform to their highest level. As such, allowing monitors to have environmental control is important because they are considered components of the system. At EMBERgency24, we believe our monitors are the most important part of the entire system.

Validation Packages Sent Only By Request After the New Year

Dealers must use EM24 change request forms now



To maintain the highest level of control over account data entry, alarm dealers should get in the habit of using EMBERgency24 data entry forms.

To encourage the use, as of January 1, 2010, validation packages for changes will only be sent at the dealers request if non-EM24 forms are used. Please understand that EM24 alarm dealers will still be able to check all

knew the biggest challenge we faced was moving telephony and the related services because we are dependent on several external carriers to deliver signals.

This obstacle would have existed regardless if we built a new central station at the old Chicago location or if we leased space elsewhere, so that didn't factor into our decision to relocate. It would have been a little easier to build in Chicago because we moved out of one rate center to another — from Chicago's 773 area code to Des Plaines' 847. We needed to have a different type of service and receive permission to terminate 773 numbers in an 847 rate center even though the actual telephone numbers don't matter any more. But since the telephony equipment is located in a different area, the carriers had to find a way to communicate with their own LECs, or Local Exchanges, from the long distance carrier. We had to resolve this issue with multiple carriers for redundancy purposes and to ensure the operation of ancillary services. The underlying factor for all telephony issues, of course, is that we cannot be down for one second. Underwriters Laboratories central stations do not have the luxury of shutting off services to move. We must be live 100 percent of the time.

Engineering Redundancies

An entirely separate but simultaneous action to the architectural stage was the engineering process for electrical power, back-up power, mechanical and life-safety systems. When we moved to 999 E. Touhy, there was an existing 5,000-amp common feed, but we needed isolated power so not to be affected by other electrical systems serving the remaining 140,000 square feet in the building.

Once isolated and after the main switchgear was retrofitted to accommodate two 275-KW power supplies, we brought the power up to a utility room that we built on the 5th floor. We then routed it back to ground level and trenched the parking lot to connect twin 275-KW generators. The end result is that we have an N+1 electrical system meaning the configuration has at least one independent backup for each component to ensure system functionality in the event of a component failure. However, we did something unique to accomplish this — we separated the power so it doesn't all go to one circuit, instead, there are four different panels so that any one circuit can go and not affect the system.

The HVAC system consists of three 7.5-ton units directly above us on the rooftop: two to support the load on extreme-temperature days and one as an alternate. It has an interesting fallover with a controlled damper system that automatically switches to run one or multiple units as needed. To protect the data center and meet redundancy needs, we also installed two state-of-the-art 10-ton cooling units that sit on top of our raised floors. Basically, we are N+1 for all critical systems, even our receivers.

The Central Station

The central station is configured with large, multi-functional smart stations designed for ergonomics and user efficiency. There is also ample room and wiring in place to allow us to increase capacity any time we want.

Total Connect Lets You Offer Smart Home Capabilities to Subscribers Today

Honeywell's Total Connect, the leading remote service for security systems, provides your customers with PC and portable remote control, e-mail advisories and video services to enable officers only respond to an alarm after visual confirmation that a crime is in progress.

Verified response is a controversial policy that was implemented in some communities as a way to cut down on false alarm dispatches. However, because criminals knew the police were not coming, crime rose in those areas, most notably in Dallas where the law was scrapped after only a year. A much more effective policy to reduce false alarms is called Enhanced Call Verification (ECV), which is the foundation of the Model Alarm Ordinance developed by the Security Industry Alarm Coalition. ECV requires central-station monitors to attempt to verify the alarm activation by making a minimum of two phone calls to two different telephone numbers before dispatching law enforcement.

The first alarm-verification call is to the location where the alarm originated. If contact with a person is not made, a second call is placed to a different phone number. The secondary number, best practices dictate, should be to a telephone that is answered at all hours, preferably a cell phone of a decision maker who is authorized to request or bypass emergency response. Available to alarm-system owners even in areas that do not require it, ECV service is an excellent way to guard against municipal fines for false dispatches.

Remind Subscribers of the Importance of Inspections and Maintenance Each Year

Most manufacturers recommend annual testing of security equipment. One way to increase your revenue stream is to send a reminder about the need for maintenance on the anniversary of each installation. Sell your expertise and explain that only professionals have the knowledge to: ■ Calibrate sensors per specifications using approved testing methods. Only pros know product failure modes and re-installation techniques. ■ Simulate inputs, test sirens and put each component under test. ■ Set sensitivity, which demands a full understanding of fire detection theory and intended use of the equipment.

■ Coordinate with central station or local authorities to test sensors that will generate alarm signals. Remind your customers that to ensure their system operates at peak condition throughout its lifecycle, annual preventative maintenance is critical because even the best-designed alarm system can be rendered ineffective if it is improperly maintained or neglected.

Mobile Access to Ursecure.com for End Users

Alarm dealers should let their subscribers know they now can manage their alarm system by visiting <https://future.wz.com/ppc/> via mobile Internet devices such as a cell phone or personal digital assistant. The same login info and dealer-defined restrictions for each user automatically apply to mobile www.URSecure.com users. Subscribers with access to www.URSecure.com need only their Account Number, Access Code, Phone Number and e-mail address to their pocket PC to login.

Fight Verified Response Policies Locally for the Safety of Your Subscribers

Alarm dealers should involve themselves in local government and take every opportunity they have to protect their customers by warning municipal leaders about the dangers of a policy known as verified response whereby law enforcement officers only respond to an alarm after visual confirmation that a crime is in progress.

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Shots Fired When Owner Tries to Verify

On a recent afternoon, an alarm system owner was playing golf when he heard a security alarm coming from his home across the fairway. The man and his playing partner decided to check the home and saw that it had been ransacked before catching a glimpse of an intruder. The burglar fired the homeowner's .357 magnum at the pair as he fled. The spent round was found resting on the swimming pool cover, but the intruder was nowhere in sight at the time, but was later caught.

Looking back on it all, the homeowner says he'd done just about all he could to secure his property and believes when it comes down to it, a man has a right to defend his home. Still, next time he will let law enforcement check out an alarm. "I think I'll call 9-1-1 and let the sheriff's officers check the home out first," he said. "Doing it myself was not my best decision."