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Security Management Solutions for Multi-site Hotel Facilities

Background

The risks to the security of our infrastructure and to the safety of our people have increased dramatically over the past five years. Responsible public officials and business managers are expected today to provide effective responses to threats that were considered outside the realm of reasonable planning only a short time ago.

Fortunately, today's wired – and increasingly wireless – world, provides opportunities for effective safety and security approaches that fit within today's constrained operational and fiscal budgets. Solutions that were technologically and economically impractical only a few years ago are now becoming available for both commercial and governmental organizations at all levels.

The operation and management of multi-site hotel facilities presents complex challenges that are not readily addressed by traditional *stove pipe* stand-alone systems. Responding to unplanned events anywhere within the hotel properties requires information collection, communication, information management, decision support and response coordination. Many security management systems have emerged over the past several years that are intended to assist organizations in responding systematically to these events. Responding to unplanned events within a heterogeneous enterprise, however, is considerably more complex since, to be effective in realistic environments, it must also:

- Provide layered management in order to scale as the breadth and depth of the hotel properties expands;
- Maximize the effectiveness and consistency of operational personnel with limited training and re-training requirements;
- Coordinate activities among elements that have very different levels of systemization and automation;
- Accommodate different processes, protocols and policies among elements;
- Provide context to enable sophisticated decision support;
- Validate response compatibility with the policies and procedures of both the overall facility and the involved elements.

The version of the EndPoint system, called Site-in-Sight™, has been designed to provide a management framework to support integrated event response for multi-site facilities such as a chain of hotels. Among the key features of Site-in-Sight that enable it uniquely to address this challenge are:

- Loose integration with virtually any elemental system with standard TCP/IP communication protocols and an event-driven architecture that permits effective supervision of a large number of diverse, complex elemental systems;
- Integration of external, contextual information sources to aid decision support;
- Ability to support both local and centralized video processing to maximize both video coverage and network efficiency;
- Implementation on standard Microsoft Windows® platforms for cost effective deployment in operational environments; and
- Flexible presentation layers that permit adaptation of the system to specific facility needs and operational procedures.

In addition to the heterogeneous nature of the various hotel facilities, the design and implementation of security solutions for even moderately complex environments such as these is an extremely difficult undertaking since the enterprise being protected, the value distribution within the enterprise and the security threats are continuously evolving. Traditional security designs, therefore, can result in solutions that, over time, are protecting the wrong assets against the wrong threats.

Practical security solution design, therefore, need to accommodate that the nature of the problem that they initially need to solve is imperfectly known and that the problem will continue to evolve over the life of the system. It is also critical that these solution designs be capable of integrating new technology on a continual basis; not only for the usual reason that new technology typically enhances the cost-effectiveness of the system, but also because this new technology is available to the threat community and systems that cannot respond to technology change will rapidly be rendered ineffective. Effective security solutions that provide long-term utility in this complex and evolving environment, therefore, require a highly structured and disciplined design approach. At

the same time, it is not practical to approach every security challenge with a solution that is developed from first principles. As a practical matter, these designs must be approached within an implementation context that is, on the one hand, open and flexible while, on the other hand, is known to be cost-effective and poses low implementation risk.

Site-in-Sight has been developed as a solution framework that enables the development of sophisticated security solutions in a stable technical context that enables rapid implementation of cost-effective structures that can be adapted in various hotel sites to meet specific requirements and which can continue to evolve as requirements and technology change.

Critical Characteristics

While there are many options available to assist organizations in responding to security and safety challenges, there are two critical characteristics that all organizations must address to ensure that their investments in these areas are both effective and cost-effective.

The first characteristic is software functionality. Traditionally, solutions in this area have implemented most of their functionality in special purpose, proprietary hardware. However, as systems have become more complex and as the threat environment has accelerated its rate of change, the ability of any closed, inflexible, system to continue to meet today's challenges is becoming very limited. Providing both the responsiveness to a changing threat environment and the openness to incorporate new technologies and systems requires that the functional value of a solution be software-based and that the software continue to evolve to remain effective. This will not only protect the original investment in the solution, but eliminate the cost and disruption associated with replacement of solutions that have been made obsolete by changes in the threat environment or in the supported technology base.

The second characteristic is communication techniques. Once again, security and safety systems have historically been implemented with proprietary, dedicated communication protocols. For organizations with distributed resources (whether they are distributed around a campus, around a city, around the country or, literally, around the world) it is simply not practical to provide the necessary communications in a robust and cost-effective manner without taking full advantage of the capabilities of the Internet as well as local intranets and wireless communication meshes. While these new communication options can be utilized by safety and security systems, they are essentially different from the dedicated communication techniques of older systems and it requires basic changes in system design and implementation to use them effectively.

The Site-in-Sight solution enhances the safety and security of hotel organizations with distributed resources based upon these two critical characteristics.

The Site-in-Sight hotel solution can be adapted to a wide range of hotel properties in a wide range of environments, providing a critical backbone for implementing the state-of-the-art safety and security solutions that are required to meet the expectations being placed on hotels today.

Site-in-Sight takes full advantage of existing network communications between multiple remote sites and a central management organization and provides the following advantages:

- Provides a standard security, safety and emergency response system.

- Provides situational awareness for all hotels in the chain and all remote sites.
- Provides a timely, uniform response to all emergencies.
- Ensures security and safety standards for all facilities.
- Provides automatic remote notification of events – does not have to be monitored.
- Can be used to model and test response scenarios.
- Can integrate to the police and fire departments as well as other support groups.
- Provides an interface for government alerts as well as relevant related information such as news and weather for context.
- Provides two-way electronic communication for all remote sites.

Site-in-Sight leverages existing personnel and resources to enhance the hotel organization's ability to respond effectively to emergency situations by providing the information needed from all remote sites to assess their status and providing to all sites consistent information and guidance from the central organization. Site-in-Sight uses standard PC-class hardware and uses existing networks for all necessary communication. Site-in-Sight can be extended from the municipal level to regional levels to global levels as appropriate.

Integrating Site-in-Sight Systems with other Hotel Systems

Site-in-Sight is a decision-making tool and as such can integrate to other hotel systems to allow management to monitor, evaluate and control any of their facility functions.

Historically, hotels, clubs and resorts differentiated between their line (customer-facing) functions and their facility functions such as security. In the past few years there has been a growing awareness that facility functions are as much “guest service” functions as the classic reception, concierge, parking, and specialized recreational or leisure functions. Even though facility functions are behind the scenes, they are critical for a successful guest experience. In some cases, hotels are making security more visible to give their guests a comfort feeling with respect to safety.

Currently most of these hotels, clubs and resorts use software systems for their back office functions: accounting, membership and guest conveniences. They have shown that there is a quantifiable ROI when automating those work activities.

By integrating the facility functions, hotel management can get a triple benefit. First they can reduce the financial and reputation costs associated with unplanned security events. Second, they can derive a day-to-day operational benefit by better optimization of inefficiently utilized resources. And third, facilities that are perceived by guests to be efficient and safe can be marketed as such to increase revenues.

As noted above, Site-in-Sight is a management decision-making tool that can provides operational, situational and environmental awareness for all facilities, no matter how geographically dispersed the facilities are.

The Site-in-Sight software can be integrated to other facility function software and allow management to monitor, evaluate and control any of the facility functions. It provides management with a tool that can be extended to automatically initiate actions, ensure standard operating policy, save time and, at the same time, provide better service to their guests.

Security need not inhibit operations. If desired, Site-in-Sight facility framework systems can integrate all three areas of awareness: operational, situational and environmental.

Operational Awareness includes Guest Relations, Employee Operations and Resource Utilization. Operational awareness allows the facility to make the most effective use of human resources and save valuable staff time.

When Site-in-Sight framework software is integrated with operational systems, the status of operations for all facilities can be made visible at all times. This can enable a number of operational strategic initiatives and because the data base in the Site-in-Sight framework can be used to tell management what happened when and, in general,

improve overall business intelligence of the hotel chain. This increased operational awareness can enable hotel organizations to focus more staff time on customer-facing activities. It can accommodate full reporting of customer requests and the status of those requests. It also allows hotel organizations to make better decisions, decisions that can be based on experience and facts.

Situational Awareness includes Safety, Security and Emergency Management. As noted, with Site-in-Sight, the status of the entire facility is visible at all times providing full reporting of activities, including who accessed an area and when, who was denied access, system logs and alarms, and a record of who is where at any time.

Framework software can be used to set and maintain a Uniform Policy. The Site-in-Sight system displays the company policy with event information

To reduce the administrative burden of facility/status monitoring and trend analysis, the user interface for facility framework systems do not require human monitoring. They are automated systems that are event driven. They are designed to contact the right people at the right time with the right information. Upon the occurrence of an event, the facility framework systems can contact the pre-designated personnel through a variety of communication means including PDA or cell phone.

Facility framework software can be integrated to outside agencies (e.g. Police) for better response to events that occur at the facility and to obtain reporting of external events in the area that may affect the facility.

Environmental Awareness is a third optional integration of Site-in-Sight systems. Site-in-Sight can be integrated to the so-called "Green Functions". These functions are those that can reduce the carbon footprint, functions such as electricity or water usage. Electrical rates run 6 to 12 cents per kilowatt hour. By having a management awareness system that can be used to monitor and control lighting in areas and HVAC interfaces, many enterprises have been able to reduce total utility costs by 8-10 %.

The impact of these savings goes beyond expense reduction. It is also a desirable function for security lock down situations, both for limiting and de-limiting lighting in sensitive areas. Customers need to believe that they are in a secure facility. However, an even higher goal would be for the guests to perceive that the hotel facility was both safe, efficient.

Conclusion

Site-in-Sight is a critical element in the design process of multi-site hotel facilities required to meet the security challenges of today – and tomorrow. It is also, however, the core backbone of the implemented solution itself. Because Site-in-Sight bridges these two essential elements of the implementation of security solutions it is uniquely able to provide effective, durable solutions to the most significant security challenges facing the hotel industry today.