

Emerging Technologies & Trends

Access Control Credentials

As the security landscape continues to evolve in new and complex ways, the industry is quickly moving beyond static, proprietary access control architectures to more secure and open solutions. The convergence of multiple applications on a credential, be it a smart card or other devices, is an accelerating trend. Many organizations see increased value in advanced credentials as it enables them to add more applications to existing physical access systems, logical systems, or extends the use of existing applications. Government standards such as Homeland Security Presidential Directive-12 (HSPD-12), Personal Identification Verification (PIV), and Federal Information Processing Standards Publication 201 (FIPS-201) continue to drive private sector market trends. It has been projected that the percentage of NFC-enabled phones will soon increase to a tipping point where their usage for broad scale authentication will become viable. Bluetooth may also be utilized as the transmission medium for the credential. In addition to advances in the physical application of credentials, logical access integration is beginning to gain momentum. The Physical Security Interoperability Association (PSIA) very recently released a draft proposal of The Physical-Logical Access Interoperability (PLAI) specification that demonstrates the potential of these concepts.

Biometrics

Over the last decade the security industry has developed numerous biometrics offerings to meet multifactor and advanced authentication requirements. Hand geometry, iris, fingerprint and other biometric offerings are very mature and the industry does not seem to be on the precipice of a revolutionary offering. Most manufacturers are now differentiating themselves by decreasing read times, improving cost effectiveness, and providing software integrations with the major access control platforms. Stanley's EyeLock products have dramatically improved read speeds with their approach to Iris, and provide a cost effective solution in extremely high and medium throughput applications. Entertech Suprema offers integrated fingerprint and facial detection readers whose performance has improved over past generations and manufacturers. FST's IMID Digital Doorman offers a packaged fusion of facial, behavior, voice and speech biometrics, with an integrated QR code scanner for processing unenrolled visitors.



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Video Management Systems

Video Management Systems (VMS) continue to evolve and become more sophisticated. Features allow users to obtain a common operating picture and provide additional system and information integration that was not possible until recently. Many VMS platforms are addressing usability by simplifying the user interface and working to make the operation as intuitive as possible. Most VMS platforms are using open standards or at the very least offer an open architecture using a software development kit (SDK) or application programming interface (API) to provide a means of integrating other products into a common user interface. Two-way, full-duplex audio integration provide intercom or public safety functionality to targeted locations, which is being a mainstream feature of the larger VMS. Mobile access is maturing as many VMS vendors are providing applications or access to their systems or functionality to smart phones, tablets, and web browsers. In addition, some VMS are allowing the mobile's camera to become another surveillance end point. VSaaS continues to evolve as new entrants into the market further develop the technology, however functionality is still limited compared to a traditional VMS.

Security Network Health Monitoring

Most physical security technology is now IP network connected, and at the same time this infrastructure is becoming more complex and complicated to implement. This drives a need for tools to reduce system implementation complexity and monitor the health of the operating infrastructure. Most VMS manufacturers are beginning to invest in better monitoring of, and reporting on, faults related to the surveillance hardware directly integrated with the system. Some Access Control Systems also provide traditional NMS capabilities, bringing in other network connected devices, but features are dated and limited. For network security health monitoring of integrated systems, integrators should look to utilize an established IT Management Platform such as Solarwinds, or invest in a security specific health monitoring tool such as Vunetrix. For standalone VMS platforms, internal features may meet the integrator's needs if monitoring of the network layer is not of concern.



Edge Recording

With the recent purchase of the industry leading edge recording manufacturer VideoIQ for their analytics capabilities, there is some question as to where edge recording technology will evolve. With most camera manufacturers moving to support Secure Digital eXtended Capacity (SDXC) format cards, cost effective edge storage capacities will soon reach and exceed 256GB. The usability and reliability of edge storage however is in question. VMS manufacturers are beginning to provide more sophisticated integration with SD card storage, allowing for failover, trickle, and VSaaS implementations with all or a subset of the video storage at the edge. However most camera manufacturers edge storage and control is proprietary, leaving functional integrations with most VMS lagging.