

Complex building management becomes a paragon of modern IP technology

With integrated Milestone IP video surveillance and Paxton Access control, the Barry Family Campus Corporation centrally and remotely handles operation of the Minneapolis Jewish Community facilities including school, daycare, health, recreation and cultural facilities while ensuring security for the safety of students, staff and community members.

Challenges: This large and complex campus of expanding buildings and outdoor facilities is used by multiple agencies for infant daycare through 8th grade education, a huge health and fitness club, a theater and art gallery, a senior



center, night-school and summer programs, events, and offices. The constant flow of traffic and people seven days a week for so many varied activities is very demanding for operational management. Access control and surveillance systems were added separately over the years in each area creating a patchwork of disconnected and outdated security systems that were inefficient and impractical for the growing community offerings.

Solutions: IT infrastructure partner Paragon Solutions Group, Inc. has implemented an open platform Milestone XProtect® IP video management software solution that is integrated with Paxton Access' Net2 access control for total overview and control. Video from existing Panasonic analog cameras are converted to digital data via Axis video encoders and additional Axis network cameras have been added in new locations.

Advantages: The campus operations are now set up for a unified system with central control of the community facilities and activities, day or night, with remote access to see the video and respond fast to out-of-hours alerts. The Milestone surveillance software integrated with Paxton Access Net2 modernizes the existing HID cards into a networked, video-enabled solution that is more effective and efficient to maintain with the standard IT resources, infrastructure and equipment. The entire system is powerful and easy to manage, with the flexibility to scale up in the future as more buildings are added and new technological innovations come to market. Above all, community members know that the security will continue to be the best possible for ensuring safety in their busy lives.

St. Louis Park is a suburb near the heart of Minneapolis, Minnesota, where the Barry Family Campus (BFC) has 200,000 square feet of Jewish community buildings nestled in a 25-acre site that's a wooded oasis at the end of a road. Between students, faculty, parents, club members, business and maintenance people, over 1,500 people stream through the bustling complex daily. Over 400 parking places can be filled with cars and school buses.



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Barry Family Campus Corporation is an umbrella property management company, administering the facilities that house eight non-profit organizations who share the costs of running and maintaining the buildings and its resources.

The largest of these organizations is the Sabes Jewish Community Center (JCC), who owned the original building that has since been expanded upon. A big health and fitness club (with indoor and outdoor pools, sauna, whirlpools, walking tracks, massage rooms, gymnasium, and workout studios) has nearly 2,500 family memberships and is open 5:30 a.m. to 10 p.m. seven days a week. The Early Childhood Center (ECC) provides daycare (toddlers to kindergarten) with about 125 children, and a special infant center has a separate wing on its own that is quite large. The Sabes JCC also has an active senior program with the 'Silver Sneakers' group that has been such a success it has spread to national rollout. They offer aerobics classes, lectures, films, dances and other activities.

The community also provides the Talmud Torah where students learn about their rich heritage, customs, Hebrew language and religious foundations. Programs and classes are offered in the late afternoons, evenings and weekends. Another partner agency involved in this campus is the The Heilicher Minneapolis Jewish Day School (K-8) in a very high, tech 68,000 square foot wing that was built in 2001.

Other agencies include The Minneapolis Jewish Community Education Service, as well as the Jewish Historical Society of Minnesota which archives important documents. The B'nai Brith Youth Organization is a tenant here with club nights and activities, too.

The campus includes a beautiful 300-seat proscenium theater, an art gallery, and multi-purpose community rooms used by all the agencies. A full working kitchen services everyone.

Bruce Margolis, BFC Operations Director, explains how the Barry Family Campus Corporation not only manages the property's maintenance, engineering and other physical needs of the building, but also the scheduling of rentals for the facility offerings, similar to a convention center with multiple events. He explains: "We're integrating event management, catering, AV equipment, hospitality services, building maintenance and security. Fortunately, the IT Director had great vision when the education wing was added in 2001, to wire the whole complex with CAT-5 network cabling and a nice server room that set up the infrastructure we've been able to take advantage of to centralize our operations with the networked security implementation of Milestone IP video, Paxton Access, and a new HVAC EMS system."



Paragon Solutions Group came into the picture in 2008 as the IT networking partner who has helped the BFC implement their new IT infrastructure and security solution, efficiently utilizing existing equipment as much as possible.



Outdated analog systems compromised security

"In the Jewish communities today, security is much more of an issue than it used to be. We are near a city and this campus needs to protect children and entire families, so security and safety are big issues of concern to our members," relates Margolis candidly.

The campus used to have an analog video surveillance system (CCTV) with VCRs and multiplexers. The tapes had to be changed every three days.

"Trying to pluck any information out of the tapes was so hard and very bad quality - it took hours to find anything and if you could, it was worthless. Likewise, an old Galaxy access control system was not kept upgraded and was no longer supported by the vendor. So the entire security system was a mess hanging by a thread. Previous managers had just added new elements on top of old through the years, all of it undocumented," recalls Margolis, and continues: "We knew we had to do something, and the vendors used before were the old-fashioned alarm installer types. Paragon Solutions Group has been extremely professional and very patient in helping us weed through the antiquated system to investigate what we had, what we could keep or had to throw out. The fire marshal came in to review his requirements, too."

Open platform IP is scalable and future-ready

Margolis started to look at networked solutions to bring the campus up to date, but didn't have enough budget to do a totally new security installation. He wanted to keep the analog Panasonic cameras that were still working fine, so Paragon Solutions Group implemented a hybrid system with Axis encoders converting the analog video to digital feed into the Milestone management software.

The IT Director, Ofer Alphabet, was a total proponent for the IP approach and the network infrastructure now in place is very robust. A separate V-LAN for the security was created that is easy to expand over time. As the analog cameras reach their end of life, BFC is adding Axis network cameras like a new pan-tilt-zoom, megapixel, or whatever comes out in future that fits their needs.

"After many hours of cabling to set up the new infrastructure, we wished we'd taken photos of the old mess of a setup, so we could show the dramatic difference to our new streamlined solution!" chuckles Todd Vojta, President of Paragon Solutions Group.

"The goal was to upgrade the system platform. Every agency using the campus had security requests and I realized we needed an approach that could be managed flexibly in phases, to scale and grow and upgrade over time. For example, the art gallery wanted extra security with both the surveillance and the access control, so we can just put a new camera in there to detect motion and send alerts if there's activity at night."



Efficient migration and video-enabled access control

The card access system was another side of the transition. Paragon Solutions Group achieved a seamless upgrade of the access control by using the existing HID cards and integrating them into the new Paxton Access networked system, converting to digital data.

"We were able to keep the HID readers and replace the old Galaxy access control system at the head end with the new Paxton Access software and door controllers. Users kept their same cards and couldn't see we had upgraded the entire system behind it to the Paxton Net2 software, which is also integrated with the Milestone IP video," explains Vojta.

The campus has a lot of doors. Currently, there are readers on doors for internal zones like an office block, the Infant Care Center, and three main entrances for out-of-hours control. A dozen other doors are monitored for other events. Input/Output (I/O) contacts trigger the Milestone video to record when doors open and the cameras are set up to track people movement. Around 750 cards are in active controlled circulation in the community's membership.

"The Paxton Access Net2 reporting functionality is awesome. The reports tell me who was here, when, by groups: parents or JCC administration, fitness staff, other agency personnel, etc. For example, I can sort to see a list of just the family members who have cards to access the campus. This system is an amazing tool that's very useful in managing the complexity of this facility's operation," states Margolis, and continues: "The event log in Net2 is great to share with the agencies as a management tool on their membership and personnel activities, too. In the Paxton Access interface, I can simply click on the camera icon next to a listed access event to see the related Milestone video of the action."



Margolis describes how he can easily make a matrix of users vs. time zones vs. access levels vs. door locations with the Paxton Access software. The cross-referencing of the data combined with the BFC scheduling program of the activities and events going on at different times throughout the building, combined with the Milestone video from the cameras at each door, gives the full picture at any time.

The fitness club has nearly 2,500 family memberships with separate cards that can be combined for both access and ID control. Paxton has the ability to print information from its database, including photos of the members and IDs, in order to ramp up the security even more.



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IP management tools ensure a safer community

To illustrate the benefits of the system overview, Margolis recalls a problem that occurred at one time with a fitness employee who was not doing the pool water tests properly. The Milestone video proved she was not spending enough time in the areas to do the job right.

"The community has reasonable expectations for their health and security which this system helps us to enforce and ensure," confirms Margolis.

"Since Milestone XProtect and Paxton Access Net2 are both IP software, it's a combined IT solution with data that has useful information for running the businesses of these organizations better, to aid the facility in optimal operations and improved customer satisfaction," concludes Vojta.

The video can verify that the persons using the access control are who they are supposed to be, as well. They do not want someone finding a lost card and using it, for example.

"It's a sensitive environment with the children's safety top of mind, and we have a responsibility to the community," says Vojta. "The abilities of the Milestone video combined with the Paxton Access provide multiple layers of security that address any questions that might come up. With this flexible, scalable, and robust IP security system, we are simultaneously fiscally responsible to the members. They entrust their families to this campus daily and we meet their needs with the best technology for today and tomorrow. The long term options give a good return on the BFC investment."



An implementation partner with expertise and foresight

"Paragon's guys are aces at understanding the whole system and our needs. They were able to do about 95% of the implementation independently, and it was very complex with all the old systems that had been patched together over the years. They were patient, knowledgeable, and effective. Now we've got the infrastructure and the platform in place to take care of our needs for many years to come," says a satisfied Margolis.

"As an integrator it's not only our job to understand their needs today but also to listen and ensure they are headed down the right migration path so when they want to move on to stages two and three, they are future-ready and can reap their system investments over time," explains Vojta. "Everything we've planned is coming to fruition over the years and that's very gratifying for both Paragon Solutions Group and the BFC."



Milestone software tailors for powerful, cost-effective performance

Margolis comments: "It's been an education for me to learn how to manage the storage required in conjunction with the frame rates and resolutions at which we choose to record in Milestone. And once the fall school season started, our needs became different than during the summer."

Vojta reports that Margolis has become an expert in what video means to the network, to storage and to system performance. "Milestone lets you effectively manage system performance by working with the frame rate, the resolution and the compression, camera by camera, in the software settings, by day of the week and times, in the flexible and variable scheduling. Managed properly, BFC gets everything they want to have for their operations."

Initially, the storage disks were filling up and slowing down the system because Margolis activated the Milestone archiving without setting it to save to another drive. He simply checked the manual and was quickly able to figure out how to improve things.

"None of this was destructive to the system; it just reacted differently depending on the settings chosen. He tweaked it and found his sweet spots. Bruce has always been in front of us by two or three steps all through the implementation process because it was exciting to move onto the new platform. He can tailor the system to exactly what he needs. Using the more advanced features of the Milestone software helps keep the costs in line because he's managing it well," praises Vojta.

Continuing value-adding integrations

The Barry Family Campus Corporation is also implementing a new Heating-Ventilating-Air Conditioning (HVAC) system with a new KMC Energy Management System (EMS) that is digital and even more complex than the security system, with 127 different units for controlling all the elements.

"I can log into this HVAC system along with the Milestone-Paxton, like if I get a call at night from people holding an event who say it's getting too warm in the theater, and lower the temperature for them from home. Or someone comes in late and needs a changed schedule on their access, I can handle that without having to come in to the campus," explains Margolis happily, and adds:

"As facilities director for a very busy and complex property, I really like the remote access to the Milestone-Paxton system. My wife probably doesn't appreciate it when I work from home at night, but the system is great – it's fun! Milestone and Paxton are my new obsession!"



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Technical information

Surveillance System: As of November 2008, the BFC has 39 cameras running on Milestone XProtect® Professional. 36 cameras are Panasonic analog cameras models WV CP-234 and WV CP-464. The analog cameras are being encoded by Axis 243Qs blades that are housed in 3 Axis 291 video encoders. There are also 3 IP cameras (2 Axis 215 PTZs and 1 Axis 212). All cameras are recording on motion detection into the Milestone software at 18 frames per second, ranging in resolution size from 640 x 480 to 1280 x 1024. The Milestone XProtect® Smart Client is installed on various machines throughout the building for viewing the images, live or recorded.

Access Control: Paxton Access Net2 software is operating with 9 ACUs and 6 I/O boards. The ACUs are controlling the readers, strikes, and contacts at 9 doors. The I/O boards are monitoring miscellaneous door contacts throughout the campus. All ACUs are networked together through a TCP-IP 485 interface that allows the Paxton Access system to talk on the network.

Network Infrastructure: The "Server Room" houses the Milestone/Paxton server - an HP DL 380. An HP NAS1000 with 1.36 TB of storage is allocated for Milestone, and allows for 12 days of video retention on the 39 cameras at the current resolution and FPS settings. There are four network switches dispersed throughout the campus. The main switch, housed in the "Server Room" is an HP Procurve 4104GL J4887A. In the "Security Closet" there is an HP Procurve 2524. The Axis 243Q encoders and an Axis 215 are connected to this switch. Downstairs, there is another HP Procurve 2524 with one Axis 215 connected to it. The third switch is installed in the "Copy Room" with an Axis 212 connected to it. All three switches are connected to the main switch via fiber links.

The Barry Family Campus is home to 3 partner agencies and 5 other agencies serving the Minneapolis Jewish Community:

The Sabes JCC is a multifaceted organization servicing the entire community with programs and services in many areas including an early childhood center, health & fitness, recreation, Jewish arts & humanities, senior services, afterschool programs, day camp, special events and much more. JCC membership, programs and services are available to all regardless of race or religion. The Sabes JCC facility features over 195,000 square feet of space to meet a wide range of events and classes. 6,000 plus members and thousands of program participants yearly gather to be enriched, educated, and enlightened. www.sabesjcc.org

The **Heilicher Minneapolis Jewish Day School** provides a pluralistic, egalitarian program that respects the diversity of Jewish life and practice. The school is generously supported by the [Minneapolis Jewish Federation](http://www.minneapolisjewishfederation.org). Grades K through 8, made up of more than 350 students, have been permanently located on the Barry Family Campus since the 1997-98 school year. www.mjds.net

The **Talmud Torah of Minneapolis** serves families and students from grades one through twelve through a varied Jewish curriculum. Students learn about their rich heritage, customs, Hebrew language and religious foundations from committed, professional educators. www.talmudtorahmpls.org

Paragon Solutions, Inc. is a single-source provider of leading-edge IP/IT services that connect and protect facilities, people and data for organizations of all sizes. Based on the needs, Paragon Solutions Group creates a custom, converged IP platform that leverages existing technology, increasing operating efficiency, productivity and customer satisfaction, while reducing total cost of ownership. Automatic upgrades and ongoing 24/7 support ensure that systems retain their performance edge as needs evolve. Paragon Solutions Group makes IP security, communications and data easy, friendly and affordable. www.paragon.net



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Paxton Access Inc. is the US Sales and Marketing office for Paxton Access Ltd, the internationally expanding British manufacturer of access control systems. Established in 2006, based in Bellevue; Paxton Access Inc. is building a comprehensive network of dealers and integrators for Net2, their leading networkable access control solution. With engineering excellence and a full 5 year product guarantee Paxton Access Ltd continue to enjoy significant increase in market activity across the globe. Paxton Access Ltd is the UK market leader whose confidence, in the quality and reliability of their equipment, shines through.
www.paxton-access.com

About Milestone Systems

Founded in 1998, Milestone Systems is the global industry leader in open platform IP video management software. The XProtect® platform delivers powerful surveillance that is easy to manage, reliable and proven in thousands of customer installations around the world. With support for the widest choice in network hardware and integration with other systems, XProtect provides best-in-class solutions to video enable organizations – managing risks, protecting people and assets, optimizing processes and reducing costs. Milestone software is sold through authorized and certified partners. For more information, visit www.milestonesys.com



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