# Enjoy your visit, but please don't touch the artwork.

Detroit Institute of Arts relies on network surveillance technology
to protect its priceless collection and improve the visitor experience.

**Organization:**
Detroit Institute of Arts

**Location:**
Detroit, Michigan, USA

**Industry segment:**
Tourism

**Application:**
Customer experience,
asset protection

**Axis partner:**
Art Sentry

### Protecting a priceless collection

The Detroit Institute of Arts (DIA) has been a mainstay of the Motor City's art scene for well over a century. Residing in its current location since 1927, the three-story Beaux Arts style building has undergone two expansions over the years and now measures 658,000 square feet and includes more than 100 galleries for museum visitors to explore. With over 65,000 pieces of art that date from the earliest civilizations to the present, the DIA creates an experience for visitors that they can't find in books, on TV or online. The inviting floorplan encourages visitors to meander through the galleries, appreciate the artistry of the painters and sculptors, and chat with docents to learn more about the items on display.

As its property and collection continued to grow, it became evident that the museum needed to upgrade its security system.

"There reaches a point where you just can't afford to put security guards in every room," said Eric Drewry, Director of Protection Services for the Detroit Institute of Arts. "And our old DVR camera technology wasn't enough to bridge the gap."

So DIA embarked on a multi-year project to improve its surveillance system and automate the communication between guards and video cameras to better protect the museum's priceless artwork. "It was important to us that whatever we implemented would be highly discreet," said Drewry. "We don't want to intimidate visitors. We want them to enjoy their museum experience."

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# Doing more with less

To help the museum achieve its goal, DIA hired Art Sentry, an Axis partner and technology integrator with extensive experience in museum security. "The challenge we faced is that a third of the museum was built back in the 1920s," said Drewry. "It was never designed to be piped out for any sort of wiring, or cameras, or fire alarm, or any technology really. Yet that's where some of our most vulnerable pieces of art hang."

To preserve the historic integrity of the galleries, Art Sentry began by upgrading surveillance in the galleries with quad-streaming technology from Axis. The technology is comprised of a multi-channel AXIS F34 Main Unit that simultaneously streams views from four separate AXIS F1015 Sensor Units through one Ethernet port. Each highly discreet lens covers a wide field of view – up to 97° – to ensure maximum coverage of the gallery. The units also support Wide Dynamic Range with Forensic Capture which enables them to capture a high level of detail in scenes with both bright light and dark shadow. This is especially helpful to museum curators and the conservation team in case of mishaps or policy violations regarding physical contact with the art.

"It also allows us to be so much less intrusive in the galleries," said Drewry. "We didn't have to tear up floors and walls and ceiling or put in eyesore pipes in the corners to hide cabling."

This solution is proving particularly cost effective because a quad-view AXIS F Main Unit allows up to four Axis sensor units to share a single IP address through the Ethernet port. This translates into needing to purchase fewer licensing fees than would be necessary with a traditional multi-camera solution.

## Look but don't touch
The Axis cameras integrate with Art Sentry's Object Protection Software. Using a combination of motion detection and virtual cross-line detection technology, the system creates an invisible protection zone around each work of art.

If an Axis sensor detects someone breaching the zone, it triggers a pre-programmed message or audible alarm tone as a warning to the individual and immediately notifies security staff who can intercede if necessary. At the same time, live video of the incident automatically streams to the museum's security center for review and forensic evidence.

Dan Lazuta of Art Sentry reports that data from multiple museums across the United States show that the combination of Axis cameras, Art Sentry software and audible alerts can effectively detect and deter about 92 percent of attempts to touch the artwork. The DIA is experiencing similar results with the system.

## Improving rapport with security staff
"Using a tone or a recorded message to correct behavior is better psychology than having a guard confront the individual," said Drewry. "We don't want to single out or embarrass anyone, although we know there will be times when guards will have to intercede."

This approach has definitely paid off. "In the past, we couldn't get through three weeks of an exhibition, large or small, without having a visitor complaint about security," said Drewry. "After the new security system was in place, we ran a blockbuster exhibition for 20 weeks and got only one comment card on security and it was positive."

Drewry was referring to an incident where a couple's child set off the alarm. The parents corrected the child and a security officer followed up by gently explaining to the child why the museum doesn't allow the artwork to be touched.
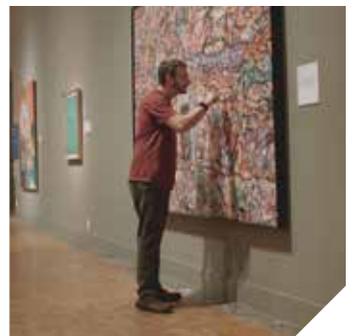
"Before we had this new system, security staff felt the burden of protecting the collection was all on their shoulders," said Drewry. "Now they can go on patrol and feel confident that the cameras will catch anything that happens when they're not in the room."

He also says the new system allows the guards to engage more often in positive interactions with visitors instead of always correcting their behavior. "It's definitely improved the visitor experience with our security staff."

## Identifying where to be more proactive

According to before-and-after statistics from other Art Sentry museum clients, the object protection solution from Axis and Art Sentry typically catches 75 times more incidents of artwork violations than previously seen and reported by security staff alone.

DIA relies on this level of performance to help the museum to continually improve its security. Since the new system began registering gallery breaches, Drewry has been able to plot hotspots where incidents most frequently occur. With this information in hand the museum staff can notice trends, consider probable causes, implement tactics to fix those issues and see if those changes work.

"It's helped us deploy resources and solutions more effectively," said Drewry. Those solutions might include anything from posting more guards or assigning docents to high-incident galleries to adding direct signage, moving furniture or installing physical barriers.

This object protection solution also offers a lot of potential for customizing security for special exhibitions.

"If we want to program the audio alert with an accented voice that reflects the period of art in a particular gallery, we can do that," said Drewry.

He also sees possibilities for using the technology during after-hours events to help keep people from straying from the event space into other areas of the museum. "We can set up an invisible boundary like we do in the galleries," suggested Drewry. "When the Axis sensor detects someone crossing that boundary, it will trigger a verbal alert telling the individual that he or she has entered a restricted area."

The museum is also considering ways they might increase their return on investment by using the system for non-security applications. For instance, they might integrate third-party analytics to map visitor traffic and see how people move through the museum or linger at certain pieces of art, which would be useful information for curators. Or they might add smoke and fire detection capabilities to the system enabling it to trigger fire and smoke alarms.

"It's always been our goal to make sure our security technology benefits as many departments as possible," said Drewry. "The system has a lot of flexibility and we're just beginning to explore all it can do for us."
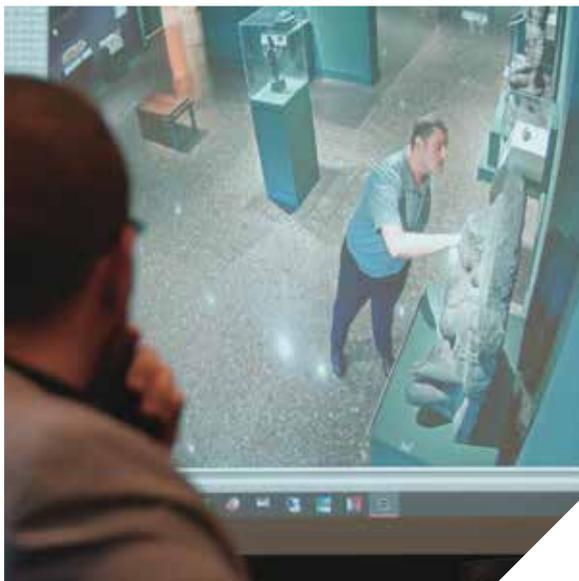
# About Axis Communications

Axis enables a smarter and safer world by creating network solutions that provide insights for improving security and new ways of doing business. As the industry leader in network video, Axis offers products and services for video surveillance and analytics, access control, and audio systems. Axis has more than 3,000 dedicated employees in over 50 countries and collaborates with partners worldwide to deliver customer solutions. Axis was founded in 1984 and has its headquarters in Lund, Sweden.

For more information about Axis, please visit our website www.axis.com.

To watch the Detroit Institute of Arts video case study, visit www.axis-communications.com/detroit-institute-of-arts
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