

Sony robotic HD cameras bring student safety and elevated video coverage together in one shot.

CASE STUDY

Customer:

- Northern Illinois University

Industry:

- Sports

Challenges:

- Implement an effective video capture solution to record football practices and games for review by coaches and players.
- Improve video production process while maintaining highest level of student safety.

Solution:

- Installed Sony high-definition robotic cameras in the school's football stadium.

Results:

- Delivers more reliable and uniform video coverage, with consistent angles.
- Reduced need for manual camera operators, leading to improved student safety.



At Northern Illinois University, quality video production is a top priority, but even that goal takes a back seat to student safety. To find the right balance between the two, the school's Media Services team is using Sony's high-definition BRC robotic cameras to record football practices for review by the coaching staff and players.

The media services team at NIU has supported the school's football team with film/video support for coaching evaluation for more than 25 years – transitioning from film to standard video to its current use of HD cameras.

The idea of turning to robotics for more effective use of video cameras actually started with NIU's music department, where professors wanted to roll-out a distance learning program with musicians and artists from around the world who could "perform" in near real-time from their locations with students on the NIU campus.

This led to the installation of two Sony robotic cameras in the school's concert hall (since increased to four). The benefits were immediately clear: more consistent video coverage with the right angles captured each time.

The success of the robotic cameras in that application led the media services team to investigate a similar solution for recording football practices, determining what type of solution would best meet the coaching staff's needs.

"The cameras needed to be flexible enough to capture all the detail that the coaches needed to see," said Jay Orbik, Director of Media Services for Northern Illinois University. "They wanted the quality of HD imagery, to see the detail of players' footwork, and they needed footage from a variety of angles." The school is currently using its cameras in SD mode since the software and hardware solution used by the football staff is not completely optimized for HD content. But having the HD cameras in place now makes them ready for the future.

Prior to the current use of robotic cameras, the school used a combination of four cameras in its football stadium: two on secure locations on wings of the stadium's press box, protected from the elements; another camera operated from on top of a semi-permanent platform structure attached to the south end zone scoreboard. The last camera had been

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–Jay Orbik,
Director of Media
Services for Northern
Illinois University

operating from a maintenance lift stationed on the field at the north end zone.

A tragedy at another school, which resulted in a student’s death, changed that fourth camera’s position.

“One of the major concerns with using lifts and platforms is the safety of the camera operators, usually students, especially during inclement weather,” said Orbik. “Also, anytime there was heavy rain and wind, we had to take that manual camera operator down off the lift and remove the platform camera, which reduced our camera angles, presenting us with a practical problem of having only two cameras rolling.”

So the challenge Orbik and his team faced was how to keep cameras rolling if weather conditions required the lift and platform cameras to return to the ground.

The media services team explored several possible alternatives, including the construction of different types of structures to allow for safer and more permanent camera placements, without the need for a manual operator.

What they came up with was an articulated structure that could be easily folded and lowered so camera maintenance could be performed without the need for a lift. “Plus, it removed the challenge of wind restrictions, allowing us to get angles and shots that we couldn’t before,” Orbik said. “We ran a series of tests, and immediately noticed the improved image quality, as well as the

quality of the shots we were able to get. And most important, the coaching staff and the students liked it, so we continued to move forward.”

With its newest combination of Sony robotic cameras in place – one each permanently installed in each end zone, protected from the elements – the results have been more “reliable and uniform coverage, with the angles always staying the same,” Orbik said.

The stadium’s robotic cameras are controlled via the camera’s joystick controller, with signals sent by fiber to editing stations located within the facility.

In fact, NIU now has 10 Sony robotic cameras in total: the two in the football stadium, four in the music hall, plus four more in a flight pack ready to go for various productions around campus.

“The image quality is fantastic, but that’s what we expected with Sony cameras,” Orbik said. “I’ve been a user of them for more than 20 years now, so I know what they can produce from an image standpoint.”

He added, “Using the Sony robotic cameras, we successfully answered the question of ‘How can we get the football team what they need and still maintain student safety.’ This solution has helped us make it safer for our students, and it helps the team have four cameras rolling even in inclement weather. It’s a time-saver, a money-saver and a win-win all around.”