

Creighton University

Panopto lecture capture goes campus-wide at Creighton University



MONTHS



RECORDINGS



DISK SPACE USED

Creighton University's BlueCast Lecture system was an instant hit with students and faculty when it went live in the fall of 2010. This case study details Creighton's initial search criteria, the selection of Panopto to power BlueCast, and its implementation from pilot program to campus-wide solution.

Competition and selection

In late 2009, Brian Young, VP and CIO of Creighton University, and Anthony Hendrickson, Dean of the College of Business, began discussing the possibility of bringing lecture capture to Creighton. Two things were animating their conversations: a study both had read showing improved student performance and retention rates from lecture capture at Penn State, and the H1N1 virus scare of 2009.

In early 2010, Young directed Instructional Designer Rick Murch-Shafer of the Creighton Division of Information Technology (DoIT) to investigate potential lecture capture solutions.

Murch-Shafer and fellow Instructional Designer, Tobias Nownes, were given three basic guidelines at the outset: the solution must be easy to scale campus-wide, it must capture video, and faculty must be able to record outside the classroom. The later was largely inspired by the very real threat of campus closures brought on by the H1N1 virus scare.



About Creighton

Creighton is a Catholic and Jesuit comprehensive university committed to excellence in its selected undergraduate, graduate and professional programs.

Creighton faculty members conduct research to enhance teaching, to contribute to the betterment of society, and to discover new knowledge. Faculty and staff stimulate critical and creative thinking and provide ethical perspectives for dealing with an increasingly complex world.

Location: Omaha, Nebraska

Students: 7,730

Courses: Graduate, undergraduate

Website: www.creighton.edu

At the time, universities across the country were busy creating contingency plans. “Flexibility was a big deal to us from the beginning,” recalls Murch-Shafer. “We needed a solution that allowed us to continue offering classes in the event of an outbreak. Enabling instructors to record content from their own homes was an ideal solution.”

Competition

Like many colleges and universities without a campus-wide lecture capture program, various groups at Creighton had, over the years, had sporadic, small scale experience with different lecture capture vendors. An appliance-based solution was already being used in one school on campus, and the DoIT team was familiar with a few other hardware vendors. But the need to enable off-campus, flexible recording eliminated these appliance-based solutions from the start.

Brian Young’s directive to find an easy-to-scale solution also ended up disqualifying the appliance option. Creighton’s vision of a “campus-wide solution” is comprehensive. It means a recording capability in every classroom. Buying and maintaining hundreds of fixed, hardware-based appliances proved unworkable and unaffordable at that scale.

The DoIT team then trained its sights on software-based solutions. They were already familiar with one popular screencasting solution, but its video capability simply didn’t measure up to the other solutions in the field. So DoIT commenced side-by-side pilots of Panopto and another leading SaaS lecture capture platform.

Selection

The pilots were small — 5 classes in the Spring of 2010 — and the DoIT team found the two systems to be fairly comparable in terms of basic front-end features. But three differences soon emerged that made Panopto their eventual choice for deployment.

“Price was one factor,” Murch-Shafer admits. “Panopto was definitely less expensive which allowed us to invest more money in hardware and outfit our classrooms faster.” The second factor was the back-end of each solution. Murch-Shafer found the Panopto administration interface to be much more intuitive and Panopto’s remote recorders more streamlined and easier to deploy.



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— **Rick Murch-Shafer**, Instructional Designer,
Creighton University.

For Tobias Nownes, the deciding factor was the classroom experience.

With the other solution, instructors were running into difficulty recording sessions back to back. It kept sessions on the local recording machine until all recording was concluded, and only then initiated a long upload and encoding process.

“Professors were getting confused when they had to record lectures back-to-back with the previous sessions still on the machine,” recalls Nownes. Panopto, on the other hand, uploaded sessions instantly — even when another session was being recorded. “No matter how long the lecture,” Murch-Shafer remembers, “Panopto sessions were off faculty computers and onto the server in less than a minute.”

In the end, Panopto’s ease-of-use won out.

“I also love that the Panopto license allows professors to download recorders at will to their own computers, and the process is intuitive enough to do it on their own without much training or oversight from us,” Nownes concludes. “I was never really convinced that this would be the case with the other solutions we evaluated.”

Introducing BlueCast campus-wide

After completing their pilot programs in the Spring of 2010, the lecture capture team from Creighton's Division of Information Technology (DoIT) began preparing to go live with Panopto for the Fall term. They decided to initiate a gradual rollout in order to test the system fully before ramping up across campus. "Our first step was to identify academic units with a lecture-based instructional methodology," recalls Tobias Nownes. "We felt like these groups gave us the best chance for broad initial adoption and would help us gauge use and management requirements as well as impact on student learning."

The Creighton College of Business was among the first groups to be invited as was the School of Medicine which had already instituted its own form of grassroots lecture capture. "They were using a portable mp3 player to record lectures," says Rick Murch-Shafer. "A designated student would be responsible for recording the lecture, uploading it to a server, and then manually linking it to our LMS."

Around the same time, Murch-Shafer noticed some unusually large files being uploaded to the LMS by the Biology department. "I found a couple of Biology courses that had about 1.5 GB of data in their folders," remarks Murch-Shafer. "Turns out they were already recording MP3s of their lectures at a very high quality, but without taking any care to compress the files and conserve space on our servers. So we went to Biology (and later Chemistry) and invited them to be part of the initial rollout, essentially offering them an automated, feature-rich way to accomplish their original intention. They jumped at the opportunity."

A/V decisions

From the beginning, the DoIT team appreciated Panopto's ability to plug-and-play in virtually any A/V environment. As the team prepared their selected departments and faculty for the initial rollout, they also took the time to test a variety of A/V equipment and build a coherent workflow for outfitting new classrooms.

"We wanted to develop a consistent install base to make provisioning our classrooms an easy process," says Murch-Shafer. "Our classroom team has done a phenomenal job of optimizing installations, equipment positioning, and cable routing."

The standard capture-enabled classrooms now include:

- An Osprey 100 Video Capture Card
- One (or more) security-type cameras for capture
- An Acoustic Magic voice tracker array microphone, ceiling mounted
- Lavalier mics in the larger rooms only

From the beginning, the DoIT team has adhered to the practice of outfitting all of the classrooms in a department before attempting a department-wide lecture capture expansion. According to Nownes, "we quickly learned that the best way to achieve broad adoption within a college or department was to offer the same capture experience in every room an instructor was likely visit."

Going campus-wide

With their rooms ready and Biology, Chemistry, Medicine, and Business all onboard, DoIT was ready to launch BlueCast in the Fall of 2010.

"Our rollout was measured both in terms of installation and the use cases we initially allowed," admits Murch-Shafer. "We wanted to test the impact of widespread video capture on our network and servers before we opened the floodgates, so initially, we only allowed lectures to be recorded."

The team was not disappointed. "We were very impressed during our trial by how quickly recordings were uploaded to the server upon completion," suggests Murch-Shafer. "We all expected these rates to diminish as more simultaneous sessions were recorded and uploaded across campus, but they didn't, which was a pleasant surprise. Current upload times are still swift and impressive."

As usage steady increased, the DoIT team hired Application Specialist Brent Saltzman to manage and grow the system. According to Saltzman, BlueCast "caused quite a buzz on campus" in its first year, and is now being used in virtually every corner of the university. As groups continue to express interest, the DoIT team takes every opportunity to expand usage and enable more classrooms.

As of March 2012, they have outfitted 120 of a targeted 170 classrooms, and every building on campus now has at least one capture-enabled classroom. This rapid expansion and adoption has produced some remarkable usage statistics.

By the numbers

The following statistics represent cumulative usage from October 2010 through January 2012:

Total Recordings: 10,283

Total Views: 217,259

Total Hours Recorded:
8,222 hrs = 342.6 days = 11.5 months

Total Hours Viewed:
101,148 hrs = 4,214.5 days = 11.5 years

Total Disk Space: 2,636 GB (2.7 TB)

Expanding adoption organically

After one year of Panopto deployment, Creighton University's BlueCast Lecture system has grown from a small 5 course pilot program into an essential campus service with over 10,000 recordings. The lecture capture team from Creighton's Division of Information Technology (DoIT) no longer needs to convince departments to adopt the technology, because students are demanding it.

"We're often contacted by individual faculty whose students are asking to have their classroom sessions recorded," says Rick Murch-Shafer. Just last week, a professor stopped by the DoIT office — at his students' insistence — to learn how to record a review session later that day. I quickly provisioned the course for him and then went to his classroom for a quick demonstration," recalls Tobias Nownes. "When I asked him to login to the system, he just looked at me with a blank stare. He'd never used a campus computer before."

"Even with that level of unfamiliarity," continues Nownes, "he was ready to go within minutes and successfully recorded his review session later that afternoon."

Application specialist Brent Saltzman remembers sitting down to his computer at 8am the next morning and seeing 15 students reviewing the new review session simultaneously. An easy success for the professor quickly became a critical resource for his students.

Freeing up class time

As Instructional designers at Creighton, Murch-Shafer and Nownes help faculty develop online courses for various programs across campus. Most of the content is pre-built, including the lectures. Once recorded, professors are able to use the same "evergreen content" rolling from semester to semester, especially for 100 level courses where the themes don't change as much. If the material becomes dated or a shift in focus necessitates new content, instructors can edit and add to their existing sessions or record new ones.

"Because of the flexibility of the system, faculty are now able to effect a kind of "time shift," reflects Nownes. "Students watch the Panopto lecture before class, and the instructor can address points of confusion directed by the students in the classroom."

"We're seeing this a lot now," agrees Murch-Shafer. "Professors are changing the way they teach because of the technology. By assigning lectures outside of class, they have more time for classroom discussion, labs, and other forms of group work."

New use cases

With the rapid growth of Creighton's BlueCast system in popularity and adoption, Saltzman and his DoIT colleagues have begun encouraging more expansive use cases of the Panopto software.

The School of Medicine initiated the first extensive non-lecture use of Panopto, recording practice doctor/patient consultations from 10 "small group rooms" which were already outfitted with cameras and mics.

"They had already been recording these sessions with Windows Movie Maker," recalls Murch-Shafer. "They switched to Panopto and loved it. It's a much easier process now. They simply input the students name and push record. The recordings are uploaded to the LMS automatically upon completion, and the instructors are free to review the sessions at later time."

A variety of groups on campus are beginning to use Panopto to create distance learning programs and to broadcast academic events as well.

In 2011, Saltzman used Panopto to broadcast Creighton's Presidential Convocation. "Broadcasting this event used to be a difficult thing to do," says Saltzman. "But with Panopto, I was able to trim the beginning and ending of the recording in the Panopto editor, and distribute the link within an hour. This capability is becoming a real plus for us."

Spotlight: Creighton live streams "Match Day" ceremony with Panopto

As the Creighton team continued to extend BlueCast service to new departments throughout 2011, they kept a keen eye on the performance of their servers and network. Panopto remained fast and stable at every level of scale, so the team began allowing campus groups to utilize BlueCast for more than recording lectures.

Application Specialist Brent Saltzman's growing confidence in the BlueCast system and his success broadcasting Creighton's Presidential Convocation in 2011 encouraged him and his DoIT colleagues to use Panopto to live stream another annual event on campus.

"Match Day" happens on the third Friday of March each year across the nation's 155 medical schools, when 4th year medical students find out where they will begin their residencies. Creighton streams the event live so families back home can see their students opening the envelopes that initiate their careers.

Creighton's old method of streaming was to use a Windows Media Server with the Windows Encoder and require viewers to drop either an RTSP or MMS link into Windows Media Player (or QuickTime on the Mac using Flip4vid). This method had been used for a number of years, but participation was always low due to the complexity of the process.

According to Saltzman, "This year, we wanted to see what our Panopto system was really capable of. We had our reservations: We were unsure how well the system would perform under such a load in addition to the normal daily volume of lectures being captured and viewed. We were also curious to see how mass streaming would impact CU's network. With all this in mind, we decided to go with Panopto and use our Windows Media server as a backup."

Panopto did not disappoint. Saltzman's team was told to expect no more than 200 viewers. Instead, they got 1,284. End users simply had to click a link to begin viewing the stream. No more complexity.

Match Day viewing statistics:

Total Unique Visitors to the broadcast: 1,284

Total Page Views: 3,970 (includes refreshes)

Peak Simultaneous Views: Approx 375

Average outbound bandwidth from web server:
400mb

Total Countries: 10

Total US States: 48

“We were all very impressed that Panopto was handling over 300 simultaneous streams and still allowing regular daily recordings to upload and process. I would call it a huge success.”

— **Brent Saltzman**, Application Specialist,
Creighton University.