

RapidUsers

Digital Rapids TouchStream Boosts Veterinary Education at the University of Guelph

The User

Hill's Pet Nutrition Primary Healthcare Centre at the Ontario Veterinary College, University of Guelph

The Challenge

Recording and streaming video from multiple patient care facilities for live remote viewing and on-demand access by students

The Solution

TouchStream

The Benefits

"TouchStream allows us to meet the learning objectives we've set out for our students and to expand our influence in veterinary medicine globally."

Hill's Pet Nutrition Primary Healthcare Centre at the Ontario Veterinary College at the University of Guelph

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Hill's Pet Nutrition Primary Healthcare Centre

is a state of the art experiential learning facility. Student veterinarians develop enhanced skills, competence and confidence in providing primary (or routine) healthcare to pets and their families. The Centre is highly innovative, with an integrated curriculum focused on general and preventive medicine, communication skills, nutrition, rehabilitation, behaviour, animal welfare, public health and good citizenship. The Centre includes a full-service general clinic offering student-delivered veterinary services to the public. Student learning and client care is overseen by a dedicated healthcare delivery team of veterinarians, veterinary technicians, animal care and customer service specialists.

To support their mandates, the Centre sought a user-friendly solution to capture video and audio from multiple patient care and procedure rooms simultaneously, stream it live for immediate remote observation and store it for on-demand access via the web. Dr. Shane Bateman, DVM, DVSc, DACVECC is the Director of Hill's Pet Nutrition Primary Healthcare Centre. "We required both live

streaming for immediate viewing and an archival system for students to review asynchronously for performance review and reflection – key components of skills-based learning," says Bateman. A lynchpin component of the Centre's solution is a set of 20 TouchStream LE live streaming encoder appliances from Digital Rapids. The TouchStream units, supplied and deployed by systems integrator Design Electronics, stream and record medical procedures, interviews and other clinical activities.

Twenty locations in the Centre, including patient care and procedure rooms, are equipped with closed-circuit TV cameras as well as omni-directional microphones suspended from the ceiling. Analog audio and video – a mix of composite and S-video signals – are fed from each room to the 20 TouchStream LE units, which are rack-mounted in one central location within the building. The Centre's TouchStream appliances are outfitted with optional internal hard disk storage, allowing the captured footage from each room to be stored as archival Windows Media (VC-1) WMV files as well as streamed live in the Windows Media format.





A key requirement of the project was for staff to be able to start and stop the recording and streaming process instantly and easily from each room. The TouchStream appliances are controlled through commands issued via the HTTP protocol by a Crestron control system, allowing streaming and archiving to be activated with one button-push, and stopped with another. LEDs on each button provide true feedback indicating whether the unit is recording or not. The units can also be controlled and monitored via an Apple iPad application, with a single control page showing the status of all 20 locations as well as the time they have been running for. The ability of TouchStream to integrate with the third-party components and control system was a key benefit to the Centre, and contributes significantly to the overall system's ease-of-use.

"The TouchStream solution plays a crucial role in allowing over 400 student veterinarians immediate and asynchronous access to observe and learn from the clinical activities of the Centre – from anywhere on the Web," says Bateman. It is important in a teaching facility such as Hill's Pet Nutrition Primary Healthcare Centre that students are not only able to watch medical and surgical procedures as they are performed, but also that they are able to review their performance during patient interviews and procedures in which they participated. TouchStream's ability to simultaneously stream and archive the video enables the Centre to provide maximum learning opportunities to students both on-site and remotely.

The Centre is evaluating increasing the capacity of their video archive to collect and review data over multiple years, enabling them to further research, evaluate and improve their effectiveness in achieving their overall goal – graduating more confident and competent veterinarians, able to adapt to practicing veterinary medicine in small businesses quickly and easily. Bateman also has designs for the Centre to become a wider-reaching teaching facility, "The Centre seeks to be an international learning centre by developing communication links and opportunities for two-way learning between student veterinarians studying all over the globe." Adding TouchStream's web-streaming capabilities to their programs is a major step towards that goal.

Digital Rapids' TouchStream live streaming and archive encoding appliance has enabled Hill's Primary Healthcare Centre to also meet its local goals. "The use of this technology in an academic environment allows us to meet the learning objectives we've set out for our students," says Bateman. "Furthermore, it showcases to prospective students our commitment to their success, and creates a value-added dimension to clients who choose the Centre to provide veterinary care to their pets – they see how important learning is to us, and how they contribute directly to the education of our students."

