

## **e-Dome – a high-end facility for the production and delivery of enhanced online learning opportunities for students at Cambrian College**

### **Opportunity**

eDome is a technologically advanced facility at Cambrian College in Sudbury for the **e**lectronic **d**elivery **o**f **m**odular **e**ducation – the initials creating the eDome name. Serving as a hub for electronic learning in northern Ontario, the facility was designed to be dual purpose:

- To support college faculty in the development and delivery of flexible learning opportunities; and
- To provide external clients with communication and production management expertise and capacity.

eDome is, in fact, in a dome-shaped building which links Cambrian College's goal to create online and hybrid learning with the need for students and businesses to save time, travel, and money. eDome has been in operation for about six years with the range of creative uses expanding.

### **Innovation**

Innovative multimedia education and communications solutions and production management expertise for faculty, students, and external clients were the driving forces behind the construction of eDome and the technological capacity of the facility reflects this:

- The high-end production and delivery resources can support live and/or recorded educational events, training, demonstrations, and presentations, as well as distance delivery through videoconferences, web conferencing, and broadcast.
- The flexible 3,000 square foot circular studio has the capacity for a live audience of up to 150 people.
- Webcasting and videoconferencing capabilities allow unlimited numbers of participants to join in and interact with the eDome audience and each other from around the world.
- Multiple cameras permit large groups to view detailed and intricate processes and procedures. On site, there are four large screens so that all students can clearly see the demonstrations, which can be shared electronically with distant participants at the same time.

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- Audio and visual equipment is broadcast quality and complemented by two high definition edit suites and DVD/CD duplication services.
- The staff at eDome has all the necessary skills to support faculty and external clients with the development, production, and delivery of flexible teaching and learning events and resources.

eDome  
electronic delivery of  
modular education

Robert Bentzen, Manager



## Outcomes and Benefits

The eDome has been effective in serving all three of its purposes, described by Sonia Del Missier, Vice President, Academic, as “the three Ps” - presentation, production, and platform for delivery. The educational applications include:

- **Visual Learning:** Using the advanced eDome production capacity and expertise, an instructor in the School of Justice worked with staff to develop vignettes so students can actually see examples of challenging job situations, such as dealing with a shoplifter, and various scenarios for response. Online courses for security guards were then developed including about 50 videos, from 2 to 10 minutes in length, showing essential skills and situation responses. eDome has produced multiple videos for numerous faculties to demonstrate complex concepts and repetitive procedures.
- **Outreach:** Using the eDome facilities to webcast and draw in participants from across North America, Australia, and Europe, the Occupational Health Clinics for Ontario Workers host an annual Repetitive Stress Injury day. The events are recorded and stored on DVD for later use.

- **Efficiencies of Scale:** To serve today's visually-oriented students, eDome worked with the Department of National Defence to record the tying of over 100 kinds of knots and lashings, using four cameras simultaneously so the process could be viewed from four angles. Students can view the processes repeatedly and change the viewing angle to aid their learning.
- **Living Lab:** Public Relations students at Cambrian are required to present to a live audience, while Journalism students must learn how to take notes and question speakers. Using eDome, both groups practice in "live" situations and review the tapes to analyze performance.
- **Industrial Standards:** College faculty accessed the industrial-level amenities of eDome, such as 600 volts and compressed air, for a live demonstration of a welding technique – and it was recorded for future viewing.
- **Partnerships:** In cooperation with Nelson Publishing, science experiments for grades 7 to 10 were produced and recorded for online and DVD viewing. As well as demonstrating experiments that can not be performed in schools for safety reasons, the productions are also useful as visual alternatives to some of the misinformation available to students on YouTube.
- **Multiple Languages:** The Oshki-Pimache-O-Win Education and Training Institute worked with eDome staff and facilities to produce visuals of 80 different x-ray procedures for teaching radiology at a distance. The production was recorded in three languages – Cree, Oji-Cree, and English.
- **Virtual Classroom:** A Medical Laboratory Technology classroom in Sudbury was connected to a classroom in Thunder Bay, so that both groups of students could see the instructor and visuals, and interact with each other. The Thunder Bay students were projected in Sudbury as though they were sitting in the back row of the classroom, greatly facilitating their interaction with the instructor. eDome expertise was used so that the technology was invisible; the students were visible and interacting.

## Challenges and Enhancements

The eDome facility was built with 'balance' in mind –between the use of the facility by teaching staff and the use of the facility by external clients to ensure revenue generation.

Over the years, capacities have been added to eDome, including a more robust web conferencing environment and a fibre optic link to the local cable TV provider. In addition, a videoconferencing capacity was built which uses Contact North's bridges and other colleges in Ontario as site locations.

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One continuing reality is that faculty need encouragement, support, and training to facilitate their use of the facilities available at eDome and the incorporation of innovative multimedia learning solutions into their teaching practice.

## Potential

The eDome potential has been described by Robert Bentzen, Manager of eDome, as establishing new ways of providing synchronous and asynchronous teaching, learning, and assessment that focus on high-level engagement and interaction. Core to this is the virtual classroom model which leverages the expertise and experience of the eDome staff in creating engaging classroom experiences for both remote and on-site students. Remote hands-on assessment, for programs such as welding, is also being explored.

The potential exists for other post-secondary institutions to learn from the best practices developed by Cambrian faculty and staff on the effective use of multi-media tools to promote engagement and interaction.

New partnerships are important for learning as well as revenue. By developing new ways to help people and organizations create and communicate, eDome serves the needs of faculty, as well as business, industry, non-profit organizations, governments, and other clients.

## Further Information

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