

# TANDBERG CUSTOMER PROFILE

## The Virginia Commonwealth Governor's School



- **Challenge:** Create a reliable, easy-to-use distance learning program, incorporating visual communication technology
- **Solution:** TANDBERG interactive distance learning IP-based video solutions
- **Result:** A first-class distance-learning model, leveraging teaching experts & raising standards in education for students

"Thanks to TANDBERG we've been able to take our 'school-within-a-school' concept and make a classroom without walls. This technology allows our students and teachers to make the world their classroom."

SYLVIA WADSWORTH  
DIRECTOR  
THE VIRGINIA COMMONWEALTH GOVERNOR'S  
SCHOOL

### VIDEO COMMUNICATION HELPS COMMONWEALTH GOVERNOR'S SCHOOL DEVELOP 'PIONEERS OF THE FUTURE'

*SCHOOL IS FIRST REAL-TIME, INTERACTIVE LONG-DISTANCE LEARNING GOVERNOR'S  
SCHOOL IN VIRGINIA*

Virginia's pioneering Commonwealth Governor's School - a "school within a school" that opened in September 1998 - is the first real-time, interactive long-distance governor's school in the state, serving 380 gifted students in three counties. Through reliable and easy-to-use visual communication, the school develops "Pioneers for the Future" from the counties of King George, Spotsylvania and Stafford. For half the school day, The Commonwealth Governor's School (CGS) offers a rigorous and integrated academic curriculum for grades 9-12 in English, mathematics, science and social studies. In the program the school incorporates high-speed Internet access, e-mail, and video communication to reach worldwide resources for in-depth research and special projects. Ninety-nine percent of its graduates attend nationally recognized universities - Harvard, Massachusetts Institute of Technology, Virginia, Duke and the military academies. Many students matriculate into honors and dual-degree programs.

#### THE CHALLENGE

If the three counties had followed the lead of Virginia's other academic-year governor's schools by establishing a central site, students could have faced commutes of 90 minutes each way and would not be able to participate in after-school activities at their home school without making often-difficult travel arrangements. So the counties decided to consider distance education between their standard high schools. School administrators wanted students to retain their loyalty to their local high school while taking core subjects by video with their regional academic peers from the other schools. This required a video-communication solution that teachers and students would find reliable and easy to use and that would make distance education seem not so distant. How to do this logistically and what technology to use became two key concerns.

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### THE SOLUTION

11th and 12th graders occupy the CGS classroom in the morning, taking their advanced core classes, while 9th and 10th graders occupy it in the afternoon. During the other half of the day, the students take their electives like drama, French, and gym with their peers at their local school. CGS relies on its visual-communication technology from 8 a.m. until 2 p.m during the academic school year.

For the technology, CGS embraced TANDBERG to provide its internet protocol-enabled video communication systems. This gives school IT officials complete control over their network within their jurisdiction - enabling them to be self-reliant rather than looking to the state to provide network video-based resources.

"The school not only wanted state-of-the-art technology, but it was important that TANDBERG could provide backwards compatibility so the school could connect with other video-conferencing systems, including IP, ISDN and ATM systems and any combination thereof," says Kevin Ramsey, the school's network engineer.

### KEY BENEFITS OF THE TANDBERG PRODUCT LINE INCLUDE:

**Ease of Use:** The intuitive **TouchPanel** permits the teacher to control all aspects of the video call and peripherals, including cameras, VCR, DVD and document camera, from one easy-to-use device. The ceiling-mounted **AudioScience** microphone replaces conventional tabletop microphones to provide excellent audio quality and more natural student interaction. Participants can be heard from throughout the room without concern for microphone placement or having to engage the microphone, letting them worry about the curriculum, not the technology.

**Reliability:** TANDBERG's non-PC based system turns on in 10 seconds and does not require rebooting when changing network selection or system configuration. "Technical-support issues and concerns are almost non-existent," says Ramsey.

**Design:** TANDBERG's Interactive Distance Learning Solutions are designed around the needs of a classroom - going beyond a traditional set-top design. With extended height carts and monitors, students have a clear view from throughout the room. A rear camera and monitor on an extended height cart allows the instructor to maintain eye contact with both the local and remote site students at all times.

### THE RESULTS

The Commonwealth Governor's School has become a model distance-learning program, expanding its reach year after year as new technologies assist its educational efforts. Nearly two years ago, a high-data rate network provided the school with its own IP infrastructure. In addition to educating high school students and area teachers, para-professionals enjoy professional development opportunities without traveling outside their county. For instance, the school connects with J Sargeant Reynolds Community College to provide ASL courses to school division interpreters so they don't have to drive to Richmond two-to-four times a week.

With its technology, CGS can virtually assemble its team of master teachers, so that regional students can benefit from a particularly gifted physics teacher or a history teacher particularly strong in the Civil War era. "Our model allows instructors to draw upon the expertise of their colleges," says Larry Letellier, a Social Studies instructor in Spotsylvania County. "One week the Stafford site teacher may introduce students to Renaissance art, while the next week I might cover Tudor England."

The school also takes advantage of its technology with virtual field trips (VFT). One such trip focused on the discovery of the footprint of a 70-foot-long dinosaur that lived in the Fredericksburg, VA, area as many as 115 millions years ago. The paleontologists broadcast to the school's four satellite sites. Students at Colonial Forge High School in Stafford, where the program originated, saw a cast of the dinosaur's massive footprint in

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person, while students at the other sites watched the broadcast and asked questions through their visual-communication system.

In another recent VFT, freshmen in earth science who had read the novel *Yellowstone Farewell*, about an eruption of a super volcano, were able to speak directly with author Wayne Sutherland at the University of Wyoming at Laramie. "This opportunity tremendously enriched students understanding and enjoyment of the book," states science instructor Edgar Morris. Coming for the fall of 2004, students will interact with actors at London's famous Globe Theater without leaving their classroom.

"Thanks to TANDBERG we've been able to take our 'school-within-a-school' concept and make a classroom without walls. This technology allows our students and teachers to make the world their classroom," says Director Sylvia Wadsworth.

### THE FUTURE

Similar magnet schools, including two others in Virginia, have opened around the United States since CGS first opened six years ago. The distance-learning educators throughout the country can share ideas and visit each other regularly. Even educators from abroad have traveled to Spotsylvania and Stafford counties to learn about The Commonwealth Governor's School model. Use of this educational model is expected to grow in popularity, especially in rural counties where technology like TANDBERG's can open gateways to worldwide educational opportunities.

The experience at CGS provides insight into how "thinking outside the box" can enable educators to use cost-effective and innovative technology to address educational needs. Nortel's Kidz OnLine program formed a partnership with CGS to develop webcasts on how technology can be used to enhance education. Four teams from CGS learned about broadcast production and web casting from two Kidz OnLine mentors. The Battelle Memorial Institute, which develops innovative products for industry and government, has given the school a \$10,000 award to enhance its math, science and robotics programs.

As the Commonwealth Governor's School attests, the educational journey through technology continues to march on.

TANDBERG WORLD HEADQUARTERS  
Philip Pedersens vei 22  
1366 Lysaker, Norway  
Tel: +47 67 125 125  
Fax: +47 67 125 234  
Video: +47 67 117 777  
E-mail: tandberg@tandberg.net

200 Park Avenue, Suite 2005  
New York, NY U.S.A. 10166  
Tel: +1 212 692 6500  
Tel: +1 800 538 2884 (toll free in the U.S.)  
Fax: +1 212 692 6501  
Video: +1 212 692 6535  
E-mail: tandberg@tandbergusa.com

www.tandberg.net