

## TEACH / LEARN

Deliver classes live and on-demand on campus and to remote locations

## BROADCAST / SHARE

Share live events on campus

### VBrick Products

VBrick's single-channel, Windows® Media encoder

### Applications

Live broadcasting and archiving of sporting events and school activities

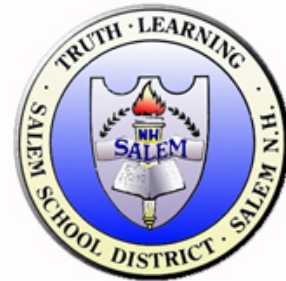
**Challenge** Broaden access and participation among students, faculty parents and the local community through live internet broadcasts of school events.

Every time the Blue Devils trotted onto Salem High School's volleyball court, students, faculty and parents wondered whether the opposing team would finally end the Devils' unbroken four-season winning streak.

Missing games became an increasingly painful prospect for fans whose work schedules prevented regular attendance during the 2007 season. Local fans could sometimes tune their TVs to a live broadcast on the school's local cable access station.

Sometimes not...

The problem was that broadcasting the games live required volunteers to man the cameras and control



room. It also meant repurposing the channel to feed live events. And, though hard to believe, Blue Devil games didn't always take priority over regularly scheduled programming.

Broadcasting over the internet was an attractive alternative. It freed up the television channel for other programs, and provided live coverage to anyone with access to an internet connection. But online broadcasting required more than the usual technical finesse, it allowed a comparatively limited number of viewers and delivered a low frame rate version of the televised game.

**Solution** A VBrick single-channel, Windows Media encoder designed to broadcast live digital video over the internet from virtually any camera signal.

"The solution was no larger than an old U-matic video tape cassette," said Tom Giarrosso, Executive Director of Salem Community Television (SCTV). "The technology inside, however, was cutting edge."

Video broadcasting technology has become increasingly accessible to academic institutions, as demonstrated by more than 1,000 other schools implementing VBrick components today. Thanks to support from the Federal E-Rate program, many schools can obtain the technology for 90% off list price.

Salem High School's encoder arrived on a September morning in 2007 – two days before the next Blue Devils game. But Giarrosso found the technology so intuitive that he did a live broadcast the same afternoon. New Hampshire's Executive Council happened to be meeting at the school with the governor to discuss state expenditures.

Two days later Giarrosso broadcast the Blue Devils game live, while one team parent watched the action unfold in real time on his laptop in a California airport.

"Once we saw it could do sports, we realized we could broadcast other things as well," said Giarrosso. Broadcasts of graduation ceremonies and town meetings soon followed. Giarrosso also used VBrick's technology repeatedly as the school became a regular stop for primary and presidential campaigns.

**Benefit** More active community engagement in academic, extracurricular and local events through inexpensive, intuitive online video broadcasting and digital archiving.

Before VBrick, Giarrosso explained, broadcasting live had required the feed to go through a PC equipped with a tuner card, and then upload via basic cable modem. It was often easier – though by no means simple – to record on tape, and then convert data to a digital format that could be downloaded later from the website.

“VBrick’s technology changed all that,” Giarrosso said. “It enabled us to free the channel programming up by broadcasting live events over an internet connection. All you needed was an Ethernet feed.”

Once connected, VBrick’s device automatically grabs an IP number enabling it to be set up remotely through a web browser. Plus, the technology doesn’t limit the number of online viewers. The encoder transmits video data to the company’s streaming service, which mirrors it to thousands of viewers. The result is that live broadcasts place a minimal burden on school servers.

Lastly, as VBrick’s technology encodes camera signals for broadcast, it automatically stores the digital data – creating an instant archive of events.

“VBrick’s technology opened up new possibilities for extending the community online,” said Giarrosso. “We still cover the same things, but now the content is available on different platforms where people can access, share or comment on it.”

The screenshot shows a web browser window displaying the Salem High School website. The address bar shows the URL: <http://www.salemschooldistrictnh.com/schools/shs/2008/>. The page title is "Salem High School" and the subtitle is "Class of 2008". The navigation menu includes "Home" and "Contact". The main content area is titled "Video on Demand" and features two sections: "Award Ceremonies" and "Graduation Ceremonies". Each section displays three video thumbnails with titles and dates. The "Award Ceremonies" section includes "SHS Academic Awards Night" (May 21, 2008), "SHS Activity Awards Night" (June 4, 2008), and "Dollars for Scholars Awards Night" (June 5, 2008). The "Graduation Ceremonies" section includes "SHS Academic Awards Night" (May 21, 2008), "SHS Activity Awards Night" (June 4, 2008), and "Dollars for Scholars Awards Night" (June 5, 2008). A sidebar on the right contains a "Rolling 30-Day Calendar" with dates and events such as "2/12/2009 (Thu) 7:30 AM NAEP Testing" and "2/23/2009 (Mon) 12:00 AM VACATION No School".

Salem High School has a special Video on Demand page on their web site which offers DVDs of awards and graduation ceremonies.