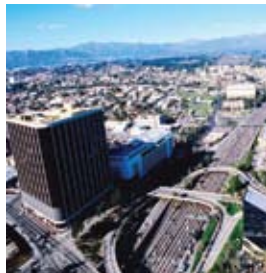


Partnerships for Public Service:

SeaChange Collaborates with PBS Member Stations
to Meet the Future of Television Head On



Today's fast-evolving broadcast technology isn't just an option for gains in efficiency and quality. With the switchover to digital broadcast looming, it is a prerequisite for managing the added complexity of multiple content streams, working within budget and with existing staff. It also opens the door to new models for public service going beyond traditional broadcast to multiplatform distribution on VOD, Internet and portable platforms.

But how are PBS member stations managing these vast changes in the technology infrastructure? For more than a decade, SeaChange International has proven itself to be a reliable and responsive technology partner. Through the twists and turns inherent to advancing innovation, SeaChange has demonstrated its commitment to PBS member stations.

"SeaChange strongly considers PBS to be one our most important strategic partners worldwide and we are investing to build that partnership at both the affiliate and corporate levels in every way possible," said Chris West, vice president, broadcast, SeaChange International. "Our work cuts across the wide variety of environments that make up the world of public broadcasting. Whether working with pioneering stations like KCET and WNET to advance the art, or helping state broadcast networks like South Dakota Public Broadcasting navigate the transition to HD and server-based workflows, SeaChange is more than a technology provider. We are a technology partner."

partner

"...SeaChange is more than a technology provider. We are a technology partner." -Chris West

“With this history of reliability, we looked to SeaChange first when it came time to shop for an HD system.” - Mike Johnson



South Dakota Public Broadcasting – Growing into HD by Maximizing SD Investments

South Dakota Public Broadcasting (SDPB) first began working with SeaChange in 1999, making a crucial first step in moving SDPB from tape to a server-based environment. SeaChange’s Broadcast MediaCluster (BMC) went into service in 2000 and has been in continual operation playing interstitial material alongside tape-based programming.

“We’ve had the BMC running around-the-clock and it hasn’t lost a minute of airtime despite being moved twice while we remodeled studios,” said Mike Johnson, senior studio engineer, SDPB. “With this history of reliability, we looked to SeaChange first when it came time to shop for an HD system.”

Like many stations and station groups, SDPB is managing a delicate balancing act preparing for the switchover to digital transmission. An HD signal will run alongside two SD subchannels. To make this work, equipment investments must be carefully divided between new transmitters and the workflow advances needed for multichannel, multiformat operation. Building on its existing investment in SeaChange SD technology is paying off in the transition to HD.

“We are in a full court press, but are a small shop with big things to do and not enough to do them. Our long-term relationship with SeaChange has allowed us to move forward into HD with a Broadcast MediaLibrary/ MediaClient (BML/MCL) for play-to-air. We’re strapped for money in the

transition to digital, but we've been able to afford this by maximizing the value of our BMC," said Johnson.

To work within SDPB's budget, the new system is configured with an all-HD I/O - four outputs and two inputs. The HD output can simulcast in SD, so the challenge was how to ingest SD content. SeaChange was able to utilize the existing BML to serve as the SD ingest interface, extending the value of that investment.

"Our longstanding relationship with SeaChange is really paying off here. We are able to leverage our previous investment to carry us through the transition ahead over the next few budget cycles," Johnson said.

Ahead at SDPB: New Opportunities, New Services, New Audiences

The SeaChange systems have already opened new opportunities for outreach to new audiences for SDPB. As the only broadcaster covering the entire state, SDPB recently received the contract to broadcast high school sports tournaments. This has proven to be an unexpected bonanza by introducing sports fans to the public broadcast service. The SeaChange BMC has delivered live-assist playout enabling the new live coverage.

"High school sports are a big deal in our rural state and there is no way we could do this without the SeaChange server. Basically, this operates very similar to fundraising drives, except that we don't know when the breaks will come," said Johnson.



What's ahead for SDPB? Plans call for adding SeaChange's near-line storage to make for a completely tapeless workflow. Likewise, the IT-based infrastructure can be built out to include multiplatform delivery as the public service evolves to find new ways to connect with its audience.

"We're a lean operation and SeaChange has allowed us to do more and do it better. It has really improved the quality of our service," Johnson said.

KCET – Fast Forward with SeaChange as a Technology Partner

KCET, the flagship PBS affiliate in Los Angeles, has maintained a leadership role in developing digital production and workflow methodologies. Part of its mission is to trail blaze technology, bringing it from the cutting edge and into the mainstream of public broadcast. Since 2005, SeaChange has served as a key technology partner for KCET in advancing the art of tapeless operations for the public broadcast environment.

KCET currently broadcasts six channels – five SD (including analog) plus one HD. All the program streams come from the same SeaChange playout system, part of the IP-based MediaLibrary/MediaClient architecture. The implementation addresses both SD and HD content on a unified platform and is a foundation for achieving true digital workflow. The SeaChange system replaced a first-generation server-based system that proved to be a difficult learning experience.

"SeaChange's MediaLibrary and MediaClient is the realization of our vision for server-based production and marks a fundamental advance

move forward
"Our long-term relationship with SeaChange has allowed us to move forward into HD with a Broadcast MediaLibrary/MediaClient (BML/MCL) for play-to-air."

-Mike Johnson

beyond the pioneering efforts we began in 1999,” said Gordon Bell, KCET’s vice president of engineering and operations. “We know all-too-well the challenges and fully appreciate how this standards-based package delivers a mature, robust answer to them.”

KCET’s MediaLibrary – Shifting Gears from SCSI to SATA

After deciding on SeaChange at NAB2005, Bell began to move forward with the implementation of a MediaLibrary 24009e online system with an X12004 near-line archive plus 10 MediaClient interfaces to integrate a variety of production platforms in both SD and HD including Harris Automation software. KCET’s 24000e series BML launched with the maximum 45TB of fault-resilient capacity, a 9-node cluster with each containing 24 300GB SCSI disk drives. Alongside this online array, the X12000 series SATA-based digital media library serves as the near-line archive. The initial archive capacity was a relatively modest 14TB capacity.

While this original configuration achieved project goals and performed flawlessly, SeaChange brought forward a fundamental redesign of the near-line storage components. Would KCET have done better to wait?

“We received a credit for the full price of our original archive system. For a little more money, we got the latest technology with 75TB of useable storage, a tremendous increase over the initial 14TB and plenty to hold us for some time. This is a true demonstration of the technical partnership we enjoy with SeaChange,” said Bell.



Given the fast-changing world of IT innovation, Bell relies on SeaChange to lead the way in advancing and adapting new storage technologies for broadcast. What's next?

"SeaChange's new Flash Memory storage is an exciting advance. It marks a fundamental shift in a core technology that offers many advantages. No spinning disks, greater reliability, lower power consumption – the future is flash memory, and SeaChange is already there," Bell said.

"...the future is flash memory, and SeaChange is already there."-Gordon Bell

PBS Customer List

Alabama Public Television – Birmingham, AL
KAKM – Anchorage
KAWE/KAWB – Minneapolis-St. Paul
KCPT – Kansas City
KCTS – Seattle
KERA – Dallas
KSPS – Spokane, WA
South Dakota Public Broadcasting – Vermillion, SD
WBCC – Cocoa, FL
WBRA – Roanoke, VA
WBZL – Hollywood, FL
WCMU – Mt. Pleasant, MI
WCNY – Syracuse, NY
WEDH – Hartford, CT
WENH – Durham, NH
WFSU – Tallahassee, FL
WJCT – Jacksonville, FL
WMFE – Orlando
WNET – New York City
WNIT – Elkhart, IN
WPBT – Miami



SeaChange International, Inc.
50 Nagog Park, Acton, MA 01720 USA
T 1.978.897.0100 F 1.978.897.0132
www.schange.com

3.17_2010

©2010 SeaChange International, Inc. SeaChange is a registered trademark of SeaChange International, Inc. All other marks are the property of their respective owners. While every effort is made to ensure the information given is accurate, SeaChange does not accept liability for any errors or mistakes which may arise. All features, specifications, system requirements and/or compatibility with third party products described herein are subject to change at any time without notice.