Case Study

Snell HD Conversion Shines at WNET

New York's premier public broadcaster uses Snell's Quasar Ph.C standards converter to leverage standard definition content as it migrates to HDTV.

The Customer

WNET.org is the premier public media provider for the New York City metropolitan area. As parent company of public television stations WNET and WLIW, WNET.org has deep roots in the New York community and a tradition of embracing technology to stay on the leading edge of public service broadcasting. This strategy has served the organization well: WNET is the most-watched public station in the U.S., and WLIW is the third most-watched.

The Challenge

With the launch of its high-definition (HD) broadcasts, WNET.org has come to rely heavily on state-of-the-art conversion technology to ensure that its viewers receive the highest possible picture quality.

At the broadcast station, there is a fundamental need for offline conversion of content from many sources, including that produced by WNET.org and feeds from its network, PBS. A large proportion of that content arrives at the studios in standard-definition (SD) and the challenge is to find a cost-effective and efficient means of creating the high quality HD output that WNET.org viewers require.

The Snell Solution

After evaluating a number of conversion systems, WNET.org deemed Snell's Quasar Ph.C system far superior in terms of its ability to match the broadcast stations functional requirements.

Quasar uses motion compensation that is based on a number of proprietary Snell technologies that provide sharp and clear up-converted pictures from any source, whether its video, film, live action or animation. The Ph.C technology ensures that each individual element and characteristic of the picture is seamlessly processed with absolute precision, using the most appropriate conversion algorithm.

"As a public broadcasting organization, we are funded by foundational grants and viewer contributions and, as such, we are continually pressed to stretch our operating budget as far as possible," explained Frank Graybill, Director of Engineering at WNET.org. "The current economic climate has made this task much more difficult. Not only is Quasar Ph.C extremely affordable, it has provided us with an ideal solution for leveraging material from a wide range of SD sources as we have transitioned to HD.

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Another important consideration for WNET.org's operations was Quasar's built-in aspect ratio converter, since a significant percentage of the station's content is anamorphic. This feature provides presets for all commonly used aspect ratios and ensures that material in 16:9 can be automatically converted to 4:3 with no loss of quality. Also, Quasar's seamless handling of closed captioning and timecode was a critical requirement for WNET.org, and such capability is not typically available as a standard feature in rival conversion systems.

Key Quasar Ph.C features

- Enhancer - a sophisticated enhancement control means that even legacy formats look good in HD.
- Gamut Legalizer - guarantees that all output is within legal limits making it suitable for the broadcast signal chain.
- Color Space Converter - provides conversion from SD Rec. 601 to HD BTU709.
- Aspect Ratio Converter - Allows sources to be reformatted with the most common options available as presets. Support for widescreen signalling enables seamless integration in the playout environment.
- Closed Captions - handled and converted to ensure compliance with legal obligations.
- Timecode - extracted and converted to both VITC and LTC.
- Monitoring and Control via SNMP and RollCall.

The Results:

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"While HDTV is a fact of life for all broadcasters, the truth is that we will have to deal with an enormous volume of SD content for many years into the future. With Quasar Ph.C, standard-definition content is no barrier to high quality HD broadcast, and the system will serve us well as our operation evolves," concluded Frank Graybill.

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