Christie **Terra Bites**:
Bite-size info to whet your SDVoE appetite

Uncompromised AV-over-IP experience

4K/60
4:4:4

An industry-wide upgrade

The emergence of 4K@60 source signals has exceeded the signal capacity of many existing AV systems, so switches that can only support 2K@60 or 4K@30 are being upgraded on an AV industry-wide level. The most promising platform to migrate solutions onto is AV-over-IP.

What about compression?

In order to fit 4K@60Hz sources into 1G bandwidth, 1G Ethernet networks that transport AV content require high compression rates of 15:1 or greater. But those high compression rates introduce both latency and image artifacts. 10G Ethernet and SDVoE platforms transport content without using compression.

Latency matters

Low latency is ideal so we can support natural:

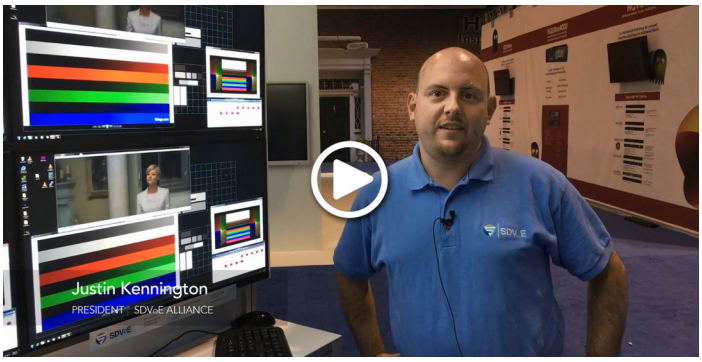
- Remote device control
- Audio experience, avoiding the need for processing and echo cancellation
- Video conferencing and interactive experiences
- Keyboard and mouse control

Image quality matters

While it may be possible to carefully select compressed content that appears visually lossless for small-screen viewing demos, the reality is not ideal. Customers will have poor viewing experiences when they see their own real-world content under heavy compression, particularly on large screens.

SDVoE codec shootout

In the following video, Justin Kennington, SDVoE Alliance, demonstrates the differences between SDVoE and other leading compression codecs.



Video - SDVoE codec shootout demonstration (00:03:24)

Considering AV and IT convergence

AV-over-IP compressed to operate 1G networks takes up a lot of data, often running between 800-900 Mbps. This leaves very little room for transporting other signals and data services, which can in turn result in poor customer experiences with other activities, such as file transfers.

When heavier compression ratios are applied on 1G Ethernet AV streaming in order to create more room for data traffic, picture quality is sacrificed.

So no matter which route we take in the 1G AV-over-Ethernet equation, customer experience is degraded.

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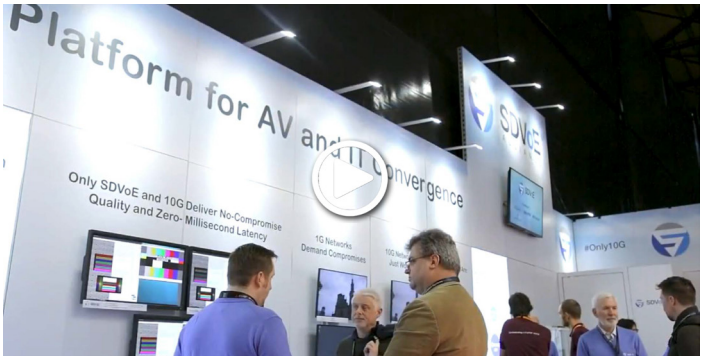
One network

This video identifies the advantages of bringing AV and IT together on a single 10G network:



Video - SDVoE Alliance demonstrates AV and IT convergence (00:04:01)

SDVoE – An uncompromised compression solution

AV systems designed for the Software Defined Video over Ethernet (SDVoE) platform—such as Christie® Terra™—use 10G network connectivity to transport AV signals. SDVoE systems deliver uncompromised content with zero frame latency and zero artifacts.

AV content at all resolutions up to and including 4K@30 content travels uncompressed and 4K@60 content only requires ultra-light compression. The 1.4 compression rate is actually so light—just 1/10 the compression rate applied on 1G AV-over-IP systems—you'd need expensive and highly-sensitive test equipment to reveal any differences, since they're invisible to the human eye and occur only at the level of individual, isolated pixels.

An uncompromised AV/IT experience

SDVoE platforms like Christie Terra are so efficient that you'll still have more than 1 Gbps of bandwidth available you can use to support traffic from other AV devices and network data services, such as file transfers, and the ability to give customers an uncompromised AV/IT experience.

Only SDVoE can deliver

Designed from the ground-up to take full advantage of 10G infrastructure, only SDVoE technology can deliver true AV/IT convergence, with the zero-latency and flawless image quality pro-AV applications require.

Hungry for more?

Visit the following sites for more information on SDVoE:

SDVoE Technology.com – *Learn about Christie® and the SDVoE Alliance – a partnership with the full AV-over-IP ecosystem in mind*

Christie Terra: An SDVoE technology solution – *Find out about Christie's solution enabling the transport, processing and control of uncompromised AV content.*

For the most current specification information, please visit christiedigital.com

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