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

The 10G advantage

Once reserved for large organizations and data centers with demanding, high-bandwidth requirements and deep pockets, 10G Ethernet networking has reached the levels of performance, availability and affordability that make it a viable option for professional AV applications. What's more, with the roll-out of the SDVoE Alliance ecosystem – an ecosystem built on 10G – designers and users can take full-advantage of this robust, fast and reliable backbone today, and into the future.

1G networking and HDBaseT limits

With origins dating all the way back to 1999, 1G Ethernet matured when bandwidth requirements were a fraction of what they are today. As demands for higher resolution and bandwidth increase, the performance limits of 1G technology have been left behind.

To compensate for inadequate bandwidth, 1G networks require the use of compression, which results in artifacts, compromised image quality, reliability and latency issues with no room for expansion.

Monolithic, proprietary matrix switchers, such as HDBaseT™, have also reached the upper limits of data rates they can handle. What's more, fiber switches are very costly. These issues, and more, are why the transition to Ethernet is inevitable.

The 10G advantage

We can categorize the key advantages of 10G SDVoE networks over 1G into three areas: performance, scalability and affordability.

Performance

Modern AV systems require 4K content transmission. As such, the ability to transport artifact-free, zero-latency 4K@60Hz video content is a key performance advantage of 10G SDVoE systems over 1G network solutions.

SDVoE networks also natively support video wall scaling, multi-viewer and KVM functions, which are not standard in traditional AV switching and distribution systems. System-wide EDID management and AV signal processing features add to the performance advantages by making system integration much more efficient. SDVoE technologies also include switches that ship pre-configured for simple plug-and-play integration and setup.

Scalability

Compared to traditional AV switching and transport,10G networks support the scalability of systems beyond 1,000 endpoints. 10G networks can also be easily expanded and built up over time, growing in tandem with your requirements. This scalability is thanks, in large part, to the density of Ethernet switches: a mere one rack unit network switch can support 48 ports. This is dramatically smaller than an AV switch that supports a similar input/output capacity.

As an added benefit, unlike proprietary AV matrixes, all SDVoE-compliant products, regardless of manufacturer, are interoperable, meaning designers have flexibility in choice and performance capabilities when specifying systems.

Affordability

Based on affordable and readily available off-the-shelf 10G Ethernet components, SDVoE systems cost much less than traditional AV matrix routing switchers. This means integrating or expanding an SDVoE system not only offers enhanced performance and scalability options over 1G networks, but also a much smaller investment.

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