

The Time is Right to Stream Live Events

By Dan Daley, Special to InfoComm International™

This is a big time of year for live events. The music touring season is nearing its grand finale, even as the theatrical season begins to ramp up. And this year, in particular, holds its share of political live events, including the two major-party conventions, held within the last several weeks, as well as the presidential and vice-presidential debates, held before live and televised audiences.

Streaming-media audiences, too. The Republican National Committee's live stream on YouTube attracted 292,000 views over the three days of the party's convention, according to Reuters. The Democratic National Convention added a splash of interactive, multichannel streaming to its popular streaming coverage. The streaming audiences for both conventions may only be a fraction of the tens of millions who watched on cable or via conventional broadcast, but consider this: About 25 percent fewer people watched Republican nominee Mitt Romney's acceptance speech the old way than saw Sen. John McCain accept the GOP nomination in 2008. It's hard to say why exactly, but the fact is, streaming of live events continues to grow by leaps and bounds, both in the number of viewers tuning in online and the sophistication of streamed presentation.

The writing is on the wall: Streaming must be a regular component of AV professionals' technology arsenals, particularly if they work the live-events beat. Many large companies are already embracing it. Clair Global, for example, the recently rebranded Clair Brothers and largest sound-reinforcement provider for live-music shows in the U.S., just added streaming capabilities to its offerings. Now the company can deliver live and delayed streamed versions of concerts for which it provides the live sound.

"Anyone can stream a live event now," says Marc Scarpa, a producer and director of live streaming productions. "It's not about 'how-to' anymore. It's about 'why' and 'what?' Why are you doing it and what's the story you want to tell?"

Scarpa's credits include streamed versions of the Grammy Awards, Woodstock 99, and a week-long event by the band Incubus that incorporated streams from diverse sources ranging from high-end Sony broadcast cameras, to GoPro wearable cameras, to an Apple iPod Touch worn around the necks of different crew members. The iPod Touch transmitted first-person points-of-view via Wi-Fi to a Livestream platform Scarpa's group used to stream the event.

Part of the reason that streaming live events is so do-able today is the availability of affordable gear. Livestream started out as a service provider but recently introduced a line of hardware and software products, including a new encoder at this year's National Association of Broadcasters (NAB) show and the Livestream Studio HD500, introduced at this month's International Broadcasting Convention (IBC) in Amsterdam. The Livestream Studio HD500 allows users to input up to five sources using HD/SDI, HDMI, composite, component and S-Video formats, and stream them simultaneously to video screens and the Internet.

A little further up the spectrum are systems such as NewTek's 14-channel Tricaster 455 switcher, a feature-rich system for four-camera productions that supports live streaming at the touch of a button.

"We want to make it seamless for a production company to get the event online," says Jessica Kantor, head of marketing and content at Livestream. "We're democratizing that market." Kantor estimates that Livestream streams 1 billion video minutes each month to 33 million viewers.

Following something akin to Moore's Law, as streaming technology gets more powerful and prices continue to drop, even more professionals will start streaming live events. Eventually, everything will be integrated and streaming switchers will come in broadcast-level quality, the goal being to give live-event producers the ability to derive broadcast, on-site and streamed video from the same device.

"If you use different switchers for broadcast and streaming, you also need an extra computer to encode the streamed content," Kantor explains. "The technology is moving towards integrating all of that switching into a single device with integrated encoding."

Narrative Determines Technology

But streaming isn't just about technology. At his production company, Simply New, Scarpa emphasizes narrative and says the technology a company chooses should reflect the level of participation desired. Streaming straight to the Internet through DIY portals such as YouTube and Ustream has become a commodity offering, he says. But, for example, integrating real-time social-media content can take a vanilla narrative and make it dynamic.

That's what Scarpa did for a streamed pre-show event for the Fox reality show X-Factor. He incorporated media-mining tools that allowed the event team's social media producer (yes, more complex streaming productions often require specialized personnel) to filter for words in social media that could be matched to either live or prepackaged content on-screen.

"We had an interview with one of the judges planned in advance," Scarpa explains. "So the social-media director set the filter to find key

words related to that particular judge. We could then steer those voices into the conversation at exactly the right moment.”

It represents a creative, ambitious mix of new media and live-event streaming, but it takes care and planning. “You have to remember that we were pulling these from what were about two thousand Facebook and Twitter comments per minute,” Scarpa says. “This is real-time curation, but that’s what makes it compelling. It’s the difference between engaging people with the streamed broadcast or just pointing a camera at a stage and sending it to the web.”

Keep In Mind

AV professionals who want to add streaming for events must first decide on the level of complexity and engagement they want to achieve and plan accordingly. As Scarpa points out, integrating many live AV, prerecorded AV and dynamic social-media sources will require a certain knowledge base, including social-media experts and encoding engineers.

While Scarpa works at the upper end of the spectrum and needs personnel with what he calls “hybrid, broadcast/streaming/social media skills,” Livestream’s Kantor says that AV professionals might want to start with a dedicated person as the company streaming technologist, or rely on freelancers as needed while companies ramp up their streaming chops.

“Right now, it’s a mix of options out there,” she says. “Very often we see someone who’s knowledgeable about streaming also working on marketing it to clients. We can also train someone at the company and they can then sell the knowledge at a markup.”

When it comes to setting up the actual streaming solution, Kantor suggests planning for multiple streams at multiple bit rates to accommodate everything from viewers on laptops and high-speed networks, to those using mobile devices on dicey Wi-Fi connections. The streams will have to be encoded simultaneously, and Kantor suggests first testing the speed of a venue’s broadband using www.speedtest.net, then apportioning bandwidth accordingly.

In true, high-speed environments, with bandwidth upwards of 10 Mbps, you can generally accommodate four separate streams, Kantor suggests: A high-speed stream at about 5 Mbps, two mid-high/mid-low-speed streams between 1 Mbps and 2 Mbps, and a stream for mobile views of at least 500 Kbps. If the broadband environment at a venue offers less than 5 Mbps overall, she suggests using two streams: one at up to 2 Mbps and a mobile stream.

In any event, use the highest encoding quality possible — at least 720p — and a good, high-rate (256 kbps or better) audio encoder. Adaptive bit-rate technology in the encoders will allow end-user devices to pick the most appropriate connection for each device.

Streamer Beware

Once you’ve embraced streaming, don’t forget that you can’t throw just any content into your productions. Piracy concerns pressed by content organizations such as RIAA and MPAA have caused service providers to set up trip-wire-like filters that can take down streamed events without notice. That’s what happened in August at the science-fiction Hugo Awards event, when what was apparently copy-protected content in nominees’ video clips caused the Livestream account to shut down abruptly for copyright infringement.

In fact, the number of take-down notices from online distribution channels such as YouTube have increased exponentially in 2012. YouTube owner Google currently receives almost 1.5 million URL takedown requests *per week*, including from people and companies on the lookout for copyrighted material in streamed content.

Not every live-events company can know every piece of content the client intends to show. Nor is every company familiar with copyright protection and digital rights management. In general, if you’re streaming an event that might contain copyrighted content, you’d be wise to engage a content identification and management service provider, such as Vobile, or use YouTube’s own content ID tools.

And of course, sometimes it’s the clients themselves that get a streamed event into hot water. Part of the producer’s job is to help the client avoid embarrassing gaffes. As *New York Times* media critic David Carr once pointed out, webcasts have little of the audience of television, but all the potential pitfalls. “The answer to ‘Is this thing on?’ is always yes.”

No longer an afterthought, streaming itself is going mainstream. It’s no longer an add-on to live events, but something that needs to be in every proposal and thought through at virtually every stage of a live event. As Livestream’s Kantor puts it, “This is becoming a very real market in AV, and fast.”

Copyright 2012 InfoComm International