Personalizing the viewing experience

Crystal provides software that automates the monitoring, control and metadata management of the end-to-end broadcast operation. From traffic, scheduling and playout through OTT/TVE, Crystal helps its clients capture new advertising revenue , speed time-to-market, increase advertising effectiveness and reduce costs. Roger Franklin, President and CEO at Crystal, opines on personalizing the viewing experience using existing technologies.

Q&A

Question: What can you tell us about Crystal's foundation, and the key milestones achieved over the years? Roger Franklin: Crystal's foundation is based on the ability to interface to just about any piece of equipment or system out there; to monitor, control and communicate with it. Everything we do is built on that core base. We've been providing monitoring and control systems for more than 30 years for some of the major broadcasters around the world.

More recently, we've extended that control to embedding signals in-band with the video and thereby effecting control on equipment at the distant end of a video transmission. Over the last few years, we've enabled the process to dynamically replace advertising in video, in a cable environment or over the air. Because we've been dealing with metadata that we've extracted from playout automation systems, we can resynchronize that metadata accurately with the video, anywhere along the distribution path. We know exactly what's playing, when. That gives us the ability to identify specific frames, when to pull a commercial out, when to put a new one in, and so forth.

Broadcast quality video needs to be frame accurate. The days of getting chopped commercials should be over, although it still happens from time to time when the timing isn't quite right. A lot of cable plants and satellite operators set up their system to be time accurate at one point, but over time, a piece of hardware starts to drift, and what used to be accurate to the frame is now 12 or 13 frames off, and it just gets worse. Advertisers are paying for a complete message; if they're paying for 30 seconds and its 30fps, they want 900 frames of video, because that's what they're paying for. The last thing we need to do is chop off the end of an advertisement, allowing the message to be misdelivered on misinterpreted.

Question: As a major player in the broadcast sector, Crystal must keep its eye on emerging trends and opportunities. What's your
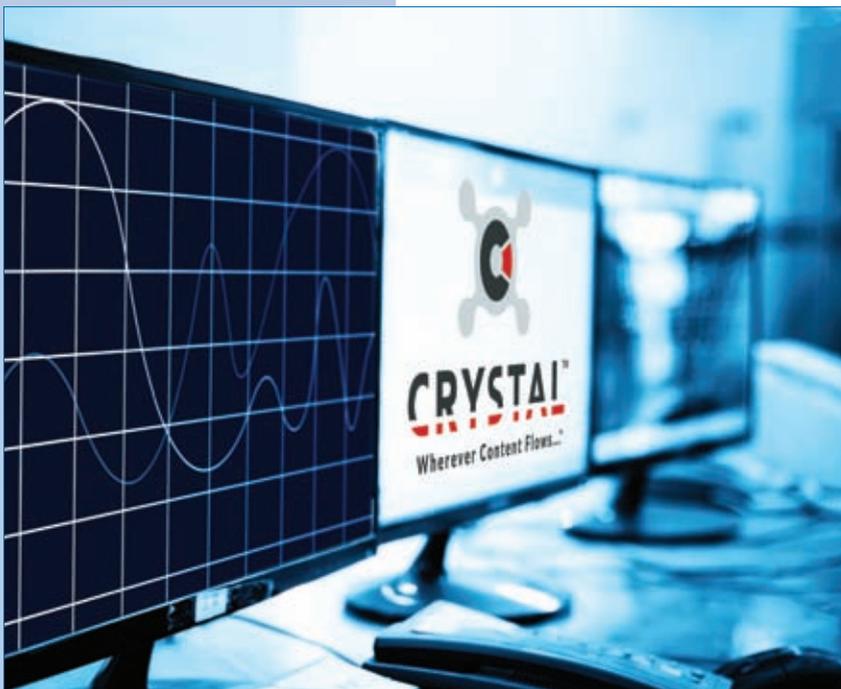
Some of the technology Crystal provides makes it possible for those OTT providers to do dynamic ad insertion with personalized content for live streams ●●●

assessment of the market right now?
Roger Franklin: Broadcast video is essentially made up of three major business sections. At the beginning, you have the production of video content which are the programmes. Traditionally, broadcasters have packaged up that video, combined it with adverts, and put together a nice package with graphics, and called it a network. That network was handed off to a distributor to get it delivered to viewers via satellite, cable, and over the air. Those are the primary three functions: Production, network packaging and distribution.

What we're seeing now is that those last two functions, network packaging and distribution, are being combined through business mergers. Moreover, these combined businesses realize that sending the same channel to everyone in their viewership is not desirable. These days viewers are much more interested in receiving content that is more relevant to them, including targeted advertising. This means delivering contextual advertising that matches the content of what they're watching, and where they are watching it. The distributors know where the viewers are and what their preferences are, and can finish the final packaging of a video network to target that delivery. In order to do that, they need to replace content as well as make sure that the right commercials are in the right programmes.

So, distributors now have to do some of the jobs of traditional network packagers, but they don't have all the information that they need to accomplish that. It's therefore incumbent on the network to provide the correct signalling to those distributors so they can personalize the content. While there are standards in place to do that, they are not always able to survive today's modern distribution path, leaving them unreliable. Crystal's latest developments solve that problem for the distributors and network packagers.

Question: We're forever hearing about the 'global takeover' of OTT; what does it mean for Crystal as a service provider?
Roger Franklin: I separate OTT into two different types of video.

Video on Demand (VoD), where we're talking about Netflix and Amazon Prime. The timing is not critical for this type of OTT, since the viewer sees whatever frame of video they like, whenever they want to watch it and companies like Amazon, Netflix and Hulu are doing a very good job at this.

The other side of OTT is live streaming, and for this, timing is absolutely critical. OTT also brings people together in communal viewing, but with a widespread community and viewers all potentially watching the same thing at the same time on individual screens. This form of OTT viewing has been challenging because it's difficult to take a live linear channel and stream it to very large number of viewers over the Internet and provide a high-quality experience with personalized adverts.

For streaming services like YouTube TV, local channels with local news and announcers are also necessary for the service to be compelling. The right systems and signals must be in place to do that dynamic advert insertion for local advertisers to frame accurately.

Some of the technology Crystal provides makes it possible for those OTT providers to do dynamic ad insertion with personalized content for live streams, and we're seeing a lot of interest there now. Last year was about distribution rights, making sure that these OTT providers didn't distribute video over the Internet that they didn't have the rights to. This year, of interest is dynamic advert insertion. And now that some of the signalling is in place, they can see the potential in generating their own ad revenue. I think that next year we'll see a lot more interest in personalization with graphics and even more relevant content.

Question: What are your expectations for Crystal and the broadcast market in the years to come?
Roger Franklin: In the last year, Crystal has created some very interesting technologies that allows us to synchronize timing signals with any video channel, even if there are no signals in the channel. What this means is that we can do dynamic advert replacement on off-air received TV channels today. We don't have to wait for the next iteration of technology, we can take a cable channel, re-synchronize the signals so we know exactly where the adverts are, and replace those adverts in a Smart TV today.

We're going to be licencing that technology to Smart TV manufacturers, and we're going to be working with networks to deliver this out of band metadata to the Smart TVs so they can do dynamic advert replacement and personalized graphics on the TV itself, using today's signals and delivery infrastructure.

One of the things that's come to light in all this is, because of this technology, we don't have to wait for OTT to do personalized TV channels. We can truly take broadcast TV and personalize it at the home, much further down the chain than we ever have before. Satellite distributed video is extremely economical and reliable, and there's no reason to dismantle that in order to achieve that personalized viewing experience.
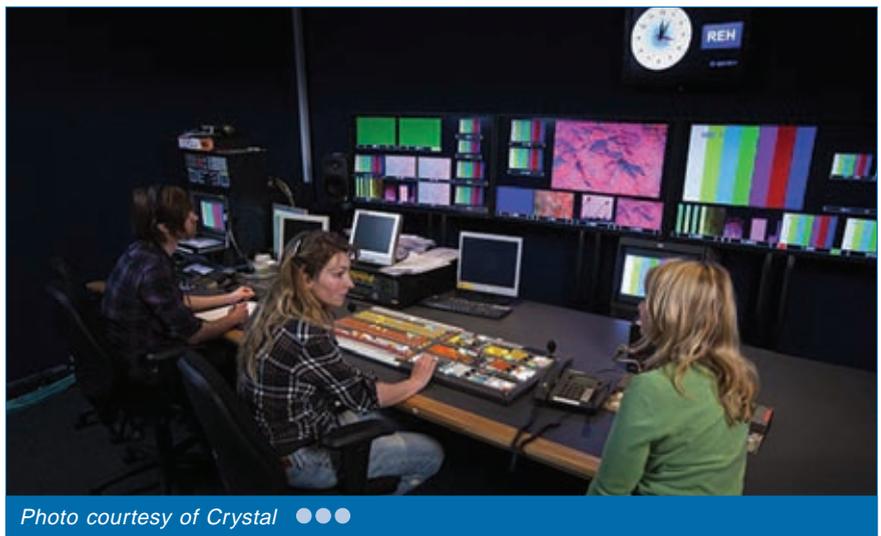

Photo courtesy of Crystal ●●●