

GARY OLSON RESPONDS TO IP SURVEY

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Like us, you might have read the recent **Quantel and Snell survey (<http://www.snellgroup.com/news-and-events/press-releases/3939/global-survey-reveals-transition-to-ip-will-take-up-to-10-years-to-complete>)** on IP adoption and had more questions than answers. Should one plan for an IP production facility one year or five years or ten years out? To dig a little deeper into this subject, we called Gary Olson, a broadcast consultant who has designed IP video and audio systems for the likes of the United Nations and the NBA. Gary shares our love of audio, having been a live mixer in his youth, and describes himself as an “industry troublemaker.” Here is what he had to say.

WS: Before we get started, we have to ask you about something you wrote for one of the trades on how specialized cables, i.e. coax, have transitioned into VLANs. What can you tell our broadcasters about this?

GO: If you think about it, the cable plant is no longer the heart of the broadcast facility and the IP switches and routers now take on that role. Traditionally, video is on coax, audio is on two-pair, communications is on some version of two-pair, control is anywhere from two-pair to five-pair, and now all those things are IP and they go over the same fiber or wire. I’m saying that you put communications on a VLAN, metadata on a VLAN, audio on a VLAN, and video transport on a separate VLAN, and that it all goes into the same port on the same switch. This means you don’t need an audio switch, a control switch and a video switch. You just have one switch for all those. And since it’s a duplex system, you don’t need an XY switch either.

WS: This is as it relates to distributing and routing, of course. But where are we in terms of IP and live production?

GO: We're more there than not there. I'm not sure that's the perception though, which is obviously reflected in the survey. You have a myriad of control surfaces talking to servers in the back room. What's not IP there? You have graphics that come in on a thumb drive. What's not IP there? The number of screens with keyboards with KVM so you could reduce the number of screens to do things ... that's all IP. Even the mic. The first thing that happens is it's digitized and the rest of its life it is traveling over a network. I think what's going on is that you have 5 % of the problem left, occupying 99 % of the conversation.

WS: So, what's left?

GO: Mostly, it's that we won't solve the problem of seamlessly splicing and switching an IP stream for live production. I say "won't" and not "can't" because it's only for crossfades and dissolves, for titles, graphics and animations, we can layer. We've been doing that with Photoshop forever. For on air, we've been layering – if you go into a master control room, there's no SDI. They're overlaying data. They're overlaying thirds. They're overlaying everything. So somehow in delivery we've figured out how to do this, but in production we haven't.

WS: Okay, so here's the big question that is on every broadcaster's mind. Should one plan for an IP production facility one year or five years or 10 years out?

GO: Many are already planning for it ... this year. I think about the recent NAB show, where everybody was screaming for software-defined networking, software-defined video networks, metadata, storage, cloud – streaming, mobile, broadband, all that stuff. Guess what? All that is IP.

WS: Perhaps the survey was telling us more about perceptions than planning and budgets. What do you think?

GO: Maybe. It is a big transition, possibly the most comprehensive and disruptive transition yet because it introduces things that have never existed before. Meaning, everyone has access to the same stuff at the same time. We used to have to carry the tape from A to B. We had ownership of the tape. So now when it goes into one big bit bucket, and everyone has access at the same time...that's a transition that will take time.

WS: One last question, this one on your use of the term "orchestration" to describe what is happening with automation and systems of late. Describe that.

GO: I think orchestration is the next generation of automation. If you take a look at all the different systems, you find there's less "push this button or that button." It's more like you tell a system to do something, you say "go," and then the system does a sequence of events, whether it's play a playlist, execute a command or render something. Then, another system knows to pick up the file and do something with it. We call these automated processes, and embedded in every system is some form of automation that handles these individual processes. What's different is that you don't have people sitting in front of the computer screen most of the time waiting for that little ball to stop spinning so they can do the next thing. They depend on something else talking to it, so orchestration is what lives on top of all this that you actually do through a single user interface. It's probably one of the major changes because of IP.

WS: Thanks, Gary, for talking to us. It's always good to get your perspective.

Gary Olson is a media technology architect and consultant with GHO Group LLC.

He is the author of **Planning and Designing the IP Broadcast Facility – A New Puzzle to Solve** ([/HYPERLINK%20http://www.amazon.com/Planning-Designing-IP-Broadcast-Facility/dp/1138798967](http://www.amazon.com/Planning-Designing-IP-Broadcast-Facility/dp/1138798967)).

Click to learn more about Olson's article on **"How Coax Became a VLAN"**

(<https://www.thebroadcastbridge.com/content/entry/308/how-coax-became-a-vlan>).

Click for details on the **Quantel and Snell survey** (<http://www.snellgroup.com/news-and-events/press-releases/3939/global-survey-reveals-transition-to-ip-will-take-up-to-10-years-to-complete>).

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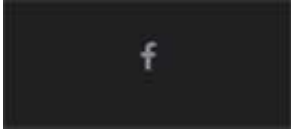


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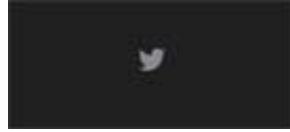


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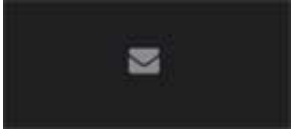




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