Is IP Really an Atoll or Island in a Sea of SDI?

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There remains confusion on where IP will first be applied in production and broadcast facilities. Image by Jordan Olson.

At this IBC vendors pushed the Cloud and IP-related technologies. Terms including; SDN, SDVN, NFV, NTP, PTP and SDS have become the buzzwords du jour. What does all this mean to the guy needing to build a facility?

I couldn't help conjuring the visual of an IP island awash in a sea of SDI technologies. Yet here we are, with another industry statement and vendor webinar on how IP is still an island among the vast expanse of SDI! BULLETIN! EBU assembled a bunch of vendors and partners and built a fully Live IP studio. At this IBC vendors are pushing the Cloud. SDN, SDVN, NFV, NTP, PTP and SDS are the buzzwords du

jour.

The Standard Bearers are scrambling to produce – Well! - Standards. SMPTE 2022-6, AES67, SMPTE 2059 and JT-NM. Let's not forget EBU FIMS.

Even the Nay Sayers are promoting IP technologies in their product offerings.

Am I missing something?!

Oh, and by the way, I have NO intention of discussing climate change! But there are the Nay Sayers again.

IP is not an island in a sea of SDI, I would say that at this juncture, SDI is the island eroding and vanishing as IP envelops it. Production creates files with metadata, content travels from servers to storage over the network controlled by applications. Phones are both cameras and 2nd screens, even to the transmitter, the STL is an IP stream. On distribution, we stream content OTA and OTT to "Smart TV's" that also access OTT streams and deliver files to a DVR. Are Netflix and Amazon producing or delivering in SDI?

Let's be somewhat realistic. There is still plenty of active content in the library on tape, the camera still puts out SDI (IBC 2015 will introduce the first IP full broadcast cameras), the production switcher only accepts SDI (IBC 2015 we will see an IP production switcher) and most video circuits still take SDI in but transport over IP (Zayo and L3 are moving to IP). So we still need the SDI Router (XY Matrix) and a few other pieces of "digital glue" while the transition is happening.

Back to this Island concept. The Internet of Things, Big Data, Asset Management in the Cloud, Adobe Anywhere, VoIP, IP is everywhere and everywhere is IP.

How does this apply to the real world? Let's see - EBU and VRT recently announced an all IP studio initiative that produced an all IP interview program and in the next phase a true multi-camera production with all the bells and whistles.

In the US, GameCreek Productions and NEP both have new all IP remote trucks/OB Vehicles for sports and large venue productions. Oh yeah, there are **SDI Islands** in them to support legacy technology like CAMERAS AND PRODUCTION SWITCHERS. Fox recently built an all IP facility in LA and are on the presentation circuit telling everyone. ESPN's new D2 facility is – wait for it – you guessed!!! IP!!!

NEP now uses one IP-enabled truck to produce sporting events.

On a recent project involving sports venues and a broadcast facility for one of the US sports leagues , only the cameras were SDI, transport was IP and the cameras were getting directly ingested to servers , everything downstream was in servers or files. However between the staff engineer and integration engineer they insisted on maintaining and expanding the SDI infrastructure. Why? Because that's what they understand. Everything else was networked, IP and file based - the whole shebang!

I am currently working on a project migrating a public access facility from analog, SDI & digital tape to file based and IP technology. The operators are intimidated and the production community is still taped based. There is reluctance to bring the new Master Control online - BUT, they edit on Premier Workstations and use attached storage for their work space. The system integrator has been avoiding communication with the IT engineer (same team) on the project and installing the network switches and equipment in their default configurations. Even though the IT engineer provided all the configuration settings, IP addresses, VLAN and subnet details. The tapes will go to the ingest area to be registered into the archive as files and at the same time the files loaded to storage in the Channel In a Box origination servers - over the network!!!

The real challenge is NOT the technology, ADOPTION and CHANGE are the challenges. It seems that true barrier is a reluctance to accept the reality that production and broadcast has been computer centric (IP) for quite some time. Nobody wants to hear about metadata, but everyone talks about MAM and Orchestration. File accelerators, stream delivery. AWS is a common acronym but IP is still years away.

We need to put the same effort in education, training and change management that we put into R&D and making up the next generation of technologies. Some of the industry groups are beginning to address this. IABM, SMPTE, EBU and SBE are running course introducing IP. At this past NAB, I ran into a system integration engineer from a known company who went to all day seminar because he told me in the future when IP gets here he should start paying attention.

Early adopters of IP technology are typically large and well-staffed facilities. They are also the ones with the most money. Where does that leave others who want to benefit from IP advancements?

At a recent meeting of a CTO club I belong to, yes CTO, I was asked how I stay up on technology by a colleague. It was a great question because he is a hard core enterprise IT guy and it was more about programming languages and coding. My answer was I do a lot of research in my areas of interest. Ok, so what does that have to do with broadcast? Everything, I read about servers, storage, networking and application development on IT sites. Cloud services and service providers are easy to learn about. None of them write about or are interested in broadcast and production. That doesn't mean that the knowledge and information doesn't apply.

Change management and adoption is a corporate thing, not a broadcast thing. Gimme a break! Industry trade shows and conferences introduce technology, they don't educate on the technology and they certainly don't discuss how to transition between technologies and new workflows.

Vendors throw the word workflow around like popcorn and candy. They don't explain what it means or how to change from legacy ones to new ones. Only that you can define your own and create anything you need.

As vendors are struggling to redefine themselves from proprietary hardware to something else, it would help them if they stopped rattling the SDI sabre and worked with their clients to better understand the next generation technologies.

Oh yeah and I do believe in global warming and climate change!!!!!

Follow me in my ramblings as I Smooth the Rocky Road to IP.

ASSOCIATED RESOURCES:

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Other related articles posted on The Broadcast Bridge.

It is Time to Adopt IP for Audio
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