

# To IP or Not to IP – That is the question!



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OR



The decision to move to an all-IP-based facility cannot be made without careful planning--and the needed solutions.

Whether tis nobler to acknowledge and accept change or remain in a state of denial. I am sure William Shakespeare would have no interest in this discussion and my apologies for the distortion of his work!

I chose to wait for NAB-NY aka CCW, the most recent conference between IBC and NAB proper. This is the conference where end-users want to see if the ideas floated at NAB were true!

I wanted to see if the momentum for IP, so evident at IBC, would carry across the “pond” but alas it did not. I asked a number of people who attended IBC if they noticed a big wide line in the ocean marked “IP” as they came to the US. Was the ocean divided with IP on the Euro side and SDI on the US side?

The best, though not original, line came from a manufacturer friend who said “De Nial” is not a river in Egypt.



Moving an entire industry from SDI to IP-based infrastructures requires that engineers are willing to cross the mythical river of denial. The Fall SMPTE conference featured a whole session on IP but quickly moved on to UHD. I spoke with the organizer of another technical conference scheduled for December and when I asked about an IP program, I was told there wouldn't be one.

### **We did what?**

While at CCW I had dinner with a friend who is senior engineering manager at a major network. He is in the midst of deploying an all IP network as part of a facility upgrade. He was invited to a meeting by a senior executive, who recently returned from IBC, and asked if they should be taking IP more seriously and to consider moving in that direction. Another senior engineer had to inform the executive that they were already moving in that direction and pointed to my friend and his accomplishments. My friend is still getting push back even as the installation continues.

### **Distractions**

UHD seems to be occupying the technical conversation with HDR a close second. At IBC EBU demonstrated a full IP production studio. When one of the key product providers was asked on their own booth when their IP product would be available, the answer was "it was a custom request", although they did expect it to become part of the product line.

One integrator told me they aren't enough IP options yet. Of course there's all the business and practical reasons not to rush into IP. And somehow the same reasons for delay didn't apply to 3D and don't appear be relevant to UHD and HDR. The CTO of a well-known mobile operator wanted to know where the business model is for UHD and HDR before he buys another round of new technology. This is a smart guy who asked the same questions about 3D before investing and he was right.

There is a lot of discussion surrounding standards, time reference and synchronization. While SMPTE 2022-6 and SMPTE 2059 are currently accepted and some new products are already using them. There also are new proposals from the Video Services Forum (VSF) under TR-03 for a new IP standard based

on segregating signals with the IP stream rather than embedding them. Hmm, discreet signals, where have I heard that before? Is this really a technology discussion or a way to delay the inevitable by confusing the community about standards?

Interoperability is based on agreed standards. What impact will these proposed new standards have on existing products and workflow issues including editing, playout, compositing, recorders, encoders and processors-just to name a few.

We are all about the cloud, storage is a big challenge and end-to-end file-based workflows are the rage. So why are we having such a difficult time adopting the reality that we now live in an IP world? Sure there are some gaps to fill and issues to resolve, but SDI did not work right out of the box.

### **The fear of change**

The words I am hearing are fear, intimidation and anger with a touch of frustration. Change is hard, disruptive change is harder. There are financial considerations on both sides. The manufacturers have inventory and are tooled for SDI. Moving to commodity hardware and software solutions is a disruptive change to their entire business model. On the user side, there are still substantial investments in SDI infrastructure that is not fully amortized or depreciated.

Then there is the human resource issue. People often resist any kind of change. The transition to computer centric technologies has introduced new levels of integration and exchange of data between business units. Maintaining data silos has become more difficult and problematic. Security and control of information and content can be handled better with newer technology.

As an industry, we are not doing the best we can introducing and educating the broadcast and production community at all levels. Senior management needs to sponsor the change and promote its acceptance to the stakeholders. Middle management needs to champion the changes and provide the stewardship to implement the changes.

We also have a mature IT industry with knowledge and skill resources that we should begin to embrace and find common ground. Broadcasters and IT professions need to seek ways to share knowledge and take advantage of those skills.

Asking “When will you be all IP?” is not a real question. The real question is, “When will you no longer have any SDI equipment?” Comically, that answer may be never. As long as content exists on tape, there will need to be technology that can recover it.

Engineers are often resistant to change. Yet our industry is always in some state of flux. Why is this round so different and why are we so unwilling to adapt?

Let’s move on. Solve the challenges and embrace the *NEW WORLD* of **IP**

Follow me as I rant, educate and hopefully entertain while I “Smooth the Rocky Road to IP”.

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