HD Q&A – David Phillips, CEO, TSL

So you want to launch a high definition channel?

Is HD in Europe at a point yet where you would actively advise broadcasters to ensure that new projects are completed as HD-ready?
Phillips: I would suggest to any major broadcaster to think very carefully before installing just an SD system. I would certainly question production companies who opt to go down the standard definition route alone, because their business opportunities will be limited. Already Australia, Japan and the US are demanding programmes that are originated in HD. These of course can then be down-converted for use elsewhere in the SD world.

Is there a split between production and broadcast in terms of HD in Europe?
Phillips: Yes, you could even take that a step further and say that Europe is starting to wake up to HD from a broadcast point of view. We now have three countries — France, Germany and UK — where one or more large broadcasters in each have staked a claim. I believe that other broadcasters will be watching very carefully and are probably already thinking how they can start to migrate to HD on whichever platform they have available.

If a broadcaster or facility is considering an HD project, and asks what are the core issues involved versus SD, what would you advise?
Phillips: There are several considerations. Signal management is absolutely crucial. Far higher bandwidth is required for moving HD signals around and, in turn, that requires much greater physical structure. The quality of interconnections is another prime example. The connections between pieces of equipment have to be absolutely right. It is analogous to 10-12 years ago when SDI was embryonic and we had lot of issues regarding the fact that cable would work for 100m but wouldn't work for 101m. We have similar technical areas of consideration for HD.

Broadcasters also need to be aware that the physical bends in cables can't be as tight as they are in SD because of the loss of high frequencies. It is vital that cables are installed and terminated to the highest standard. Overall, there will be an increased cost incurred, which will also include routers and general infrastructure products from manufacturers, though in some areas that looks set to change.

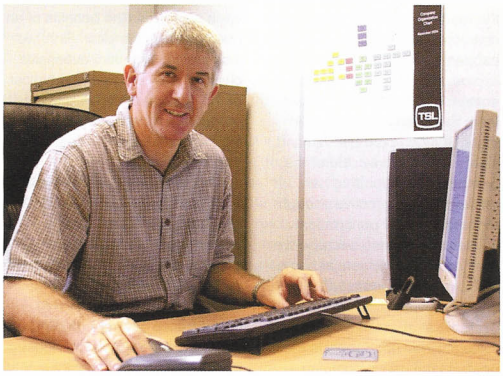
Monitoring is inevitably going to be more complex. If you look at the TSL system at BBC Broadcast Centre in London, there is a move away from CRT devices to large-screen back projection devices that are programmable in terms of what is seen on the screen. When a plethora of signal formats need to be monitored it is much more flexible to have those types of displays.

Media management is much more complex in an HD environment because it is also highly likely that SD assets are required to move around within the same infrastructure. It is important to ensure that signals arrive in the right place in the right standard and that various converters — aspect ratio, for example — are all synched up and working properly. That is an area that is perhaps not quite considered to the level that it should be.

How much do you have to take into account the variation in proposed HD standards?
Phillips: Standards issues for HD need considerable thought; there is a lot of debate at the moment about 720p versus 1080i. It is very important in Europe that we adequately prepare to allow migration to the very best technical standards.

At TSL, we suggest that the production of the programme is done at the highest standard that the budget will allow. This requires some investment because to move 1080i or 1080p signals around requires much higher bandwidth and greater care in the installation. Due thought needs to be given to both the compression rates and choice of codecs.

What you then do with the transmission — if you put it out at 720p, for example — is up for debate. We would strongly advise broadcasters to go with the highest possible infrastructure standard even if they cannot right now afford all of the technical equipment within the set-up or if it is not yet available. At least make sure the rest of the infrastructure is ready.



Phillips: "Signal management is absolutely crucial"

What about the cost of HD equipment versus SD?
Phillips: If the HD enhancements are built but they don't drive any greater revenue streams, are broadcasters and other facilities actually going to purchase HD and subsidise it for a period of time while customers decide to purchase the technology at home? That brings up another key area: the set-top box. There are many different standards in Europe, many different languages — it's not quite the same in the US where the volume of the production of new set-tops will reduce the cost. If each country here has its own design of set-top box then that increases the length of time before the equipment is available and increases the cost per unit.

How important is audio?
Phillips: Broadcasters are starting to realise that they are going to have to match the quality of audio provided by DVD players. Most big players are installing systems that are Dolby 5.1 capable. It is crucial that high quality audio is factored into HD systems and again, that is where TSL has a high level of expertise, providing our range of audio monitoring products. However, there is always the trade-off to be made of the ease of moving audio around whilst encoded with Dolby 5.1, against the need to edit it and produce subsequent different versions of the mix.

It is important to look at the European market as a business model: what drives the consumer to want to have HD?
Phillips: Usually it is significant major events; the Olympics, big football tournaments. For example, the World Cup in Germany in 2006, which will be produced and available in HD, provides an excellent opportunity to positively influence the consumer market.

HD display devices are a major driver. Screens are becoming larger, at a higher resolution and costs are reducing. LCDs offer an opportunity to get some very cost-effective monitors into the home.

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