



MEET THE... UK BROADCASTERS

OCTOBER 2016

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THE EVENT

In early October 2016 the Digital Production Partnership hosted its first **Meet The... UK Broadcasters** event, bringing together senior technology leaders from across UK broadcasting.

Six leaders joined the DPP's Members to share their views on the biggest challenges facing the broadcast sector today. We have summarised their thoughts in this short report.

THE LEADERS



BEVAN GIBSON

Chief Technology Officer
ITN



SINEAD GREENAWAY

Director of Technology and Operations
UKTV



TOM GRIFFITHS

Director of Broadcast and Distribution Technology
ITV



CHRIS JOHNS

Chief Engineer, Broadcast Strategy
Sky



MATTHEW POSTGATE

Chief Technology and Product Officer
BBC



ORPHEUS WARR

Chief Technology Officer
Channel 4

FIVE KEY THEMES

- 1 THE COST OF FRAGMENTATION**
- 2 FLEXIBLE BUYERS AND SELLERS**
- 3 THE DRIVE TO INNOVATE**
- 4 TALENT WARS**
- 5 BUILDING SECURITY TOGETHER**



THE COST OF FRAGMENTATION

Everyone knows there's been a huge growth in the number of media platforms used by audiences in recent years. It's great for consumers; but a headache for broadcasters entering this area of delivery. Where do you start – especially if you are a young channel, trying to match the likes of Sky Go or BBC iPlayer?

New entrants to the on demand game face a dilemma – as Sinead Greenaway from UKTV explains:

“It’s really expensive. From a technology point of view, especially as the slightly smaller broadcaster, getting onto all these platforms is hellish, and there really needs to be some work around standards. How do we afford to be on these services? As a commercial broadcaster, our success is actually penalised. The more we do, the more we pay.”

The cost of bandwidth and infrastructure for on demand delivery, whether cloud based or within the broadcasters, is clearly a challenge compared to the well-established, one to many, broadcast delivery model.

But the challenge of cost is not unique to the smaller players: it is a challenge for all broadcasters as they try to grow audiences on digital platforms. Vice and BuzzFeed are threatening the existing broadcast model by building huge global audiences online. Broadcasters are responding – but even when they do manage to build an online service they have to budget for bandwidth costs that will only increase as the programming gets more popular. These costs add to others that come from transcoding and moving files for delivery on a huge range of platforms.

It’s a problem that Orpheus Warr, CTO of Channel 4, has been grappling with for a while:

“I think the challenge is so broad that it goes beyond the development of particular standards. It’s really about compatibility and flexibility. I’d like to see a world where end to end solutions work because that’s what works best for the customer – and because it’s what we want. Channel 4 would like services that are modular: that interoperate reliably. It’s hard sometimes now to tell the difference between an IP channel and a broadcast channel, so there really isn’t any excuse for us to be stuck in a walled garden any more. I’d very much like you all to help me break out of it.”

Chris Johns was upbeat about embracing the new approaches to content delivery:

“Ultimately the consumer will want more, and we have to deliver it in a way that is most efficient, be that over a satellite, terrestrial transmission, via IP, to mobile phones, or to tablets. Our job is just to find the most efficient way to get the content and the entertainment to the customer. It’s a challenge for us. But if it wasn’t a challenge we’d be pretty bored.”

FLEXIBLE BUYERS AND SELLERS

A recurring theme from the broadcast leaders was that a changing approach to business and finance requires greater business agility from broadcasters.

Business agility is something that requires everyone in the media supply chain to work together. Tom Griffiths, Director of Broadcast and Technology at ITV, explained how he is trying to take ITV on this journey:

“It’s about things like speed to market, the ability to adapt and change, the ability to shut things down as well as to start things up again. And it’s about commercial flexibility. As a commercial organisation, how can we stop technology being the very barrier to profitability? This is why we started looking at business agility in the first place. Parts of our business thought that when they came to the technology group and said ‘I’ve got a problem, how can you help me solve it?’ the response they would get would be ‘it’ll cost you a couple of million quid and take a couple of years’ – and of course that’s just not good enough. Sometimes even three months is too long. So how can we respond to that?”

While ITV emphasised flexibility with suppliers, UKTV emphasised partnership. Sinead Greenaway highlighted that the broadcaster wanted much closer relationships with their suppliers:

“From a UKTV perspective, we really want partners. How do we really work together to make this thing fly? With some of our current suppliers we’re doing really brilliant work – and maybe that’s because we’re quite an agile broadcaster, we’re not the big guy, so we can move quite quickly. But I’d love to foster an environment where that agility was the norm not the exception.”

Orpheus Warr at Channel 4 highlighted how working with smaller companies has given them a competitive edge:

“When we launched 4oD, which was the first catch up TV service in the world, we did lots of very complicated things, but we also used lots of new tools. We even partnered with people who had just released software. We partnered with people who actually hadn’t released the software yet: it was more bleeding edge than anything else, and that took a lot of risk from us but it took a lot of risk from them too, and it worked really well. Now we relish the opportunity to innovate and we still rely on our partners to help make it happen.”

Tom Griffiths explained how ITV are now re-architecting some of their delivery chain:

FLEXIBLE BUYERS AND SELLERS

“We’re completely re-architecting from end to end, moving to a microservices, API-based structure that’s much more componentised. I think there’s a real role for the supplier community to play in that as well. We’re really not interested in buying a monolithic end to end solution for anything. We’re looking for people who can fix a point problem here and there, and can provide us with that little thing that frankly it’s not worth us building. If you guys are doing it already better than us, I’m not about to go and build it. I’m going to go and buy it. What becomes really important is things like the quality of your APIs. If the product’s great but the ways of getting information in and out of the product aren’t great, it makes it much harder to use it.”

If the message wasn’t clear before, broadcasters are now examining in detail how they can work more efficiently with technology provision. Bevan Gibson from ITN is committed to making the technology provisioning at ITN as intelligent as possible:

“We’re making sure that the utilisation levels of our infrastructure become much higher than we’ve got at the moment. Moving forward, we’re looking at the things that can be done in the cloud – things that can be done via non-preemptable and preemptable resources. That’s going to really change the model and the way that we can offer cost effective and reasonably priced solutions to our clients – so that’s a big challenge for us.”

In fact ITN wants to go much further:

“The equipment that sits in some of our newsrooms is only operated eight or ten hours a day because of the bulletin based service that we have. Our online operation doesn’t operate 24/7 for most of our clients. So how do we make the equipment and infrastructure better utilised across the organisation? How can we spin up instances of something during our peak times of the day and peak events of the year – such as elections, referendums and other big news events? We know when elections are but we don’t know when the next big non-preemptable news event is and how do we make sure that the infrastructure is available?”

Bevan believes that by starting to look in detail at the business of investing in equipment, its use, and its functionality, we will really change the way that we design and build broadcast and production facilities. Could this be the start of broadcasters moving away from owning all the infrastructure that’s required for the occasional election or huge news event, and instead just scale their cloud infrastructure to support these less frequent peaks?

FLEXIBLE BUYERS AND SELLERS

BBC CTO, Matthew Postgate, believes that if we can get better in our thinking on infrastructure and services, then we are on the cusp of being able to do things in a very different way. This will help to drive down cost, but also increase creativity and agility.

“If I look out there, and look at a company like Adobe, who’ve moved to a subscription model, then I want to sit down with their CEO and ask: what does it take? What kind of level of courage does it take to do a thing like that? I’ve got 20,000 people who regularly work for the BBC and 40,000 individuals with a BBC email address, who work with us less frequently. What that tells me is that’s how many people come in and out of our organisation; so I need to be able to fire up the kind of software they might need for only six weeks, and then I need to turn it off again.”

But this demand for flexibility can be disruptive to suppliers who have an established business model and an established approach to investing in new product development. Bevan Gibson sees the answer in partnership:

“We understand that our partners need to invest in R&D to make sure that they can provide solutions to us. But at the same time I can’t be investing a million pounds in a solution and only be using it 20% of the time. If I can buy something for two hours and pay £20 an hour, I’ll do that rather than investing in something up front. It’s all about working with partner organisations to make sure that what we’re doing is cost effective for us.”

THE DRIVE TO INNOVATE

People who work in production and broadcasting are familiar with constant innovations in consumer technology. They also see regular changes to Facebook, and constant new features in Gmail. But when they ask for changes to the systems they use at work, it's usually a long time before they see such change – even if it's incremental, let alone revolutionary.

Employee expectations have shifted. Matthew Postgate describes how it once felt as if technology teams were pushing solutions onto reluctant staff; but now staff are trying to pull new solutions from their technology colleagues. One of the most common demands now being made, for example, is for a mobile approach to be built – overnight. Matthew challenged all parts of the industry to think about how they can help to drive this pace of change, and support this thirst for innovation.

Chris Johns from Sky said their production teams are also pushing harder to innovate. They are now routinely shooting in UHD as a way to grow a high quality back catalogue, as well as to provide better HD output. At the same time Sky are innovating with their new VR services – bringing the viewer into the action. All this is being achieved without increasing budgets. Doing more for less, without a loss of quality, requires Sky to drive efficiency and innovation throughout the production process. Investing in a UHD catalogue, storage and grading is something that Sky highlights as the evolution of their output. This situation isn't new, says Chris:

“When HD arrived everybody threatened there was going to be a huge uplift. Now HD is done for less than the equivalent of what the price used to be to do SD. So you can get there.”

Channel 4 are keen to emphasise their preparedness to trial innovative new technologies. They have already delivered a personalised, dynamic ad insertion platform for online delivery of adverts; and they are also working on increasing their speed of delivery for live-to-vod assets, by working with agile suppliers.

Speed of innovation is something Orpheus Warr wanted to highlight when talking about the 2016 Paralympics:

“The Paralympics was a huge effort. It's quite amazing that we showed fully accessible versions of the opening and closing ceremonies on live TV – about ten hours' worth of content. Audiences could watch the standard version on Channel 4 or, if they had sight or hearing access needs, they could watch a fully signed, fully audio described, fully subtitled version on 4seven. The feedback from our audience was phenomenal. It may sound like that was a reasonably straightforward logistical exercise. It wasn't. The way our supplier worked with us not only to do the live accessibility work, but even just to make 4seven a live TV channel (which it hadn't been until then) was lovely to experience. And that's what I'd like to see from all of our suppliers – current suppliers and future suppliers – is an appetite for risk, an appetite for experimentation and a passion for innovation, particularly when it comes to the experience of the viewer.”

TALENT WARS

It is more challenging now to get the right staff, at the right time and at the right cost than at any other time in the past.

TV used to be seen as the sexy place to work. But now, as Sinead Greenaway pointed out, the technical and online skills required by broadcasters and their suppliers are also sought by financial institutions and global tech giants. These competitors have deeper pockets – and are creating worldwide products. It makes them very attractive to work for.

This problem is multiplied when looking for staff for cyber security roles, as ITN has found:

“If you don’t offer them a job in the interview, they’re going to go to their next interview and you’ll be outbid.”

Meanwhile the skills of existing broadcast engineers also need to be nurtured and developed to ensure that the broadcast sector can continue to innovate. Sinead highlighted the need for hybrid skills, and collaboration within broadcast and online teams. It’s not just about bridging the gap between Agile and Waterfall approaches, Sinead argued. It’s actually about working together. It’s this development of truly joint working, through which both broadcast and online teams learn new things, that these technology leaders hoped would make the broadcast sector become more attractive.

But the search for the talent needed for the future isn’t just about technology skills. Diversity is hugely important. UKTV is acutely aware, for example, of the need for more women to enter the technology sector. Meanwhile ITN wants to see the technologist of the future able to think much more about business as well as engineering:

“It’s about making sure that we’ve got the right mix of commercial skills in those guys. Even though they’re engineers and project managers and IT specialists, it’s about making sure that when they’re negotiating with suppliers, they’re thinking about the total cost of ownership. They need to look at how to design something that isn’t a Rolls Royce; they need to create designs that are fit for purpose, reliant, flexible and resilient. It’s this flexible and modular approach to system design that will help to improve the whole media technology space.”

BUILDING SECURITY TOGETHER

All the broadcasters agreed that security now represented a daily challenge.

Broadcast security isn't just an issue for broadcasters; it's an issue for everyone. Matthew Postgate explains:

"The reality is that we are moving to an IP centric industry. We know that. It provides us with lots of benefits, such as cost agility and creativity, but it opens up completely new surfaces for attack. And it opens up those attack vectors in areas that we didn't traditionally worry about. So we have to tackle this as an ecosystem. Phoning up a supplier and saying 'these patches have been released, we need you to patch your equipment', and them saying 'no, no, no, don't add the patch, we don't know whether the equipment will work', is no longer acceptable."

Matthew sees this change in mindset as a fundamental shift in the media industry as broadcasters move from hardware-centric to software-centric systems. Importantly, these systems are often shared or implemented across multiple broadcasters. He advocates a different approach:

"It's about our partner base. We have to be operating in a way that allows us to keep ahead of the bad guys. We're the good guys, we've got to work together – because if the good guys aren't working together on this stuff then it's the bad guys that get the benefit."

Channel 4 echoed the point:

"We're all part of a big value chain, and it's incumbent on all of us to take security very seriously. I'm relying on each of you in the room to take it as seriously as we do, because if one link gets broken, then we're all in trouble. As suppliers and as vendors, it's very important that not only are you looking after yourselves, but you're looking after your customers as well. If you're producing software or services that are secure, then you're helping everybody else stay secure too. That's invaluable."

CONCLUSION

Our broadcasters wanted to see some changes in approach in the media industry. They called for:

- customers and suppliers to work better together
- a sense of joint responsibility
- the end to interoperability issues

And they urged us, as an industry, to think hard about how:

- the inevitable process of fragmentation of platforms can be made more manageable and affordable
- we can attract a new generation of the right kind of talent

And finally at the very top of the agenda for all the broadcasters was the belief that we need to think differently about how we do business together: how we buy, form partnerships and scale solutions in a way that fits with the needs of a modern broadcaster – as well as the needs of a modern supplier.

This DPP report was written by **Andy Wilson**, with **Mark Harrison**. Design was by **Vlad Cohen**.

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