



# A Digital Focus

By Sara Waddington, Managing Editor, SCTE

## Richard Lindsay-Davies, CEO, DTG outlined the Digital TV Group's latest initiatives, achievements and ongoing focus to *Broadband Journal*.

The DTG (Digital TV Group) is the UK's self-funding centre for innovation in digital media technology. Since 1995, it has been central to the distribution of TV in the UK – digital TV; interactive TV; the digital TV switchover; on-demand TV; HDTV and UHD TV. The DTG underpins the free-to-air platforms Freeview, Freesat and YouView and supports the development of Pay-TV and other platforms.

It is now working towards the future of television – embracing the convergence of content and networks to efficiently deliver video to all screens, in all formats. DTG Testing is a vital resource for the TV and IP industries and a trusted partner to the regulators. The team works daily to maintain standards across digital TV platforms 'so that retailers and broadcasters know they are working with certified manufacturers and devices that they can trust'.

Each year, its technical experts produce real-world test reports, white papers, best practice guidelines and the D-Book, the definitive list of specifications for UK digital TV. The Zoo at DTG Testing is the UK's only comprehensive testing and accreditation centre for digital TV devices and services.



**Richard Lindsay-Davies, CEO, DTG**

Richard Lindsay-Davies, CEO, DTG outlined the Digital TV Group's latest initiatives, achievements and ongoing focus to *Broadband Journal*.

**BBJ:** Please give a brief background to the DTG and its activities. Please explain your mission and objectives.

**RLD:** We were created in the mid-1990s to help with the deployment of world-class traditional television and, in many

ways, we can divide this into three areas. We look after today's technology and we publish the technical specification behind Freeview (which is also used by other platforms such as satellite, cable and IP). We also run labs and a test centre in London to provide mechanisms to test products (such as TVs and set-top boxes). We won an Emmy for the work that we did in the early days of digital television. Our members range from the Hollywood studios to the consumer associations.

It's all about putting the viewer first and ensuring a world-class digital TV experience in the UK. We have specified around 130 million TV sets that have been sold into the UK market (i.e. 27 million TV households). They are selling at around five million per year. We have also specified every single digital television sold into the UK.

From an international perspective, we have formal links across the globe with the CTA and the Ultra-HD fora in the USA, the SCTE in the UK and a host of other international organisations. Many TV manufacturers tend to align their televisions for the UK market and then modify them to work in other markets. That is because the UK defines its product technology very tightly, so it is then easy to modify this for other markets.

**BBJ: Please outline any recent successes or achievements and the reasons for this?**

**RLD:** We have been nominated a few times for various awards such as the Emmy and various Royal Television Society awards. The Emmy award we received was for our work on wide-screen switching. But we also work on very simple issues, such as ensuring that the right channel appears in the right place on a programme guide or that the right signal is supported in the TV so that, for example, high dynamic range, resolution, frame rate and colour all appear as they should on TVs. Much of the work we do ensures that this continues.

More recently, when 4G rolled out across the UK in 800MHz, we looked after the mitigation for the roll-out and are in the process of planning the same level of work for 5G roll-outs. We are currently focused on a range of next-generation activities (e.g. Ultra HD and higher frame rates) and we are doing a lot of work on next-generation audio (such as Dolby



ATMOS). So, we are working across the industry to ensure that new deployments and Ultra HD work well in the market and viewers get the right experience. Of course, this helps to drive commercial revenues further up the chain for our members.

**BBJ: What are your views on the business climate in 2018 and going forward in 2019?**

**RLD:** We, and the industry, are bracing ourselves for a difficult period where people might delay investment, especially with the uncertainty of Brexit. In London, certainly, investment decisions have already been delayed as people wait for the outcome of Brexit. We have done a lot of work with the satellite community and ambassadors from various European countries (e.g. Luxembourg, Germany and France) to ensure that, where channels are playing out from the UK on satellite frequencies, they are able to move to European satellite frequencies post-Brexit.

From a general business perspective, our industry is stimulated by technology and the insatiable appetite that viewers have for more advanced and more complex technology and content every year. We are seeing a huge drive from players such as Google and Amazon, but also the traditional players, disrupting the traditional TV market with their innovations. For example, Virgin Media has disrupted its traditional model with its V6 platform and mobile content distribution and Sky has disrupted its own model with Now TV. A lot of the innovation is driving growth in the market as well as demand for talent and technology.

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As the FANGS (Facebook, Amazon, Netflix, Google) mature (and they are not the new kids on the block any more), they are joining the DTG and working with us to ensure that their products are stable and work well in the market. They are also co-producing content with the likes of the BBC.

**BBJ:** *Which issues are of prime importance for your members right now and how are you addressing these issues?*

**RLD:** One issue is how viewers discover content in the future. As we move to a converged media world, viewers are using different types of remote-control interfaces or even voice control and, increasingly, AI and machine learning will help navigation. The traditional prominence that public service broadcasters were afforded by an Act of Parliament is now more complex to regulate, it could change the market and the availability of good public service content. So, we are looking at that issue.

We have not yet begun to see the impact of machine learning and Artificial Intelligence (AI) in the way that content is delivered and personalised. The same applies to advertising and monetisation. We may well see a lot of interest in the future in how we manage and regulate AI and machine learning to ensure that we sustain the public value of public service broadcasting.

Another issue is how content is targeted at viewers in a way that does not cause harm and offence or does not pose any security or privacy risks to viewers. It must genuinely be something that the viewer wants or needs.

We are also looking at what the impact will be of high-bandwidth broadband, whether over cable and fibre networks or by 5G. We are also interested in how the consumer electronics, or in-home equipment, market develops. We are trying to look at how we, as an industry, can get a better measure of the impact of what we are doing to change the market economics, because it will affect the ability of the UK to influence the market.

There is certainly a preoccupation in trying to understand and ensure that we service content distribution mechanisms to support every demographic, including Millennials and Generation Z who are used to a highly connected and a converged media world. We also run an accessibility forum for TV so we shouldn't forget that, at the other end of the scale, people are living longer and suffering from more physical and

## DTG Testing Notified Body now offers certification for extended range of products

DTG Testing has announced that, following a successful UKAS assessment (against ISO/IEC 17020 Inspection Body Accreditation), DTG Testing Notified Body has significantly extended the range of products that it certifies.

Notified Bodies are a route to attaining CE Marking by certifying products which have met Radio Equipment Directive (RED) requirements, which is a pre-requisite when selling products in Europe. DTG Testing Notified Body now provides assessments against RED requirements for the following categories of products:

- Base Stations for Mobile Networks
- Fixed Links
- Fixed Wireless Access
- Private/Professional Mobile Radio
- Radar
- Radio Local Area Network
- Satellite Earth Station (Fixed/Mobile)
- Short Range Devices
- Ultrawideband Applications
- Wireless Microphones
- Broadcast Radio
- DTT Amplifiers
- DTT Antennas

For further information, email [customerservices@dtg.org.uk](mailto:customerservices@dtg.org.uk)

cognitive impairments - we have to ensure that we cater for those people as well. It can sometimes be a struggle for most of us to get technology working in homes.

**BBJ:** *What is your strategic and technical focus/vision over the next few years? Are there any new initiatives that you would like to highlight?*

**RLD:** As previously mentioned, we divide our activities into today, tomorrow and the future. In 2020, there will be a Japanese Olympics in Tokyo in 8K. We need to make sure that, as 8K TVs come into the market, they will up-res HD and 4K, and we need to ensure that they do this in the right way. We

recently launched DBook 11 (our specification for terrestrial TV) and, in the coming months, we will look at how we factor in 8K.



Looking forward, there are very exciting things to come as media converges i.e. very high bandwidth (broadband and 5G). We ran a workshop recently looking at what the TV industry would do if we had perfect 5G. I believe 5G roll-out to the whole of the UK is still a long way off. We are also looking at personalisation (i.e. targeted advertising/content). I think there is a lot of interest, as resolutions go up, in VR and AR experiences. A lot of the studios are very excited about this.

We are running the TV Transformers project, in partnership with Goldsmiths University, which is trying to build some research into practical industry workshops and, hopefully, some real agile deployments into the market. SCTE members are very welcome to take part in this. We are keen to ensure that we bring new expertise to the table i.e. on the AI front. The same applies to in-home distribution. We have just published a draft in-home distribution guide – it's a complex area and we want to bring all the experts to the table.

### **BBJ: Which trends do you see developing in global cable/broadband markets?**

**RLD:** We are certainly seeing an increasing trend towards aggregation of content i.e. cable operators aggregating Amazon and Netflix, as well as their own content. That builds on search and discovery prominence. A more prominent focus on customer service is another trend. As technology gets more complex, and resolution and bandwidth requirements around the home increase, it is important that operators ensure that viewers can view their services properly.

The other trend is globalisation of content rights. This is where a good aggregator can add value for viewers. For example, you may get the same latest released movie from four or five different platforms, at different prices. One way that platforms add value to viewers is to not only help viewers find content,

## DTG defines latest UK TV industry requirements with D-Book 11

The DTG has published the latest version of the D-Book, the only universally deployed technical standards for TV and digital terrestrial television (DTT) in the UK. The D-Book is updated annually with the collaboration of industry, underpinning Freeview, YouView, Freesat, EE TV, BT TV and TalkTalk TV.

D-Book 11 changes and updates include:

- **RF test process update:** As the 700MHz clearance project continues, the RF test process has been updated to test LTE co-existence performance in the 700MHz band instead of the 800MHz band. This will ensure that TVs are ready for the arrival of 5G mobile services in the coming years. Some test points that are no longer relevant, due to the way modern receivers are built, have also been removed.
- **HEVC, HDR and HFR requirements:** While there are no published plans for the introduction of broadcast services to exploit HEVC, HDR and HFR, many TVs support them. D-Book 11 provides requirements for implementation where receivers support the technologies for broadcast. This is backed up by test coverage in the DTG Testing test suite. The aim of this is to prepare a large portion of installed receivers for a potential future service introduction.
- **Alignment with HbbTV 2.0.2 and DVB-DASH:** Since the publication of D-Book 10, there have been several key updates published in the specifications backing D-Book (including HbbTV 2.0.2 and DVB DASH) and, as a result, parts of the HbbTV requirements have been removed and are now aligned with published specifications.
- **Removal of Standard Definition device profiles:** Freeview withdrew its logo from Standard Definition (SD) TVs and set-top boxes in January 2017. Therefore, the two SD TV device profiles for receivers and recorders have been removed, leaving only High-Definition device profiles.

The D-Book 11 is available to DTG Members for free and can be downloaded from

<https://dtg.org.uk/publication/d-book/>

but also to ensure that they also get the best economic value for services. We are already seeing an increased level of mergers and acquisitions in the market and I expect to see that continuing into next year.

**BBJ: Where do you see the greatest challenges and opportunities?**

**RLD:** I think the greatest challenge, and also the greatest opportunity (if you crack it), is to cut a clear path through the complex technological content rights distribution challenges. It entails finding a way to extract the user interface and the complexity, so that it is very simple for the viewer. You can enlist the positive sides of AI and user interfaces, such as voice, to help users get the right content at the right time and the right price. If you do it badly, the viewer will churn from the platform, move to another platform or just dump the content. The key to this is to simplify everything so that the viewer gets a great experience, which they are happy to pay for.....

The uncertainties caused by Brexit have already had a damaging effect on the country. Some companies have already moved out of the UK. Providing we get certainty quickly, the extent of the damage can be limited. The biggest risk of Brexit is that everyone is too focused on Brexit. Instead of all the government departments (with whom we work closely) being focused on the day job, they have all been focusing on Brexit. I am looking forward to a return to 'business as usual', when Ministers focus back onto the issues.

Some of these issues will be discussed at our Annual Summit on **8 May 2019** in central London. SCTE and its members are most welcome to attend.

**BBJ: Thank you for your time.**



For further information, see <https://dtg.org.uk/>

**TV TRANSFORMERS**

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Disruptive innovators will impact the future of your business. Work with the smartest minds in the industry and help us research the latest innovations to redesign television for the future.

HIGH BANDWIDTH CONNECTIVITY IN TV	PERSONALISATION	DISCOVERY IN A CONVERGED MEDIA WORLD
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EVOLUTION OF  
THE HORIZONTAL  
MARKET

**MARCH 2019**

Television device and content businesses no longer have a separate value chain. The new era of TV apps, sticks and mobile devices coupled with new services and platforms are changing the dynamics of the market. Funding prelaunch and ongoing developments across the chain has raised new investment and ROI debates with calls for new revenue sharing models. This will disrupt the economics and viability of the horizontal market further, putting universality at risk.

What is the public, economic and business impact of disrupting the horizontal market model?

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SMART