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Can We Go Back to the Future?

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How has the last month been for you? When I wrote my welcome for April's issue of TVBEurope I never dreamt we'd still be in lockdown when I came to write this one. Possible naivety on my part, I'll admit, but by the time you read this, the UK will be in its sixth week of lockdown and a new normal has been adopted by millions of people. Of course the one thing that hasn't changed is our voracious appetite for content, be that news and information or something that will take our minds off the current situation. Over the past four weeks we've seen audiences soar for both traditional TV and streaming. It seems the big winners of the current situation (if I can call them that) are the streaming services which have not only seen their audiences rise but also their valuations on the stock market. At one point in April, Netflix was worth more than Disney. Who would have predicted that six months ago?

Of course it remains to be seen whether audiences will stick with streaming and pay-TV services once lockdown eventually ends [2]. Pay-TV should see viewers stick around for longer as contracts usually run for 12 to 24 months, but the streaming services could see a major churn in subscriber numbers once everything calms down. We'll definitely be keeping a close eye on that in our Daily newsletter. Once lockdown measures do begin to ease there's going to be a whole host of live content that viewers are going to be eager to watch, particularly sport. While there's still a lot of discussion around how sports events will be staged, we know that viewers

will want to watch, however that staging happens. The question then arises, can the infrastructure cope? So far, the internet has managed to up pretty well as everyone works from home and streams content. But when millions want to watch live sport via OTT services, will those same protocols hold? It might not be the case of one football match available via OTT, but instead there could be multiple games at the same time. While Amazon's first foray into streaming the Premier League last December was well received by football fans, the maximum number of live games streamed at any one time was just five. As the Premier League, and the lower divisions, try to complete the 2019/20 season as soon as possible, are we likely to see an increase in matches played at the same time and streamed to viewers? Can domestic internet cope with the strain on bandwidth? And, that's just for one sport. Finally, I've been thinking about what the future holds for trade shows.

What does the postponement of the olympics mean for 8K? The sporting world entered 2020 with the firm expectation that 8K Ultra High Definition (UHD) technology [1] would come into focus for the first time. For almost a decade, major broadcasters have been ramping up their efforts with the end goal of delivering the 2020 Olympic Summer Games in Tokyo in 8K UHD. Since then, the COVID-19 virus has irrevocably changed every aspect of global society. With the sporting landscape now firmly on hiatus, broadcasters and content owners are looking towards 2021, with some sections of our industry now asking what implications this could have on potential 8K rollouts. To understand what the future might hold for 8K, it's important to note the progress made so far. There are obvious associations between major sporting events, the adoption of TV technology and the replacement cycles of legacy TV electronics. Yet, what is often forgotten is the best viewing experiences are often already achievable through far simpler implementations. Until we see the widespread

availability of 5G and the development of next-generation video compression technology, such as Versatile Video Coding (VVC), it will be some time before major progress is made in reducing the bitrate required for 8K UHD streaming. Any future shift to 8K involves a huge ecosystem change, and despite the best efforts of many leading TV manufacturers and some broadcasters, consumer eyeballs and wallets aren't clamouring for 8K capable TVs just yet. While there are many 8K-capable TV sets on sale today, the equipment needed to produce and distribute the content is not fielded widely, due to both technology maturity and the economics involved.

Ultra HD forum updates the industry by Ben Schwarz. The Ultra HD Forum was excited about the prospects for UHD in 2020. Then COVID-19 happened. As we put this article together I from home, people throughout the world are in various situations of lockdown [2]. Restrictions in movement make electronic media the most convenient window to the outside world. Video consumption and teleconferencing have exploded in usage. Tech-resistant people have embraced this trend, and geeks have been digging even deeper into newer, often disruptive services. Embracing new video services has become a mass audience phenomenon. Concurrently, there's consensus that we're heading for a recession. But there will be a rebound predicted for the second-half of 2020 or the first half of 2021. Combining rapid economic growth, pent-up demand and renewed consumer enthusiasm with Japan's long-term commitment to HDR and higher resolutions, promises to turn the games into a significant growth opportunity for UHD.

COVID-19 has also brought challenges to internet traffic management. Daytime streaming has seen a 40 per cent increase in some markets, while analysts talk of an overall 20 per cent increase in traffic. Major OTT UHD services have reduced per-stream bandwidth, leading to a decrease in perceived quality. The Ultra HD Forum supports a multitude of

proven technologies. One that is particularly relevant here is Content-Aware Encoding. Using the latest AI and ML techniques, this approach to encoding brings bandwidth saving of up to 50 per cent without any significant loss of perceived quality. Since its inception, the Ultra HD Forum has published Guidelines for the UHD community, available freely. This new release, version 2.3, offers a holistic view of all existing UHD technologies. The Guidelines use the concept of a "foundation layer", consisting of readily available mature technologies, and an "enhancement layer" including newer, more leading-edge technologies. Throughout the Guidelines development, more than 35 other member companies have contributed to the effort.

So many of the processes we are used to in modern shooting – low pass filters, debayering and more - reduce resolution, so starting with as high a pixel count as possible is always going to be an advantage further in the production process. No one is really saying that every 8K shoot now is likely to be watched in 8K anytime soon though that future proofing argument is always there in the background and should not be discounted – but you will get a much better deliverable at any format as a result. And for anyone shooting for VFX work, that extra detail is going to lead to much cleaner composites, even if the VFX work itself is being done at lower resolutions. Beyond the technical, there are plenty of creative reasons for shooting at 8K as well. Reframing is one of them.

References:

1. What is 8K? [Electronic resource]. – Mode of access: <https://pcmag.com/news>. – Date of access: 24.03.2021.
2. Coronavirus lockdown measures [Electronic resource]. – Mode of access: <https://bbc.com/news/topics>. – Date of access: 30.03.2021.