4K: A new normal

The next logical evolution of content consumption, 4K has been taking the world by storm for several years now. Coronavirus or no coronavirus, nothing can slow down its progress for long as consumers continue to demand more, better, and yesterday.

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The broadcast sector was already looking pretty healthy, with HD, UHD/4K and even 8K being key trends to watch amongst industry professionals. With the coronavirus pandemic sweeping the nation this year, however, more people are watching more content more frequently than ever before while holed up inside their homes, pushing the broadcast industry to previously unknown heights.

Growing to new heights?
According to a new report from Research and Markets, the global pay TV market size is expected to grow at a CAGR of 1.7 percent over 2020-2027 to reach US$260 billion. This may not seem like booming growth but considering how well embedded the pay TV market is across the world, it's pretty strong growth nevertheless, particularly with stiff competition from OTT providers ongoing. Increasingly diversified experiences are expected to be the watch word of the segment during the reporting period.

With the roll-out of 5G technology underway (despite the 5G towers under physical attack by the general public this year), the IPTV sector is expected to grow significantly. Increased bandwidth and enhanced ability to build virtual end-to-end networks for specific applications is a major driving factor for the industry. Additionally, the rapid proliferation of the 5G delivery model in emerging economies is expected to provide consumers with a 4K viewing experience.

In contrast with Research and Markets, Grabyo predicts a much dimmer future for pay TV market operators. According to a report from 13,000 consumers across 11 territories published in March, almost 75 percent of consumers plan to cancel their pay TV subscriptions within five years. The global penetration of online streaming has reached 55 percent of consumers, surpassing the 50 percent who subscribe to pay TV services. Of the global consumers who plan to stop paying for pay TV or who have already cut the cord, 26 percent reported the number one reason was the price of services. Streaming is simply more affordable and more attractive.

The report found that 66 percent of UK consumers spend up to £20 per month on video services. Some 30 percent...
reported that all their video spend is for online streaming services. The growing popularity of streaming is highlighted in the subscription to multiple services, with 28 percent of UK customers subscribing to two or more online video services, compared with 35 percent of consumers in the US, and 32 percent across Europe with multiple online streaming subscriptions. The report also nominated the amount consumers are willing to pay for online streaming services. In the UK, 40 percent state they are willing to pay up to £35 per month for online video services, which rises to 47 percent in the US that are willing to pay up to $35 monthly. Choice of what to watch, flexible subscription options and a low price point, mean consumers are looking to spend smaller amounts on multiple services tailored to their interests.

However, reports based on surveys are notoriously skewed, with consumers saying one thing and acting completely differently. While many across the broadcast sector expected 2020 to be a pivotal year in predicting the future of consumer trends, alas, this year is likely to be a spectacular outlier, with extreme habits due to the ongoing pandemic. Only once normality, in whichever form it takes, resumes, are we likely to see a more accurate portrayal of what the future of content consumption might look like.

A new normal
Whatever the outcome, whether consumers switch en masse away from linear and pay TV packages to the new world of free and subscription-based streaming services, 4K is likely to play a big role, possibly even becoming the ‘new normal.’

Unlike the earlier disaster zone that was 3D TV, 4K is the logical next step in content standardisation. Largely interchangeable with Ultra High Definition (UHD), 4K delivers four times as many pixels per frame as HD: The standard format is 3840x2160 for 4K versus 1920x1080 for HD. Understandably, technophiles, gamers, sports lovers and definition snobs are all very excited, with many having jumped on board already, purchasing new TVs, set top boxes (STBs) and games consoles even before the full 4K picture emerged.
Indeed, 4K isn’t truly finished yet – it’s more than a matter of having four times as many pixels, as the technical people running the joint are still fine tuning further improvements such as high dynamic range (HDR), which can do more with a given number of pixels than previous technologies. Everyone in the know understands that the future (for now) is 4K HDR, more than just 4K.

Every market report to date is overwhelmingly positive on the future of 4K, and it helps that many stores across the Western World are slowly phasing out HD TVs in favour of 4K. However, there remain several sticking points regarding the technology:

**Standards:** As already noted, screen resolution standards for 4K have become well-established in recent years, however, there is a lot more to 4K than just pixels. 4K TVs are still being produced with HDMI 1.4, which enables 4,096x2,160 pixels at a frame rate of 24fps; this is just about enough for standard 4K video content; however, it won’t cover the higher frame rates required for 4K gaming. HDMI 2.0 came onto the scene in 2017 and enables higher resolutions, higher bandwidth, and higher framerates, but in most cases cannot be retrofitted into existing 4K TVs.

**Quantity does not equal quality:** Increasing pixel numbers fourfold does not afford a fourfold increase in picture quality. Industry experts are looking into other ways to improve picture quality, with HDR leading the way, Wide colour gamut (WCG) and high frame rate (HFR) are other points of interest.

**Motion resolution:** Anyone who watches TV regularly will recognise that when there’s significant movement on the screen, such as during a football match or a battle scene, there’s a big loss in resolution, reportedly around 40 percent. This has not been improved upon with the evolution to 4K technology but may become addressed in future iterations.

**Human potential:** While our eyes can appreciate the improvement as we move from HD to 4K and 8K, we need to be sitting close enough to a large enough screen for that impact to be felt.

Most consumers sit an average of 8-10 feet away from the TV, and research has shown that an 84-inch screen would be necessary at this distance for the full impact of 4K technology to be apparent. TV screens this large are not the norm in most modern homes; while 55-inch TVs were apparently the most frequently sold globally in 2018, we’ve still a long way to go.

**A rosy future amongst the chaos**

Even in these troubling times, the future for 4K is looking brighter than ever. While worldwide, research, development, manufacturing, and content production is almost set on pause, at some point soon industry will ramp up again, and we’ll return to some semblance of normal.

The continued fine-tuning of 4K devices will resume, and consumers will be able to experience unprecedented viewing quality.

For satellite operators, the rise of 4K is a positive arrow in their quiver amidst the threat of stagnant or even falling demand for traditional linear TV in the face of OTT and IPTV services. 4K brings renewed interest and demand in traditional TV consumption, and of course, higher definition content such as 4K, and maybe one day 8K, requires much more bandwidth for transmission than SD or HD content. Thus, 4K should, in time, provide a boost to the ongoing challenge of satellite overcapacity, driving demand higher and alleviating falling capacity costs.
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