

Ask the expert - Chris Chinnock

Executive Director, 8K Association

In this interview, Chris discusses the benefits of 8K production, and brings us up-to-date with the latest in the 8K industry.

Q1 Please could you say a few words about the 8K Association.

A1 The 8K Association was formed 2 years ago, and has 30+ members now. There are a few missions. One is to educate the professional 8K ecosystem - content creation through distribution - about the advancements that are happening in 8K. The aim is to reduce the fear of adopting 8K. A lot of pioneers are out there showing that it's not as difficult as some may think - education and evangelising the professional community.

We also focus on the consumer market where there are already 8K TVs. We have a certification programme for 8K TVs that set performance and interface standards that TVs have to make in order to display the certified logo. That gives consumers a comfort level that they can buy an 8K TV that will perform at a high quality.

The third mission is support members with 8K content that they can use in their various development activities and promotional activities. We are seeking to use the content with other standards organisations to help promote the development of the 8K ecosystem, and reduce some of the barriers and address some of the challenges.

Q2 What are the benefits of using 8K production for live applications?

A2 Live and file-based workflows have different benefits. There's a clear desire in the live environment. The Olympics were supposed to be broadcast in 8K by NHK were postponed, but they've been broadcasting since December 2018, so they clearly want to move to this next generation technology.

The advantage of 8K is not just more pixels. Almost all the 8K content is also high dynamic range, so you're getting a lot more picture quality than just resolution. In a live environment there are several applications which show benefits.

One benefit is archival value for live high-profile sporting events. You want to capture that in the highest quality that you can. We recognise that delivering to consumers today is difficult, but archiving in 8K is clearly a benefit for longevity of the content. That applies to film and movies as well.

There's also the ability to potentially replace a number of cameras with a single 8K camera. It's been shown that you can mount an 8K camera high above a playing field, and you can now have multiple tracked 2K or 4K cut-outs that can be software defined to follow a player or follow the ball, and those can be direct to air. That can potentially eliminate camera positions, or you can use the extreme zoom capabilities now to find things you may have missed with other cameras.

Q3 Are the advantages the same for off-line production?

A3 It's a little different. If you're going to finish and distribute in 8K, it's higher quality you get. There are benefits of more resolution, high dynamic range and wide colour gamut.

If you're planning to finish in 4K, then you've got a bigger canvas that you can crop from - you can move it around, you can pan and scan - you've got more flexibility to create it. It's clearly been shown that if you capture at higher resolutions and then finish at lower resolutions, you get a much better image than if you capture at native 4K and finish at native 4K; plus the archive value of course.

Q4 If I'm a broadcaster or content provider, how do I get my 8K programmes to my audience?

A4 There's no doubt that's a challenge! Its about 8 years into the 4K transition and we still don't have a lot of broadcast 4K, so it will take time to get broadcast 8K. However, the environment is different now compared to even 2 - 3 years ago. We're seeing a lot more activity to move content to the cloud, so cloud-based processing is happening a lot faster than people thought based on cloud-based distribution.

There's an acceleration of the trend of broadcasters going from traditional linear broadcast and distribution models to cloud-based models. DVB-I, the internet initiative, has been announced, which allows broadcasters to do both. These will accelerate the transition to IP delivery, which is a perfect fit for 8K.

Q5 What kinds of tools and products are available for creatives wanting to make 8K programming?

A5 Since NHK has pioneered 8K, they have been working with their suppliers to develop the 8K ecosystem a number of years ago, and they've been broadcasting for 2 years now.

The equipment's there. We're seeing more vendors getting into it. They're adding a piece or two of 8K equipment every quarter. We have a lot of cameras. There's less variety in production equipment, but plenty of TVs available.

It's not from lack of equipment, but more business models and we need codec development as well.

If you'd like to find out more , visit <https://8kassociation.com/>

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