



Peter Knight FBKS reports on a real 'first' in Event Cinema - Sony and National Theatre Live's first 4K cinema broadcast of War Horse.

Warhorse

Sony first with 4K event cinema

I was lucky enough to be in the audience for an evening which saw the world's first 4K presentation of an Event Cinema showing that was transmitted live to a cinema. The collaboration between the National Theatre



Live and Sony Cinema saw the ever popular play "War Horse" captured on Sony F55 cameras at the New London Theatre and broadcast in 4K directly to the Curzon Cinema in Chelsea, to an audience which was a mixture of invited industry members and the general public. National Theatre Live is of course an initiative by the National Theatre to broadcast live performances onto cinema screens around the world, and is one of the most popular Event Cinema shows. Since its first season, which began in June 2009, over two million people have now experienced the work of National Theatre Live in cinemas worldwide.

Team work

In order to achieve this 4K 'first', Sony needed to work with both of the National Theatre's long term partners, Creative Broadcast Solutions (CBS) who were responsible for capturing the event in 4K, along with NEP Visions, who provided the Outside Broadcast infrastructure to send the signal via satellite to the Curzon Cinema. Over 1000 other cinemas worldwide also received a simultaneous live HD feed, which was distributed by Links Broadcast. The feed was also recorded on a Sony MasterDeck, both for archive purposes and for the creation of a 4K DCP master to be sent to cinemas around the world. NEP Visions also recorded 4K ISOs onto two additional Sony MasterDecks for later use.

The 4K signal was uplinked on to SES Astra's 3B satellite using 36MHz of capacity in order to achieve the maximum possible video data rate within the modulated 4K transport stream. This 4K signal was downlinked at the Curzon cinema in Chelsea via a 1.8M Links

Broadcast antenna and fed in to Adtec RD70 receiver decoders before eventually being delivered to Sony's 4K projector.

In the cinema

The presentation was flawless in its transmission and technical presentation. But like all new technology and firsts there were technical challenges, the main one being around the available contrast ratio. The Sony SRX-T420 projector with the prototype 4K live input board used for the demonstration provided a 2000:1 contrast ratio, which, although similar to that of competitor DLP projector systems, is significantly less than the 8000 to 10000:1 ratio that the newer Sony DCinema R515 projector series can normally provide when used for showing DCPs or 2K live performances.

The contrast ratio issue arose during this technical 'first' because of the use of prototype components in the 4K live input board, and I was assured that this will be resolved in the longer term.

Future progress

For future live theatre performances the higher contrast ratio of Sony's DCinema R515 projector series will be particularly beneficial as this can compensate for the normally difficult challenge of using a theatrical lighting set up, that doesn't have all the lighting which a film or television set would normally have. This will undoubtedly provide greater contrast and enhanced picture quality, and Sony tell me that the 4K live input board for the R500 projector series is due later this year.

An exciting development

Not surprisingly Sony were very excited about this project. David Bush, Head of Marketing at Sony Professional, Sony Europe said, "At the heart of Sony DNA is the will to push technological boundaries always further. Being able to demonstrate, with the help of partners, a worldwide first live 4K workflow from stage to screen, on a project as well loved and renowned as War Horse, represents a true milestone in the development of 4K technology."

And of course you couldn't have such an important evening without having a special guest at the end of it all. Much to the delight of the audience there was a guest appearance of Joey from War Horse who provided a great photo opportunity for the crowd.



In spite of my minor criticisms, speaking to members of the general audience it was obvious that they really enjoyed watching the 'broadcast' and were more than happy with the image on the screen. Let's remember that this was the first time this had been done - a

complete 4K capture to screen chain of live content. The move from prototype to release status of boards for use in the higher contrast ratio R515 projector will see the images improve. This is true of all firsts and it will only get better. So well done to all those involved, and I look forward to seeing the next stage of this development.

The Sony press release provides further technical information, available from: www.sony.co.uk/pro/press/pr-sony-war-horse