

## Press Release



### Digital Cinema at the 2015 Berlinale

Concurrent with cinema technology developments in recent years, the Berlin International Film Festival has been bringing its facilities up to the newest digital standards. The digital proportion of the approximately 2,500 film screenings will again be over 95 percent this year. The majority of festival screenings will be DCPs (Digital Cinema Packages). Seven companies - Colt Technology Services, Rohde & Schwarz DVS, Arri, Dolby, Barco, Highlands Technologies Solutions and Aspera, an IBM company - will provide support to the Berlinale in the area of digital cinema, ensuring that the festival's digital infrastructure is exemplary and digital formats are received, converted, tested, stored, transferred to the venues and projected onto the screens seamlessly.

The newest milestone on the long path to digitisation is the installation of the immersive audio system Dolby Atmos at the Berlinale Palast, which moves sounds anywhere in the theatre space, including above the audience. However, long before the audience can enjoy a film, numerous technologies are implemented behind the scenes of the festival, beginning with the submissions' arrival at the Berlinale Film Office. The films are submitted in diverse formats - primarily DCP, but also on tape and in various video formats. Before the film copies can be presented at the festival, they must each undergo a comprehensive quality control and standardisation process.

First the film copies are transferred via the Colt fibre optic network with a 10 gigabit/s connection to the Colt data centre. There they are recorded onto the Rohde & Schwarz DVS ingest and production server VENICE, which converts them to a standard video format. The R&S VENICE can process and convert signals on up to four channels simultaneously. The video data is then converted to DCPs on the R&S CLIPSTER Mastering Station. Following the conversion, the DCPs are stored centrally in the Rohde & Schwarz DVS SpycerBoxes, two storages with a total capacity of approximately 800 TB. The storage is comprised of two components in constant synchronisation. Should one fail, the other takes over immediately, ensuring an error-free sequence.

Thanks to the transport software by Aspera, an IBM company, the delivery of DCPs will be possible in digital format for the first time this year. The software uses a 10 gigabit/s internet connection by Colt and makes it possible for film studios and filmmakers from all over the world to upload their DCPs directly to the Data Center, thereby dispensing with the postage of hard drives.

**65. Internationale  
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#### Press Office

Potsdamer Straße 5  
10785 Berlin

Phone +49 · 30 · 259 20 · 707  
Fax +49 · 30 · 259 20 · 799

press@berlinale.de  
www.berlinale.de

Ein Geschäftsbereich der  
Kulturveranstaltungen des  
Bundes in Berlin (KBB) GmbH

#### Management:

Prof. Dieter Kosslick  
(Intendant Internationale  
Filmfestspiele Berlin),  
Charlotte Sieben  
(Kaufmännische Geschäftsführung),  
Prof. Dr. Bernd M. Scherer,  
Dr. Thomas Oberender

Vorsitzende des Aufsichtsrates:  
Staatsministerin  
Prof. Monika Grütters MdB

Amtsgericht Charlottenburg  
HRG Nr. 96 · HRB 29357  
USt ID DE 136 78 27 46



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All delivered DCPs then undergo an elaborate projection testing process with a software specifically developed to ensure that each film is presented in the correct format and the screening runs smoothly.

The DCPs are transferred from the data centre to the venues at maximum speed via the Colt fibre optic network, which comprises approximately 250 kilometres of cables and transfers approximately 500 terabytes of data during the festival. Colt support teams are on stand-by during the festival around the clock. Having arrived at the venues, the films are temporarily stored on the cinema servers and projected onto the screen from there. In addition, Dolby will support the Berlinale with technology and accessories for audio and 3D, as well as technical know-how, ensuring that all venues achieve the best possible audio output. For image quality of the highest standards, Barco will fit three venues (Berlinale Palast, Friedrichstadtpalast and Haus der Berliner Festspiele) with a total of six high bright DP4K projectors, as well as provide local technical support to festival venues for flawless film projections. Furthermore, Qalif Ultimate and Qalif Optimizer units by Highlands Technologies Solutions will be installed. These advanced calibration and measurement tools will ensure that film image quality during the festival is constantly held to the highest standards.

The 4K projectors and Dolby Atmos system will also benefit the Berlinale festival trailer, which was freshly mixed and produced in a new version in 4K resolution and "high-frame-rate" by ROTOR Film Babelsberg in cooperation with Dolby for the 65th Berlinale.

Press Office  
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