



FACILITY

Pre-Schoeps stage shot



Schoeps in situ.

Berlin Philharmonic

The world famous concert hall has switched to Schoeps mics for flexibility and invisibility on its Digital Concert Hall live streaming events. ZENON SCOEPE has to hear more.

Last visited the Berlin Philharmonic in 2009 (*Resolution* V8.6) to report on the recent upgrade of its audio facilities and the momentum gained in its groundbreaking Digital Concert Hall concept. For those who consider the internet and the streaming of content to be the preserve of the popular music industry, the Berlin Philharmonic has managed to harness the medium and, most significantly, to make money from the exercise. Saturday night concerts are streamed live in stereo as a six-camera shoot to paying subscribers around the world. Every concert is then postproduced and put up in an archive that the same subscribers can access and enjoy at their leisure. Interestingly, the impetus for the venture came not from some opportunistic idea from outside but emerged directly from the musicians in the orchestra themselves. The orchestra had played a concert in Taipei, which was simultaneously piped out to a large screen and sound system

outside the concert hall. The orchestra was taken aback by the presence of several thousand 'viewers' when they came outside.

It was a practical demonstration that their potential audience was much bigger than they would ever be able to play to directly so they set about planning to reach more of them. When it's not touring, the orchestra plays three concerts a week, which are always sold out. It can't play more and so it was virtual expansion through a Digital Concert Hall that got the vote. However, it had to be a top flight production and operation just like the orchestra and that required top gear. Deutsche Bank backed the venture and as Christoph Franke, creative producer at the Berlin Philharmonic points out: 'To really make this work it needs a lot of money and the perfect combination of a presence as a global brand — which not all orchestras have — and an association with a well known venue.'

Christoph has been involved with the Digital Concert Hall for four years and is responsible for hiring the video directors, the postproduction, and running interviews with conductors and soloists on the site. The aforementioned technical facilities were created in-house for the audio and picture together with a business sub-entity of the Berlin Philharmonic; it has been running well ever since.

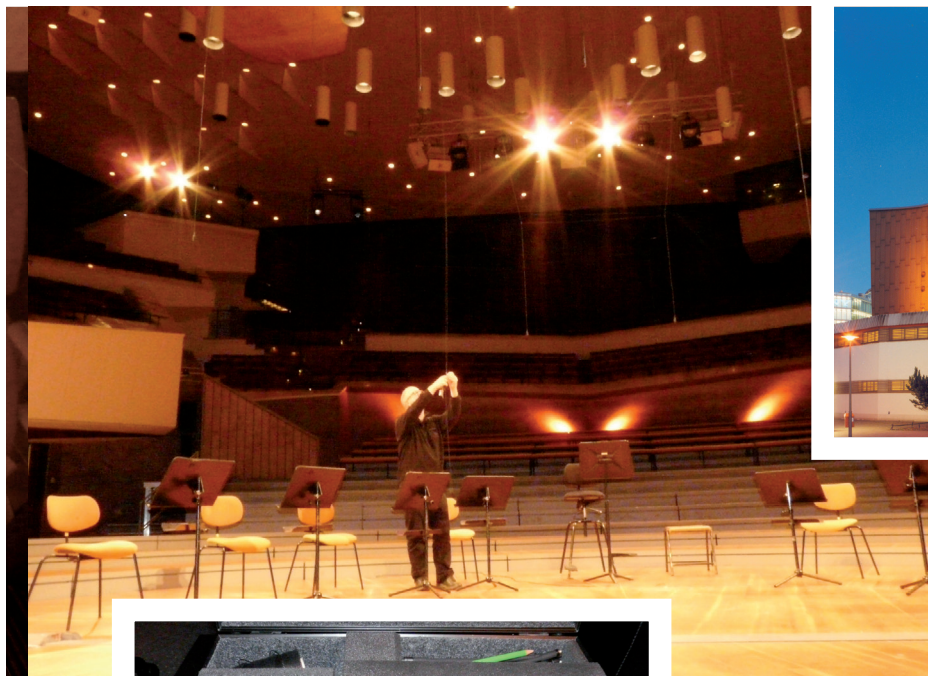
The schedule for the run up to the Saturday night streaming is carefully planned. Typically the score goes out to the video director some two weeks before the concert, he works out his cuts and shots and gives the marked up score to an assistant who enters it in to an Excel spreadsheet that then contains all the camera shots and their order.

The orchestra normally plays each programme three times — on Thursday, Friday and Saturday. The dress rehearsal is on Thursday morning, where the camera shots are prepared and stored. In the evening the first concert is treated as a camera dummy run, checking everything is in order. The Friday concert is the dress rehearsal for the video team who record it. The video director takes the resulting DVD home and looks it through and tweaks if necessary.

The Saturday evening concert is streamed live and recorded, which means that they now have two evenings recorded and a fall-back should they need to edit for the archive. They always record a separate and continuous camera shot of the conductor, which serves as convenient cut-to for any visual edits. The hard disk of the Saturday performance is collected and postproduced 'in best' to create the online archive version of the concert including audio edits to remove 'musical inconsistencies' and crowd noises.

While the streaming visuals are vital for the sense of 'being there' it is, above all else, the sound of the orchestra that is its biggest attraction. To this end the Berlin Philharmonic recently switched to the Schoeps brand with a big order for new mics to add to the stand-mounted Colette models it already had for soloists and its boundary layer mics. The order was for CCM models (small compacts with the preamplifiers directly behind the capsule and Lemo to XLR connection) and represented 20 CCM 4 (cardioid); 5 CCM 21 (wide cardioid); 5 CCM 41 (hypercardioid); and 5 CCM 2S (omni with HF lift).

These are for the ceiling hanging mics positioned directly above the stage area.



with an innovative cable hanging gooseneck, which allows mics to be raised and pointed if required. They don't spin thanks to the special Schoeps Kevlar cable used. There are also special stereo bar fixtures. Thin wire ties can be used to offset the pitch of hanging mics. This was an idea the concert hall's engineers had but which Schoeps as a precision engineering firm refined and made less obtrusive. Schoeps says that this is

how a lot of its development arises and adds that the ability to supply accessories and additional bits and pieces is very often as important as supplying the microphones themselves. Each plug is engraved with a number and the Philharmonic hall symbol.

The improved 'invisibility' is not just down to the size of the mics but also to the use of a special darker grey colour than normally employed on the company's products. That it works is substantiated by the difficulty experienced when actually trying to photograph the mics for this article.

All these accessory additions are modular and can be attached to the end of any hanging cable thereby increasing the flexibility of the setup. And flexibility is needed — with as many as 40 mics regularly in use there is no such thing as a standard layout. 'Every conductor has his own ideas so we have to move the mics around,' says Klaus-Peter. 'Yesterday we had a traditional Schubert Symphony and normally we would have the strings sitting around the conductor and then the woodwinds — he had the woodwinds in front of him and then the strings.'

He adds that different engineers will have a different interpretation of what is required, particularly with mic numbers, types and heights. 'It's one the last areas where you can still make an imprint. The sound will be different on the recordings. There are many ways to be right!' he says.

They frequently have to work quickly when rigging mics and have comparatively slim windows of opportunity to tweak positions during musician breaks. But the results are consistently excellent and the Berlin Philharmonic has earned its reputation on excellence at all stages.

It's intriguing why other orchestras have not managed to emulate Berlin in its streaming success. Christoph points out that it really is to do with the quality and strength of the Berlin Philharmonic international brand. So it's playing in stereo at 320kbits in AAC on a computer near you now.

'Here we can control the whole channel from microphones, to the desk, through the internet and to the client at the other end in Japan or Argentina and we know what comes out of his speakers,' he says.

It amounts to the greatest HD archive of one the greatest orchestras in the world playing in one of the greatest halls in the world. ■



Up in the roof cavity area of the building tiny holes penetrate the ceiling and motorised cable winches plus some hand-cranked cable winches control the individual height of each hanging cable above the performers.

The engineers had enjoyed using similar Schoeps mics in their chamber music hall and as chief sound engineer Klaus-Peter Gross points out: 'The Schoeps mics offer us more possibilities; they sound good and look very good.' And by that Klaus-Peter means that they've harder to see by the audience and the viewers. The previous microphones had been attracting unwanted attention and the house engineers were being asked by the picture team to raise mics out of shot and to avoid shadows. This compromised their audio sensibilities and a meeting with Schoeps came up with a variety of solutions and lots of other ideas that Schoeps was prepared to accommodate. It's one of the benefits of Schoeps being a smaller manufacturer that it is still able to respond to specific customer requests positively and to get samples and prototypes run up relatively quickly.

The Berlin Philharmonic engineers wanted ways to pull the hanging cables to the side accurately and to be able to point the capsules. Schoeps came up