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A SOUND EDUCATION

Sonic College boasts a cutting-edge tech line up to train the next generation of technical audio professionals



The atrium complete with 187-channel Meyer Sound Spacemap Go system

SUPER SONIC

The next generation of technical audio professionals are being trained in a one-of-a-kind facility in Denmark packed with the best technology and tools available today. **Anna Mitchell** takes a trip to Sonic College.

It's mid-September and I'm at Sonic Days at Denmark's Sonic College. The educational facility is buzzing with students, academics, audio professionals at the top of their game, and representatives from the biggest brands in sound design and mixing.

This two-day event is a remarkable showcase demonstrating just how significant this school is for technical audio tuition. The manufacturers carrying out demonstrations here know that the students graduating from this course will shape audio production for films, gaming, music, podcasting and more in the years to come.

Just one week prior to Sonic Days, the college in Kolding, part of University College South Denmark (UC SYD), was opened by Crown Princess Mary of Denmark. With the country's eyes on the space, Sonic College

took the opportunity to show off its colossal 187-channel Meyer Sound Spacemap Go spatial sound system installed in the five-storey atrium of the college.

"This is the heart of the college and the largest Spacemap Go installation we've ever carried out," says Anders Jørgensen, consultant and project manager at AV integration firm Stouenborg who handled the complex installation.

Søren Siig, a technician at Stouenborg, said it was tricky to fix the 187 speakers required for the system. The soaring atrium is architecturally stunning but, says Siig, "the mix of uniform wood panelling and bare steel and concrete made placement tricky both in terms of maintaining the aesthetic and having the right surface to drill into."

Each floor has 13 Meyer Sound UP-4Slim loudspeakers and three Meyer Sound USW-112XP subs facing into the atrium, while the

ceilings of the walkways surrounding it have further Ashby-8C ceiling speakers. Across the entire site 89 Ashby units were installed.

The Spacemap Go spatial sound design and mixing system harnesses the power of these speakers and Meyer Sound's Galileo Galaxy network platform with 11 Galaxy 816 units installed in the central rack room. Speaker cabling runs to 14km.

When the challenge of fixing the units in place had been overcome, Stouenborg was still left having to attach three speakers to the ceiling of space. Faced with a height of 30m the team had little choice but to hire a specialist climbing company to scale the height with ropes and, via remote instruction, fix the final units.

At the official royal opening the system was put through its paces. A band played using Spacemap Go and pre-recorded vocals were placed in different points



The Dolby Atmos dubbing stage and cinema with 80 seats for screening, mixing, and mastering Dolby Atmos content

throughout the atrium. An artistic sound installation has been developed for the Spacemap Go system and this was also shown off, and now runs daily in the space.

With classes at Sonic College underway, the system is now also open to students to develop sonic art installations and get hands on with manipulating sound through space using QLab and the Spacemap Go software. This is all accessible through an iPad interface so students, artists and staff can walk through the space testing the compositions from different points of all five floors.

“We give students a 10-minute introduction to Spacemap Go and they get straight into it, experimenting and creating some really powerful effects,” says Lars Tirsbæk, a lecturer at Sonic College.

However, the system wasn’t installed purely for art. In fact, its purpose was deemed significant enough to research fields that the

university was able to gain funding from the A.P. Møller Foundation for its installation.

Jørgensen explains that atriums are important parts of commercial construction, with architects favouring them to bring light into the centre of large buildings and connect spaces and people. But, so far, there’s been little research into acoustics and the use of sound in these environments and the atrium at Sonic College and its Spacemap Go system is effectively a giant living lab for the university.

“We can create different experiences by adding and isolating sound,” Tirsbæk. “We can create a living building even with just a few people.”

Anthropologist and researcher Birgitte Folmann is embarking on a wide-ranging research project in the space that will explore how sound can be an active part of an engaging atmosphere. Her findings have the potential to influence

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Anders Jørgensen, Stouenborg

architects and planners, impacting how spaces are considered and designed through greater understanding on how sound could be deployed to affect moods, improve wellbeing or provide services such as wayfinding.

“Much of my research is based on human observation and this is a perfect lab for experimenting and recording reactions,” says Folmann of the five-storey open space where a position on any floor provides a vast outlook. “It’s a goldmine for data.”

Studios, performance spaces and teaching rooms in Sonic College are all connected on an enormous Dante network that means audio can be flexibly and dynamically routed from space to space.

Stouenborg was tasked with having to integrate the Spacemap Go system into this network using the AuviTran AVBx7 platform and AVB to Dante conversion cards.

Tech-Spec

Audio

Audinate Dante Domain Manager
 AuviTran AVBx7 platform and Dante and AV cards
 Dolby HE rendering and mastering unit (HE-RMU), theatrical rendering and mastering unit (RMU), CP950a cinema processor and IMS3000 integrated media server
 Genelec studio monitors
 Meyer Sound Galaxy 816 units, Ultra-X20 point source loudspeakers, UP-4Slim compact installation speakers, USW-112XP subwoofers, Ashby-8C ceiling speakers, MPS-488HP power supplies and cinema surround sound systems
 Shure ceiling microphones

Control and management

Actassi patchpanel
 Apple iPad
 Atlona AT-AVA0EX70C-BP 4K/UHD extenders and AT-UHD-SW-52ED switcher
 BlackBox HD6224A KVM switches
 Eaton EMAH PDUs
 Kinovox ¼-in wall mounting boxes
 Lenovo compact PC
 Luminex GigaCore 26i PoE switches
 Neets EcoHo Plus keypad
 Netgear GS308P network switch
 Patchbox Plus+ Frames

Display

Aver cameras
 Blackmagic Design Decklink 4K, Smart VideoHub and Smart ControlPro
 Epson projectors
 Iiyama ProLite monitors
 NEC NP-NC1202L laser projector
 Panasonic PT-VMZ60 projectors
 Sony displays



Faced with a height of 30m Stouenborg had to hire a specialist climbing company to fix three speakers in the ceiling

The levels of the atrium are cleverly used so an open theatre sits just off the main atrium with tiered seating leading up to the first floor. Here an Epson EB-PU2010B projector fires onto a retractable projection screen provided by local AV supplier AV Center. It's flanked by Meyer Sound Ultra-X22XP point source column speakers provided by Stouenborg, which again posed a tricky challenge for the integrator to mount. An Atlona HDMI switcher and extenders are used in this presentation area.

Sonic College shares the five-floor facility, that echoes an

adjacent university building to which it connected via an enclosed footbridge, with other divisions of UC SYD and there are shared areas including a cafeteria and a gymnasium.

Tirsbæk was instrumental in setting up the new facility and deciding what spaces would be most beneficial to students and essential to delivering a good grounding in sound design. “[Building the new facility] was an opportunity to start from scratch,” he says.

Dante Domain manager helps the university manage the Dante network, locking down areas so

students are offered room to experiment within boundaries chosen by teaching staff and network managers.

“We didn’t have the Dante network in our old facility,” says Tirsbæk as he counts off a long list of benefits. “Now you can do a mix then easily route it through to the cinema to listen. You can take a stage box to anywhere in the building and still communicate back to the control room.”

A range of other spaces offer students the perfect sonic playground complete with cutting-edge products that

deliver hands-on experience with the very best AV, broadcast and studio tools and technologies in commercial use including Blackmagic Design broadcast kit.

“This was a complex project,” says Tirsbæk. “With so many adjacent studios and performance spaces we had to consider acoustics and sound isolation carefully. Also teaching needs put different requirements on spaces like our recording studio where we have a standard sized area for performance but a far larger control room so groups of students can watch and learn.”

There were standard spaces

We considered hybrid learning in a way we perhaps wouldn't had we not had the pandemic.

Lars Tirsbæk, Sonic College

that Tirsbæk had on his wish list including Foley room, music studio and a production space but the number of spaces he wanted was very specific too. "Ten studios was the magic number," he says. "We have an intake of 40 students a year so that means groups of four per studio. And we able to achieve that with this space."

The campus also boasts some of the most cutting-edge facilities for educating sound designers including a fully equipped Dolby Atmos Mastering Suite. During Sonic Days, Dolby was on-hand to guide students through the process of mixing and mastering in the spatial audio format.

"The mission of Dolby Institute is to educate, inspire, and empower the next generation of content creators," says Glenn Kiser, director of the Dolby Institute. "Sonic College is helping us further that mission by providing the facilities needed

to educate and create in Dolby Atmos. By collaborating with Dolby and the wider community of professionals in the region to share learning resources, they're enabling the content creation community to better tell their stories."

An Epson projector and Atlona HDMI switch were deployed in the Dolby Atmos Mastering Suite to allow groups of students to see the Dolby Atmos mixing workflows clearly on a large screen. Audio was delivered by a Meyer Sound cinema surround sound set up.

Another highlight is the Dolby Atmos dubbing stage and cinema with 80 seats for screening, mixing, and mastering Dolby Atmos content. Meyer Sound cinema surround sound and postproduction suite was integrated so students could practice audio mixing for film and TV and experience their efforts in a cinema environment. Visuals are delivered with an

NEC NP-NC1202L laser projector.

Classrooms are specified with Epson powered interactive smart boards, Sony displays, Shure ceiling microphones, Aver cameras and built to the MIT TEAL classroom format. In one teaching room a transparent projection screen allows for different sound set ups depending on the lesson being taught.

Tirsbæk points out that specifying and building Sonic College through the pandemic had a great impact on the project with provision for remote teachers to be brought in through Zoom. He believes these provisions, once born of necessity, will have a lasting positive impact on the range and quality of tuition delivered to the students. "We considered hybrid learning and an international outlook in a way we perhaps wouldn't had we not had the pandemic," he says. 🌐



Photos: Nalle Magnusson