



MAKING A NOISE

Showcasing an icy climate in the searing heat of Dubai is no mean feat. Finland turned to technology to do the job at Expo 2020 Dubai and it packs a punch.

By Caroline Reid and Christian Sylt.



The immersive experience begins before visitors set foot inside the pavilion which is draped in a taut white fabric to resemble the white stuff that covers

Finland for much of the year.

The fabric appears to be torn at the front to resemble a gorge and create an entrance to the pavilion. Inside, guests are greeted with the work of Finnish lighting specialist, SAAS Instruments as LED icicles hang from a mirrored ceiling. Lights flash down the LED strips to make it seem like snow is falling, and a suitably spooky voice echoes around.

"The digital snowfall installation at the pavilion entrance introduces the exhibition's innovation theme and guides visitors through a snowy Nordic atmosphere," explains Severi Keinälä, commissioner general of the Finland pavilion.

"The accompanying audio plays a poem called 'Lumi', which means snow in Finnish and is recited in Arabic, English and Finnish." As guests continue into the main exhibition hall, the audio seamlessly switches to reflect the footage on a 53 metre LED screen which wraps around the upper rim of the cavernous room.

It is home to exhibits from Finnish tech titans including Evergreen Farm, maker of the world's most efficient climate controlled hydroponics facility, and Wärtsilä which has developed a way of generating methane from air.

The technology is showcased through touch screens, models and Pepper's Ghost displays which use mirrors to beam images on to glass so

that they look holographic.

Scenes of scientific progress in Finland play on the wraparound LED screen and Keinälä says that "all AV components are meticulously synchronised to create a comprehensive experience for the visitor. The uniform audio visual narrative guides the visitor through the exhibition." It is no exaggeration.

After passing through a shop which sells stereotypically Finnish products like Moomin ornaments and reindeer hide, visitors find themselves in a genuinely foreign environment.

It sees guests walking through a wooden gorge which soars 15 metres in the air. This grand finale is a haven of calm in the middle of the hustle and bustle of the Expo. Guests are immersed in smells of wood as natural light pours in from a crevice above. Woodland sounds and violins echo all around and this isn't just down to the surroundings.

Genelec's sleek audio aesthetic

The entire pavilion is served by 84 Power over Ethernet (PoE) 4430 loudspeakers made by Finnish brand, Genelec. Made from recycled aluminium they suit the pavilion's sleek aesthetic. Crucially, they are convenient as their PoE capability provides power, audio, and speaker management features from just a single standard network cable.

Genelec makes the most of this flexibility with its Smart IP Manager software which can configure an almost unlimited number of rooms, zones, speakers and audio channels.

Each speaker can be individually equalised and monitored through the Smart IP system meaning





that the entire network can be optimised for the size, shape and acoustic properties of the space. The Finland pavilion puts this to the test.

All of the speakers are fed with Dante audio streams and 74 of them are located in the exhibition hall where they are configured as a custom immersive array. The other 10 speakers are in the gorge where their quality comes into its own thanks to the acoustic properties of the sheer wooden walls.

"Our installation consists of immersive loudspeaker arrays that surround the visitor from all directions and provide a deep sense of envelopment," says Genelec spokesman, Howard Jones.

"In the gorge area of the pavilion we have installed a ten-channel immersive loudspeaker system that is reproducing a specially commissioned piece of sound art by Finnish composer



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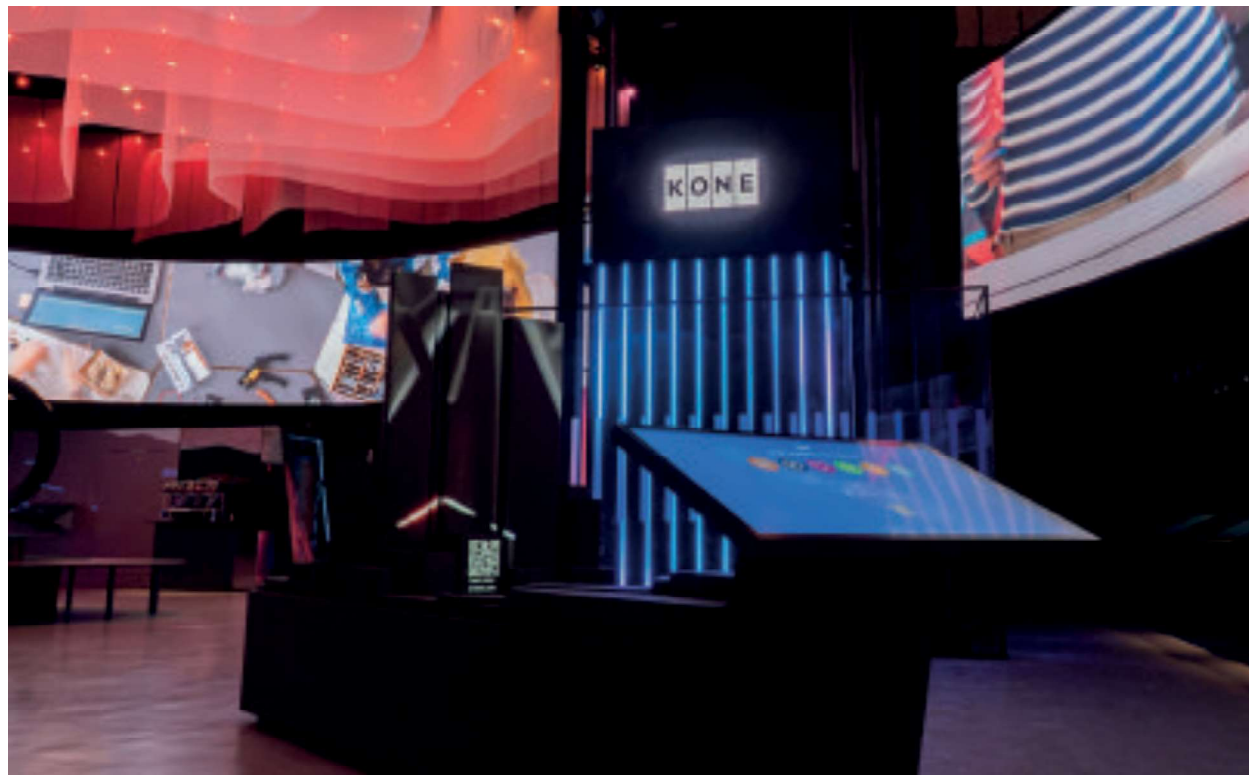
Emilia Takayama, entitled 'The Land of Snow'.

"The marriage of Smart IP technology and Emilia's sound art makes a particularly pleasing and natural combination. The Land of Snow represents the Finnish seasons of the year, creating an immersive atmosphere through instrumentation, melody, and harmony - plus sound recordings of nature, which are embedded into the composition.

"The concept of specially commissioning a multi-channel composition is driven by the increasing possibilities that immersive audio creates. In the natural world, sound is all around us, and we learn at a very early age to identify from which direction sounds are coming from. Therefore, we wanted to produce an immersive audio installation to demonstrate how a sense of realism and envelopment can really heighten the visitor



SUNEESH SUDHAKARAN/EXPO 2020 DUBAI



experience and set a standard for future sound installations.

“Achieving a sense of realism and space through immersive audio requires very high quality loudspeakers which can deliver clarity and intelligibility wherever the listener is located.

“In large scale installations like this visitors are constantly on the move so we’re proud of the way that Smart IP provides a great listening experience for everyone, regardless of where they are positioned. This means that there aren’t any dead spots in the sound and the experience is consistently good for all visitors.”

Despite the complexity of the pavilion, Keinälä says “there were no significant challenges in the project. The exhibition design team produced the design package in close collaboration with Business Finland, and a highly professional technical team built the design according to the plans.”

He adds that the secret to this success was “close collaboration between the design team, the client, and the build team.” Digging deeper, he reveals that the attributes they required from their AV partners were “reliability, seamless teamwork, high-level communication and of course high quality execution.” It was a team effort.

The entire system was designed by Genelec and commissioned by GSL Professional in Dubai, Genelec’s local distribution partner. The system installation and programming were handled by Audico Systems from Finland.

“Creating the best visitor experience requires the highest quality AV content and equipment,” says Jones. “We guaranteed both of these ourselves, so the rest was simply down to good planning and execution via our experienced partners at GSL and Audico.” You can see and hear the difference it makes. ■



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