

OVNEW



With stunning views across the city of Barcelona, OVNEW sits atop the Hesperia Tower Hotel and is Spain's second highest restaurant, - the tallest being in Madrid. Built by the same architects as the Pompidou - Renzo Piano and Richard Rogers - the domed structure of OVNEW is nothing short of iconic and most certainly stands out in the city's skyline

The restaurant - named by a combination of 'OV' (OVNI being the acronym for UFO) and 'NEW' in Spanish - is the brainchild of Jon Giraldo and Jaime Lieberman. Jon is a trained lawyer and Jaime is an artist, but they decided to follow their passion for gastronomy, so both are chefs, too. The journey began six years

· Above
The stunning dome provides a unique space for this concept restaurant.

ago with the restaurant concept starting out in Jon's living room. He explained: "Working with gastronomy, we felt it wasn't enough to just have food and wine, humans have five senses and it's silly to only stimulate two senses during an experience, so we looked at how to enhance the experience.

"Firstly, we looked at lighting. We looked at a cheap solution for my house, as this concept started in my living room, six years ago. More than 9,000 people have had dinner in my living room... although not all at the same time of course! The installation of the lighting was very simple, Philips Hue lighting controlled using an iPhone app, plus two simple loudspeakers in stereo form and our entertainment was







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a soprano singer. People were excited about the experience.

"After two years we opened a restaurant, Spoonik and looked to further enhance the experience. We added video mapping to the tables and four loudspeakers. Until that point we had no investment, it was just us investing in ourselves, but in year four, Hesperia Hotels entered our lives."

Another venture had previously occupied the space that OVNEW now inhabits, but when representatives from Hesperia Hotels became aware of Jon and Jaime's first restaurant venture, Spoonik, and were fans of the concept, they knew who they wanted to be the next tenants in their rooftop venue. Jon and Jaime were well on their way to creating an immersive restaurant experience, but the bar was raised when they visited the Sonar+D festival, which saw Eurecat - the technology institute renowned for its ground breaking work in the world of immersive sound technology - unveil its incredible SFËAR 3D live sound technology in a large demonstration space, as part of the Market Lab programme of lectures and events

"Hesperia Hotels told us they had a special place, and said we had a special concept - so they wanted us to work together. With their investment, we could achieve the idea we'd had in our minds from the very beginning - to create a true experience for the five senses," Jon continued.

OVNEW is an experience that is born from the

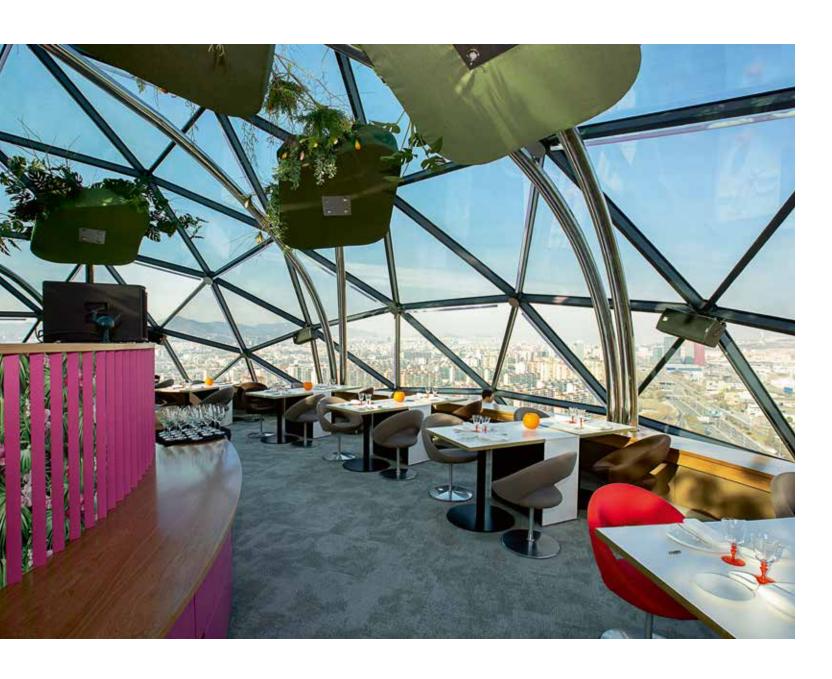
'neurogastronomía' that combines a multisensory experience, taking diners to the remotest corners of the planet and to an exquisite interior with haute cuisine. "We are the only restaurant in the world, I believe, to offer this kind of experience with the five senses, as well as offering a spectacular view from 100-metres high," Jon added. "We feel that people consume experiences differently nowadays, the consumer habits of millennials and centennials, and the fact they have so many inputs during the average day - much of which is down to social media - it's impossible to have a single focus. We need more things to see, hear, play, we need to have a real immersive environment and a journey with an experience - this was our proposal." After the Sonar+D festival, Jon and Jaime discussed their plans with representatives from Hesperia Hotels, as well as with Amate Audio the audio manufacturer used at the festival, and who Ion and Jaime had worked with at Spoonik. SFËAR, the brand behind the 360° live sound technology from Eurecat demonstrated at the festival, was also added to the mix through its relationship with Amate Audio and Jon's relationship with SFËAR's, Timothy Schmele. Originally, Amate Audio had made contact with Eurecat because it wanted to update its filtering technology. After working on a small project together, they decided to partner up and work on solutions for spatial audio concepts - one of the first being the Sonar+D festival. So, with all the people in place, the next step was

to devise a plan for OVNEW. SFËAR's Umut Sayin takes up the story: "They wanted something special for both the sound and the lighting. The dome itself is already very special, but when you think about sound here, there is no stage, no focal point, it's axisymmetric, and it's best to go for something different.

"Normally when we look at a space, the first thing we decide is, how many loudspeakers do we need. We look at where we can mount the loudspeakers and we consider where the audience will be. We worked with the carpentry and metal work teams, and at first we thought we could hang the loudspeakers from the structure. We outlined the loudspeaker distribution in positions we thought would be optimal for space, but we later found out we couldn't place loudspeakers where we had planned due to structural reasons. So, we had to have a rethink.

"Spatial audio is often designed for a central audience, the loudspeakers are aligned to the centre and they are more or less equal distance from one another, and the core processor is located centrally. In fact, the majority of spatial audio installations out there are designed with a central audience. In here, the bar is in the centre and the audience surrounds it. This is uncommon for a spatial audience with multiple channels, so we had to come up with a solution for this."

In total, four different models of Amate Audio loudspeakers have been installed at OVNEW. The most important for the spatial audio are the ones hanging in the dome, 26 Nitid N26-SA3D - a



KEY8A's are hidden underneath the tables.

SA3D enabled version of the standard Nitid N26 with Dante input. These are carrying out the 'smart' FIR filtering for the 3D sound in the dome. The integrated SA3D processing platform performs the distributed processing for the SFËAR software - providing the scalability of the 3D sound. Amate Audio's Joan Amate explained further: "The spatial version of our DSP carrying out the 'smart' FIR filtering is important because we have 26 channels in the dome. There are 26 filtering operations being performed at the same time, but with this setup, it is being performed in each individual loudspeaker, not in a central computer.

We save the resources of the central computer for other tasks, which we then distribute to the loudspeakers." Next are 10 Amate Audio Nítid N10's used for the inner ring, which are used to enhance the immersive sensation, when guests are outside of the central sweet spot. "Around the ring there are eight N12W subwoofers, which provide low-end reinforcement for the restaurant. Originally, we wanted to go for the larger subwoofers, but they didn't fit so we had to go for the smaller 12-inch models. This worked well in the end though, since they pair well with the N26's in the dome. The subwoofers also feature spatial filtering,

and there is management for the spatial bass frequencies," added Umut. The management for the spatial bass frequencies was particularly important, because if there are different objects moving in spatial audio, discrepancies can be created if the bass element doesn't follow. Even though the spatial filtering isn't as much in the low frequencies as it is in the high frequencies, if they move separately, a discrepancy will appear. The final loudspeakers from Amate Audio are 15 KEY8A's - an active version of the company's KEY8, specially made for OVNEW with a customised 'facing the floor' preset as they are installed 👂

TECHNICAL INFORMATION

26 x Amate Audio Nitid N26-SA3D loudspeaker (SA3D enabled version with Dante input); 10 x Amate Audio Nitid N10 loudspeaker; 15 x Amate Audio KEY8A loudspeaker; 8 a Amate Audio Nitid N12W subwoofer; 1 x MacPro computer; 1 x Linksys LGS552P managed gigabit ethernet switch; 1 x Ferrofish A32 Dante/MADI converter

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under the dining tables to offer a more personal listening experience for the audience. When it comes to the overall control and management of the system, this all takes place within the SFËAR software, with support from the control rack, which comprises a MacPro computer, a Linksys LGS552P managed gigabit Ethernet switch and a Ferrofish A32 Dante/MADI converter.

Umut explained the control configuration: "The venue has a number of different channels and they are all different elements of audio, which have to be sent individually, so, power and audio separately. This requires a lot of cabling and power management. All of the loudspeaker audio is connected, as we have audio over IP using Dante. With just an Ethernet cable we send the signal and control the monitoring of the DSP. "Additionally, there is the filtering, and we had to take the acoustics of the space into account, too. One of our concerns initially was the glass, but we have the decorative material that is hung around, as well as many objects that are also part of the decoration, which helped with the acoustics. "We made an initial calibration of the space, then the decoration came in and we made a second calibration of the space because the acoustics changed drastically. One of the filtering processes

includes the ability to move the audio from place to place. So, the calibration process also had to be uniform with the acoustics, to move the sound from one place to another, and make it portable. When we talk calibration, we are talking about removing the acoustics and making the audio as transparent as possible for the setup.

"The 3D audio tracks that are played through the loudspeakers, they have been specially produced at Metrica Studio in Ibiza. The tracks are put through a special renderer to function in the dome. We have a special player for 3D audio playback, but what makes it particularly interesting in this case is the playback is nonlinear. There is no set timeline, there are seven different scenarios - named after continents such as Europa, Asia, Oceania - and the transition from one to the other has to work with the food delivery, as well as the lighting change, and the theatrical show - all of which are part of the sensory experience."

Despite everything being pre recorded it isn't just a case of pressing play and letting it run, it is always monitored by the in-house technician using a simple iPad interface. The control of the audio tracks, in conjunction with the change in lighting presets - which are also managed from the iPad interface - as well as what's

going on within the performance, the food and the beverages being served is all executed meticulously in order to provide that once in a lifetime experience.

"We essentially have two and a half hours of soundtrack, so the dining experience - during which musicians and performers interact with the diners - last approximately that long, and the show itself is updated in some way each week. We offer this on Thursdays, Fridays and Saturdays, however, alongside that, we also do brunch on the weekends, and we open as a sky bar during the week from 12 noon until 3pm," Jon outlined. To keep the concept fresh, and keep diners coming to OVNEW time and time again, Jon and Jaime plan to change the food menu every six months, and the audio tracks with matching lighting effects every 12 months.

It truly is a unique restaurant experience that has obviously been years in the making. But now, it has fully come to fruition and is not only a dream come true for Jon and Jaime, but also for all involved, since having a spatial audio showcase is not an everyday occurrence. Amate Audio and SFËAR now have a platform to build on, and they can look ahead to future projects, all the while knowing, they have been part of this landmark installation at OVNEW.