

FLUX:: and L-Acoustics Lead ADM-OSC Standardization for Object Based Audio

Posted on October 26, 2021



Marcoussis and Orléans, France - October 2021 - With today's entertainment consumer

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hungry for rich, immersive experiences, immersive audio continues to become a viable and sought-after element in various production workflows. However, the prevalence of so many platforms and proprietary communication languages has been a stumbling block to widespread adoption of spatial audio, and a challenge to interoperability amongst production tools. Indeed, to quote an old tech industry joke, the nice thing about standards is that there are so many of them.

Now FLUX::Immersive, L-Acoustics, Radio France, and other major industry manufacturers have joined in an initiative to standardize Open Sound Control as a streaming protocol for interoperability among immersive audio systems.

The ITU BS.2076-2 Audio Definition Model (ADM) is a solution for the archiving and interoperability of immersive audio productions. ADM-OSC provides an implementation that follows the ITU standard, allowing to stream positioning information of audio objects in real-time using the Open Sound Control protocol.

Led by use cases from Radio-France, FLUX::Immersive and L-Acoustics have joined forces to initiate a common language to ease system integration within the production process.

“Since 2018, Radio France has been experimenting with object-oriented audio productions of electronic music concerts,” explains Hervé Déjardin, audio innovation project manager at Radio-France. “These trials have highlighted the need for a common protocol between the different elements of the chain. The objective is to be able to address the metadata streams to different rendering engines without using translators.”

ADM-OSC offers a universal communication language among object-based audio software for live and post-production. A technical workgroup with industry peers has been created to advance on this proposal and collaborate on the parameters. This workgroup has received the support of

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multiple manufacturers and the ADM-OSC language is currently implemented in some audio software.

As Hugo Larin, FLUX:: Immersive Business Director, explains, “Few things are more of a roadblock than trying to build an integrated workflow that incorporates multiple manufacturers and getting stuck in a proprietary communication portal. We felt there was a need to adopt a common communication, a common grammar, between industry peers.” With this in mind, FLUX::Immersive has added ADM-OSC as a supported input or output OSC communication option within its SPAT Revolution platform.

We clearly hear in the field the challenges of integrating multiple object editors and or renderers delivering for various stream formats in a production,” Larin observes. “Allowing for the selected tools of choice to interoperate in the environment of the day or at different stages of a project is one of the things that this audio object language can brilliantly achieve.”

Guillaume Le Nost, L-Acoustics Executive Director, Creative Technologies adds: “As an industry, we need to nail down the immersive workflow to enable the next generation of productions. I am really glad to see that many pro audio manufacturers have reacted positively to our initiative, from Digital Audio Workstations to Broadcast systems. I am really looking forward to providing a super strong ecosystem, where users can easily use several audio renderers at the same time, or easily move into post-production with ADM files at the center of their workflow. It is still early days for ADM-OSC, but users and manufacturers can already try an initial ADM-OSC implementation in our L-ISA Controller software.”

A GitHub repository with specifications and a testing tool can be found at:
<https://github.com/immersive-audio-live/ADM-OSC>

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A panel discussion will take place at AES Fall Online 2021 on October 27th in the Immersive Audio program. To find out more about the event and register, please visit <https://sched.co/ocEt>

About FLUX:: Immersive

FLUX:: Immersive has established a reputation as a leader in the creation of audio processing software with the core idea to design inspiring technically innovative tools for sound engineers, with no compromise of the audio quality. The company has always been in the forefront of the development of software solutions for the professional audio industry, supporting multichannel processing, which for over a decade has been frequently used for multichannel surround recording, movie post-production, immersive live & installation sound, and in various other applications.

About SPAT Revolution

SPAT Revolution is a state-of-the-art real-time immersive audio mix engine, redefining the art of object-oriented and perceptual mixing making it possible to intuitively position audio-sources in space, letting the acoustic signature of the room build the desired depth, independently from the output format. Designed to integrate into virtually any workflow, and with full automation of the spatialization parameters, SPAT Revolution offers a wide range of possibilities, empowering artists, sound-designers and sound-engineers virtually unlimited possibilities to design, create and mix an outstanding immersive experience

SPAT Revolution is the result of a successful partnership between FLUX:: Immersive and the French research institute Ircam, created to bring the vast research performed at Ircam available to the market.

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About L-Acoustics

Founded in 1984 near Paris, France, L-Acoustics is the market leader in professional sound reinforcement technologies. With over 550 team members worldwide and offices in Paris, London, Singapore, Los Angeles, and New York, L-Acoustics is present in over 80 countries via our network of Certified Providers. Focused on solutions that elevate the audience experience, more than 20% of L-Acoustics' talent is devoted to R&D in the areas of acoustics, applications, mechanics, electronics, signal processing, and software development. In recognition of creating innovative professional sound technology, L-Acoustics was named as one of *Fast Company's* Most Innovative Companies of 2020.

Recognized for pioneering the line source array, L-Acoustics continues to shape the future of the professional audio industry with L-ISA Immersive Hyperreal Sound technology, a multidimensional, object-based approach to designing, mixing, and processing sound that results in extremely natural and intelligible audio, and a more vibrant, authentic connection between artists and their fans. Now also available for exceptional private sound spaces with L-Acoustics Creations designs.

L-Acoustics technologies can be heard in places like the Hollywood Bowl, Dickies Arena, Allianz Arena, home of Bayern Munich, or the Philharmonie de Paris, as well as the world's top-grossing festivals, and on tour with world-class artists such as Mark Knopfler, Aerosmith, and P!NK.

About Ircam

Ircam, Institute for Research and Coordination in Acoustics/Music, is one of the world's leading public research institutes in the fields of musical expression, science of music, sound and acoustics. The institute has for the last decades made a significant importance to the world of avant garde and electro-acoustical art music, with its groundbreaking scientific and technological innovations including numerous concepts for electronic music and audio processing.

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