



For immediate release — Monday, January 22, 2024

Innovative audio creation technology a first of its kind for Faculty of Fine Arts

An innovative device developed by University of Lethbridge music professor Dr. Arlan Schultz that can move sound in two or three dimensions with human gestures is garnering interest from some of the largest technology companies in the world. The AuraWand is the first commercialization project of its kind to be developed out of the Faculty of Fine Arts and is built as a world-class, cutting-edge professional audio device for use on the stage and in the sound studio.

“Being able to mix and move sound around in three dimensions — up, down, and closer/further from you — is very different than mixing in a stereo format,” says Schultz, who works in the fields of composition and music technology, researching immersive audio and how it can be incorporated into music composition.

“Our device allows individuals to seamlessly interact with spatial audio and it puts the focus back on listening and physically engaging with the art of immersive sound design.”



The AuraWand and AuraWave Technologies has earned more than \$250,000 in funding support from investors and non-dilutive grants and its technology is now on the radar for some of the largest companies in the world, including Dolby, Apple, Google, Microsoft and audio content creators involved in making or mixing spatial audio in professional and home studios.

Schultz says the idea for the device evolved from recognizing a lack of specialized technology for digital audio creation. The AuraWand allows the user to conduct with space and leverages a musician’s natural desire to physically engage with sound production. The AuraWand is meant to make the process of mixing and-composing in spatial audio environments technically transparent. The device places the audio

engineer's emphasis more on listening, nuanced trajectory creation and on human interaction with the sonic environment, as opposed to technical engineering.

ULethbridge's Office of Research Services supported Schultz for the provisional IP filing and encouraged him to commercialize his technology by connecting him with [imYEG](#) (Innovation Masterminds Edmonton).

"ULethbridge is home to some of the world's brightest minds and most accomplished researchers, and their work is innovative and impactful," says Vice-President (Research), Dr. Dena McMartin. "It's exciting to help our researchers convert their incredible ideas into commercial products that can really advance the sectors within which they are working. Dr. Schultz's technology has the potential to make a huge difference in how people approach and create with digital audio technology."

Schultz initially pitched his idea to imYEG, a pre-accelerator program funded through Brass Dome Ventures Ltd. (BDV). They work to connect innovators to experienced entrepreneurs to commercialize innovative technology, providing mentorship from industry experts and entrepreneurs. While Schultz was initially not accepted by the program, Kelly Micetich, VP Operations of Brass Dome, was intrigued by his pitch.

"There was something about Arlan and his idea that caught my attention as being unique and potentially very promising, so I followed up personally for a second look," says Micetich. "After doing so, I was sold, as was our entire BDV team. Not only has Arlan now successfully graduated from imYEG, he has received both funding and business support through Brass Fund One."

The unique technology breaks barriers not only for the business world, but also highlights the value of commercializing research in the fine arts. AuraWave's mandate, beyond the development of AuraWand, is to bring digital audio research from the most innovative labs in the world to an industrial level so it can be utilized by creators and sound artists.

"We're looking to develop interactive digital audio technologies for music composition, audio engineering and live performance that are currently lying dormant on innovators' shelves. Our goal is to determine if they hold commercial value, see whether we can develop them to an industry standard, and gauge whether there is traction to bring them to market," says Schultz.

"There are so many amazing new technologies out there right now that people would absolutely love to be able to use, but they're just not available because they're sitting on researcher's shelves. In the long term, our goal is to become a digital audio technology platform company."

More about Schultz's project: <https://stories.ulethbridge.ca/aurawave-technology-project-first-of-its-kind-for-fine-arts/>

PHOTOS:

AuraWand-Schultz — Dr. Arlan Schultz

AuraWand — The AuraWand Gen 2.0 at the 64-channel MMR Space in the CIRMMT at McGill University in Montreal

To view online: <https://www.ulethbridge.ca/unews/article/innovative-audio-creation-technology-first-its-kind-faculty-fine-arts>

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Our University's Blackfoot name is Iniskim, meaning Sacred Buffalo Stone. The University is located in traditional Blackfoot Confederacy territory. We honour the Blackfoot people and their traditional ways of knowing in caring for this land, as well as all Indigenous Peoples who have helped shape and continue to strengthen our University community.