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GUEST EDITORS' NOTE
Special Issue on the Internet of Sounds

Part II

The Internet of Sounds (IoS) is an emerging research area that is progressing at a steady pace, with several endeavors conducted at the academic, industrial, and artistic level. The IoS stems from the intersection of the field of Sound and Music Computing with that of the Internet of Things. It refers to the network of devices able to sense, acquire, process, actuate, and exchange data, serving the purpose of communicating sound-related information. The IoS can be conceptualized as the union of two paradigms: the Internet of Musical Things [1] and the Internet of Audio Things [2], which respectively address musical and non-musical domains in networked contexts.

The increasing attention devoted to IoS topics by a wide variety of stakeholders (e.g., researchers, technologists, and artists) motivated us to organize a special issue on the IoS for the Journal of the Audio Engineering Society (JAES). The present document introduces the second volume of the special issue, which continues the list of contributions included in the first volume that appeared in JAES in October 2021. In this volume, six contributions were selected, which present an overview of what is possible today with the IoS.

The first article, "On the Impact of Audio Characteristics to the Quality of Musicians' Experience in Network Music Performance" by Tsioutas and Xylomenos [3], undertook a large-scale NMP study with musicians, assessing a wide range of subjective variables of Quality of Musicians' Experience against latency, and correlated these results with the audio characteristics of the instruments and performance. The findings validate and extend previous studies with a wider array of qualitative variables and audio characteristics.

The second article, "Parametric Evaluation of Ensemble Vocal Performance Using an Immersive Network Music Performance Audio System" by Cairns et al. [4], describes an immersive audio Network Music Performance (NMP) system designed for group singing. The system was evaluated through an experimental design involving ten singers distributed across Europe. Results of the experiments allow estimation of the conditions under which it is possible to achieve vocal performance that conforms to expectations of live interactivity.

The third article, "Experiencing Remote Classical Music Performance Over Long Distance: A JackTrip Concert Between Two Continents During the Pandemic" by Bosi et al. [5], presents a study where the NMP software JackTrip was used to support a distributed classical concert involving musicians from four different locations in two continents. The authors provide a discussion on the technical setup of the NMP system, numerical analysis on the achieved mouth-to-ear latency, and qualitative assessment of the quality of experience perceived by the involved musicians.

The fourth article, "SMIF: A Format for the Offline Exchange of Smart Musical Instruments Configuration and Data" by Turchet and Golyshev [6], defines a file format for the offline exchange of content produced by the emerging class of smart musical instruments. Implementations of an encoder, decoder, and player for it were also provided. Such a format enables the creation of novel applications for the offline exchange of smart musical instruments configuration and data, some of which are illustrated in the paper.

The fifth article, "Design Recommendations for a Collaborative Game of Bird Call Recognition Based on Internet of Sound Practices" by Rovithis et al. [7], argues that engagement in Citizen Science projects applied on Smart Cities infrastructure can be enhanced through contextual and structural game elements accomplished via augmented audio interactive mechanisms. The authors proposed an interdisciplinary framework based on the paradigm of a collaborative bird call recognition game, where users collect and submit audio data, which are then classified and used for augmenting physical space.

The sixth article, "Sparse Iterative Beamforming Using Spherical Microphone Arrays for Low-Latency Direction of Arrival Estimation in Reverberant Environments" by Mathews and Braasch [8], introduces an estimation method for acoustic direction of arrival that allows positional information about sound sources to be transmitted over a network using minimal bandwidth. The experimental evaluation of the method, conducted under simulated conditions, not only indicates the favorable accuracy under reverberation and source discrimination when compared against other state of the art localization methods but also demonstrates the potential for integration into real-time frameworks.

We are honored to have the possibility to introduce the latest research on the IoS to the AES community, and we are pleased for the IoS community to have been given the opportunity to share their work in JAES in this curated issue. We thank all researchers who participated in the

review process. We are truly grateful to the JAES editorial team, with special thanks to the Editor-in-Chief Prof. Vesa Välimäki, for their expertise, constant help, and professional advice and for the opportunity in the first place to publish this special issue in one of the most prestigious journals in the field.

As the number and variety of papers listed above demonstrate, today there is a flowering of scholarly interest in the IoS. We feel privileged to contribute to this conversation and introduce the work of the authors represented in this second volume of the special issue on the IoS. We hope that the emerging IoS community will find both volumes of this special issue to be an informative and useful collection of articles, which facilitates the productive exchange and cross-fertilization of ideas, methods, approaches, and solutions across the multiple research disciplines that underly the IoS.

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