

SEDA Autumn Conference 2024



Session Title: Low-latency music technology: harmony across institutions, or a broken promise?

Session Type: Lightning Talks (10 minutes)

Main presenter(s): Benjamin Redman, Royal Conservatoire of Scotland

Co presenter(s): None

Session Summary: Low-latency technologies have an important role in the future of music education by offering synchronous musical interaction so that remote parties can play music together in real time between different institutions, something not possible via standard videoconferencing platforms. This reduces the need for travel, resulting in cost savings as well as less environmental damage. These technologies open a new world of teaching and learning possibilities for students, including collaborative learning, and teaching through playing.

Session Outline: Low-latency technologies such as LoLa and JackTrip offer high-quality audio and facilitate synchronous musical interaction so that remote parties can play music together in real time (Drioli et al., 2013). Limited research has been conducted on how effective these technologies are when used for instrumental music teaching, but the available literature suggests a need for more in-depth testing (Riley et al., 2014; Davies, 2015; Iorwerth and Knox, 2019). Trials conducted between 2016-2021 showed promise and potential for wider adoption of these technologies (Redman, 2020, 2021). Attitudes to technology can determine whether it is accepted or not by institutions and individuals (Brudvik, 2018).

Since the start of the pandemic in 2020, the JackTrip Foundation rapidly developed JackTrip technology to allow it to operate via home networks using inexpensive standalone devices (JackTrip Foundation, 2021). This allowed teachers and students to work together from home during the pandemic with high-quality low-latency audio. The technology can allow musicians to participate in real-time settings across continents (Cáceres et al., 2008; Cáceres and Chafe, 2010; Ferguson et al., 2020; Hadhazy, 2020; Mizuno, 2012). However, successful use often requires a great deal of technical support from experts (Redman, 2020, 2021).

This paper aims to give an up-to-date picture of whether the promise of these technologies has been fulfilled, or whether the technology still needs further development before it can be more widely adopted and sets out to answer the research question: 'How easy is the technology to use for non-specialist users, and are refinements required to make it more accessible?'

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