



RAGAZZI BOYS CHORUS PIONEERS VIRTUAL REHEARSAL TECHNOLOGY

The group has piloted a web application for real-time choral singing during Coronavirus pandemic.

REDWOOD CITY, CA— Based in the heart of Silicon Valley, **Ragazzi Boys Chorus** is pioneering an innovative platform that enables real-time remote singing for chorus members. The acclaimed chorus is solving the issue that has stymied musical ensembles during the Coronavirus pandemic: singing together while physically apart. Until recently, creating live music online has been untenable due to lagging audio in web-conferencing tools like Skype and Zoom. Motivated by his son’s longing to sing with his Ragazzi Boys Chorus friends, Mike Dickey, a software entrepreneur, developed an inexpensive, plug-and-play solution that reduces latency to a point where singers can harmonize in real-time over common Internet connections. Created in partnership with Stanford University’s Center for Computer Research in Music and Acoustics (CCRMA - ccrma.stanford.edu) as part of the **JackTrip Foundation**, the new program (dubbed the Ragazzi Virtual Studio) has completed testing with Ragazzi and has been deployed to the choristers in Ragazzi performance ensembles, aged between 5 to 18 years old.

“Ragazzi is thrilled to be a pioneer in this game-changing venture,” said Kent Jue, Artistic and Executive Director of Ragazzi Boys Chorus. “Choruses have been devastated by the pandemic, and the need for music and community is even greater in these uncertain times. Through Mike Dickey’s extraordinary work, Ragazzi is continuing to build our musical brotherhood, grow essential skills, and sing together despite being apart. This project will also allow choruses and other musical ensembles across the world to lift their voices in virtual song.”

Members from Ragazzi Boys Chorus and Ragazzi Continuo pilot-tested the technology. With testing completed, Ragazzi has deployed the Ragazzi Virtual Studio to the nearly 200 boys in the entire chorus for real-time online rehearsals. Each Ragazzi chorister has been provided a kit that

RAGAZZI BOYS CHORUS – VIRTUAL REHEARSAL TECHNOLOGY 2-2-2-2-2-2-2-2-2 includes the device necessary to sing together in real time. Funding for these kits was provided by a generous Ragazzi donor.

The technical challenge to virtual music collaboration is reducing delays in sound transmission to below 20-25 milliseconds (one way), a hurdle previously achievable only for very small groups (up to about 5 performers) who have advanced technology skills and expensive audio equipment. Mr. Dickey has built miniature computing devices using inexpensive components that are commercially available from Raspberry Pi and HiFiBerry. These devices are powered by custom software developed by Mr. Dickey, built on top of the JackTrip Open Source audio platforms (developed by Chris Chafe for CCRMA). This hardware and software combination will make it easy for groups of any size to quickly get up and running with JackTrip, without requiring deep technology skills. Dickey anticipates that even large groups (with hundreds of musicians) will soon be able to use these devices to achieve the real-time syncing across household internet connections.

About Ragazzi:

Peninsula-based **Ragazzi Boys Chorus** is one of the San Francisco Bay Area's premiere music and performance organizations for boys. Last year, more than 250 boys from over 100 schools in 30+ Bay Area communities participated in the program. Ragazzi means "boys" in Italian and is the term used in opera to refer to children's voices. Ragazzi has performed with the San Francisco Opera, San Francisco Symphony, Opera San Jose, West Bay Opera, Symphony Silicon Valley, Masterworks Chorale, and the Stanford University Symphonic Chorus among others. The group has toured throughout the United States and internationally. Ragazzi was honored for its contribution to the San Francisco Symphony's triple Grammy Award-winning recording of Stravinsky's *Perséphone*, and has five CDs available: *A Holiday Collection*, *Canciones de Alabanza*, *Magnificat: My Spirit Rejoices*, *Splendors of the Italian Baroque*, and *I Dream A World*. To learn more about Ragazzi, the public may visit **ragazzi.org**

About the JackTrip Foundation:

The **JackTrip Foundation** is a non-profit organization dedicated to advancing technologies to enable music collaboration over the Internet, and to facilitate the creation of music that

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transcends distance constraints. Stanford professor Chris Chafe, Director of Stanford University's Center for Computer Research in Music and Acoustics (CCRMA - ccrma.stanford.edu), developed the JackTrip technology to reduce latency in audio transmissions over the Internet, allowing musicians to collaborate in real time. Mike Dickey has developed a Web server application and easy-to-use interface, allowing any singer or musician to log in and make music together in real time. These two innovators have founded the JackTrip Foundation to support this technology for the benefit of musicians everywhere. For more information about the JackTrip Foundation the public may visit **jacktrip.org**.

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MEDIA: High resolution photos of **Ragazzi Boys Chorus** can be downloaded from:
<http://cbpr.co/press/RagazziTech/>

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