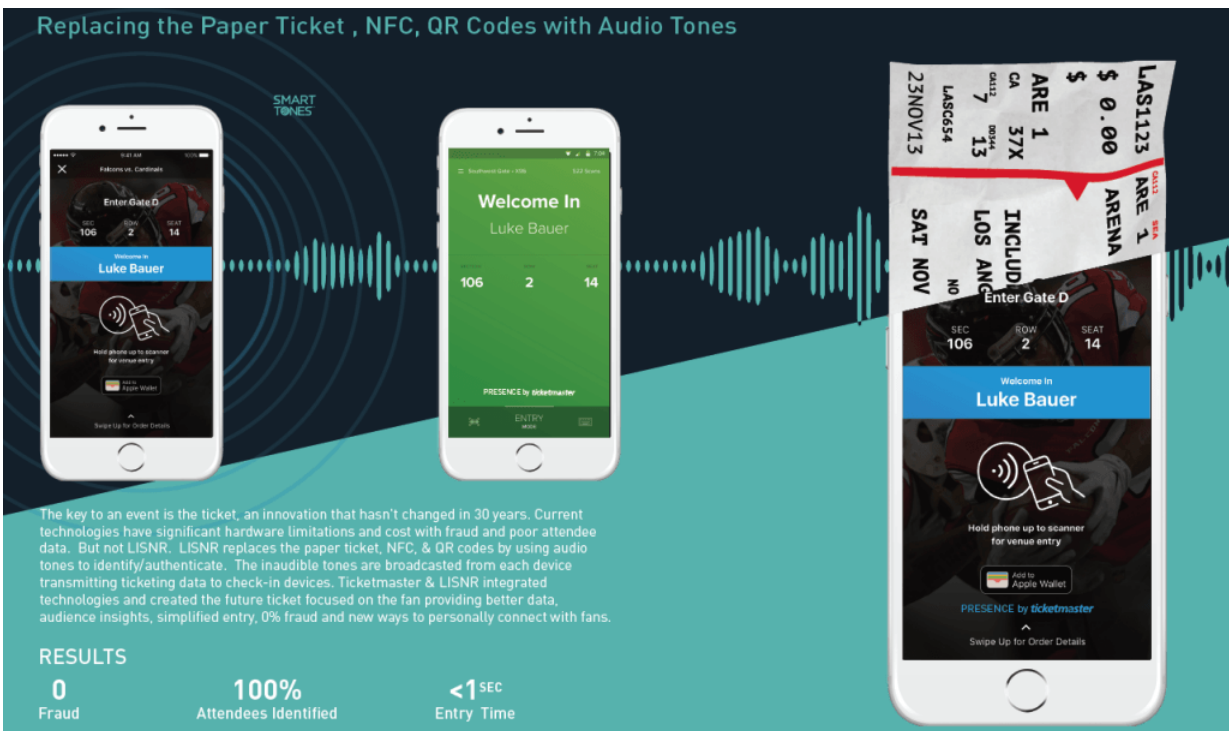


Event-goers check in with audio data from their phones

July 7 2017, by Nancy Owano



Replacing the Paper Ticket , NFC, QR Codes with Audio Tones

SMART TONES

The key to an event is the ticket, an innovation that hasn't changed in 30 years. Current technologies have significant hardware limitations and cost with fraud and poor attendee data. But not LISNR. LISNR replaces the paper ticket, NFC, & QR codes by using audio tones to identify/authenticate. The inaudible tones are broadcasted from each device transmitting ticketing data to check-in devices. Ticketmaster & LISNR integrated technologies and created the future ticket focused on the fan providing better data, audience insights, simplified entry, 0% fraud and new ways to personally connect with fans.

RESULTS

0 Fraud	100% Attendees Identified	<1 SEC Entry Time
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(Tech Xplore)—If you hate the hassles associated with long lines at events, technology can make your event arrivals easy going. Something that has to do with audio tones will enable easy passage through the gates and to your seats. This is a process where Ticketmaster will admit people to events and track their movement using audio technology.

More than 10 billion tickets are sold every year, said a video, and Ticketmaster set out to reimagine how a ticket could personalize the experience according to the identity of the fan.

Ticketmaster has partnered with Lisnr. The latter does business in ultrasonic audio [technology](#) *VentureBeat* said, "Lisnr's technology will be used to power attendee verification for hundreds of millions of tickets."

The rollout has begun in some venues, said *VentureBeat's* Paul Sawers. With Lisnr's technology as a backbone, Ticketmaster created its Presence system, found at a few venues across the world, said *Neowin*.

Cara McGoogan, *The Telegraph*, on Wednesday: This is an app "that understands who is entering a gig by listening for silent sounds emitted by mobile [phones](#) in a development that could spell the end of entry queues and stop touts from selling tickets on at a marked up price."

According to Lisnr, access control can be secured using Lisnr Smart Tones. Each user can be given a unique, encrypted [tone](#). The receiving device will decrypt the tone and only grant access to [tones](#) that contain the correct data.

Lisnr technology involves a communication protocol that uses inaudible sound. How inaudible?

"Lisnr's smart tones constitute audio signals in the 18.75 kHz and 19.2kHz range," said Sawers. They are "completely inaudible to more than 90 percent of the human [population](#)."

Lisnr's web site said this is a data over audio solution using the ultrasonic audio, Smart Tones. Each Smart Tone has the preamble, header, and the payload. The company said Lisnr is compatible with all operating

systems.

They also said their technology is "a commercial-grade globally deployed ultrasonic protocol. Our software base is built from a C-library with additional functionality wrapped into specific SDK's and API's depending on platform and use case. This allows for full functionality across all software [platforms](#)."

The user experience, meanwhile, was described in *The Telegraph*.

"Users must download an app and open it as they approach the venue's entrance. Microphones installed at the event listen for [audio signals](#) emitted from the devices at between 18.75 kHz and 19.2 kHz, frequencies," McGoogan said.

Users' phones light up green when their identity is confirmed.

VentureBeat: "As you approach the venue, you take out your phone and it broadcasts your ticketing data, which is detected by a scanner at the venue and confirms your identity, thus expediting the entry process."

Results? Impressive, according to the video presented on this approach. The video said 0 cases of fraud and 100 percent of attendees identified, with entry times in less than a second.

"The new method has resulted in faster entry times for consumers, along with zero instances of fraud, mostly likely due to the fact that the tone being broadcast is not only tethered to an account but it is also unique to each device, making it harder to reproduce," said *Neowin*.

Meantime, Ticketmaster gains in customer insights.

"Beyond just offering show goers the ability to gain entry in an expedited fashion, it also provides Ticketmaster with an extra layer of data, since each beacon of Lisnr audio can be tracked. That means a venue can account for all of the people in [attendance](#) and can even pinpoint where they are in the location," said *Neowin*.

As for now, the system rollout has begun at some venues but, according to *VentureBeat*, Lisnr said it will take around 4 years to complete the process globally.

Natt Garun in *The Verge* said that In the future, "Lisnr and Ticketmaster plan to add shopping [capability](#) with this sound recognition technology, so guests can purchase food and drink from their seats without waiting in line at concessions."

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