

June 28, 2022 (</blogs/bluetooth-assistive-listening-gets-closer>)

Bluetooth Assistive Listening Gets Closer (</blogs/bluetooth-assistive-listening-gets-closer>)

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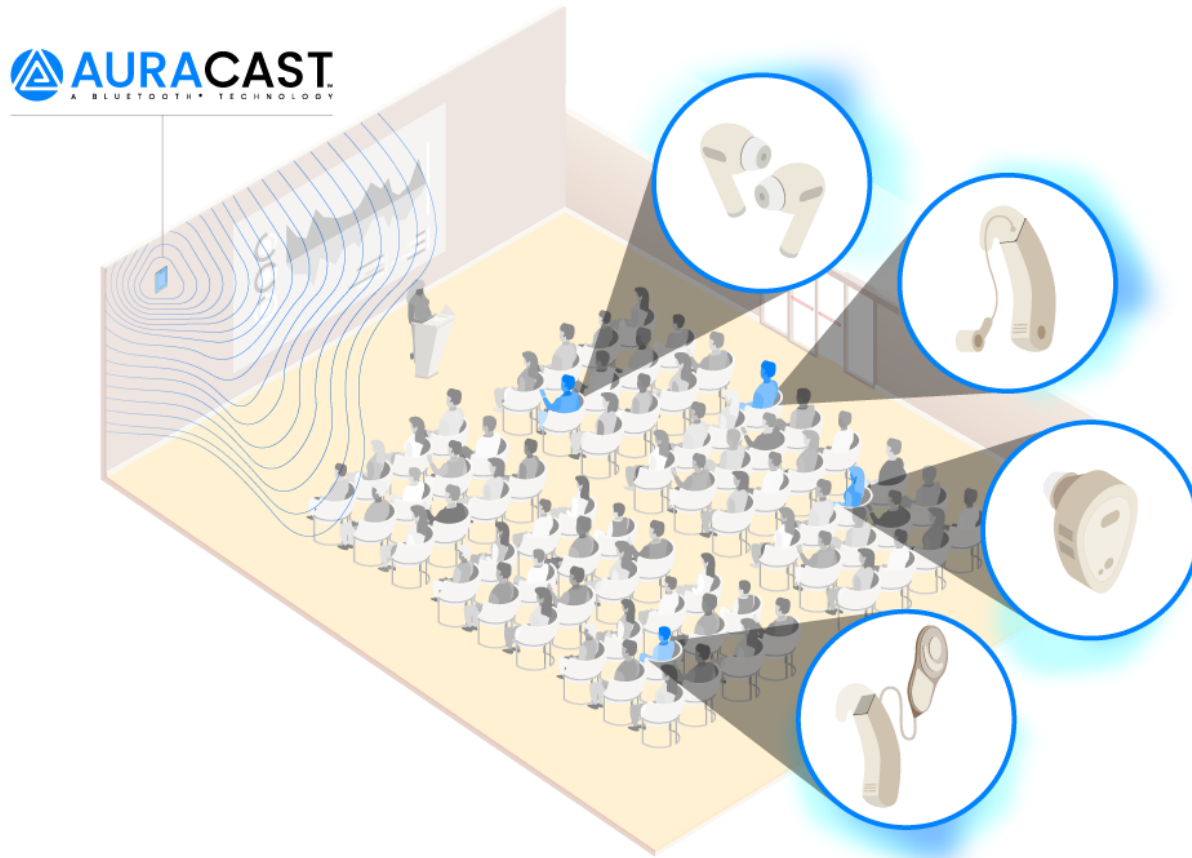
Auracast could make connecting to an assistive listening system as simple as it is with a hearing loop.

By Stephen O. Frazier

Ever since the first Bluetooth-enabled hearing aids were marketed by Starkey in 2005, (<https://www.medicaldevice-network.com/analysis/digital-hearing-aid-history/>) many users have had the mistaken impression that Bluetooth could be used as an assistive listening system. That was not true, but this is about to change.

The Bluetooth Special Interest Group (SIG), the standards organization for the technology, recently announced Auracast, formerly known as Bluetooth LE Audio Sharing, (<https://www.bluetooth.com/auracast/assistive-listening/>) will allow multiple users to connect to a Bluetooth signal. With Auracast, the door will be open to many applications and make Bluetooth a competitor with FM, infrared, hearing loop, and WiFi audio assistive listening systems.

Many people don't realize that Bluetooth is a one-to-one technology that allows two devices to wirelessly exchange data. Created over 20 years ago, Bluetooth increased its speed and capability but that also increased its need for more power, draining hearing aid batteries linked by Bluetooth to another device such as a smartphone.



Credit: Bluetooth.com

This issue was addressed in 2020 with a new Bluetooth LE (low energy) version that then led to Auracast. Derek Edwards, Au.D., an audiologist and audio engineer, says on his website (<https://www.profithearing.com/bluetooth-low-energy-audio/>) that this technology is "broadcast audio," noting: "You can broadcast one or more audio

this technology is broadcast audio, noting: you can broadcast one or more audio streams to an unlimited number of devices like headphones, earbuds, and hearing aids.”

In 2014 the European Hearing Instrument Manufacturers Association (EHIMA) urged SIG to explore using Bluetooth for assistive listening systems able to connect wirelessly with hearing aids. Bluetooth has delivered.

On the Bluetooth blog late in 2021, (<https://www.bluetooth.com/blog/hearing-aid-manufacturer-explains-why-bluetooth-audio-sharing-will-be-a-game-changer-for-those-with-hearing-loss/>) Jeff Solum, a wireless system architect at Starkey Labs, was asked how soon Starkey will offer products that include multi-user assistive listening. He predicted hearing aids will be “hardware ready” by 2023. He then said, “I would estimate the breakout year for this technology will be 2024, when most smartphone and computer platforms will have adopted the technology.” In a first step, some Starkey hearing aids using Bluetooth LE are already able to receive sound in digital form directly from the Amazon Fire TV Cube.

Nikolai Bisgaard, the vice president of external relations at hearing aid manufacturer GN ReSound, is not as optimistic. On the Better Hearing website run by Hearing Industries Association, he writes in January 2022 (<https://betterhearing.org/newsroom/blogs/the-next-version-of-bluetooth-with-audio-sharing-will-bring-a-new-world-of-sound-to-users-with-bluetooth-enabled-devices/>) that “hearing aids are medical devices and thus subject to rather strict regulatory requirements, so it will therefore take some time to get products out.”

Experts like Solum and Bisgaard have indicated that most of today's hearing aids are already using Bluetooth LE technology for their programming so, as it is implemented in new models they will be able to benefit from Auracast as well as the already available connectivity to phones, TVs, and other devices.

Bluetooth LE is available in Android 4.3 and later devices where it provides reduced

power consumption compared with classic Bluetooth. On the Android Authority website, a June 2022 report (<https://www.androidauthority.com/daily-authority-auracast-june-9-2022-3174640/>) states that a Bluetooth spokesperson told a few publications that consumer products with support will come as early as “toward the end of the year and the holiday season.”

Other tech firms are already onboard. CEVA Inc., a licensor of wireless connectivity and smart sensing technologies, has announced that its latest IP family now supports Auracast. Wireless software licensor Packetcraft Inc. is providing commercial licensees with SIG-qualified LE Audio software supporting the Bluetooth LE Generic Audio Framework specifications that are an integral part of Auracast.

Auracast could make connecting to an assistive listening device as simple as it is with a hearing loop. Wearers of Bluetooth-capable hearing aids could connect with the touch of a button (or possibly even automatically once you enter a room with a Bluetooth assistive listening system). Those without hearing aids could connect with a pair of Bluetooth earbuds or use their Android or an older iPhone with plug-in, wired earbuds, and those with telecoil-equipped hearing aids could connect using a neckloop.

With Auracast ready, the focus is on hardware such as transmitters. Predictable Designs, a firm that helps entrepreneurs, inventors, and small companies develop electronic hardware products, says it takes at least two years (<https://predictabledesigns.com/product-development-timeline-how-long-it-takes-to-develop-a-new-hardware-product/#:~:text=Having%20a%20hardware%20startup%20is%20a%20long%20game,1%20hour%2C%20as%20long%20as%20a%20few%20weeks>) to develop, manufacture, and market an electronic hardware product.

Andrew Thomas, the market development director at loop maker Contacta, is aware of the challenges and cost of installing hearing loops. In the Bluetooth blog in October 2021 (<https://www.bluetooth.com/blog/a-new-global-consumer-service-will-enhance-audio-accessibility-for-everyone/>) he says “Bluetooth LE has

service will enhance audio accessibility for everyone," he says, "Bluetooth LE has the potential to be used as an ALS across a variety of public applications." He went on to say that, for Contacta, "There will be opportunities to develop new products as the technology develops, particularly outside of the ALS arena."

Ampetronic, Contacta's largest rival in the U.K., offers a different perspective. On their website they offer a 2020 post (<https://www.ampetronic.com/bluetooth-streaming-instead-of-induction/>) from German audio therapist Rosemarie Muth in which she says, "We all hope that one day there will be better and cheaper public hearing system technology that can replace induction. If this should be Bluetooth Low Energy Audio it will still take many years to get there and it will be much, much longer before induction can be replaced completely with a clear conscience."

A concern to the legions of hearing loop advocates in the U.S. is the often asked question, "Will Bluetooth replace loops?" I contacted Williams AV in June 2022 to get their opinion and heard back from Tony Braun, the vice president of global marketing at Williams AV. He says, "We continue to see the proliferation of hearing loop enabled venues in both domestic and international markets," adding, "We at Williams AV are confident that hearing loop technology will remain a preferred option by many venues for years to come."

I also reached out to Contacta's Andrew Thomas, who agrees: "Many industry experts have suggested that loops/T-coils will be around for at least 10 years."

Where hearing loops are concerned, it's conceivable that Auracast will initially be installed to supplement existing hearing loop installations and the two systems would be run in tandem for as much as another decade until the vast majority of telecoil-equipped hearing aids have been replaced.

In her Ampetronic post (<https://www.ampetronic.com/bluetooth-streaming-instead-of-induction/>) Muth adds, "Induction loops and Bluetooth Low Energy Audio (or other successor standards) could coexist, and maybe it will stay that way for a very, very long time."

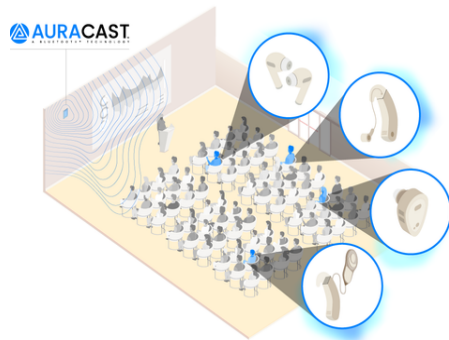
It's not really known when Auracast assistive listening will be a reality—only that it's

It's not really known when broadcast assistive listening will be a reality. Only that it's getting closer.



Trained by the Hearing Loss Association of America as a hearing loss support specialist, staff writer and New Mexico resident Stephen O. Frazier has served HLAA and others at the local, state, and national levels as a volunteer in their efforts to improve communication access for people with hearing loss. Contact him at hlaanm@juno.com. (<mailto:hlaanm@juno.com>) For more, see sofnabq.com (<https://sofnabq.com>) and loopnm.com. (loopnm.com.)

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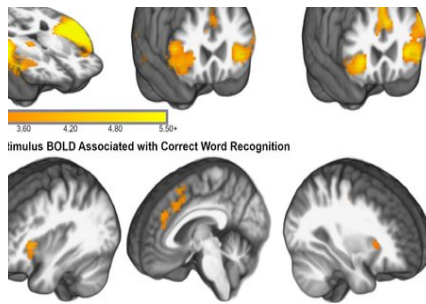
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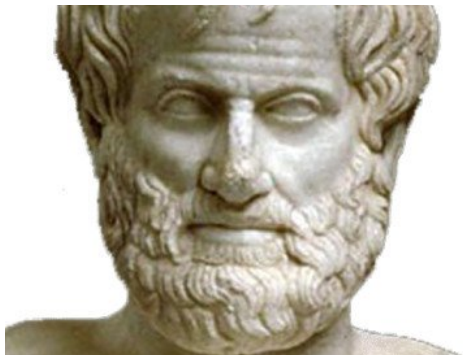
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