

Press release

New Phonak technology allows people with hearing loss to hear better than normal hearing people

A long sought breakthrough for people with hearing loss

Staefa, Switzerland (July 18, 2014) – In a paper published in the American Journal of Audiology, Professor Linda Thibodeau of the University of Texas describes her findings of a new technology which allows people with hearing loss to hear and understand speech better than those with normal hearing. The finding is evident in cases where conditions are most challenging for people with hearing loss: in noise and over distance. This innovative technology enables hearing aid users to understand speech in high noise and over distance by up to 62%* better than people with normal hearing in the same condition.

In her research, Professor Linda Thibodeau conducted measurements comprising a comparative speech recognition test with hearing aid users. This was achieved by using different wireless technologies (called fixed FM and adaptive FM) and the new technology (called Roger) – in different noise levels. “Our research with the new Roger wireless technology compared to the current and past Phonak wireless FM systems yielded impressive benefits for adults and teens listening to speech in noise in a laboratory and real world situations. Particularly at high noise levels the use of Roger allowed significant speech recognition where it was previously impossible”, summarizes Linda Thibodeau on the major finding.

Innovative technology: The Roger Pen



Better understanding than a normal hearing person in noisy environments? The Roger Pen makes it happen.

7% by people with normal hearing.

The Roger technology was invented at Phonak headquarters in Switzerland. A team of over 40 engineers and audiologists, worked together for more than seven years on the project. A radical new approach was taken to extract speech from background noise, based on complex mathematical models. One of the breakthrough moments in the development of the technology was the recognition of the systems capability of successfully assessing the background noise in order to effectively reduce it and extract the desired speech signal.

The study at a glance

- *Test group:* 11 adults, aged 16 to 78, with moderate-to-severe hearing loss, fitted with behind the ear hearing aids of different brands
- *Control group:* 15 adults, aged 18 to 30, with normal hearing
- *Test method:* objective and subjective speech recognition measurements at different noise levels

Highlight results

- Roger clearly outperforms adaptive FM and fixed FM
- Roger enabled people with hearing aids to even hear better than the normal hearing from 65dB
- One participant went from 0 to 90% (at 75 dB) and from 0 to 58% (at 80 dB) speech recognition with Roger

Publication details:

- Comparison of Speech Recognition With Adaptive Digital and FM Remote Microphone Hearing Assistance Technology by Listeners Who Use Hearing Aids. Linda Thibodeau, PhD. American Journal of Audiology (AJA), Vol23, 201-210, June 2014.

Next to the performance, the group also worked on the design of the new technology. One of the products, a wireless microphone, looks like a pen aiming to be as inconspicuous as possible.

"We are extremely proud of this achievement and keen to see which impact Roger will have on people's lives. Restoring people's hearing is our mission, and we strive to do more, do better for those with hearing loss", says Maarten Barmentlo, Group Vice President Marketing for Phonak. "To provide better hearing in noise is in our DNA. By giving people even an advantage over those with no hearing loss we made the impossible possible".

What is Roger?

Roger by Phonak is a new digital wireless standard that helps hearing aid users to understand 62%* more (in noise and over distance) than those with normal hearing. It uses cutting-edge wireless microphones to pick up the voice of the speaker and transmit it wirelessly over 2.4 GHz to miniature ear-level receivers. Roger is hassle-free and automatically adapts its settings to the noise and speakers around.

For more information on Phonak Roger, please visit: www.phonakpro.com/roger

* Professor Thibodeau, Linda, PhD (2014), Comparison of speech recognition with adaptive digital and FM wireless technology by listeners who use hearing aids, University of Texas, Dallas, USA, The American Journal of Audiology. Volume 23, 201-210, June 2014.

About Phonak

Headquartered near Zurich, Switzerland, Phonak, a member of the Sonova Group, has developed, produced and globally distributed state-of-the-art hearing systems and wireless devices for more than 60 years. The combination of expertise in hearing technology, mastery in acoustics and strong cooperation with hearing care professionals allows Phonak to significantly improve people's hearing ability and speech understanding and therefore their quality of life.

Phonak offers a complete range of digital hearing instruments, along with complementary wireless communication systems. With a worldwide presence, Phonak drives innovation and sets new industry benchmarks regarding miniaturization and performance.

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Phonak – Life is on

We are sensitive to the needs of everyone who depends on our knowledge, ideas and care. And by creatively challenging the limits of technology, we develop innovations that help people hear, understand and experience more of life's rich soundscapes.

Interact freely. Communicate with confidence. Live without limit. Life is on.