

**Lydia® Voice passes the test**

## **Highly reliable voice recognition even while wearing a mask**

**The coronavirus has taken hold around the world, and all parts of the economy have a duty to help slow the spread of the virus. An increasing number of logistics firms are implementing measures to maintain operations and protect their workforce. Masks, or even simple face coverings, are now standard items of clothing in many warehouses, as they are in everyday life. But what impact do they have on voice recognition when working with pick-by-voice systems? EPG has looked into this very question and has conducted a computer-based test to assess recognition rates when staff are wearing a mask.**

“I’d first like to share the findings: When working with voice-controlled systems while wearing a mask, the speaker-independent system Lydia® Voice once again demonstrated its strengths compared with systems based on personal voice profiles,” says Tim Just, CEO of topsystem (Member of EPG). “We invested a lot of development work into the latest version of our voice software and that’s really paying off in the crisis: With the aid of our technology, we’re helping logistics companies to maintain their operations and avoid any shortfalls in picking productivity despite the safety measures in place.” The test was conducted using the latest version of the system, Lydia® 8, which is based on neural networks and the deep learning concept. This concept resulted in a 25% improvement in recognition security, representing an important advantage primarily for employees with dialects or strong accents. “The test shows that precise recognition is still very much achievable even when the speaker is wearing a face covering, with no system adjustments required. In addition, voice training – and subsequent training with a mask – is not necessary, as can be the case with speaker-dependent pick-by-voice solutions,” says Tim Just.

### **Lydia® Voice delivers impressive performance with excellent recognition quality**

The standardized, computer-based test evaluated the impact of wearing N95, FFP2, paper or cloth masks on voice recognition rates while using the latest version of Lydia®

Voice. The test was initially carried out with three different types of headset. The results for all types of mask showed roughly the same recognition rate (99.75% to 100%) as picking without a mask. Even with the FFP2 masks, which are generally reserved for healthcare professionals, there were practically no measurable shortfalls when using Lydia® Voice. Picking with the Lydia® VoiceWear® also passed the mask test, with the results similar to those achieved with the headset. N95, cloth and paper masks had hardly any measurable impact on voice recognition quality in this test either, with no declines in productivity. “Only the FFP2 masks in combination with Lydia® VoiceWear® showed some minor deviation, although it was still at a tolerable level,” Tim Just adds. “This deviation is due to the fact that FFP2 masks have a greater impact on acoustic signals due to the way they are made.”

More information is available at <https://www.lydia-voice.com/gb/lydia-voice-suite/pick-by-voice-with-face-mask/>

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1. What influence does a mouth-and-nose guard have on speech recognition when working with pick-by-voice? EPG got to the bottom of this question and tested Lydia® Voice with different mask types.
2. The use of Lydia® Voice with a headset and a mouth-and-nose guard has no influence on the recognition reliability and quality in picking.
3. Even when working with the Lydia® VoiceWear® there are no significant deviations in recognition reliability when wearing a mask.

#### **About EPG – the Ehrhardt + Partner Group**

EPG is a leading logistics expert and employs more than 600 people at 17 locations around the world. The company was founded in 1987. The EPG | LFS warehouse management system, deployed by more than 100,000 users for logistics management, is at the heart of the company's success. Over the years, the software has developed into a comprehensive supply chain execution system (SES) and gives users networked control of all manual and automated logistics processes (EPG | WCS) – in the warehouse and on the road – including resource and employee scheduling (EPG | WFM). In addition, EPG provides Lydia® Voice, an efficient and ergonomic solution for voice-controlled processes in logistics, industry and maintenance. Lydia® Voice is a leading solution using the very latest technology, running on neural networks and AI components. Alongside these core products, the Group's complete solution for logistics is

complemented by private cloud solutions, logistics planning and consulting, and all services and support related to warehouse hardware and infrastructure. EPG also has its own training centers, its Logistics Solution Centers (LSC), at its headquarters in Germany, in the USA and in Dubai, delivering hands-on training and CPD for employees and logistics experts. More than 1,500 customers across all industries rely on EPG's expertise, cross-functional product range and know-how.

### **About topsystem**

topsystem Systemhaus GmbH is a comprehensive solution provider for speech-controlled work processes. Lydia® Voice Suite, its flagship application set, has made the company a technology leader in the sector. topsystem has been developing process optimisation systems for the automotive, trade, production, logistics and maintenance sectors since 1995 and offers customised IT applications alongside standard IT products. Generic brand hard- and software solutions, such as the mobile speech client Voxter® and the innovative voice vest Lydia® VoiceWear, form the core of its business activities. Comprehensive process consultation and after-sales services round off the portfolio. Forming the basis of all services are the company's profound technological expertise and extensive industry knowledge gained over many years. With over 100 employees and branch offices in Germany and the UK, as well as representatives in Russia, topsystem boasts a globally connected sales network and a worldwide network of integration partners.

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