Supporting communication in aphasia through AI: The CAPA project.

Adults with aphasia - a language disorder arising from brain damage such as stroke - face substantial challenges in everyday communication. Impairments in both language comprehension and spoken language production represent critical barriers to effective interaction (Bueno-Guerra et al., 2023), leading to reduced social participation (Georgiou & Kambanaros, 2023) and negatively affecting quality of life (Filipska-Blejder et al., 2023).

There is therefore a pressing need for tools that support individuals with aphasia in real-world communication settings. The CAPA project addresses this by investigating the extent to which modern AI systems can provide meaningful assistance. AI-based speech recognition and response generation technologies are being integrated into a mobile communication aid designed to support both language comprehension and production.

This talk outlines the project's goals and presents findings from initial foundational studies, including online surveys, expert interviews, and a focus group conducted as part of a comprehensive requirements analysis.

The project is a collaboration between Limedix GmbH (neolexon), the Fraunhofer Gesellschaft, and Johanniter Hospital Stendal. The resulting communication aid will expand the portfolio of neolexon, originally spun out of the Institute for Phonetics and Speech Processing at LMU München.