The vAssist consortium

The vAssist consortium comprises a highly **interdisciplinary team** assembled from research and industry including technical expertise in the fields of **web-based service development** and next-generation **speech interaction**, many years of experience in delivering **telemedical** and **-communication services** and extensive knowledge in **user-centered design methodologies**. Two **end-user organizations** represent the two application areas of vAssist. The partners come from Austria, France and Italy.

Partners

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vAssist

Voice Controlled Assistive Care and Communication Services for the Home

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Call 3:
ICT based solutions for Advancement of Social Interaction of Elderly People

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vAssist

Voice Controlled Assistive Care & Communication Services for the Home

What is vAssist?

The goal of vAssist is to provide specific voice controlled home care and communication services for two target groups of older adults: Seniors suffering from **(fine-) motor skill restrictions** and/or older persons with **chronic diseases**. vAssist creates simplified and adapted interface variants for **tele-medical** and **communication** services applying **multilingual natural speech interaction**.

How can vAssist help?

vAssist aims at enhancing the perceived quality of healthcare and communication services by **reducing costs** related to their production and delivery. This will be achieved by **channel independence** in the delivery of vAssist services, so that **existing hardware and interfaces** in the home of the seniors can be used (e.g. TVs, smart phones, PCs, laptops, tablet PCs). Results from experimental studies on speech input show advantages compared to keyboard systems. Speech input is faster and high accuracy can be achieved. Further, recent studies indicate that **speech interaction shows high acceptance among older adults** as an alternative interaction possibility for modern ICT.

What is natural speech interaction?

The user interface (UI) is the control mechanism for hardware devices or software applications. Specific forms of UIs are **spoken dialogue systems**. These so-called speech interaction systems are based on speech input and can be defined as computer systems that **interact with human beings via spoken natural language** on a turn-by-turn basis. Such systems include (but are not limited to) speech control of diverse functionalities, voice search and/or question answering. The most important difference between diverse speech interaction systems is whether it reacts on speech input only, speech output only or interactively.

Technical approach

The vAssist architecture provides clearly defined interfaces in order to separate the vAssist infrastructure (**speech in- and output**) from actual services provided to the end users (**channel independence**). The services can be selected from a "service database", which holds the information about service types and corresponding service providers. This approach makes it **easy to integrate** new services to the vAssist system. vAssist is based on **state-of-the-art interactive voice response** (IVR) technologies that will be used in order to **provide speech-based interfaces** for tele-medical and -communication services. Domain and language-specific speech models and optimized service-specific recognition grammars will allow older users to interact with vAssist services in a natural way using speech (natural speech interaction).
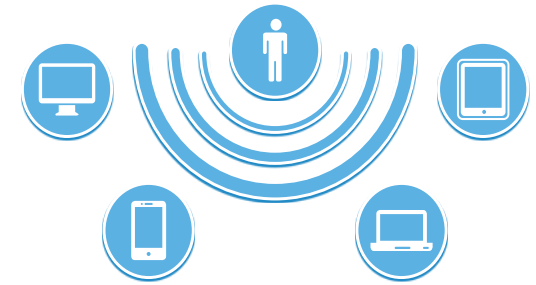
User-centered market-oriented design approach

vAssist follows a **user-centered market-oriented design (UC-MOD)** approach. This means that end users (primary, secondary and tertiary) will be involved during all project phases **considering market-oriented aspects** right from the beginning. This procedure assures that the iteratively developed speech controlled services and business models are adjusted to the needs and wishes of the users showing a high market potential within 2-3 years after the project duration.