

Project Note

Innovative microphone software for better hearing

An international manufacturer of hearing aids has added an innovative microphone to his platform of transmission equipment for instruction purposes. Zühlke developed the software for this microphone using the latest technology.

Task

Phonak is a leading manufacturer of hearing aids and accessories. In this project, an additional microphone was to be added to an already launched transmission equipment system. It was integrated seamlessly into the wireless communication platform that already existed. The objective was to have a microphone that could be controlled intuitively even though it had no display and that supported all legacy interfaces of the complex wireless communication platform.

In this project, Zühlke developed the software within the stipulated period. The Zühlke tasks included project planning with cost and time estimations. Zühlke engineers used their expertise in modelling, in embedded software development and in testing.

Implementation

To develop the software, Zühlke relied as much as possible on concepts and components from the existing software platform that Zühlke had helped to develop. That included architectural concepts, drivers, UML model elements and source code generated from it. At the same time, the engineers set about consistently refining and improving the platform while improving and expanding the test infrastructure.

With this platform-driven process, the microphone software was completed in short order. Platform improvements flowed back into the platform and positively influenced the quality of all equipment based on the platform. The platform achieved a high level of stability thanks to the consistent use of the further-developed and improved test methods.



Technical Data

ARM9

Sciopta RTOS

UML with Rhapsody, Eclipse, GCC

Assembler, C, C++, Python

Subversion, BuildBot

Customer benefits

- The project was able to be completed quickly and on schedule thanks to the use and expansion of the legacy platform.
- The consistent use of automated testing processes greatly improved software stability.
- A well-functioning platform emerged due to a multi-project collaboration and the experience that Zühlke has in the area of model-driven software development.

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