

# From Home-Made to Tailor-Made: R&D Support for Sourcing Bluetooth Silicon Components

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## Abstract

Sourcing departments often are confronted with the task to make rather complex components available within the product design process. Bluetooth baseband components are an interesting example of such a component since they not only constitute a major cost point in the product's bill of material but also come with a rather complex set of requirements: Regulatory approval of the component, hardware characteristics like size, pinout, number of external components, RF performance and mechanical dimensions are probably already obvious areas of interest that sourcing departments have to deal with ordinarily. For Bluetooth, we also have to consider a substantial amount of software embedded inside the component that has to be evaluated and studied. Highly automated software verification systems play a significant role in this evaluation. The sourcing project also includes some experience of migration from such components already being developed in-house. The presentation will outline the project concept, its main obstacles and lessons learnt. It will not elaborate on the technology details but instead give an overview about the complexity of such sourcing project, its runtime and volume.

## Curriculum Vitae



Martin Botteck works as a Research Manager in the Nokia Research Center where he leads the Validation and Testing Technologies group since August 1, 2004. Born in 1962, he got his diploma in electrical engineering from the University of Dortmund in 1988, and was awarded a PhD of electrical engineering from the same university in 1993. Dr. Botteck joined the Digital Broadcasting Division of Nokia GmbH in 1993 as a Development Engineer and has since gained experience in various business units such as Consumer Electronics, Nokia Ventures Organization, Mobile Phones and Technology Platforms. In these units he obtained diverse R&D management functions dealing with process and quality issues, Bluetooth application platforms and the d-box decoder project. Since the end of 2001 Dr. Botteck has worked as a Chief Architect for Bluetooth component software and has represented Nokia in standardization and transnational cooperation projects.