

Department	Electrical engineering
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### Abstract of the diploma thesis

There are a lot of cordless phones on the market at the moment. Most of them use a digital transfer protocol, like DECT. Complete chipsets are available for the most popular cordless phone

protocols. But all these chipsets have one thing in common, they all use a high carrier frequency. DECT for example uses a carrier frequency of 1.9GHz. In the United States there are phones available using a carrier frequency of 900MHz or 2.4GHz. The chipsets for such high frequencies are quite expensive and thus make the whole product expensive. It's impossible to get a cordless phone for less than US\$49.-. Most of them are even much more expensive.

The major target of this diploma thesis is to find alternative and cheap solutions for the transmission of voice data at low carrier frequencies (walkie talkie frequency band: 350-450MHz). This includes the search and implementation of alternative devices for the RF frontend and the integration of many parts of the transmitter path on one single DSP/ $\mu$ C.