

Modelling of Power Supply Distribution Networks in Mixed Signal Environments

Background

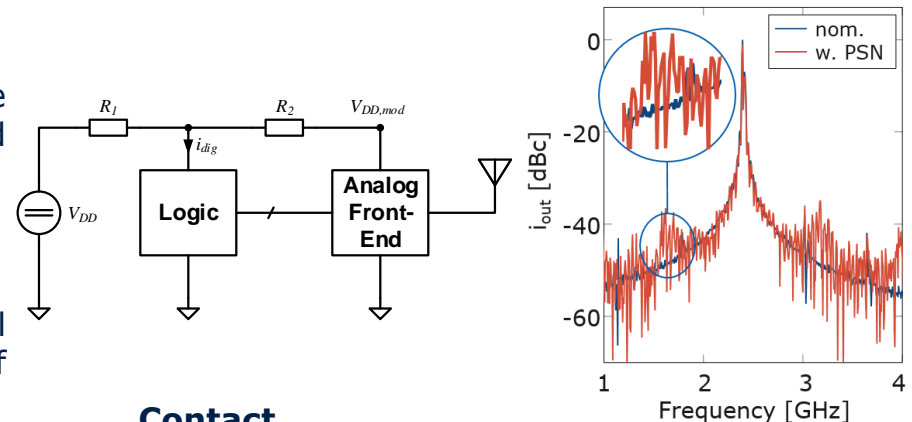
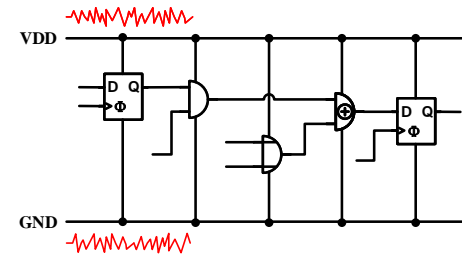
To increase system stability and decrease power consumption different digital, AMS and RF system components are integrated on the same substrate. As a result power supply noise and coupling through substrate or supply lines is becoming a critical factor in such designs.

To take these effects into account during design phase and early verification an efficient simulation method and high-level models are needed.

Task

The aim of the thesis is the development of a model for on-chip supply networks that allows simulation of supply noise and transfer characteristics.

First research and comparison of different modelling approaches for digital and analog supply networks should be investigated. Afterwards one solution is to be implemented in the simulation environment developed at the institute. The model should be verified and compared to current state-of-the-art simulation methods.



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