Student work

Hochschule Offenburg
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Realization of a phase locked loop to control a 60 and 140 GHz radar chip for localization applications

Due to its robust and daylight and weather-independent functionality, radar sensors are becoming increasingly popular. For some time now, radar sensors have been used for environment detection and obstacle detection in the automotive sector and in industry.

The advances in semiconductor technology (SiGe, CMOS, GaAs, etc.) allow a high level of integration of circuits, even at frequencies in the range of millimeter waves.

This makes it possible to implement small and inexpensive sensors that are increasingly being used in everyday applications.

In this bachelor thesis, a phase locked loop (PLL) to control the voltage controlled oscillator for both a 60 and a 140 GHz radar chip for localization applications, e.g. for robotic lawn mowers, is to be developed.

For this purpose, a PLL should be designed, built, programmed and measured.
Basic knowledge of circuit technology and programming is an advantage.


Image source: Bosch

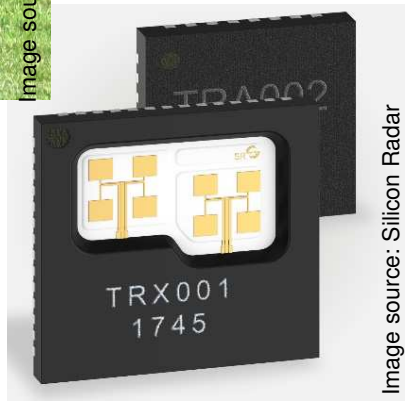
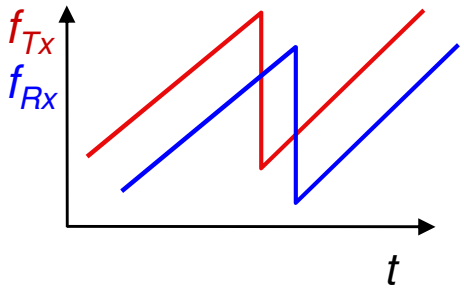
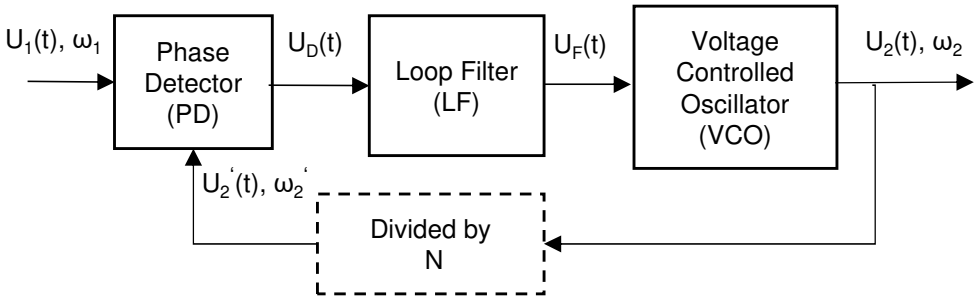


Image source: Silicon Radar





EMI Elektrotechnik, Medizintechnik und Informatik

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