ABSTRACT

PLL is a system which consist of a sub-system that is phase detection, LPF and VCO, quality of a design of PLL is determined by a good VCO design.where VCO act as an output frequency control.

VCO is an oscilator where the voltage DC input act as control function from frequency output. DC voltage input cotrol value varactor diode capacitance which affected to the changging of output frequency in oscilator, input act as control function from the output.

In this final assigment will be designed and implemented a VCO as a feedback-amplifier which consist of amplifier circuit and resonant circuit, then from simulation will be known VCO's paameter like VCO constanta K, varactor function , and temperature determine in VCO output

From simulation unit parameter that we got, than analyed,syncronied with fundamental theory and realied implementation.this simulation hoped will make us easyer in understanding how VCO work and it's parameter so that it can be referenced as a desgn of other VCO.