Modeling of a differential gear mechanism

Abstract

A differential is a particular type of simple [planetary gear train](http://en.wikipedia.org/wiki/Planetary_gear_train) that has the property that the angular velocity of its carrier is the average of the angular gears.

The differential gear mechanism allows the outer drive wheel to rotate faster than the inner drive wheel during a turn. This is necessary when the vehicle turns, making the wheel that is traveling around the outside of the turning curve roll farther and faster than the other.

The main objective of this paper is to developed parametric model of differential gear mechanism by using **solid works** under various design stages