

ABSTRACT

This project focuses on the way of developing and using bond graphs and aims at modeling and simulation of a mechanical system using bond graphs.

First, there is a brief summary of the history of bond graphs, symbols, and how they are been used for modeling any mechanical system and how it can be modeled with the use of bond graphs. There is also a reference on the systems that bond graphs find use.

Afterwards, an introduction to the mechanical system that is been modeled, which is a Quadcopter, is held. Then the way it works and the places that find use are described. Next, the mechanical part of the Quadcopter was modeled and the comprehensive bond graph was constructed.

Finally the advantages derived from the use of this method for modeling systems are given.

Keywords: [bond graphs, modeling mechanical system, Quadcopter]