Grammar-based Designer Assistance Tool for Epicyclic Gear Trains

Xin Li and Linda C. Schmidt Department of Mechanical Engineering University of Maryland College Park, MD 20742

ABSTRACT

This paper presents a grammar-based designer assistance tool for Epicyclic Gear Trains (EGTs) that helps designers generate concepts of EGT structures. The tool is comprised of three parts. The first is a grammar-based graph generation engine, the second is a functional schematic sketching module and the third is a concept selection module. Here we highlight the implementation of the first two modules. This is an initial exploration of using grammar-based design to build a practical designer assistance tool (DAT).