

Feature Based Design: Geometrical Interrogation

서호원 (KAIST 산업경영연구소)

A geometrical interrogation of feature based design to convert shape features to a valid solid geometry is discussed. The technique involves geometric representation of features, modeling procedure with features, geometrical varification, and updating modified features. The feature is represented by a set of a solid primitive and a Boolean operation, and the modeling procedure is a add-on procedure of features. The geometrical varification checks the validity of modeling procedure in terms of a valid solid. The update procedure follows the changes of existing features and redefines the features accoding to feature interaction, and define the relationship betwen features in a part feature graph. The overall procedure uses schemes of a boundary evaluation procedure from a constructive solid geometry (CSG) to a boundary representation (B-rep).