

ABSTRACT:

Currently, design and machining features diverge in meaning, even when they are interpreting the same object. This divergence of feature interpretation provides a venue for research work to reduce the complexity that arises in recognizing interacting machining features. Therefore, this paper demonstrates the recognition of design features with the aim to eventually decompose the interacting machining features. Loop driving recognition links the CAD data directly to the features to be recognized. The first step is to recognize the design features from B-Reps part. Then geometrical reasoning on these design features is employed to convert the design features to its respective machining features. The process of conversion is in fact the process of decomposing the interacting machining features without having to visit the B-Reps data again. The system takes into account the nesting of the design features that causes more interacting machining features to be decomposed. Finally, output data of both design and machining features are then displayed.