

Filling sharp features on corner of triangular mesh by using Enhanced Advancing Front Mesh (EAFM) method

ABSTRACT

Repairing an incomplete polygon mesh constitutes a primary difficulty in 3D model construction, especially in the computer graphics area. The objective of hole-filling methods is to keep surfaces smoothly and continually filled at hole boundaries while conforming with the shapes. The Advancing Front Mesh (AFM) method was normally used to fill simple holes. However, there has not been much implementation of AFM in handling sharp features. In this paper, we use an AFM method to fill a holes on sharp features. The Enhanced Advancing Front Mesh (EAFM) method was introduced when there was a conflict during triangle creation. The results of the study show that the presented method can effectively improve the AFM method, while preserving the geometric features and details of the original mesh.

Keyword: Meshes; Holes; Corner; Features; Boundary

