## Accepted Manuscript

An optimal algorithm for 3D triangle mesh slicing

Rodrigo Minetto, Neri Volpato, Jorge Stolfi, Rodrigo M.M.H. Gregori, Murilo V.G. da Silva

PII: $\quad$ S0010-4485(17)30121-5
DOI: http://dx.doi.org/10.1016/j.cad.2017.07.001
Reference: JCAD 2537

To appear in: Computer-Aided Design
Received date: 9 September 2015
Accepted date: 2 July 2017

Please cite this article as: Minetto R., Volpato N., Stolfi J., Gregori R.M.M.H., da Silva M.V.G. An optimal algorithm for 3D triangle mesh slicing. Computer-Aided Design (2017), http://dx.doi.org/10.1016/j.cad.2017.07.001

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

* This paper describes novel algorithms for the triangle mesh slicing and contour construction problems.
* The slicing algorithm uses a sweeping plane strategy highly simplified and optimized for unstructured triangle sets.
* The contour construction algorithm uses a hash table strategy to assemble polygons in linear time.
* A remarkable improving in execution time was achieved in relation to other algorithms from the literature.
* Considerable contribution in the process planning for areas such as medicine where the meshes have large number of triangles.


# https://daneshyari.com/en/article/4952584 

Download Persian Version:
https://daneshyari.com/article/4952584

## Daneshyari.com

