Photic Extremum Lines

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Abstract

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Keywords: *Non-Photorealistic Rendering, Feature Lines, View-Dependent Object-Space Algorithm, Contours, Silhouettes, Suggestive Contours, Photic Extremum Lines, Illumination, Interactive*

1 Introduction

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2 Related Work

3 Mathematical Preliminaries

DEFINITION 3.1: Mesh Function

$$f\colon S \to \mathbb{R}$$

4 Photic Extremum Lines

5 Algorithm

Algorithm

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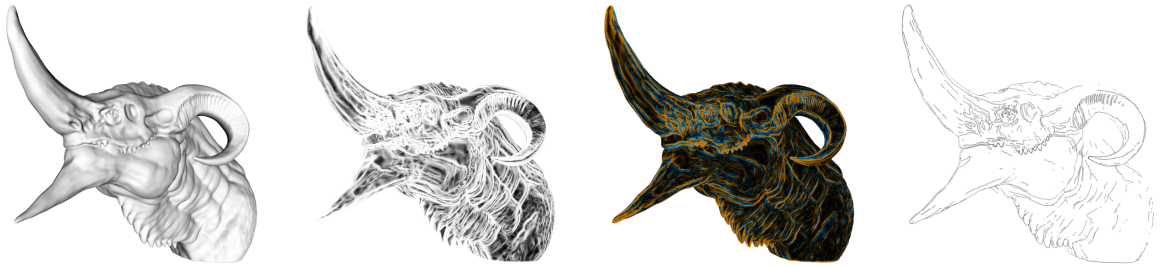

(a) *Illumination* **(b)** *Variation* **(c)** *Variation Slope* **(d)** *PELs*

Figure 1: ***Short Summary Part***

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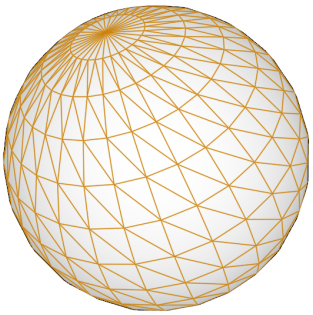

Figure 2: *Triangulated Meshes*

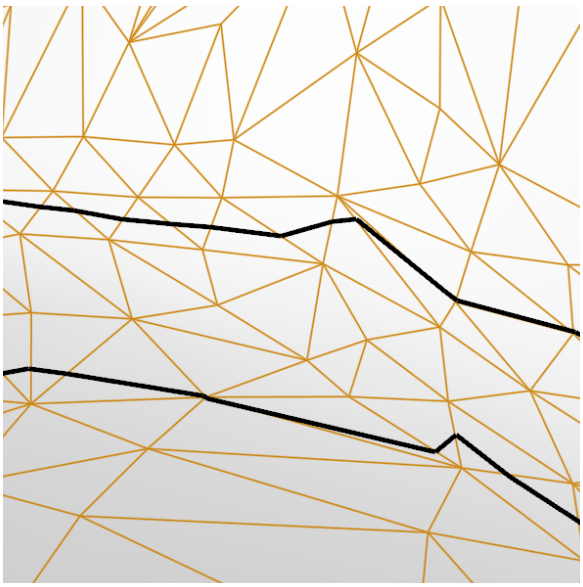

Figure 3: *Sub-Polygon Feature Lines*

6 Implementation

7 Results and Comparison

8 Conclusions

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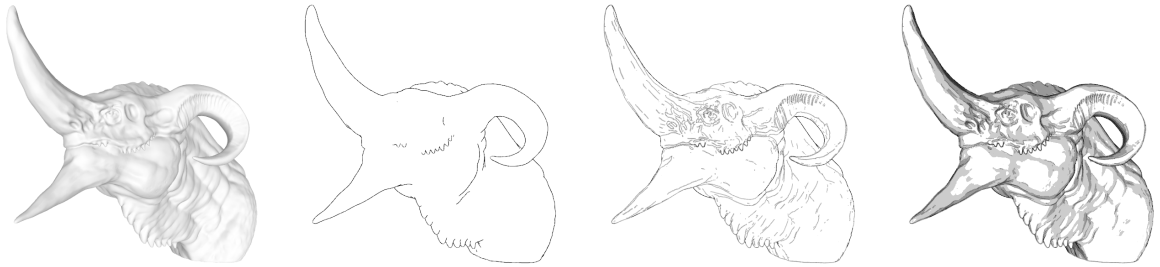

(a) *Illumination* **(b)** *Contours* **(c)** *Contours and PELs* **(d)** *Contours, PELs, and Toon*

Figure 4: ***Short Summary Part***

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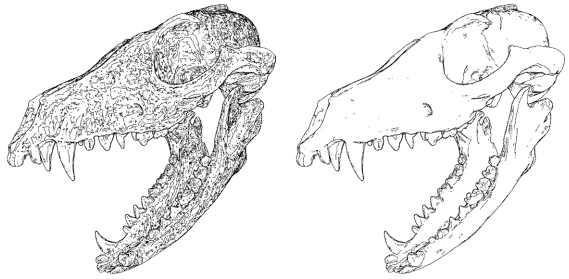
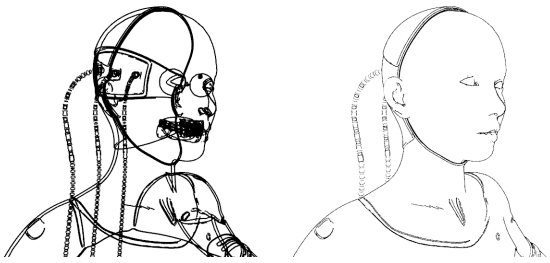


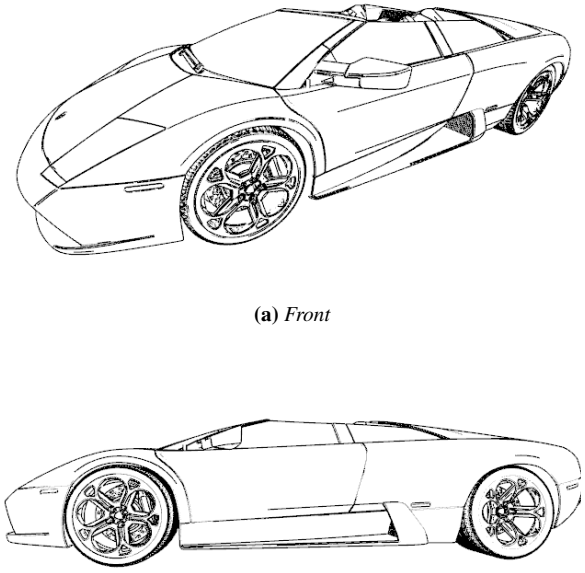
(a) *Low* **(b)** *Mid*

Figure 5: *Effect of thresholding*



(a) *Off* **(b)** *On*

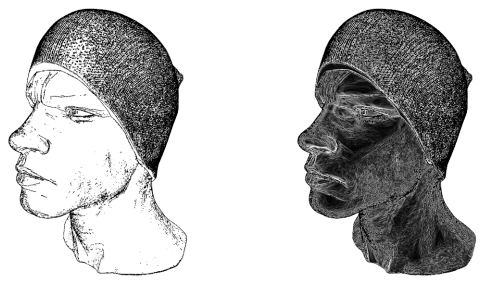
Figure 6: *Two-Pass Rendering for Hidden Line Removal*



(a) *Front*

(b) *Side*

Figure 7: *Nearly Perfect Line Extraction for Smooth Objects*



(a) *Contours and PELs* **(b)** *Variation*

Figure 8: *Erroneous Line Extraction for Noisy Objects*

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