

# 计算机图形学中的阴影算法

FRANKLIN C. CROW

University of Texas at Austin

Austin, Texas

原论文链接: <http://dl.acm.org/citation.cfm?id=563901>

译者: 刘阳

## I. 摘要

*Graphics Presentations with Shadows and Moveable Light Sources*, 1970 SJCC, AFIPS Vol. 36.

## II. 介绍

## III. 为光源建模

## IV. 第一类: 扫描时进行阴影计算

## V. 第二类: 两遍的方式

## VI. 第三类: 投射阴影多边形

## VII. 三类方法间的比较

## VIII. 鸣谢

## 参考文献

- [1] Appel, A., *The Notion of Quantitative Invisibility and the Machine Rendering of Solids*, Proceedings ACM 1967 National Conference.
- [2] Appel, A., *Some Techniques for Shading Machine Renderings of Solids*, 1968 SJCC, AFIPS Vol. 32.
- [3] Appel, A., *On Calculating the Illusion of Reality*, IFIP 1968.
- [4] Bouknight, W. J., *A Procedure for the Generation of 3-D Half-Toned Computer Graphics Presentations*, CACM, Vol. 13, no. 6, Sept. 1970.
- [5] Bouknight, W. J. and Kelley, K., *An Algorithm for Producing Half-Tone Computer Graphics Presentations with Shadows and Moveable Light Sources*, 1970 SJCC, AFIPS Vol. 36.
- [6] Bui Tuong Phong and Crow, F. C., *Improved Rendition of Polygonal Models of Curved Surfaces*, Proc. of the 2nd USA-Japan Computer Conf., 1975.
- [7] Clark, J. H., *Hierarchical Geometric Models for Visible Surface Algorithms*, CACM, Vol. 19 no. 10, Oct. 1976.
- [8] Crow, F. C., *The Aliasing Problem in Computer-Synthesized Shaded Images*, Dept of Computer Science University of Utah, UTEC-CSc-76-015, March 1976. (abridged version to appear in CACM)
- [9] Newell, M. G., Newell, R. G. and Sancha, T. L. *A Solution to the Hidden-Surface Problem*, Proceedings of the 1972 ACM National Conference.
- [10] Newell, M. G., *The Utilization of Procedural Models in Digital Image Synthesis*, Department of Computer Science, University of Utah, UTEC-CSc-76-218, Summer 1975.
- [11] Sutherland, I. E., *Polygon Sorting by Subdivision: A Solution to the Hidden-Surface Problem*, Unpublished, 1973.
- [12] Sutherland, I. E., Sproull, R. F. and Schumaker, R. G., *A Characterization of Ten Hidden-Surface Algorithms*, Computing Surveys, Vol. 6, No. 1, March 1974.