FEATURE ARTICLES

14 Vector and Raster Hidden-Surface Removal Using Parallel Connected Stripes
Claudio Montani and Michele Re
An algorithm to display 3D scenes, which is based on a new data structure, makes it possible to obtain raster and vector output without specialized hardware.

Supercomputers for Graphics

24 Guest Editor's Introduction
John Staudhammer

26 Supercomputing and Graphics in the Earth and Planetary Sciences
L. M. Gelberg and T.P. Stephenson
Applications from the atmospheric and earth sciences demonstrate the synergism between massive analytic engines and powerful imaging and graphics systems.

34 A Vectorized Scan-Line Z-Buffer Rendering Algorithm
Scott Dyer and Scott Whitman
This new algorithm takes advantage of the vector computer's architecture for improved performance.

46 Full-Wave Theory Applied to Computer-Aided Graphics for 3D Objects
Ezekiel Bahar and Swapan Chakrabarti
New reflection models for computer-generated synthetic images are developed using a full-wave unified analytical approach that self-consistently accounts for specular and diffuse scattering.

Special Report

61 Visualization in Scientific Computing—A Synopsis

July 1987
Volume 7 Number 7 (ISSN 0272-1716)
DEPARTMENTS

4  About the Cover
   The Midwestern Giant

8  Application Briefs
   What's Going on up There?

71 Selective Update

73 Graphics Bulletin Board
   SURFMODL

74 New Products

80 Advertiser/Product Index

CIII Professional Calendar

CG&A subscription information, p. 81; Change-of-address form, p. 2; Reader Service Card, p. 81.