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**IEEE Computer Graphics and Applications**

Vol. 5, No. 11, Jan. 1985 (Monthly)  
Nonmembers, $70/yr.; members, $20/yr.

**Edge-Based Data Structures for Solid Modeling in Curved-Surface Modeling Environments**  
Kevin Weiler  
CAD/CAM applications need quick and easy access to topological information about objects. Here, four structures for representing this information are evaluated for sufficiency, efficiency, and ease of implementation.

**Interfaces for Data Transfer Between Solid Modeling Systems**  
P. R. Wilson, L. D. Faus, M. C. Ostrowski, and K. G. Pausilj  
Data-exchange methods between geometric modeling systems have yet to be standardized. This early attempt, while not ideal, appears to provide a good foundation for future efforts.

**Back-to-Front Display of Voxel-Based Objects**  
Gideon Frieder, Dan Gordon, and R. Anthony Reynolds  
This straightforward 3-D display algorithm traverses voxels slice by slice to project each voxel on the screen. No surface detection or z-buffer is needed.

**Timcols: An Educational, Computer Graphics Timner-Marking Simulator**  
Jeffrey J. Welty, John W. Moser, Jr., and Michael J. Bolley  
Visualizing complex timber-marking and tree-growth concepts gives forestry students new insights into the problems, confidence in practical techniques, and invaluable experience.

**Background and Source Information About Computer Graphics**  
Carl Machover

**On an Efficient Line-Clipping Algorithm**  
David F. Rogers and Linda M. Rybicki

**IEEE Software**

Vol. 2, No. 1, Jan. 1985 (Bimonthly)  
Nonmembers, $90/yr.; members, $14/yr.

**On Formalism in Specifications**  
Bertrand Meyer  
A critique of a natural-language specification, followed by a presentation of a mathematical alternative, demonstrates the weakness of natural language and the strength of formalism in requirements specifications.

**Techniques for Algorithm Animation**  
Marc H. Brown and Robert Sedgewick  
Allowing a user to interact with dynamically changing graphical representations of algorithms or data structures may help in teaching, research, or systems programming.

**A Survey of Application Generators**  
Ellis Horowitz, Alfonso Kemper, and Balaji Narasimhan  
By encouraging the unsophisticated computer user to develop his own data-intensive programs, application generators can significantly improve software productivity.

**Software Engineering: The Future of a Profession**  
John D. Masri  
Increasing and diverse pressures, manpower shortages, and technology transfer problems all plague the growing software engineering profession. Industry, government, education, and the professional society together must help.

**Features of Languages for the Development of Information Systems at the Conceptual Level**  
Alexander Borgida  
Conceptual modeling languages make information systems easier to design and maintain by using vocabularies that relate naturally and directly to the "real world" of many computer applications.

**Assessing the Usability of Human-Computer Interfaces**  
Timothy E. Lindquist  
Engineers may be able to design a better interface if they take into account the control structures underlying the interface syntax.

**IEEE Transactions on COMPUTERS**

Vol. C-34, No. 1, Jan. 1985 (Monthly)  
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**IEEE TRANSACTIONS ON SOFTWARE ENGINEERING**

Vol. SE-11, No. 1, Jan. 1985 (Bimonthly)  
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