7 Solid Modeling: Guest Editors' Introduction  
_Herb Voelcker and Ari Requicha_

9 Solid Modeling: A Historical Summary and Contemporary Assessment  
_A. A. G. Requicha and H. B. Voelcker_  
A new generation of industrial geometry systems is emerging based on the technology of the 1970's. The generations of the eighties and nineties will require more research.

27 GMSolid: Interactive Modeling for Design and Analysis of Solids  
_John W. Boyse and Jack E. Gilchrist_  
In GMSolid, designers can work directly with primitives to build complex solids. This and GMSolid's friendliness, flexibility, and 3-D feel make it superior to wireframe CAD tools.

43 The Build Group of Solid Modelers  
_Robin Hillyard_  
Build 2, Design, and Romulus are solid modelers with evolutionary links. Consideration of their characteristics and histories yields some general insights into solid modeling.

69 PADL-2: A Technical Summary  
_Christopher M. Brown_  
Academia, business, and government joined forces to produce PADL-2, a flexible, extensible geometric solid modeling system. P2/MM is its current implementation; an improved version is under development.

86 An Industrial Perspective on Solid Modeling  
_Ware Myers_  
A few solid modeling packages have reached the market, and early users like them—more are on the way.