Editor's Introduction to the Special Section on Computer Graphics

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This issue of the *Journal of Information Processing* has a special section on Computer Graphics. Contributions to the section, unlike those to most of other special issues/sections in the past, were solicited through the publications of the *Information Processing Society of Japan*. The normal review process was applied to papers submitted in response to the call for papers for the special issue on Computer Graphics, and four papers were selected for publication. All of them are thus regular contribution papers.

Two of the four papers concern methods of constructing geometry. "Heuristic Understanding of Three Orthographic Views," by C. Kim, M. Inoue and S. Nishihara, describes an algorithm for reconstructing a 3-D model from a scanned image of a three-view drawing. A heuristic approach is employed to improve search performance of possible solutions and to find more likely solutions earlier. "Surface Deformations by Surface Transformations," by N. Urano, presents a surface deformation technique using surface transformation. This technique makes it possible to create a complicated shape by combining simple surface deformations. The other two papers deal with methods of generating images. "A Display Method of Trees by Using Photo Images," by K. Tadamura, K. Kaneda, E. Nakamae, F. Kato and T. Noguchi, reports an approach to displaying a tree image by using two photographed textures. Shading, shadowing and stereo viewing of the tree image are used to increase the realism. "Fast Volume Rendering by Polygonal Approximation," by K. Koyamada, S. Uno, A. Doi and T. Miyazawa, proposes an approximate volume rendering method in which a volume is sliced by equi-distant surfaces. Volume rendering computation is approximated by operations on polygons, which can be handled at lower computational cost.

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