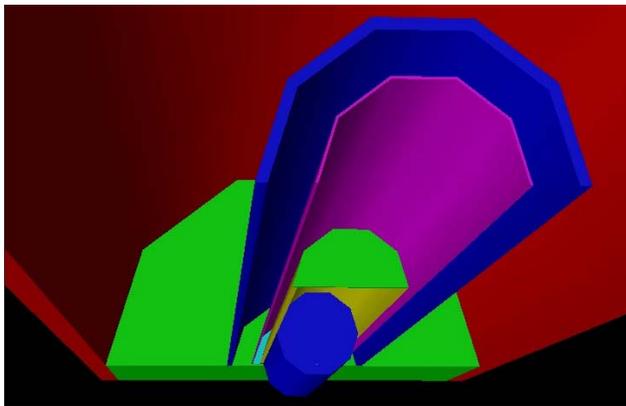


Pilot-17 Highlight

WSU

Interactive Rendering of MCNP Models



MCNP (Monte Carlo N-Particle) is a code from Los Alamos National Laboratory that simulates the interaction of neutrons, beta particles (electrons) and gamma radiation with various materials in a three-dimensional model. Widely used in the nuclear engineering and related communities, it uses as input a description file which is based on a model representation known to the computer graphics community as CSG (Constructive Solid Geometry).

This project adapted a known technique for CSG rendering to the MCNP file format. MSCF facilities were used to test the scalability of this technique to the large datasets typically found in MCNP design files.

Publications:

V. Roetman, *Interactive Rendering of MCNP Models*, MSCS Project, Washington State University School of EECS, 1999.

V. Roetman and R. Lewis, "*Interactive Rendering of MCNP Models*," presented at the 11th Western Computer Graphics Symposium (Panorama, British Columbia), March 26-29, 2000.

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