The Optimized Synthetic Infra-Red Interactive Simulation (OSIRIS) presents an immersive virtual environment for a simulated night-vision battle. Players attempt to find other players in a thermal environment so they can lase their opponents before getting lased themselves. In an ARL Stair Stepper device, they move through a forest of thermal trees over a high-fidelity terrain and view their environment through head-mounted displays. As they search for opponents, players try to avoid land-mines and other obstacles.

OSIRIS implements 3D thermal modeling, 2D infrared texture generation, infrared atmospheric effects, thermal sensor degradations, optimized scene rendering, high-fidelity terrain, aspect-unique trees, and dynamic terrain. Each of three networked environments interacts with the other over a LAN via DIS protocols using a common terrain database and common entity representations. Each also distributes the representation of its participant to the other environments. In this way, players are able to interact with one another as well as with their surroundings.

The project is designed to further advance the importance of detailed realism in the virtual worlds of the future.

Max Lorenzo

Communications Electronics Command/Night Vision & Electronic Sensors Directorate
10221 Burbeck Road, Suite 430
Ft. Belvoir, Virginia 22060-5806
USA
+1.703.704.3185
+1.703.704.1753 fax
lorenzo@nvl.army.mil

Contributors

David Poole
Robert Deaso
Young Lu
Alex Kekesi
Jae Cha
David A. Slayton
Mary Williams
Russ Moulton Jr.
Virginia Kaste
William J. MacKrell
Robert A. Paddison
Jeremy Riecks
Marc Roth
Frank Wodoslawsky