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Web3D Consortium X3D Revision to add Physics, Particle Systems, UI Enhancements, Realistic Motion

Update submitted to ISO for review; Supports features common in high-end gaming for use in online entertainment, simulation and CAD

San Francisco, CA — August 1, 2006— The Web3D Consortium today announced that it has submitted a revision of the X3D® specification for review by the International Standards Organization (ISO). This X3D Revision is the second update to the X3D specification since its unanimous approval as an international standard by ISO in 2004. It represents a significant advance in layering & overlays, physics, particle systems, smooth motion, and picking, enabling 3D simulations and web applications to implement features traditionally found only in high-level gaming systems. All features have been tested in real world applications, and been reviewed by hundreds of developers, before being incorporated into the revision.

X3D is an ISO-ratified open standard that lets developers leverage 3D as easily as text and 2D graphics. It supports a rich set of componentized features including geometry, behavioral modeling, interactivity, spatialized audio & video, and networking, that can tailored for use in visual simulation, engineering, CAD, medicine, training, entertainment, education, and more. This X3D Revision includes enhancements for delivering game-like experiences with physics and special effects, HUDs (heads-up displays) and user interface overlays, spline-based animation, realistic motion, as well as features specifically for simulation and CAD applications like cross-sectioning and orthogonal views.

"Distributed training/gaming and simulation in a virtual environment happens every day in the form of interactive games produced for the entertainment industry." said Alan Hudson, President of the Web3D Consortium. "The new X3D revision let us leverage these gaming technologies and combine them with real-time sensor data, to provide more realistic simulations, that draw in users and keep them engaged in the experience." Hudson notes "The entertainment industry tends to use proprietary technology, but X3D provides these modeling and simulation capabilities using open standards, royalty free technology."

"X3D provides an extensible foundation for building engaging 3D content in a range of applications, including games, entertainment, social networks, and online virtual worlds," commented Tony Parisi, president of Media Machines

and co-chair of Web3D's X3D working group. "This revision brings the state of the art in real-time graphics together with the open framework of the web, enabling endless possibilities for play, communication and commerce."

Key Features added to this X3D Revision:

Along with support for the latest advances in graphics hardware and accelerated rendering, the new X3D revision offers the following features to maximize interactivity and real-world simulation:

- **Layering** - offer the ability to intermix 2D and 3D content. This enables simplified creation of professional HUDs and user interface controls layered over the 3D scene.
- **Physics Engine** - lets developers animate their environments using a real-time rigid-body physics engine. This makes environments come alive and respond to the user in non-scripted fashion including integrated collision detection with friction.
- **Particle Systems** - enables effects like fire, smoke, rain, and snow.
- **Followers** - enables realistic smooth motion of 3D objects or avatars that is dynamically calculated between start and end points. Using Followers, a 3D object starts and stops in a more natural manner without jerks and sudden stops.
- **Non linear Interpolators** - uses splines and squads to create smooth animations that can also be much smaller in size. This also makes it easier to support animations exported from common 3D modelers like 3ds Max and Maya.
- **Picking Sensors** - allows content to pick into the scene and get back what was discovered (Ray, Cone, Cylinder, Sphere, Volume geometries); this lets you create agents that can sense their environment or model real world sensing technologies such as sonar.
- **OrthoViewpoint** - provides orthogonal viewpoint instead of perspective. Used for CAD viewing and in Layers for pixel-perfect textures.
- **Clipping Plane** - lets you slice through solid objects to reveal the center. The cross sections of a 3D object let you view internal structures and assembly relationships.
- **Texture Properties** -gives the developer direct control over how a browser processes a texture, including mipmap generation, filtering properties and texture priority.
- **Two sided material** - lets you add internal material so clipping planes have something different to show inside versus outside.
- **GeoProximitySensor**- adds the ability to detect the user's position in geospatial space.
- **View Management** - gives the content author control over the Viewpoint list; this is particularly helpful for large environments with lots of viewpoints.
- **DIS Extensions** - enable better runtime discovery of network entities.

All X3D specifications, including Revision 1 can be viewed at:
<http://www.web3d.org/x3d/specifications/>

About the Web3D Consortium

The Web3D Consortium is a member-funded industry consortium committed to the creation and deployment of open, royalty-free standards that enable the communication of real-time 3D across applications, networks, and XML web services. The Consortium works closely with the ISO, MPEG and W3C standardization bodies to maximize market opportunities for its membership. All Consortium members are empowered to participate in Consortium working groups and are able to accelerate the delivery of their cutting-edge 3D platforms and applications through access to specification drafts and conformance tests before public deployment. More information on the Consortium and Consortium membership is available at <http://www.web3d.org>

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