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**Developing Open Standards for Real-Time 3D Communication on the Web**

## Extensible 3D (X3D): Web Ready • Enterprise Approved

Membership Newsletter: 01 February 2011

### Letter from the President

2010 was yet another year where change is constant. As markets churn and economies re-calibrate (again), the value of open international standards has never been more clear: cross-platform, web-ready interactive 4D content in X3D is a great investment. Our members are pioneering the creation and delivery of this media, extending the standards and building out many great innovations.

Across devices and vertical markets, we are seeing this value gain traction. X3D offers a royalty-free solution to many CAD, GIS, Medical requirements. However many consumers, vendors and researchers are still unaware of the power and flexibility of the X3D ISO standards. This is a great opportunity for our organization and our community, but foremost we need to improve our messaging and mindshare.

Over the coming year, I look forward to bringing the activities of Consortium to light through letters to government & consumer organizations, RFI and RFP responses to grants and contracts, and improved website and X3D content integration.

In an effort to mobilize the community on new and emerging topics, we are launching Special Interest Groups (SIGs) within the Web3D Consortium to incubate research, development, specification work items and Working Groups Charters. SIG participation will be open to the interested public and the Web3D Consortium will provide communications and hosting services via listserves, blogs and forums.

Recent discussions and conferences have identified, **e-Learning** and **Augmented Reality** as charter SIGs; other potentials SIG areas include

**X3D:** The ISO standards for dynamic scenegraphs: Extensible 3D (X3D), Virtual Reality Modeling Language (VRML) and Humanoid Animation (H-Anim) provide the proven platform for durable and interoperable interactive virtual world content.

**X3DOM:** Web3D Consortium member [Fraunhofer](#) has developed a JavaScript-based player for X3D. It runs in any browser that supports HTML V5 and JavaScript-based WebGL rendering layer, which include beta releases for Mozilla Firefox, Apple Safari and Google Chrome web browsers. It supports native X3D within an HTML page. For more information see [X3dom.org](http://X3dom.org) project and example implementations.



**Success Story:** 3D cities on the web. Textured 3D models of complete cities at a resolution of 4 inch (10 cm) per pixel can be constructed automatically and visualized with



[Bitmanagement's GeoVRML/X3D viewer](#).

### News & Upcoming Events

#### **SPIE Medical Imaging/DICOM WG-11 meeting**

February 12 – 17, 2011

Lake Buena Vista (Orlando), Florida, USA

#### **Mobile 2.0/AR Standards Meeting**

February 15-17, 2011

Barcelona, Spain

#### **Call for Papers - Web3D 2011**

Due: 13 March 2011

[web3d2011.org](http://web3d2011.org)

Paris, France

#### **FCVW Conference 2011**

11-13 May 2011

Haptics and MMOs (Networking, Avatar Interchange) support.

I look forward to a great year for Web3D as we build our community and continue to grow to 3.3 and beyond!

Stay posted to the [web3d.org](http://web3d.org) website for important news and your [consortium@web3d.org](mailto:consortium@web3d.org) email for important member information!

Virtually yours,

Dr. Nicholas F. Polys  
Director of Visual Computing, Virginia Tech  
President, Web3D Consortium

National Defense University (NDU), Washington DC

### **Web3D Conference 2011**

June 21-23, 2011

[web3d2011.org](http://web3d2011.org)

Paris, France

### **SIGGRAPH 2011**

Aug 7-11

[siggraph.org/s2011](http://siggraph.org/s2011)

Vancouver, Canada

## **Working Group Updates**

### **X3D-Architecture:**

- The X3D Binary Encoding document has been revised per ISO comments and proceeds through the ISO process to IS status.
- The X3D 3.3 Work Item has been approved by ISO. Look for Web3DC member ratification at end of Q1 2011 for spec impact across Sci-Vis, CAD, and GIS verticals.
- Web3D must send a Committee Draft (CD) text to ISO SC 24. This requires a Consortium member vote for the document ratification.

### **X3D-Earth [OGC ]:**

Web3D Members fulfilled our cooperative work agreement with the Open Geospatial Consortium attending several recent meetings including Washington, DC and Toulouse, France.

### **HTML/X3D [W3C]: “Declarative 3D” Incubator Group**

Through our cooperative work agreement with the World Wide Web Consortium the X3D WG is working with DFKI to form a W3C Declarative 3D” Incubator Group to best integrate X3D with HTML. The goal is to make the native authoring and use of declarative XML-bases X3D scene as natural and well supported for HTML5 authors similar to SVG and MathML.

### **Humanoid Animation**

H-Anim 1.1 presents the conversion from real body scan

**Success Story:** 3D Simulation for enterprise data. [Octaga](http://Octaga.com)’s X3D technology provides world-class 3D visualization and animation software tools for the Oil & Gas industry. CAD and Geo data delivered for operations, maintenance and training.



## **2010 Outreach Report**

### **Augmented Reality Workshop**

Held in conjunction with ISMAR and in cooperation with Web3D Consortium Korean Chapter Korea this group met to establish a cross organizational community and discuss the use of available standards for AR and compare approaches and proposals. See Web3D AR-SIG.

### **SIGGRAPH (LA, USA) and SIGGRAPH Asia (Seoul, Korea) 2010**

Web3D Consortium booth, Tech Talk and Birds of the Feathers were a great success. Members Fraunhofer and Bitmanagement showed amazing applications of their software. Programmers, animators, artists, and 3D graphics experts around the world are adopting X3D for its powerful optimized visualization of real time 3D graphics, easy-to-create interactive 3D content, robust interoperability and import/export formats and support of native 3D within an HTML5 page.

### CAD [ISO TC 184]:

In response to the review of See the Member Wiki for the technical comparison between proposed technologies: X3D, Collada, U3D and others; see the members area for the full report.

**Success Story:** [Fraunhofer IGD](#)'s X3D multi-touch table and an impressive 8-meter wide high definition projection mirroring the table's image is used by [The Coperion Group](#) in planning and building plants and systems for the plastics

industry.



### Standards Pipelines & Timetable

**X3D binary encoding (FDIS)** 4<sup>th</sup> quarter 2010  
Notable: parsing speedups of over 7 x, authentication and encryption of X3D content.

**X3D Base Spec V3.3 (PDAM)** 2<sup>nd</sup> quarter 2011  
Notable: Geospatial and Volume Components.

### The 3D Environmental Information Systems Workshop

Hosted by the Web3D Korea Chapter workshop discussed and showcased recent X3D development in the areas of Mixed reality, Geospatial, CAD translations, H-Anim and e-Learning.

### Web3D Conference 2010

This conference co-sponsored by Web3D Consortium focused on recent trends such as interactive 3D graphics and its wide range of applications from mobile devices to high-end immersive environments. This year's hot topics included web integration, scientific visualization, 3D user interface, eLearning and another exciting installation of Web3D Art.

### IEEE Virtual Reality - Medical Workshop

Members organized a half-day workshop examining VR in medical applications; papers and presentations covered volume visualization, haptics, training and psych therapy. Keynote by Henry Fuchs. See Web3D Med-WG.

### Augmented Reality Event

Web3D outlined a case for AR open standards, presented a tutorial on how a X3D based AR applications can be built today and discussions on how the AR community can get involved in building a roadmap for open AR standards. See Web3D AR-SIG.

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**Web3D Consortium ( [www.Web3D.org](http://www.Web3D.org) ) is a nonprofit organization that develops and maintains the VRML, X3D and H-Anim standards - 3D file format and runtime specifications that are open, royalty free and ISO certified for transmission of 3D data over networks.**