

web|3D  
CONSORTIUM

X3D Update

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Web3D Consortium Update  
August 2011



## About the Web3D Consortium



- International
- non-profit
- member-funded industry group
- Develop and Promote X3D

Our members span business, academia, government  
and the military



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# ABOUT OPEN STANDARDS X3D



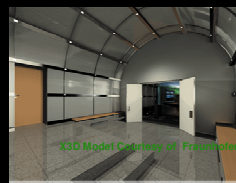
www.web3d.org



- Portability
- Durability
- IP-independence
- International
- recognition and support

Real Time  
Web Ready  
ISO Approved  
Open/Commercial  
Source

# VRML & X3D



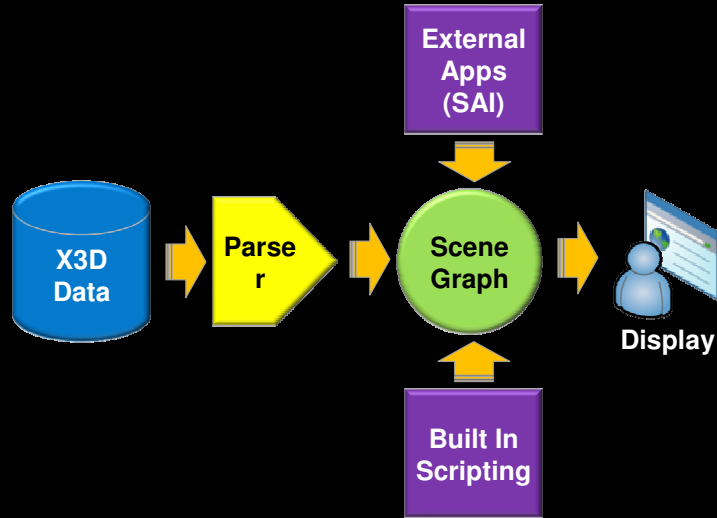
- VRML is the most widely supported real-time 3D format.
- X3D updates VRML functionality and provides an XML and binary encoding + Geospatial Support.
- X3D is the 3D component of MPEG 4.



• X3D - 3D Portrayal model for OGC services.



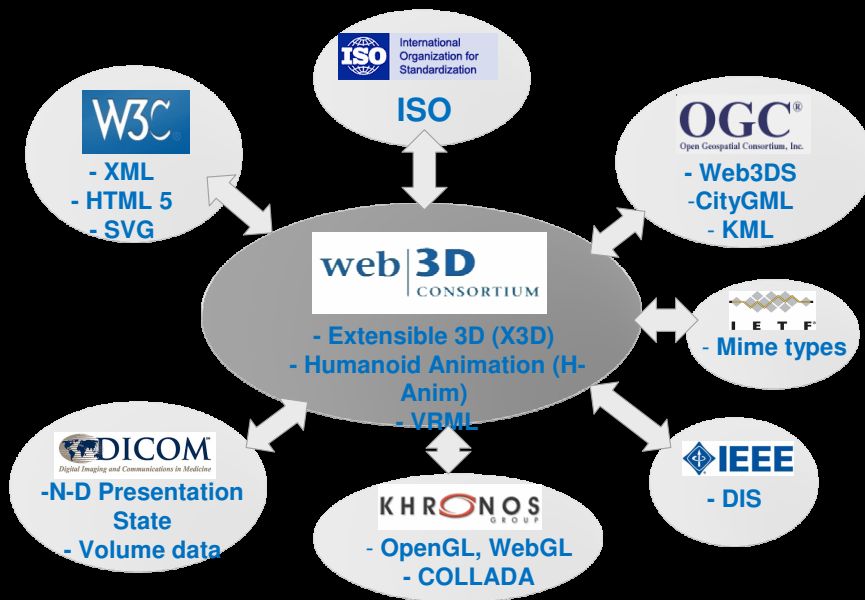
## About VRML & X3D



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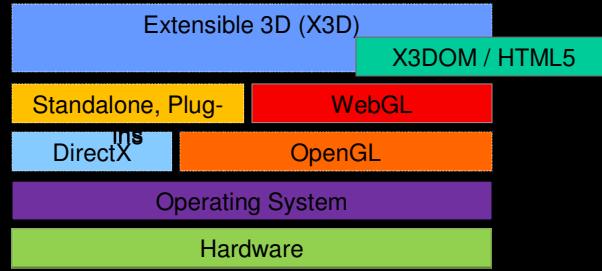
## WEB3D COLLABORATION & CONVERGENCE



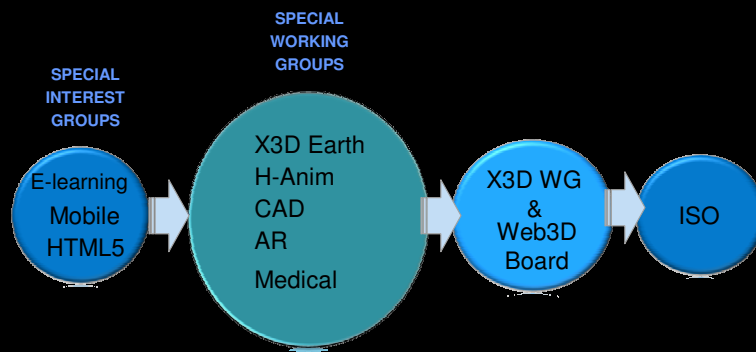
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# X3D Graphics Stack



# Web3D Working Group Process

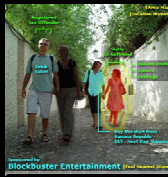


## Web3D – Open Special Interest Groups

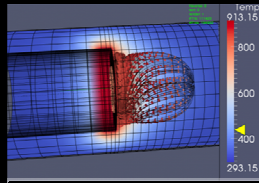
Why? Raise awareness in web-enabled 3D visualization

Who? Developers and industry leaders interested in using open standards for 3D Web

AR/MR



HTML5/X3DOM



E-learning

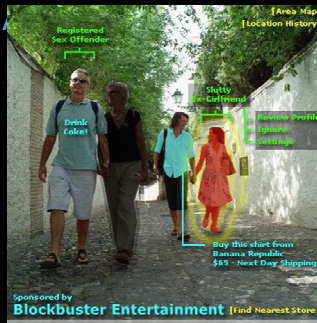


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## Web3D News – Augmented Reality

- Web3D - Collaborating with OGC for location based AR apps.
- Web3D - SIG AR and SIG 3D into a Working Group



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## Planned goals of AR WG include:

- Collect requirements and describe typical use cases for using X3D in AR/MR applications
- Produce and propose X3D components for AR/MR scenes and applications
- Produce sample AR/MR applications using X3D to demonstrate how this functionality can work correctly

## Web3D News – e-learning

- Ongoing Collaborative efforts with the IMS Global Learning Consortium to make X3D part of their stack.
- **X3D e-learning Application**  
Web3D Korea Chapter e-book app  
Contains text, video,  
3D graphics component  
The e-book uses functions of X3D



## Web3D News – X3D Earth

- New approaches for handling coordinate precision across Geospatial scales
- Quad tree imagery and terrain tools developed using Rez platform.
- The latest exemplar, by NPS, AVAILABLE NOW
- 3D Blacksburg - Online Mirror World for civic engagement, as test bed for LOD management
- OGC 3DPIE



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## 3DBLACKSBURG.ORG



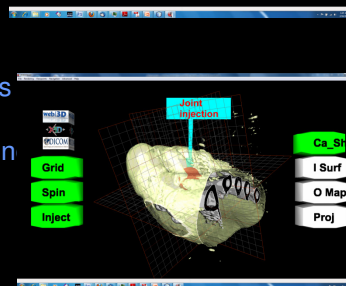
## OGC 3DPIE – ROLE OF X3D

- Interoperable 3D portrayal pipeline
- Major output format of the Web 3D
- Identify challenges for future X3D developments and future OGC/Web3D collaborations



## Web3D News – X3D Medical

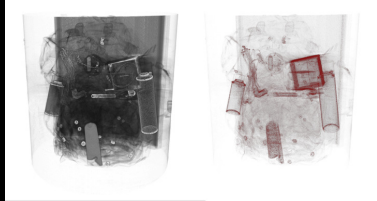
- New Component in 3.3
- VolumeData (may include segmentation or Isosurface information)
- VolumeRenderStyles
  - Composable
  - Can be assigned to different segments
- Two volumes (eg. X-ray + CT) can be blended





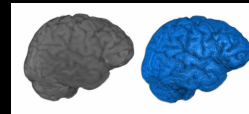
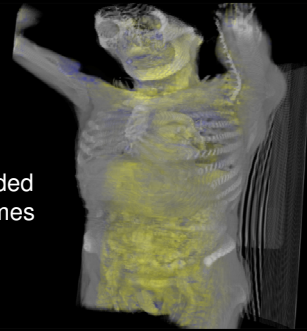
# X3D EXAMPLES

Default vs Composed

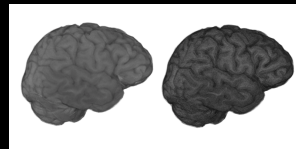


Default vs Cartoon

Blended volumes



Default vs Shaded

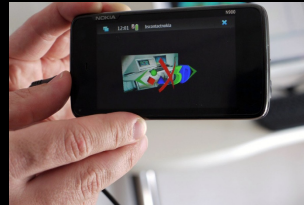


Default vs Edge Enhanced

# X3D ON MOBILES



Supported iOS Devices:  
iPhone 3, iPhone4, iPad,  
iPod touch,  
iMac



Supported Devices:  
Nokia N900,  
several Linux enabled  
set-top boxes



Android + Nvidia Tegra support in Q4 2011



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## Web3D News – Multi-user

- Recent developments include open source release of DeepMatrix, OpenDIS
- Best paper at Web3D 2011 was a multiuser paper on HTTP

1.1

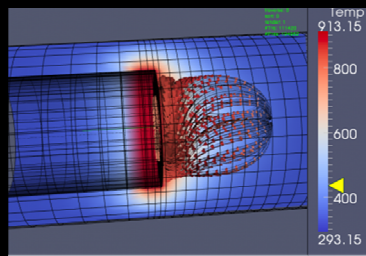


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## Web3D News – X3DOM /HTML5

- X3DOM allows X3D in native browsers - 3D WITHOUT PLUGINS (yea!).
- X3DOM is an open source, open standards X3D viewer developed by Fraunhofer, a member of the Web3D Consortium
- X3DOM New Release - New Features



Courtesy Fraunhofer



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## Web3D News – Release of X3D V3.3

- Volume Rendering
- New Units Proposal
- Geocentric rendering



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## Declarative 3D W3C Community group Goal

Evaluate the requirements for a successful standardization of a declarative approach to interactive 3D graphics as part of HTML documents.

### Key Players

DFKI  
Fraunhofer  
Web3D Consortium  
KHRONOS



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# Web3D Chapters

## Active Chapter

Korea Chapter  
China Chapter

## Proposed Chapters

India  
Paris  
Germany

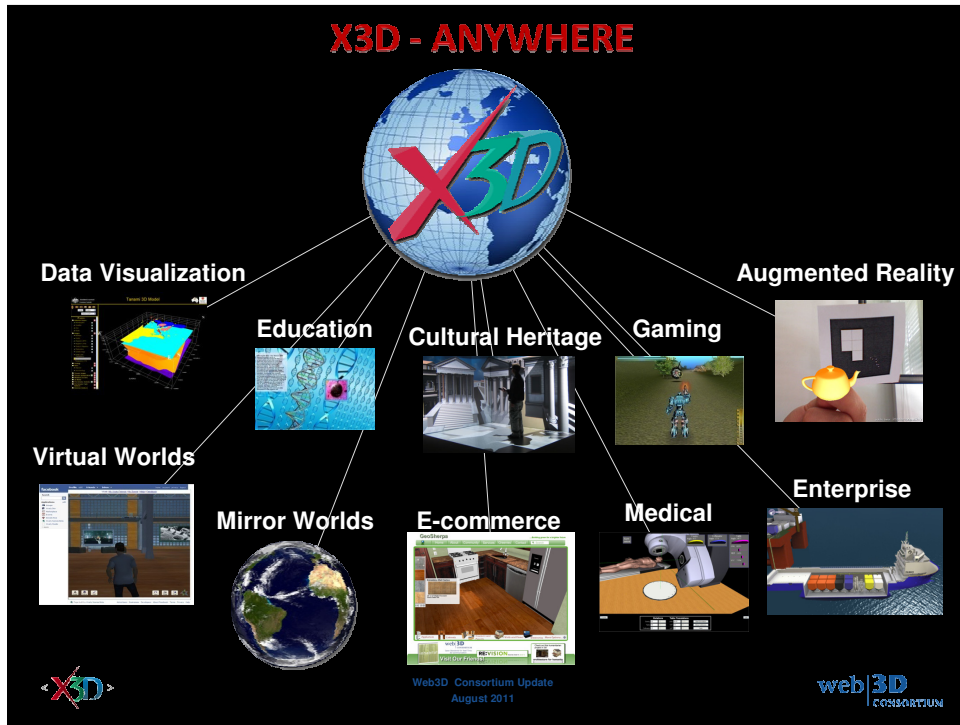


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# Adoption

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There has been no better time to discuss X3D technologies and also join the Web3D Consortium. We look forward to your participation.

## Why Adopt X3D

- It is open source, free, and royalty-free (you own your content!)
 



- Interoperable between applications and platforms
 




- Longevity - Content stands the test of time
- Recognition and Support

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There has been no better time to discuss X3D technologies and also join the Web3D Consortium. We look forward to your participation.

## Why Join the Web3D Consortium

Consumers is changing their behavior towards 2D

Consumers are ready for interactive immersive 3D experience

There has been no better time to discuss 3D technologies



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## Together we can build a immersive 3D world



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We look forward to your participation

To join visit us at: [www.web3d.org/join](http://www.web3d.org/join)



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