www.web3d.org

Web3D Consortium Overview

Anita Havele and Nicholas Polys
Web3D Consortium

Who are we?

International member-driven Standards Development Organization. Founded in 1997

Building and maintaining royalty-free, ISO ratified open standard X3D and HAnim

Our members span from Industry, academia, research institutes, government agencies and professionals

WWW.Web3D.org

What is X3D?

An ISO ratified royalty free open file format and run time architecture for publishing 3D on the Web and 3D printing

Encodings include: VRML, XML, JSON and Binary

Languages: Java, JavaScript Python, C, C++, C#

The Web is our platform

All browsers
All platforms

Interoperable/Realtime sharing

X3D a Backbone for 3D Visualization

Industry Standards Unify Communities

HL7 Version 2 & 3
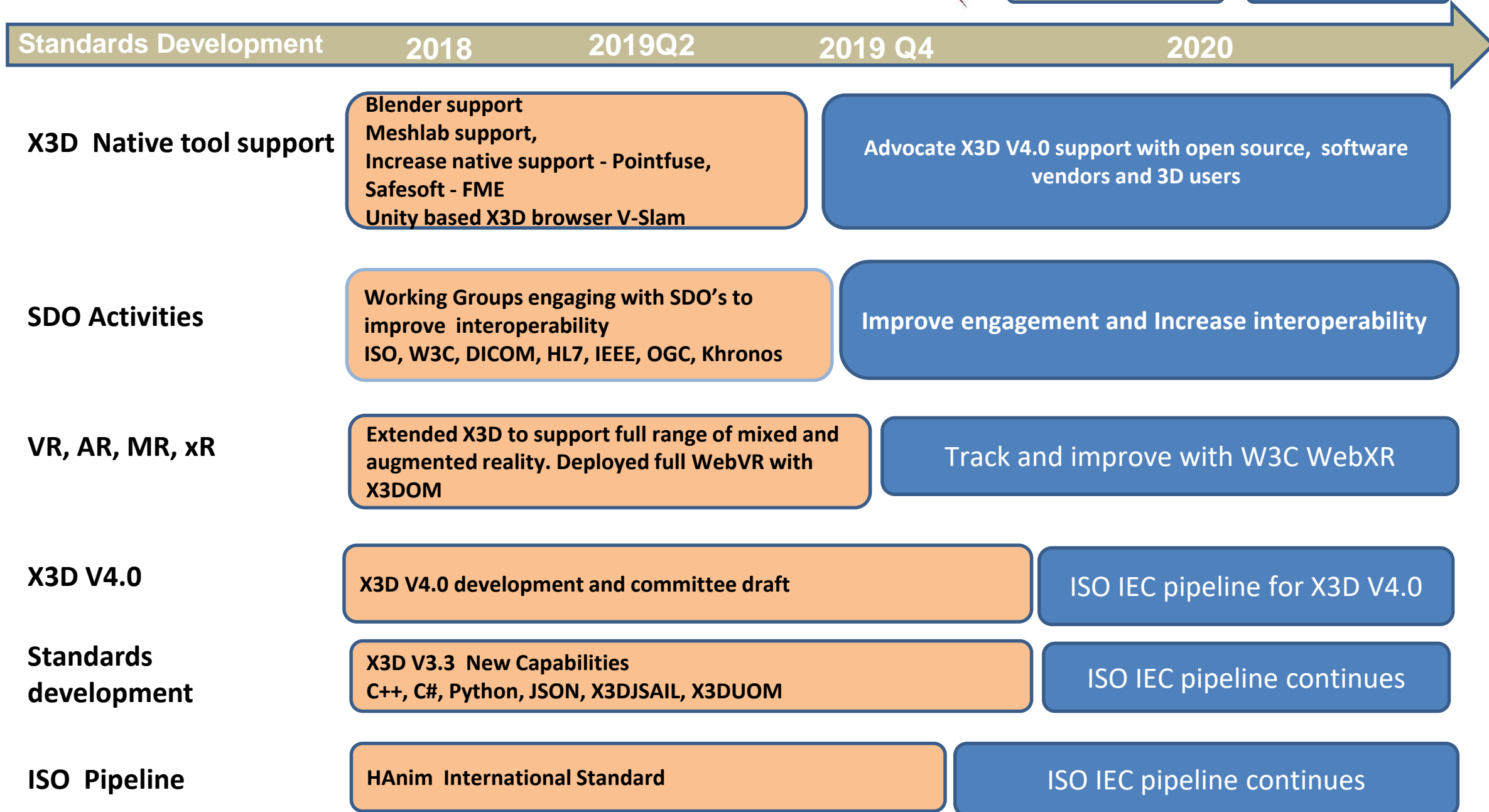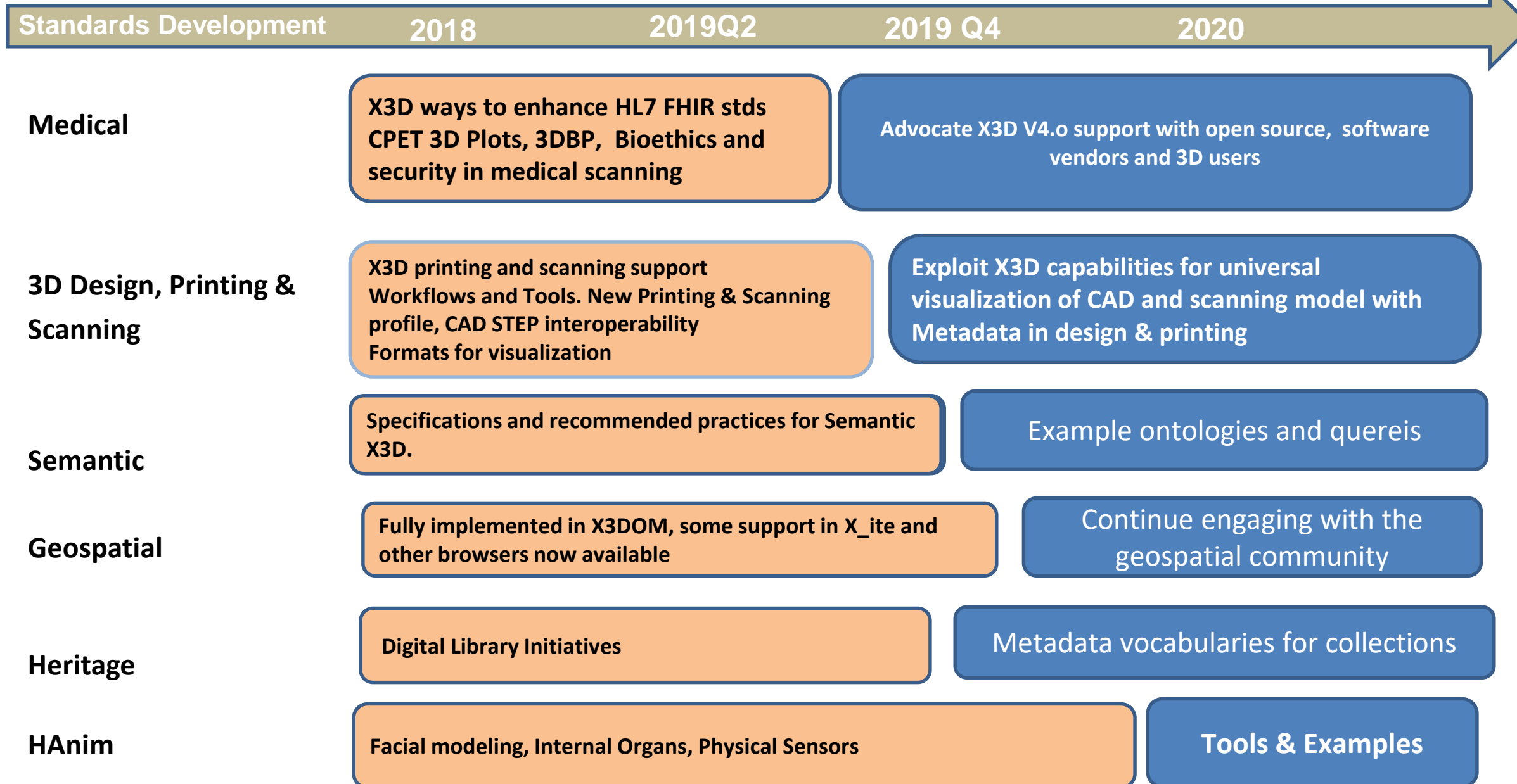
HL7® FHIR®

SDO Interoperability

- HL7 – FHIR Web3D Combo!!! Web3D ways to enhance FHIR

- IEEE- 3DBP – Consumer usage of 3D presentation formats

- DICOM WG 17 3D Printing formats

- ISO TC 184 SC4 W- G 16 – Visualization Formats – CAD and STEP Interoperability

- ISO TC SC24– HANIM and X3D V4.0

- OGC – Geo 3D Visualization using X3D

- Khronos –webGL and glTF

Web3D Standards Roadmap

In development

In Planning

Standards Development | **2018** | **2019Q2** | **2019 Q4** | **2020**

X3D Native tool support

Blender support
Meshlab support,
Increase native support - Pointfuse,
Safesoft - FME
Unity based X3D browser V-Slam

Advocate X3D V4.0 support with open source, software vendors and 3D users

SDO Activities

Working Groups engaging with SDO's to improve interoperability
ISO, W3C, DICOM, HL7, IEEE, OGC, Khronos

Improve engagement and Increase interoperability

VR, AR, MR, xR

Extended X3D to support full range of mixed and augmented reality. Deployed full WebVR with X3DOM

Track and improve with W3C WebXR

X3D V4.0

X3D V4.0 development and committee draft

ISO IEC pipeline for X3D V4.0

Standards development

X3D V3.3 New Capabilities
C++, C#, Python, JSON, X3DJSAIL, X3DUOM

ISO IEC pipeline continues

ISO Pipeline

HAnim International Standard

ISO IEC pipeline continues

Web3D Consortium overview– SIGGRAPH 2019, Los Angeles

Web3D Standards WG Roadmap

Standards Development	2018	2019Q2	2019 Q4	2020

Medical
- X3D ways to enhance HL7 FHIR stds CPET 3D Plots, 3DBP, Bioethics and security in medical scanning
- Advocate X3D V4.o support with open source, software vendors and 3D users

3D Design, Printing & Scanning
- X3D printing and scanning support Workflows and Tools. New Printing & Scanning profile, CAD STEP interoperability Formats for visualization
- Exploit X3D capabilities for universal visualization of CAD and scanning model with Metadata in design & printing

Semantic
- Specifications and recommended practices for Semantic X3D.
- Example ontologies and quereis

Geospatial
- Fully implemented in X3DOM, some support in X_ite and other browsers now available
- Continue engaging with the geospatial community

Heritage
- Digital Library Initiatives
- Metadata vocabularies for collections

HAnim
- Facial modeling, Internal Organs, Physical Sensors
- Tools & Examples

Web3D Consortium overview– SIGGRAPH 2019, Los Angeles

Our members are all doing it all!

Membership = Empowerment

- **EDF -** Manufacturing/energy
- **Virginia Tech** – Geospatial
- **NIH** – 3D Print Exchange, WebVR
- **NPS** – 3D Model Exchange,
- **KSHELL** – CAD Design
- **Synergy** – Facilities Management
- **MBARI – Scientific visualization**
- **Fraunhofer –** Service based X3D visualization

Participate

Upcoming Events

SIGGRAPH 2019 **July 29-Aug 1, 2019 – LA**

Booth 903

Birds of the Feather Sessions

Korea Chapter Meeting -

Monday, 29 July 2019 - 2pm - 6pm

Location Belasco, Hotel Indigo

Web Publishing with 3D in HTML5 Meeting

Tuesday, 30 July 2019 3pm - 4:30pm

Location LACC Room 504

Web3D 2020 **June 24-26, 2020 in Seoul, South Korea**

Contact
Anita Havele
Executive Director,
Web3D Consortium
Anita.Havele@Web3D.org

Participate

- **Working Group Activities**
  - http://www.web3d.org/working-groups

- **Would you like to join in?**
  - Participants always welcome
    - http://www.web3d.org/join

- **Anything else? What are we overlooking?**
  - Improvements, suggestions are always welcome
    - x3d-public@web3d.org