Goals

• Upgrade existing X3D Compressed Binary Encoding with improved capabilities

• Design requirements:
  – Full representational capability for X3D graphics
  – Royalty free (RF), two or more implementations

• Components
  – Shape and geometry compression
  – Streamable progressive mesh at run time
  – Efficient XML Interchange (EXI) compressed XML, compatible with digital signature and encryption
Timeline for X3D Binary Capabilities

• **Annual.** We reviewed goals and developmental capabilities at the Web3D Conferences and SIGGRAPH in 2013, 2014 and (soon) 2015.

• **2013.** We accomplished our strategic goal to define X3D Compressed Binary Encoding (CBE) requirements and planned all steps.

• **2014.** We received multiple contributions for geometric compression and progressive streaming for X3D.

• **2014.** Efficient XML Interchange (EXI) is a fully approved W3C Recommendation with multiple implementations (both commercial and open source).

• **2015.** Decision: retain existing Compressed Binary Encoding (.x3db) for model stability, add Efficient Binary Encoding (.x3de) for improved capabilities.

• **2015.** All needed components are in hand. We will soon close our Call for Contributions to begin in-depth implementation and specification efforts.
  - Some specialty items like Volume Compression may deserve a follow-on Call for Contributions.

• **Target completion?** With sufficient member contributions, possibly finish 2015.
  - Not “if,” simply “when” all due-diligence efforts are complete.
References

• Web3D Consortium
  – http://www.web3d.org

• X3D Compressed Binary Encoding Activity
  – http://www.web3d.org/working-groups/x3d/compressed-binary-encoding-activity

• X3DOM Shape Resource Container (src)
  – http://x3dom.org/src

• Efficient XML Interchange (EXI) compression
  – http://www.w3.org/standards/xml/exi