

Common Geometry Primitives library

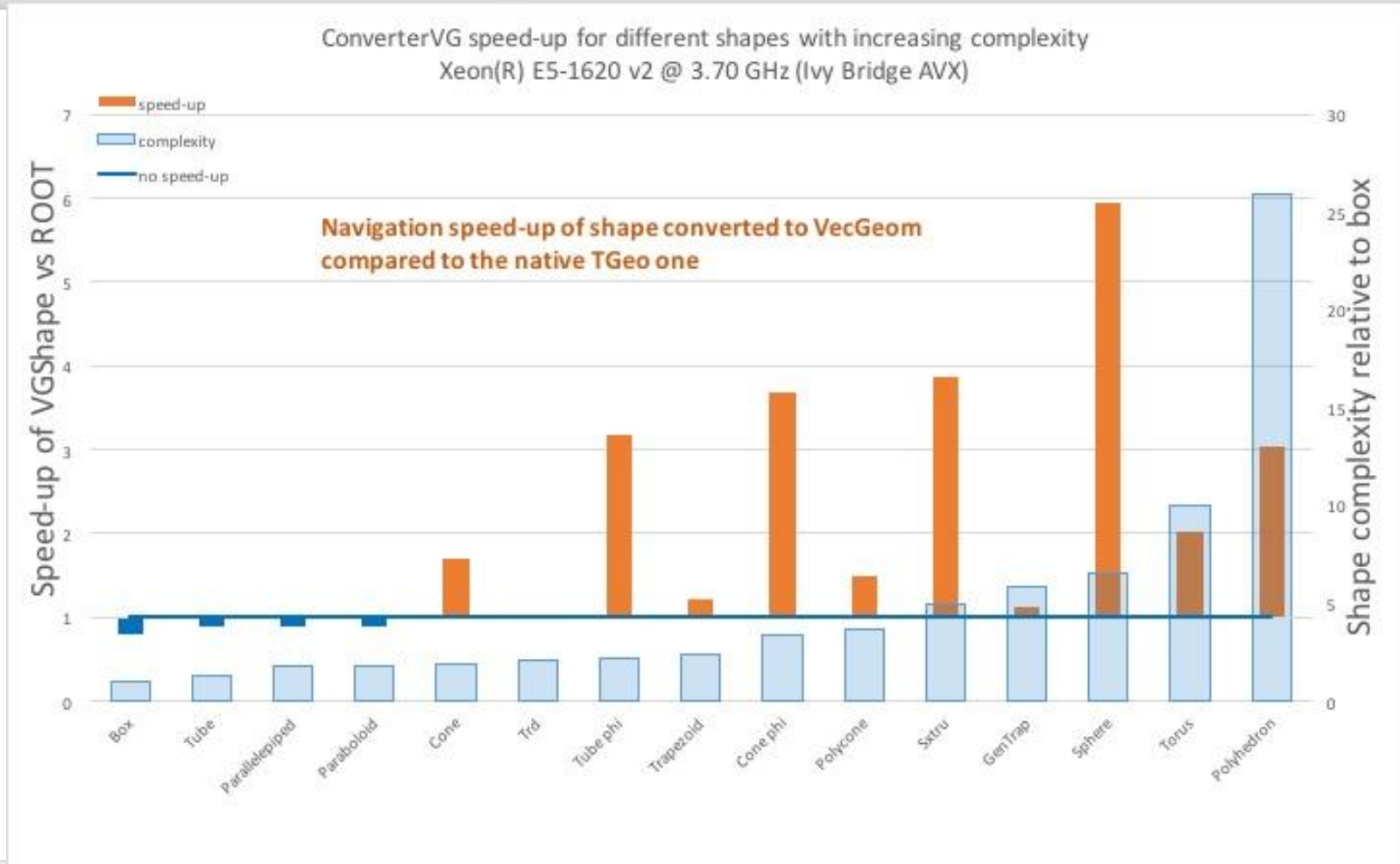
WP3 – 3/11/2016

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Activities since last meeting...

- Improved version of torus solid
 - Several bug/convention fixes
- Preparation for the GeantV community discussion
- Benchmarked integration of VecGeom solids in ROOT
 - Some overheads due to the adapter interface affecting the fast algorithms (box, tube, parallelepiped, orb)
 - Important gains for complex solids
- Adapter TGeo-VecGeom will be available in ROOT release v6.08

Conversion performance in ROOT



Ongoing activity...

- Code robustness & correctness
 - Reviewing/fixing issues on existing shapes detected by the **ShapeTester** testing suite
 - Shapes particularly under exam: Cone, Polycone
 - Extending coverage to different possible topologies
- Ongoing refactoring of code to VecCore
- Verification of correctness in complex geometry setups
 - Analyzing issues from several solids present in the CMS setup: now mainly restricted to polycones
- Extending testing coverage by adding new shape topologies
- Shapes coming next (as priority):
 - Cut-tube, Tessellated-solid, Extruded-Solid

Resources

- Assuming current resources sum up to ~ 1.5 FTE, adding up contributions from PH/SFT:
 - John Apostolakis
 - Gabriele Cosmo
 - Andrei Gheata
 - Mihaela Gheata (AIDA PJAS)
 - Tatiana Nikitina
 - Sandro Wenzel