

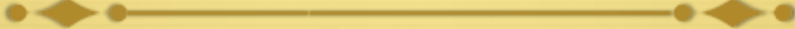


Geometry

draft plans for Geant4 release X

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Thread-safety



- ✦ Implementation of thread-safety for sharable classes, thread-private data and volatile class members
 - ✦ Evaluate solutions proposed in MT prototype for RW data in the geometry tree
 - ✦ Evaluate possibility to reduce or completely eliminate RW data and its impact to exposed interfaces
- ✦ Verification of multi-threading for:
 - ✦ Nested parameterisations, divisions, regular navigation
 - ✦ Multiple runs with dynamic geometry
 - ✦ Parallel navigation

Features to drop ...



- ✦ BREPS solids module
 - ✦ All solids can be constructed with CSG or specific shapes
 - ✦ No persistency or visualization supported
 - ✦ Implementation incomplete with no plans for further development since several years and for short/medium term
 - ✦ May be reinstated if resources are allocated in future...
- ✦ Built-in UI commands for overlaps checks based on lines
 - ✦ Not always reliable and source of confusion
 - ✦ To be replaced with UI commands based on exact check for surface points randomly distributed

Migration to Unified Solids



- ✦ Integration of Unified Solids library
 - ✦ Preserving original G4 types and API