

TGeoCAD: an interface between ROOT and CAD systems

Monday 11 March 2013 19:20 (20 minutes)

For high-energy physics experiments, in addition to the data analysis part, a very high precision in the description of the detector geometry is essential to achieve excellent results.

The physicists team which performs the simulation of the detector needs to strictly collaborate with the engineers team that works on the mechanical design of the detector. Often, this collaboration is made hard by the usage of different and incompatible software.

Therefore, the necessity to improve the level of communication between physicists and engineers led to the implementation of an interface between the ROOT simulation software and the CAD systems.

The TGeoCAD interface is able to convert ROOT files in the STEP (ISO 10303) format which can be imported and used by many CAD systems.

This talk will describe the design and implementation of the TGeoCAD interface, which has been developed to enabling the use of ROOT files in several CAD systems.

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