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Interface to Unity for High Energy Physics detector visualization

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The visualization process of detector is one of the important problems in high energy physics (HEP) software. At present, the description of detectors in HEP is complicated. Industry professional visualization platforms such as Unity, have the most advanced visualization capabilities and technologies, which can help us to achieve the visualization of detectors. The work is to find an automated interface to efficiently convert all detector descriptions from HEP experiments in formats such as GDML, DD4hep, root, Geant4, directly to 3D models in Unity. Such an interface has been successfully applied to several detectors, converted them into 3D models and imported into unity. This work has great potential to play an auxiliary role in detector design, HEP offline software development, physical analysis and other parts HEP experiments, and it also provides a good foundation for future research such as event display.

Significance

References

Experiment context, if any

Primary author: SONG, Tianzi (Sun Yat-Sen University (CN))

Presenter: SONG, Tianzi (Sun Yat-Sen University (CN))

Session Classification: Poster session with coffee break

Track Classification: Track 2: Data Analysis - Algorithms and Tools