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Composite Framework for CMS Applications

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We present a composite framework which exploits the advantages of the CMS data model and uses a novel approach for building CMS simulation, reconstruction, visualisation and future analysis applications. The framework exploits LCG SEAL and CMS COBRA plug-ins and extends the COBRA framework to pass communications between the GUI and event threads, using SEAL callbacks to navigate through the metadata and event data interactively in a distributed environment.

We give examples of current applications based on this framework, including CMS test-beams, geometry description debugging, GEANT4 simulation, event reconstruction, and the verification of reconstruction and higher level trigger algorithms.

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