



The Future of the LC Simulation Software

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Status & Plans

- Decision of LLR to stop support of Mokka beyond the DBD studies (recentering on SiW ECAL studies support)
 - Expertise still there: G. Musat (→ CMS),
 - Emilia Becheva gain experience on ECAL mods
 - Still some developments to be included in trunk (track in calo, interaction types, ...)
- AIDA WP2 commitment: consulting + adaptation of Mokka to the new geometry package (*just started*)
- DB management for the ILD models to be taken care of by IPNL (*in discussion*) with event^{ly} *if needed*:
 - improvement of DB resilience (versioning, backups, ...)
 - Move of DB server to CC IN2P3 (central support)

V. Boudry (LLR) LC Software Meeting Jan. 2013

<https://indico.cern.ch/conferenceDisplay.py?confId=228477>

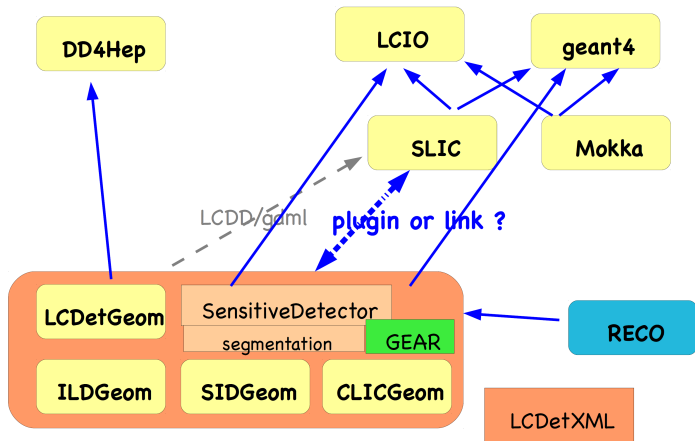


- SLIC
 - ▶ SiD Concept
 - ▶ CLIC_SiD_CDR
- MOKKA
 - ▶ ILD
 - ▶ Calice Testbeam Models
 - ▶ CLIC_ILD_CDR
- Mokka support fading
- Desire among all three groups (SiD, ILD, CLIC) move to single simulation software for linear collider studies

Geometry Interface



- Detector geometry necessary for Simulation, Reconstruction, and Analysis
- Detail of geometry depends on the application, but should come from unique source



(F. Gaede LC Software meeting Jan. 2013)



- AIDA software package to provide geometry description for full life-cycle of HEP experiments (Developer: Markus Frank (CERN)) (<http://aidasoft.web.cern.ch/DD4hep>)
- Should be able to provide geometry information to simulation, reconstruction, analysis, (mis)alignment, etc.
- DD4hep to provide link between XML description of detector and GEANT4 or reconstruction software (via user provided implementation)



- Design phase of DD4hep
- Make sure it can provide the right interface for users (Detector Implementers)
- Early testing and implementation of SiD/ILD/CLIC (LCDetGeom) geometries by F. Gaede (Desy), C. Grefe, A. Sailer (CERN) (all contributing limited fraction of their time)
- Still some implementation questions open (e.g., where to implement sensitive detectors, i.e. their granularity)
- I will be starting with the BeamCal, which I am most familiar with both simulation and reconstruction
- Later: All sub-detectors have to be ported to new system