

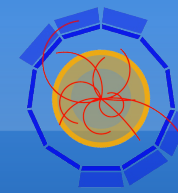
Adaptation of Mokka to DD4HEP

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Frascati
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Adaptation of DB & code



AIDA

- Emilia is getting acquainted with the code...
- Move to XML
 - ▶ Dump the MySql DB
 - ◆ models03 → 1.1MB, 34133 well formatted lines.
 - ◆ TinyXML code for reading exists (Gabriel)
 - ◆ ∃ 323 DB (⇒ 50 Temporary DB for calc.); 3-10 vers. per sub-det.
 - 16 needed ?
 - Survey needed to know the needed and the superfluous

- ▶ Check vs. DD4HEP format
 - ◆ Some adaptation of the XML DB will be needed.

- ▶ Adapt the code
 - ◆ In the latest version of the drivers the mysql calls are wrapped.
 - ◆ Get rid of in-MySQL calculations ?

model	sub_detector	build_order	
1566	ILD_o1_v05	LHcal01	120
1567	ILD_o1_v05	tpc10_01	200
1568	ILD_o1_v05	ftd_simple_staggered_02	220
1569	ILD_o1_v05	SEcal03p01	90
1570	ILD_o1_v05	SHcalSc03	110
1571	ILD_o1_v05	SCoil03	400
1572	ILD_o1_v05	yoke05	500
1573	ILD_o1_v05	LumiCalV	100
1574	ILD_o1_v05	tubeX06	150
1575	ILD_o1_v05	sit_simple_planar_sensors_03	210
1576	ILD_o1_v05	SField01	1000
1577	ILD_o1_v05	vxd07	20
1578	ILD_o1_v05	set_simple_planar_sensors_01	230
1579	ILD_o1_v05	maskX03	160
1580	ILD_o1_v05	BeamCal08	650
1581	ILD_o1_v05	SServices00	1200
16 models			

Review of sensitive detectors



- Requested at last LC-SW meeting: review of SD in Mokka.
- No straightforward tasks: check def. of SD, look for corresponding objects.
- Example for the SECAL04 driver:

Name the SD in the SEcal02.cc	Class name	G4 object	Attached to
theBarrelSiliconSD	SEcalSD02	G4Box	WaferSiLog (build silicon slab),
theEndCapSiliconSD	SEcalSD02	G4Box	
theBarrelScintillatorSD	SEcalSD03		scintillatorLogical
theEndCapScintillatorSD	SEcalSD03		
theEndCapRingSD	SEcalSDRing02	1) G4SubtractionSolid *ECRingSiSolid(G4Box- G4Tubs)	ECRingSiLog,
		2) same like in 1) but Z minus -> hole not symmetric	ECRingSiLogZminus

Name the SD in the	Class name	G4 object	Attached to
theSD	SDHcalEndCap	G4IntersectionSolid of a G4Box and G4Polyhedra	RingScintLog
theENDCAPEndSDi		G4Box	EndcapScintillatorLogical
theBarrilRegSD		G4Box	ScintLog
theENDCAPEndSDi		G4Box	EndcapScintillatorLogical

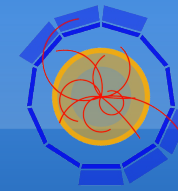
Review of code responsibility



Sub-detector	Driver	Sensitive det.	Contact name	Type of G4 object
SEcal03p01	SEcal04	SEcalSD03 SEcalSDRing02 (implemented also SEcalSD02 for Silicon but used for another model)	becheva	- G4Box 1) G4SubtractionSolid *ECRingSiSolid(G4Box- G4Tubs) 2) Same like in 1) but the hole is not symmetric
SHcalSc03	SHcalSc03	SDHcalEndCap	Angela ?	- G4Box - G4IntersectionSolid of a G4Box and G4Polyhedra
LHcal01	SLHcal01			
tpc10_01	tpc10			
ftd_simple_staggered_02	FTD_Simple_Staggered			
SCoil03	SCoil02			
yoke05	yoke05			
LumiCalV	SLcal03			
tubeX06	tubeX01			
sit_simple_planar_sensors_03	SIT_Simple_Planar			
SField01	SField01			
vxd07	SVxd04			
set_simple_planar_sensors_01	SET_Simple_Planar			
maskX03	maskX01			
BeamCal08	BeamCal01			
SServices00	SServices00			

To be continued...

Summary



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- MySQL DB dumped. Reformatting needed.
- Code review has started.
 - ▶ More complicated in some parts than expected; simpler in others
- Q? about recoding of temp mysql DB ?
 - ▶ Simple removal of mysql dependency ?
- List of drivers available
 - ▶ Find contact name for each of them.