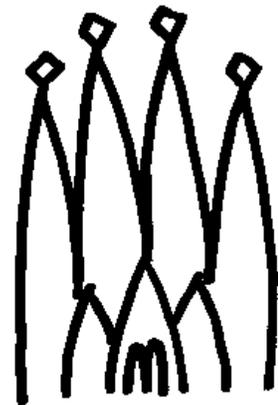

Status and Plans for GAUDI

Computing meeting

LHCb Week, 1 December 1999

P. Mato, CERN



line

What's new with the current release

Event Model

Detector Description

N-tuples

Visualization

Framework Enhancements

Plans for next release

nt Model

ddition of new classes

E.g. VELO clusters

erification

Bugs from release 2 removed. Compared formatted event d
dumps between Sicb and Gaudi

nant references

Automatic loading when referenced. (e.g. the MCVertices :
loaded if referenced from MCParticles)

Detector Description

Logical Structure

Detector decomposition

(*DetectorElement*)

Identification

Geometry Description

Hierarchy of geometrical volumes

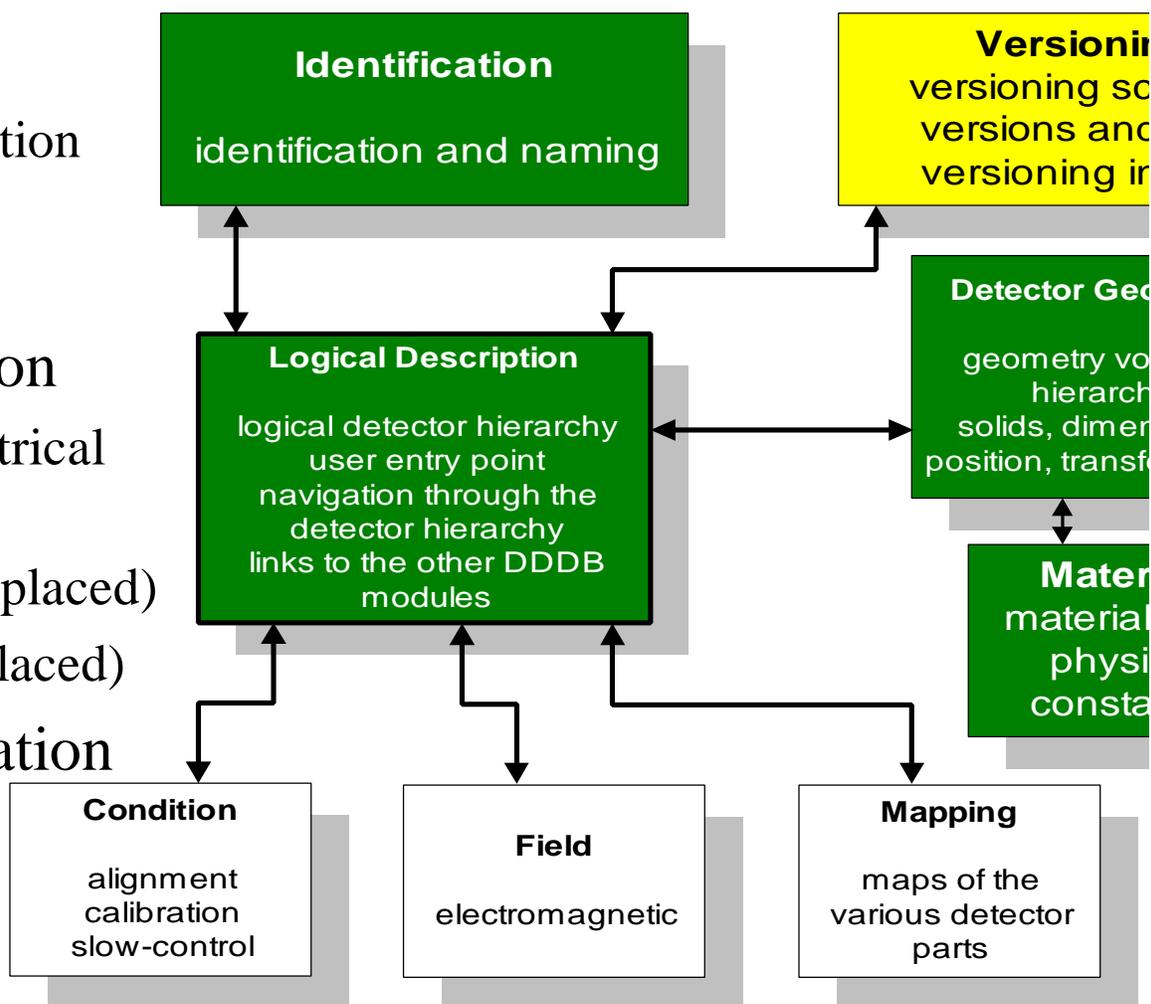
LogicalVolumes (unplaced)

PhysicalVolumes (placed)

Instant representation

Model on XML

Files



tuples

N-tuple data type

- Complementary to genuine data objects

- Based on simple data types (portability)

Developed interface for creating, writing and reading tuples from an Algorithm.

New N-tuple data service attached to a persistency service. Current back-end based on HBOOK.

- Imposed small limitations

Other back-ends also possible

a Visualization

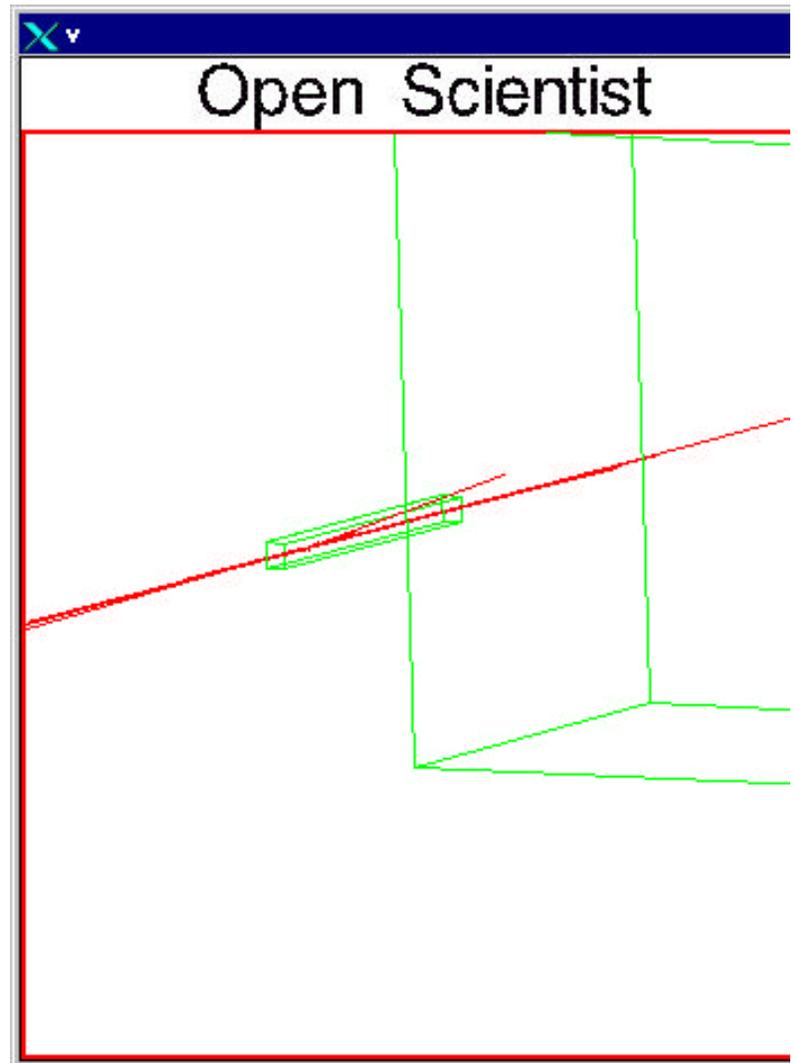
Prototype exists based
on Open Scientist(*)

Proof of concept

Could be useful for
debugging. E.g.
geometry, algorithms

More work is needed to
make it complete and
usable.

OpenGL, OpenInventor, HEPVis, Lab, ...



Framework Enhancements

Dynamic linking of libraries

The framework supports **dynamic** and **static** linking (NT operational, UNIX next release)

Improved format of JobOptions files

C-like syntax, include files, append to list, etc.

New suit of example programs

Topical examples

One complete Analysis example

umentation

.HCb

GAUDI

.HCb Data Processing Applications Framework

User Guide

Version: 2
Issue: 1
Edition: [Document Edition]
Status: Draft
ID: [Document ID]
Date: June 18 1999

User Guide

European Laboratory for Particle Physics
Laboratoire Européen pour la Physique des Particules
CH-1211 Geneva 23 - Suisse

LHCbSoft - Netscape

File Edit View Go Communicator Help

Chapter | Previous | Next

class IAlgorithm

The [IAlgorithm](#) is the interface implemented by the [Algorithm](#) base class. Concrete algorithms, derived from the [Algorithm](#) base class are controlled through this interface.

```
#include "IAlgorithm.h"
```

class IAlgorithm : public virtual IInterface

Overridables	
execute	The action to be performed by the algorithm on each event.
finalize	Algorithm finalization.
initialize	Initialization
name	The identifier of the algorithm.
sysFinalize	System finalization.
sysInitialize	Initialization

IAlgorithm::execute

```
virtual StatusCode execute() = 0;
```

The action to be performed by the algorithm on each event. This method is invoked once per event.

Document: Done

Contents of current release (v3)

lhcb.cern.ch/computing/Components/html/GaudiMain.html

Current public release

Version	v3 (23/11/99)	
Description	It consists of the following packages: Gaudi [v5], LCHbEvent [v6], SicbCnv [v6], RootCnv[v3], HbookCr DetDesc[v2], GaudiExamples [v6] Release Notes	
Supported platforms	WNT 4.0, HP-UX 10.20 (*) and Linux RedHat 5.1	
Installation	Windows NT 4.0	UNIX
	Download sources only	Download sources and binaries (Linux)
Documentation	User Guide v3 (html , pdf (1.1MB), ps (18MB!!))	
	Presentations: C++ code documentation (html)	

is for the next release

Data Access

- Support for native ROOT files

- Event selection and event collections

- Data dictionary based converters

Event Model

- Containers with multi-access patterns (sequential, matrix, e

- New Sicb converters and consolidation of existing ones

- Study and implement support for Event pile-up

Plans for the next release (2)

Detector Description

Study Tracking group request (radiation length between 2 p

Populate XML files with Geant3 data

Design and first prototype of the Alignment and Calibration model

Visualization

Complete a set of graphical converters for existing detector MC event classes

GaudiLab Interactive Service for Windows

XML Conversion service for WIRED

Plans for the next release (3)

Monitoring

- Algorithm and Service browsing

- Property browsing

- Job Statistics

Analysis Tools

- Formalization of “Tools” (e.g. associators, vertexers, etc.)

- Minimization library

- Implement the new interface of Histogram from LHC++

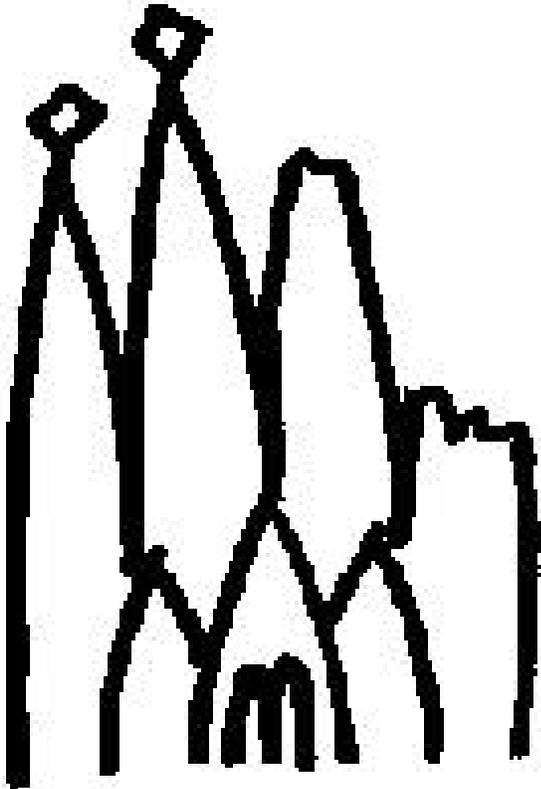
Conventions

- Units, Class ID allocation, File locations, etc.

clusions



v2



v3