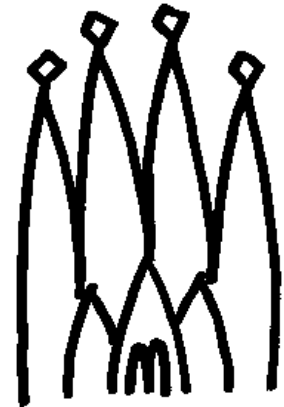# Discussion on managing the coexistence of CDF and XML geometry files

LHCb Software Week

5-7 April 2000

P. Mato / CERN

# Problem Statement

◆ Today's situation

- – The geometry information is available to Fortran algorithms from CDF files by specific Fortran detector description code.

◆ Final situation

- – The geometry information will be made available to GAUDI algorithms from XML files (or database) by a combination of generic and specific converters.

◆ Intermediate situation (hybrid)

- – Fortran code (in particular Geant 3) will get the geometry from CDF files and C++ algorithms from XML files.

➢ **How can we made sure that the two "persistent" geometries are consistent?**

➢ Even if BRUNEL is completely in C++, SicbMC will still be in Fortran for a while.
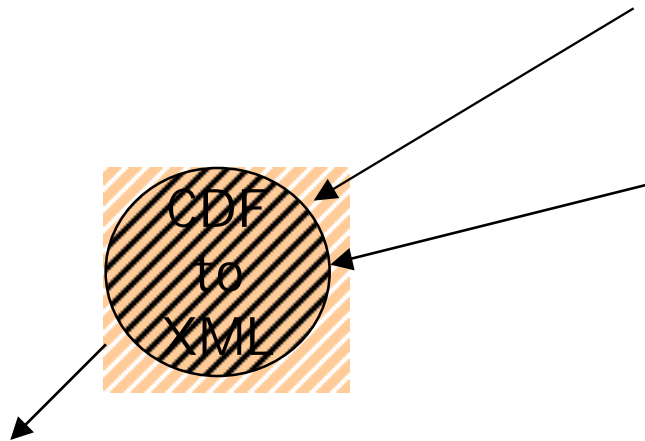
The Ingredients
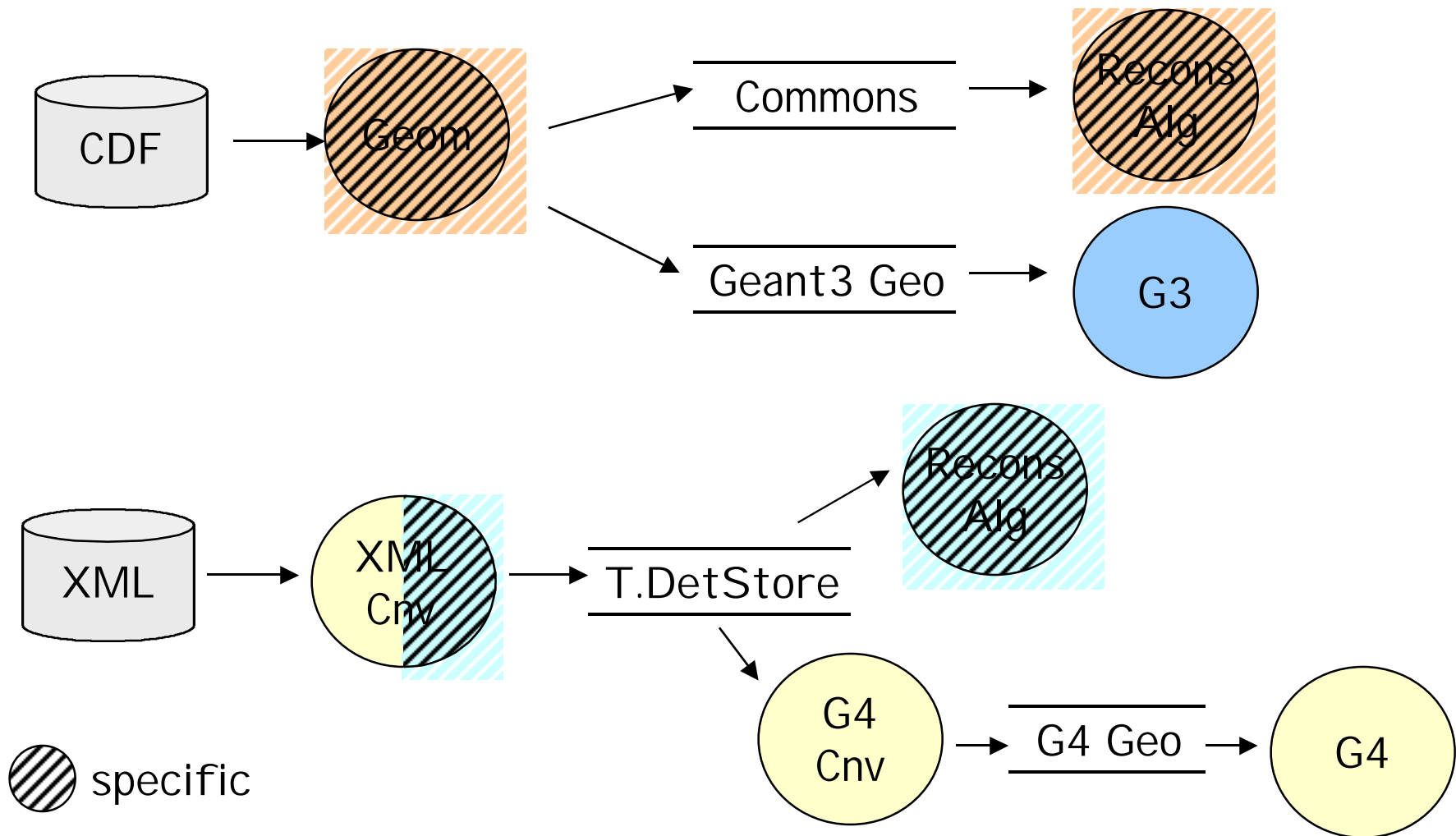
Option A
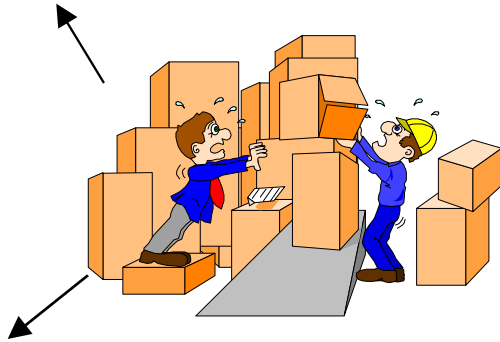
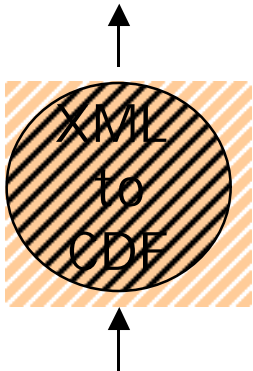The two geometries are edited by hand, making sure that they are compatible

Option B

Rewrite specific Fortran routines (based on existing ones) to generate XML from CDF

Option C

XML
to
CDF

Sections of the XML file contain
CDF fragments, which can be
extracted.

Pros and Cons

	Pros	Cons
Option A	No extra code needs to be written.	- Painful if changes are often.
Option B	Single master source (CDF)	- A lot of work from each sub-detector. - Will not take advantage of new possibilities. - The extra information will be in form of code.
Option C	Single file with both sets of information (XML)	- Some information will be repeated within the same file (different sections)

Discussion