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Subject: ROOT based track follower discussion.

Posted by [Lia Lavezzi](#) on Fri, 29 Oct 2010 08:41:08 GMT

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Hi all,

we would like to start a discussion on the proposal to build up a new track follower, ROOT based.

The original idea comes from Mohammad so we would ask him to please correct what we are going to say if it is not precise.

For those who are not aware of the discussion, here is a short summary.

Before the summer holidays we (Pavia group) proposed to Mohammad and others VMC people to insert Gean4e (the same as GEANE, but Geant4 based) in the VMC, in order to test it and compare it to GEANE. This necessity comes from the fact that GEANE is written in fortran and this creates the need of a continuous and not easy maintainance. Mohammad proposed to write a new ROOT based track follower instead: it would be completely independent from the transport engine.

We think that this is a very good idea, it would make it easy to maintain, easy to use and it would allow also other experiments (basically all the ones which use ROOT) to use it if they want.

In that case the propagation of the particles in the magnetic field would make use of the Runge Kutta algorithm. This is already available in fairroot and also in ROOT.

Since the genfit people just worked on the RKTrackRep, we thought that they may also be interested in this project and, from a short exchange of emails with them, it seems so.

Since many people have a good feeling about this project, it may be useful to be more concrete and to define what exactly we already have and what is still missing, so that everyone can contribute and we can enlarge the discussion. Maybe we should also re-start the discussion with the VMC people.

Could those people interested in this project please reply to this message and comment? Depending on the number of persons interested we could start planning this new activity.

Best regards,  
Lia, Alberto and Gianluigi.