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Subject: Re: WirepointHitPolicy detplane implementation  
Posted by [Lia Lavezzi](#) on Thu, 19 Mar 2009 15:42:09 GMT

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As the code is written now, I don't have the info on the track direction in poca, but I think I could get it by writing a code more similar to the extrapolateToPoca (i.e. by adding the additional propagation): do we really need this info?

That's true, in the extrapolateToPoca you have the track direction because you extrapolate the track to the poca, but I thought we wanted to get rid of the statePred (and covPred) in the extrapolateToPoca/ToLine in order to avoid to call the Propagate function there, did we? ...I'm a little confused...

I attach to this message the GeaneTrackRep.cxx with my implementation of the extrapolateToLine, just to show you how I would do things (at least for the extrapolateToLine)... but anyway it would not be so difficult for me to change the code and make it similar to the extrapolateToPoca.

I'd like to find the track direction without the need of performing the propagation, but I admit the most simple way is (as you did) to perform the additional propagation after having found the poca; in this case, however, we could do things in a slightly different way: now we use the PropagateToVirtualPlaneAtPCA and then a virtual detector plane is built internally (in Propagate): this would be ok if we wanted to consider this plane as detPlane, but we don't want to do this! We want to build our own detPlane (in the appropriate function). So actually, to find the direction, it would be enough to perform a propagation to the track length (and not to the plane) which corresponds to the found poca (without the need to build the plane)... I could look in FairGeanePro, if this is already feasible.

So if we want the direction also for the extrapolateToLine, I could provide a function similar to the extrapolateToPoca in order to have a preliminary implementation and then think about some modifications to make it faster... what do you think?

Lia.

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## File Attachments

1) [GeaneTrackRep.cxx](#), downloaded 473 times

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