Subject: Re-Mapping of SDS SensorIDs
Posted by Stefan Pflueger on Tue, 21 Nov 2017 16:30:58 GMT
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Hi,

I want to assign the SensorID's of the Lmd Pixel sensor volumes with a fixed number. Right now the ID's of active volumes are just globally counted and referenced to the volume paths. So depending on which Detectors you load in the simulation first the ID's of the sensors vary. I thought about introducing a remapping function that would take the global sensor ID get the volume path and with that information remap it to some specific sensor ID of the detector (in the case of the lmd sensors 0-399). I did not look deeply, but I could not find any function so far that would allow me to do this. I think this would be needed in a general way (so not only for the sds hits) and should be implemented in the digitization stage. Could anyone comment on this? I would implement this in a general way in the digitization stage. Is this a good idea?

Best regards,
Stefan

Subject: Re: Re-Mapping of SDS SensorIDs
Posted by Ralf Kliemt on Tue, 21 Nov 2017 16:41:23 GMT
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Hi Stefan,

Until now we did not need fixed sensor id's. The dynamic tool is sufficient as it creates for each simulation a global(!) one-to-one map of the active volumes. Fixed numbers may counter these benefits.
What is your issue with the dynamic IS?

Cheers!
Ralf

Subject: Re: Re-Mapping of SDS SensorIDs
Posted by Stefan Pflueger on Tue, 21 Nov 2017 18:14:56 GMT
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Hi Ralf,

yeah the global one-to-one mapping of active volume paths to a global sensorID is good and I don't want to change that. Basically I need to know in a "secure" manner, which sensor is fired based on the sensorID associated with the hit (so where this sensor is located in the setup). With secure I mean that it will always deliver the correct result. Atm I don't think this is possible, because the global sensorID (which is assigned to each active module) depends on the order you load the detector modules. The LMD has 400 active sensors atm. If I load that detector first I get assigned 0-399. If I load MVD first I get something like 500-899. How is it planned later on in the runtime? I believe every sub detector gets a unique ID and then each subdetector can assign its sensor ids as they wish, or not (as long as its one-to-one)? Therefore a mapping of the global sensorIDs to the actual sensorID scheme used later on

would be necessary. Maybe I'm also missing something here...

Cheers,
Stefan

Subject: Re: Re-Mapping of SDS SensorIDs
Posted by Ralf Kliemt on Tue, 21 Nov 2017 19:21:52 GMT
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Hi,

We actually do that by the geometry path string.
Also the PndGeoHandling can transform your coordinates, to and from volumes by ID or path.
Maybe that's already what you need?

https://subversion.gsi.de/trac/fairroot/browser/pandaroot/trunk/PndTools
/generalTools/PndGeoHandling.h

Cheers!
Ralf

Subject: Re: Re-Mapping of SDS SensorIDs
Posted by Stefan Pflueger on Wed, 22 Nov 2017 08:19:12 GMT
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Hi Ralf,

ok correct me if I'm wrong. The PndGeoHandling class can convert the volume path to the globalID (or shortID). Now later on when the experiment runs the Lmd detector sensors for example will be assigned ids 0-399 (in some order we like). How do you connect that sensorID to a sensor on the geometry? Because that is the data the experiment will deliver or not? I dont see how this works atm. Of course you could assign every sensor in panda the same ID as the geometry globalID, but that concept would not be very open to changes.

Cheers,
Stefan

Subject: Re: Re-Mapping of SDS SensorIDs
Posted by Ralf Kliemt on Mon, 27 Nov 2017 08:58:54 GMT
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Hi Stefan,

Today we'll have our computing eZuce meeting at 2pm. It would be a good idea to discuss your issues there in person. I'm not entirely sure, yet, why this is an issue.

Cheers!

Ralf

Subject: Re: Re-Mapping of SDS SensorIDs
Posted by Stefan Pflueger on Mon, 27 Nov 2017 09:29:32 GMT
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Hi Ralf,

all right. I will be there

Cu later