Subject: Moving to Genfit2
Posted by asanchez on Fri, 23 Jan 2015 13:16:36 GMT
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Dear Elizabetta,
I would like to start substituting all the old genfit dependencies,
used in my tracking procedure.

I have seen there is in the development directory a branch called genfit2, which one can use as a reference
to implement the new tracking functionalities.
A copy of the trunk is already there.

Could you please remind me what is the procedure to be followed in order to run
my code modifications based on genfit2. ?

I mean to what should I pay attention, should I make all the modifications
within my own detector directory and test it there? (/development/genfit2)

thank you in advance and have a nice weekend

best regards
Alicia

Subject: Re: Moving to Genfit2
Posted by Elisabetta Prencipe (2) on Sun, 25 Jan 2015 11:02:49 GMT
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Hello Alicia,

in /development/genfit2 you can find a kind of trunk-rev of pandaroot (e.g., all packages, not only genfit) that were already modified in order to run with the new revision of genfit2. You could download in your home/directory/pandaroot folder this /development/genfit/ and start to work with that revision in your own /home/area. What is called "genfit", it is effectively "genfit2". I did not change the name, and I also tried to preserve all the function/method names as they are in the currect pandaroot release. Several changes are in. While the functinalities of the genfit interface (e.g., GenfitTools) have identical names to the past, the genfit2 classes have different names and dfferent meaning, compared to what was in genfit1. Those cannot be changed: it is in the standalone code. Just for example, you can have a look to the packages stt, mvd, lmd. For now, in the cmake list, the hyp pachages are taken out. After you do your modifications, you need to add in the cmake list of /development/genfit2/ your package names.

In my last talk at the coll meeting I put in comparison some differences between genfit and genfit2 (e.g., the equivalent name of classes, in genfit2, that you can use). Make sure, once you start your modifications in your /home/directory/pandaroot, that geane track rep is not used: genfit2 makes use of its own trackrep. I already did this substitution/replacement for other packages, namely stt, mv, lmd. You can have a look into those.

The only changes that I still did not commit in svn, but you would need, is the following: when running the reconstruction, please set up the number of iteration (for running the Kalman Filter) at least to 3, better 5. In this moment, by default it is set to 1. This is not enough. Once you set up this number to 3 or 5, it does not mean that the fitter will try to do always 3 or 5 iterations; it means that the maximum number of iteration will be what you set in the rec-macro. But if the fitter converges sooner, there is kind of "intellingent" algorithm that allows not to run though all the iterations that you set up; indeed, in case more iterations are needed, you set up a maximum limit for those. For sure, ths means: "more than 1".

The ideal track finder still gets some troubles. It is something which will be fixed once I come back to my office. For the time being, you can try with the real track finder: it looks working good.

In the next days, a genfit2 update will be provided in any case. New features and fixes related to energy loss part are available.
Let's keep in touch!

Elisabetta
If any question, please do not haesitate to contact me.
cheers, Elisabetta

Subject: Re: Moving to Genfit2
Posted by asanchez on Thu, 12 Feb 2015 10:27:46 GMT
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Dear Elisabetta,
thank you very much for the Information.

I have a simple question now,
since the version of the hyp detector which is included
in development, is a bit obsolete. I would like to know
wether I can simply downloaded the genfit package and the GentfitTools
from your development/genfit2 directory and work with it independently from the whole
genfit2 (trunk) code.

Is there any other dependency apart from genfit and GenfitTools ?

muchas gracias

Alicia.

Subject: Re: Moving to Genfit2
Posted by Elisabetta Prencipe (2) on Thu, 12 Feb 2015 10:47:36 GMT
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Hello Alicia,

I recommend to upload the full development-trunk as it is in /development/genfit2. Several pandaroot packages make use of the genfit(2) classes, and their names and functionalities are changed in genfit2, compared to genfit1-trunks. Therefore, if you upload /genfit2/ alone, in your trunk revision, you would get several level of nasty crashes.

You can do the following:

1) download /development/genfit2/ as it is a new trunk revision
2) try to compile it. If it works smoot (and it should):

3) upgrade your new /hyp/ package to the revision that you like
4) uncomment the line related to the /hyp/ package in the cmake list file. This will produce a crash in pandaroot compilation, because you have still the old genfit functions in your /hyp/ package, I guess.
5) Start to work on that, until it will be solved

I am sorry that I had no time to fix the genfit2 issues for the /hyp/ packages, in th past weeks, while I did it for the other packages.
I very much apprereciate that you are helping, doing yourself.

Please, do not aesithate to ask, if any troubles.

ciao, Elisabeta

Subject: Re: Moving to Genfit2
Posted by asanchez on Thu, 12 Feb 2015 12:01:45 GMT

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Dear Elisabetta,
I'm glad to help,
in addition we want to know asap (TDR)
how efficient is the new tracking feature for
our hyper nuclei case, so it is fine to work on .
Thank you for your support

Alicia.

Subject: Re: Moving to Genfit2
Posted by asanchez on Thu, 12 Feb 2015 15:19:20 GMT

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Dear elisabetta,
by compiling genfit2
I get some error, apparently some files are missing,
could you please update it again?

here the error message, part of it ..

In file included from
/home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/SharedPlane Ptr.h:27,

```
                 from  /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/AbsTrackRep
.h:26,
                 from  /home/lorente/work/FairGenFit2/pandaroot/GenfitTools/adapters/PndGenfitA
dapters.cxx:11:
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/DetPlane.h: 40:32: error:
boost/scoped_ptr.hpp: No such file or directory
In file included from
/home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/AbsTrackRep .h:26,
                 from  /home/lorente/work/FairGenFit2/pandaroot/GenfitTools/adapters/PndGenfitA
dapters.cxx:11:
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/SharedPlane Ptr.h:30:32: error:
boost/shared_ptr.hpp: No such file or directory
In file included from
/home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/SharedPlane Ptr.h:27,

                 from  /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/AbsTrackRep
.h:26,
                 from  /home/lorente/work/FairGenFit2/pandaroot/GenfitTools/adapters/PndGenfitA
dapters.cxx:11:
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/DetPlane.h: 191: error: â has
not been declared
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/DetPlane.h: 191: error: ISO
C++ forbids declaration of â with no type
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/DetPlane.h: 191: error:
expected â before â token
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/DetPlane.h: In member function
â:
```

thanks in advance

Alicia.

Subject: Re: Moving to Genfit2
Posted by Elisabetta Prencipe (2) on Thu, 12 Feb 2015 15:22:27 GMT

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Hi Alicia,

 did you upload in you home this branch?

 https://subversion.gsi.de/trac/fairroot/browser/pandaroot/development/ge nfit2/

Elisabetta

Subject: Re: Moving to Genfit2
Posted by asanchez on Thu, 12 Feb 2015 15:27:49 GMT

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hi, yes that is what I did, did I probably miss something?
svn co https://subversion.gsi.de/fairroot/pandaroot/development/genfit2 panda root

regards
alicia

Subject: Re: Moving to Genfit2

Posted by StefanoSpataro on Thu, 12 Feb 2015 15:31:50 GMT

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You should include inside the genfit2 CMakelist.txt the connection to $SIMPATH/include.

Subject: Re: Moving to Genfit2

Posted by asanchez on Fri, 13 Feb 2015 13:56:16 GMT

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Hi
I still get the same error message

```
[ 80%] Building CXX object
GenfitTools/adapters/CMakeFiles/genfitAdapters.dir/PndGenfitAdapters.cxx .o
In file included from
/home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/SharedPlane Ptr.h:27,
                 from  /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/AbsTrackRep
.h:26,
                 from  /home/lorente/work/FairGenFit2/pandaroot/GenfitTools/adapters/PndGenfitA
dapters.cxx:11:
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/DetPlane.h: 40:32: error:
boost/scoped_ptr.hpp: No such file or directory
In file included from
/home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/AbsTrackRep .h:26,
                 from  /home/lorente/work/FairGenFit2/pandaroot/GenfitTools/adapters/PndGenfitA
dapters.cxx:11:
 /home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/SharedPlane Ptr.h:30:32: error:
boost/shared_ptr.hpp: No such file or directory
In file included from
/home/lorente/work/FairGenFit2/pandaroot/genfit/core/include/SharedPlane Ptr.h:27,
```

Subject: Re: Moving to Genfit2

Posted by asanchez on Fri, 13 Feb 2015 14:09:24 GMT

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Sorry but it seems it cannot find the
boost directory, how do I get rid of it?

best regards
Alicia

Subject: Re: Moving to Genfit2
Posted by Elisabetta Prencipe (2) on Fri, 13 Feb 2015 14:10:02 GMT

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Hi Alicia,

I downloaded the branch version which I suggested to you.

When /i try to compile, no problem occur. So, let's start from scratch:

1) External package needed: Apr13

2) svn co https://subversion.gsi.de/fairroot/pandaroot/development/genfit2 mynewtrunk

3) cd mynewtrunk

4) mkdir build

5) cd build

6) cmake ../../mynewtrunk

7) make

. ./config.sh

I cannot understand why you get those error messages, as all new files are in, and correctly introduced in the /genfit/Cmakelist.txt:

https://subversion.gsi.de/fairroot/pandaroot/development/genfit2/genfit/ CMakeLists.txt

Please, even if I'm pretty sure that you followed the steps 1-8 one by one, I would ask to do that again, and post a reply point by point where exactly you get the error.

Talk to you soon, Elisabetta

Subject: Re: Moving to Genfit2
Posted by asanchez on Fri, 13 Feb 2015 14:20:10 GMT

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Dear Elisabetta,taking a look into the CAMkelist.txt if genfit directory I
have notice that there is some dependency to genfit2 and not genfit.
what does it mean ?

see line 318:

```
MESSAGE(${library_sources})
MESSAGE(${GENFIT_SRCS})
add_library(genfit2 SHARED ${library_sources} ${GENFIT_SRCS})
target_link_libraries(genfit2 ${ROOT_LIBRARIES} -lEve)
set_target_properties(genfit2 PROPERTIES ${FAIRROOT_LIBRARY_PROPERTIES}
LINKER_LANGUAGE CXX)

#add_library(genfit SHARED ${GENFIT_SRCS})
#TARGET_LINK_LIBRARIES(genfit ${ROOT_LIBRARIES})
#set_target_properties(genfit PROPERTIES ${FAIRROOT_LIBRARY_PROPERTIES})
```

Subject: Re: Moving to Genfit2
Posted by Elisabetta Prencipe (2) on Fri, 13 Feb 2015 14:22:05 GMT

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Hi Alicia,

'genfit2' is the name assigned to the tool. It is correct.

Elisabetta

Subject: Re: Moving to Genfit2
Posted by asanchez on Fri, 13 Feb 2015 14:51:12 GMT

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Hey Elisabetta,
somehow I getting the same error message ..

Subject: Re: Moving to Genfit2
Posted by Elisabetta Prencipe (2) on Fri, 13 Feb 2015 14:56:19 GMT

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Hi Alicia,

1) are you using the correct external packages, e.g. Apr13?
2) did link properly your SIMPATH?

It looks that you cannot find the package /boost.

You are suppsed to have it, in the updated version as suggested here:
http://fairroot.gsi.de/?q=node/77

BOOST 1.53.0

Could you please chech your SIMPATH and verify that it is linked to
/your-home/[...]/your-apr13.build?

echo $SIMPATH

cheers, Elisabetta

Subject: Re: Moving to Genfit2
Posted by Radoslaw Karabowicz on Fri, 13 Feb 2015 15:56:12 GMT
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Hi Alicia,

The boost should be downloaded and installed when you installed the external packages.
Can you please check if it was downloaded to:
your_path_to_fairsoft/basics/
The downloaded file should be boost_1_54.0.tar.bz2 .

If it is not there, you can try to download it from
http://sourceforge.net/projects/boost/files/boost/1.54.0/ to this directory
and run the installation macro again.

hope it helps,
radek

Subject: Re: Moving to Genfit2
Posted by asanchez on Fri, 13 Feb 2015 20:54:07 GMT
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Dear Elisabetta,
I have been taking a look into
my local external packages, nd it seems that the boost directory is there.
I still don't know why it is not compiling properly.

could I ask you to send me your config.sh file and the cMAkelist.txt
for the genfit and the genfit(trunk) directory?
Probably Im not putting the simpath/include in the correct place.

thank you in advance
and sorry for the inconveniences

best regards

Alicia

Subject: Re: Moving to Genfit2
Posted by Elisabetta Prencipe (2) on Sat, 14 Feb 2015 16:49:07 GMT
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Hello Alicia,

I attach here some files, as you asked: config.sh is from my genfit_branch/build; the CMakeList.txt is from my genfit_branch. CMakeList.txt_genfitAlicia is that from the package /genfit/ inside the branch. You will see, it is different from the CMakeList.txt of the standard pandaroot release. In the new branch, 'genfit' is the name of the folder; but genfit2 is the package there in. I just preserved the same name: the content is different from the other pandaroot release/trunk revisions. The file CMakeList.txt_branchAlicia comes fom the branch.

I think that something went wrong when you uploaded

a) apr13 external package in you home

or

b) the intallation of the new branch somehow did not succeeded.

My easy suggestion is to delete them, and start all process from scratch. In other words:

1) `cd /your_home/<...>/`

2) `svn co https://subversion.gsi.de/fairroot/fairsoft/release/apr13`

and you get installed again the apr13 external packages;

3) follow instructions as they are addressed to you, once you do 2)

4) install the genfit2 branch as follow:

```
svn co https://subversion.gsi.de/fairroot/pandaroot/development/genfit2  <my_branch_name>
```

5) follow the instructions how to install pandaroot on your pc, as indicated here:

https://panda-wiki.gsi.de/foswiki/bin/view/Computing/PandaRootInstall

6) make sure to export your SIMPATH env. variable as follow:

```
export SIMPATH=/you_home/your_pandaroot_repository_on_your_pc/apr13.build/
```

7) configure your environment with:

```
your_new_branch_build> . ./config.sh
```

and you should be ready to run your macros.

Please, let me know if you still get problems.

ciao, Elisabetta

File Attachments

1) config.sh, downloaded 328 times
2) CMakeLists.txt, downloaded 401 times
3) CMakeLists.txt_genfitAlicia, downloaded 359 times
4) CMakeLists.txt_branchAlicia, downloaded 378 times