

Introduction

Common Tracking Software Forum - 2nd Meeting

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Common Track Reconstruction Software Forum

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reminder: Goals of CTF

- felt the need for a more regular forum to discuss developments in HEP tracking software, to
 - complement workshops like CTD and Concurrency Forum
 - enable **exchange of software ideas and concepts**
 - share **best practices**
 - facilitate **code re-usage**
 - support possibly emerging **common tracking software** projects
- created under the umbrella of HSF
 - <http://hepsoftwarefoundation.org/>
- aiming for ~monthly phone meetings
 - today 2nd meeting
 - possibly adjust frequency (low activity ?)



summary first meeting

- fruitful meeting with talks from LC, Belle-2, ATLAS and LHCb and SFT
- triggering some discussions
 - re-use of Runge-Kutta solver
 - software licenses
 - (dis)advantage of light-weight approach to tracking
 - ...
- **general agreement to continue the series !**
- ME, BH, FG: next step(s):
 - follow up by setting up independent builds of tracking software tools
 - ... to be done ...

Thursday, 3 December 2015	
15:00 - 15:10	Introduction: Goals of the Common Tracking Software Forum 10' Speaker: Markus Elsing (CERN)   TrackingForum.pdf
15:20 - 15:35	Tracking Tools for the Linear Colliders 15' Speaker: Frank-Dieter Gaede (Deutsches Elektronen-Synchrotron (DE))   gaede_trackreco_lc...
15:45 - 16:00	GenFit and its Application for the Belle-II Experiment 15' Speakers: Johannes Rauch (Technische Universität München), Martin Heck (KIT)   GenfitTrackRecoFor...
16:10 - 16:25	Future of the ATLAS Common Tracking Project and its Application for FCC 15' Speaker: Andreas Salzburger (CERN)   CDOT-2015-Dec-S...
16:35 - 16:50	Tracking Software in LHCb 15' Speaker: Michel De Cian (Ruprecht-Karls-Universitaet Heidelberg (DE))   20151203.pdf
17:00 - 17:15	Ideas about Software Repository, Nightly Build System and Software Licences Speaker: Benedikt Hegner (CERN)   HSFTTrackingWG.pdf

minutes: <https://indico.cern.ch/event/459865>



personal impression

slide shown in last meeting:

Outlook - what we like to get

- we are continuously trying to improve our tracking code, e.g.
 - currently **navigation** is somewhat simplistic and brut-force
 - → would like to benefit from ATLAS code for geometry navigation
 - treatment for **non-homogeneous B-fields** is not yet optimal
 - → eventually we need a Runge-Kutta solver for arbitrary B-fields
 - implement **parallelization** where possible
 - → want to benefit from work done for LHC
 - use this forum for **exchange of ideas**

- would like to see more **common HEP tracking software tools**
- ideally under the umbrella of the **HSF**

F.Gaede, DESY, Track Reconstruction Forum



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- had interesting discussion w/ A.Salzburger on ATLAS navigation code based on surfaces
- approach seems well suited to be implemented in aidaTT for the linear collider tracking code
 - just need effort to do it ...
- Runge-Kutta will become available w/ ATS

- idea to follow up:
- have tracking related utilities in a framework independent library
- “cernlib2”
- need to see if this is feasible and desirable



plan for today

- have one presentation on ATS (ATLAS Tracking Software)
- prepare the CTF meeting at the CDT workshop in Vienna (<https://indico.hephy.oeaw.ac.at/event/86/>)
- overall goal: **raise awareness of CTF**
- → discussion later today on how to best achieve this
 - try to get many invited talks ?
 - could ask for contributions
 - have a town hall meeting ?
 - other ideas ?

