



Accelerator Toolbox Collaboration Meeting

Wednesday, May 17

9:00-11:30 AM

Room 19

All users and developers of the AT particle tracking code are encouraged to attend!

presentations by:

Boaz Nash (ESRF)
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Topics:

Recent developments
Collaboration between many labs
Roadmap towards AT 2.0
Working with Matlab Middle Layer
pyAT- python interface

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<https://sourceforge.net/projects/atcollab/>
<http://atcollab.sourceforge.net/index.html>

Discussion TOPICS

- **Using new version of AT**
 - Migration to AT 1.4
 - Roadmap to AT 2.0
- **Identify missing features**
 - GA based algorithms (MOGA, MOPSO, RDCS, ...)
 - Lattice convertors
 - Others
- **Active AT contributors**
 - Defining Workpackage leader ?
 - Who want to join?
- **Distribution**
 - Versioning with GIT instead of SVN
 - Licence under GPL or other

git/svn Github

- Some learning curve for git, but the distributed model has been tested with many software projects.
- People keep their own distribution, and issue a “pull request” to merge their changes with the main branch, to be approved by one of the main developers.

-→ Quality management

→ Package responsible across the community

MMML questions

- MML maintenance
- Sharing development
- Future / strategy in you laboratory

Priority 1 items

- **Fringe field model (affecting chromaticity)**
- **PassMethods**
 - Reduction and simplification
 - Check performance and accuracy between AT old/ AT New
 - Quadrupole Fringe field
 - distinguish Entrance/Exit (split magnet)
 - Two models
 - E. Forest Version
 - Elegant Version
- **Tracking/Pass Benchmarking**
 - Done for ESRF/SOLEIL/ThomX
- **NAFF integrated**
- **Look4 add (database based fast help)**

Priority 2 items

- **ID modelling**

Benchmarking of IDtable vs Tracy3 (RadiaMaps)

- **Duplicated functions**

Remove when possible

NB: there will be often similar functions between AT and MML (atenergy, getenergymodel)

- **'Reuse' Flag ringpass**

Keep it (warning for new passmethod)

New flag working for anycase

- **Physical Aperture**

* Add in structure information about

- losses entrance or exit of a magnet
- full coordinated at the loss element

- **Summary of new features and performance of AT2.0**

- **Full compatibility with MML and installation procedure**

Priority 2 items

Recursive tests

- Make a list of function + tracking
- Later discussion

Documentation

- **Header/help online of function to review and complete**
- Standard Format to be defined
- EXAMPLE
- NOTE: if deprecated functions, give new function a help to complete
- **m2html like in MML**

PDF documentation

- Idea : Use of Overleaf <https://www.overleaf.com> (collaborative tool)?
- Add PDF useful reference
- Collecting Licences
- Assign responsible for each document

Some priority 3 items After AT 2.0

- **a new website?**
- Forum vs Email list ? Not really used today.
- IBS
- Benchmarking with different codes including Elegant et Tracy3
- Others