



Updates
on requirements/items
from previous TF meetings

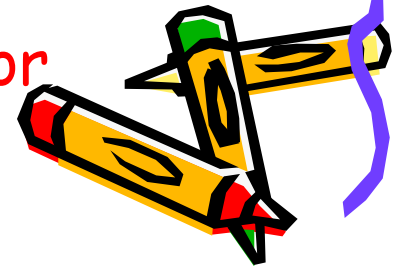
Geant4 Technical Forum
February 5th, 2004

Makoto Asai (SLAC)
on behalf of Geant4 collaboration

Req.0101 : Access to the Track properties before hadronic processes are invoked

Responsible: H. Kurashige, H.P. Wellisch

- The solution proposed is to add a new user hook in the hadronics processes to enable the user to inspect the final state for the hadronic processes.
- Design iteration to enable the placement of such a hook implies removal of ParticleChange and G4Track from hadronics except for level 1 framework. This was done in 6.0.
- The user hook is to be seen in the context of new needs of CMS for monitoring, and interests to do microscopic NIEL calculations.
- The requirement to be closed in the next minor release.

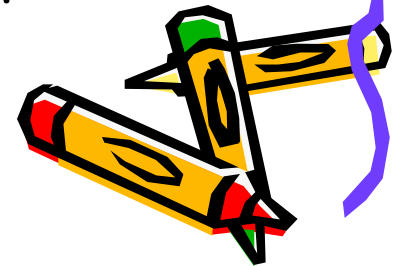


Req.0103 : Geometry construction - input from external models

Responsible: G. Cosmo

Two aspects of this 'multi-request' are under consideration

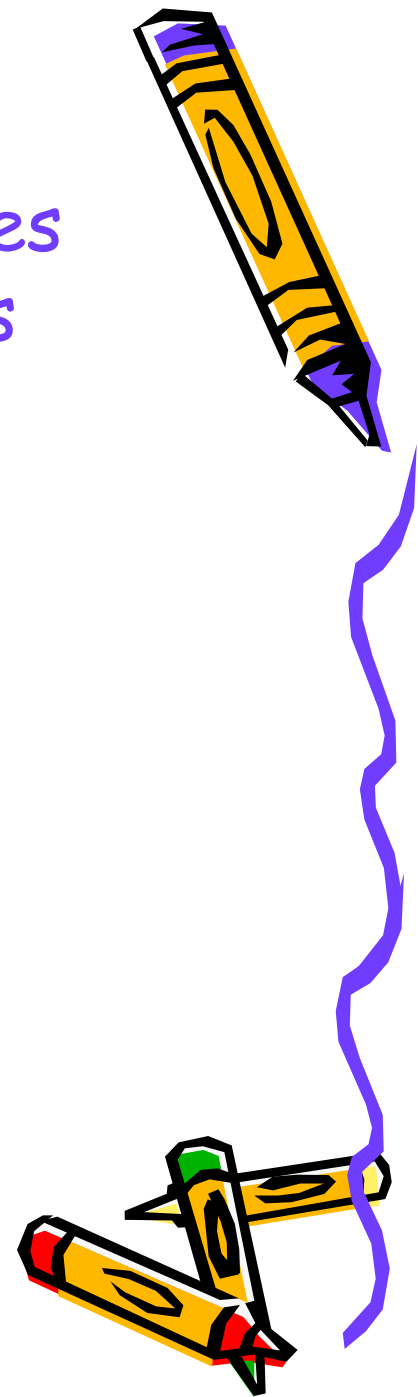
- to receive targeted resources from partners and,
- if so, would be added to the 2004 work plan
- GDML:
 - adding output capability
 - including it as an I/O persistency module
 - extensions to data model
- CAD interface:
 - in the process of identifying objectives for
 - BREPs extensions
 - interface to CAD
- **Action plan to be prepared.**



Req.0106 : Setup statistical test suites
for most sensitive physics quantities

Responsible: J. Apostolakis

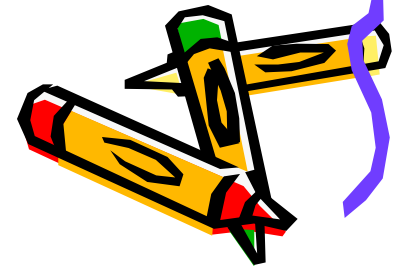
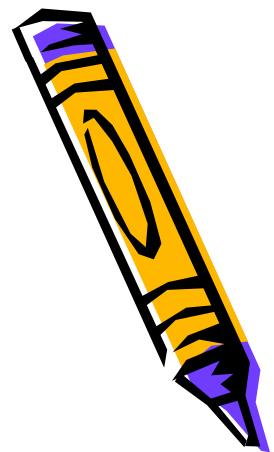
- JA to comment on 2004 activities



Req.0107 : Installation kit which contains all packages

Responsible: G. Cosmo / G. Folger

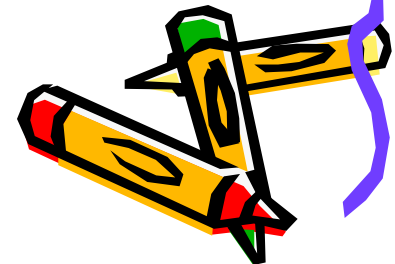
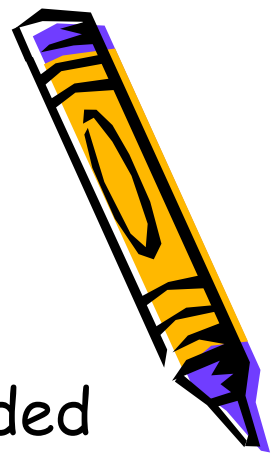
- We could offer it on a best-effort basis
 - as many customers require only current systems
 - new packaging will require additional effort to maintain, document, etc.
- For example, at the moment SLAC is maintaining an installation kit for Linux and Windows
<http://geant4.slac.stanford.edu/g4cd/>
- The requirement to be closed.



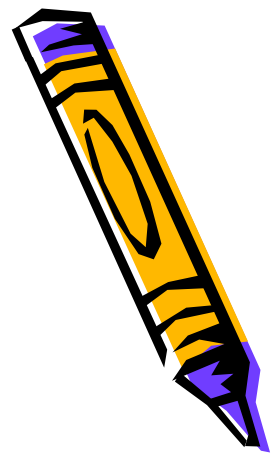
Req.0201 : Killing the primary in (electron) Bremsstrahlung

Responsible: V. Ivantchenko

- Concrete process for this purpose has been provided to the requestor.
 - this can be seen as prototype in case of other users with the same requirement.
- For potential 'general case', an example (TestEm1) includes the implementation class.
- The requirement to be closed.

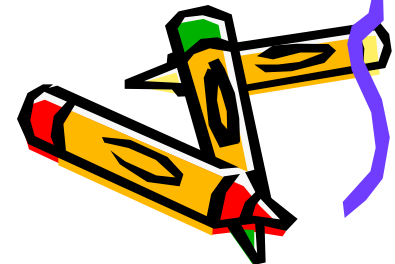


Req.0202 : Abstraction of geometry navigation / modeling



Responsible: G. Cosmo

- First version of abstract G4Navigator provided in Geant4 6.0
 - first simplification/consolidation of interface
 - virtual methods for key functions
- Further requirements awaited (A. Gheata)
- The requirement to be closed for now until further requirement arrives.



Req.0203 : Pre-defined decay products

Req.0204 : User-defined MC truth

Req.0205 : Maintaining event generator information

Req.0207 : Depositing additional information in calorimeter hit

Responsible: M. Asai

- All of required functionalities have already been released with Geant4 6.0.
- A sample code had been distributed to the users who requested these requirements and who expressed interests.

<http://www.slac.stanford.edu/~asai/NLD1.tar.gz>

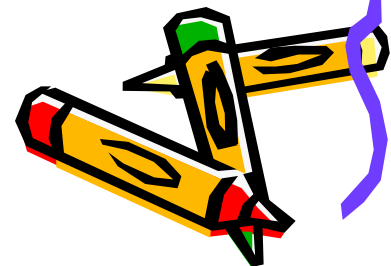
- A new example (exampleN08) derived from this sample code is under construction and it is expected to be released with the next public release.
- The requirement to be closed.



Req.0206 : Physics modeling options and consistency

Responsible H.P. Wellisch

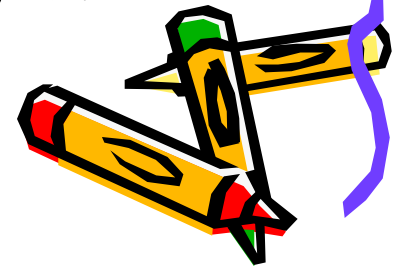
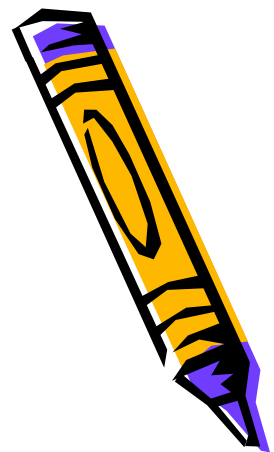
- New set of physics lists based on Geant4 6.0 will be available by the end of March 2004.
- If time permits, at that time the steering of the tailoring will be (optionally) independent of the G4UI (CMS request).
- The requirement to be closed with March release.



Req.0208 : Enhanced saving and restoring of selected processes' cross-section tables

Responsible: M. Asai, H. Kurashige

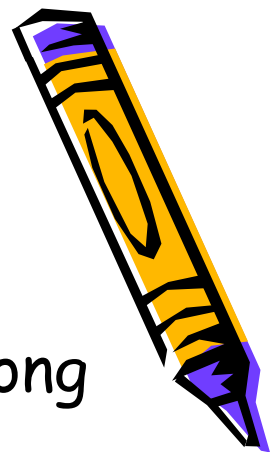
- Some enhanced verboisities have already been released with Geant4 6.0.
- Some aspects are identified as candidate working items for 2004, including:
 - Reshuffling of the order of materials/cuts is now implemented and to be included in February reference tag.
- Some functionalities require in-depth study, and possibly significant resources.
- **Work/study item in 2004.**



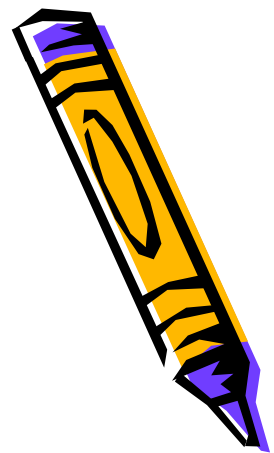
Req.0209 : Physics lists capabilities and choices

Responsible: H.P. Wellisch

- Since Geant4 6.0, physics lists are distributed along the public release.
- The physics lists will continue to be distributed in major geant4 releases.
 - Release notes were included in the last physics lists update and will be part of the 'standard' maintenance process.
- A physics list, when it is created, will print
 - information as to what physics is included,
 - it will be in the next revision
 - what use-cases it can be used for
 - it will be done once maintenance concerns for correctness are resolved.
- Work item for 2004.

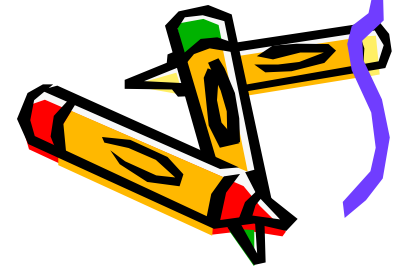


Req.0210 : Correction of known problems



Responsible: J. Apostolakis

- Agreement was reached at the previous meeting
 - to address open issues, to the degree possible.
- The requirement to be closed.



Req.0211 : Geant4 release type and frequency

Responsible: J. Apostolakis / G. Cosmo

- The proposal was discussed only briefly at last meeting, by common agreement. An explanation of current practice was made.
- G4 is requested early communication of major change requests.
- No further action is currently foreseen.
- **The requirement to be closed.**

