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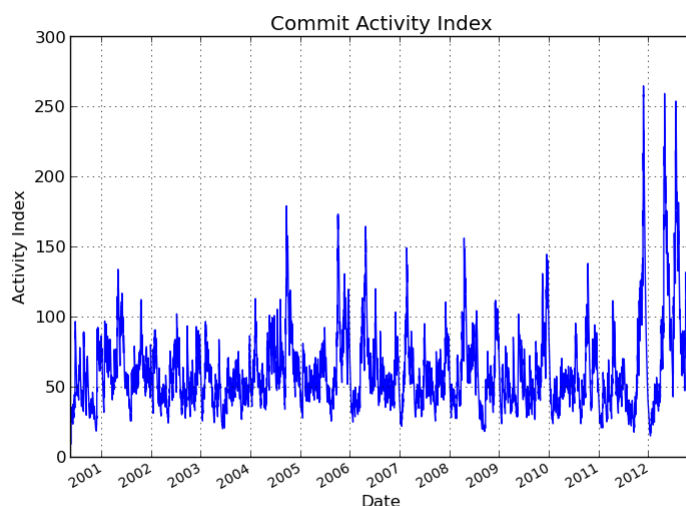
On the way to ROOT 6

Submitted by axel on Sun, 18/11/2012 - 14:09

[Cling](#) ^[1] [ROOT6](#) ^[2]

Hi!

We are running late with ROOT 6, in part because I'm just back at work after being sick for 4 weeks. The other cling team members were hacking away at Fermilab, and I'll demonstrate how major that step to version 6 is for ROOT.



"Commit Activity Index" for ROOT

[SVNPlot](#) ^[3] defines a sort of arbitrary measure for the "activity" in a repository, basically the average commit frequency without looking at the relevance of each commit. As such it's not necessarily a good measure - but the amount of changes we seem to put into ROOT 6 is amazing nonetheless. And it corresponds to how we feel: productive and exhausted :-)

So when are we going to release ROOT 6? [Where are we?](#) ^[4] Core parts now work completely without CINT: dictionaries are built from the information extracted by clang and thus I/O does not rely on details provided by CINT anymore. TInterpreter is migrated almost completely. Those are major chunks. But we have still have a few details that need to be fixed before we can remove CINT (and Reflex and Cintex) from the repositor. We need one major piece of work before we can release ROOT 6.0.0 (related to [clang::Modules](#) ^[5]).

Then we have to make a cut: what do we really, really need in ROOT 6.0.0, what can wait until ROOT 6.2? Complete error recovery from bogus input? Likely only "to a large extent". Unloading? Likely only in ROOT 6.2. Performance improvements to demonstrate that we can do better than with CINT? Likely only in ROOT 6.2. PyROOT? Definitely in ROOT 6.0.0! We might have to remove features that many see as essential, for instance `void f()`


```
{gSystem->Load("libEvent"); Event* e = new Event();}
```

 Some of these features might come back after ROOT 6.0.0, some of them are the price we pay for having a proper compiler read your code.

Working with ROOT-with-cling over the past months tells me that going to clang + llvm was the right thing to do: it is a major improvement for ROOT, in many, many respects. A nice side effect is that we reduce the amount of "our" code from about 300k (CINT, Cintex, Reflex, rootcint, TCint) to 30k (cling, rootcling, TCling)! But it's wonderful to be able to write any C++ code, not the CINT subset. To use the C++11 "auto". To get error messages that are immediately understandable. I'm

positive that you will enjoy ROOT 6, too!

Cheers,

A handwritten signature in black ink, appearing to be 'B. C. L.' or similar, written in a cursive style.

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Source URL: <http://root.cern.ch/drupal/content/way-root-6>

Links:

- [1] <http://root.cern.ch/drupal/category/package-context/cling>
- [2] <http://root.cern.ch/drupal/category/package-context/root6>
- [3] <http://code.google.com/p/svnplot>
- [4] <https://trello.com/board/cling-root-v6-0-0/506c36d8c59a1a93530035ec>
- [5] <http://www.open-std.org/jtc1/sc22/wg21/docs/papers/2012/n3347.pdf>