

Discussion February 21, 2008

Agenda

- SCons Status Update - Navid
 - 13 binaries to go
 - Windows just about set
 - Emmanuel set to look at Mac starting Monday
 - Tagging procedure during this transition
 - If SCons updates are the only thing on the HEAD, go ahead and tag
- Web Interface and the new RM
- Issues
 - LATEST tags too much in CVS view? - Toby
 - Alternatives
 - Remove LATEST tags after some set amount of time?
 - Build LATEST once per day?
 - Eliminate LATEST and replace with nightly HEAD builds?
 - Getting package owners to maintain their own SConscript files
 - Orphaned Packages?
 - When to start GR transition?
 - MRStudio?
 - Improvement Suggestions
 - `env.Tool` can it accept a string and split it on its own?
for lib in 'astroLib hoopsLib tiLib st_appLib st_streamLib irfLoaderLib'.split(): `env.Tool(lib)`
to this: `env.Tool(astroLib)`
`env.Tool(hoopsLib)` etc..
 - Yes, do this: for lib in 'astroLib hoopsLib tiLib st_appLib st_streamLib irfLoaderLib'.split(): `env.Tool(eval(lib))`
- How will we handle keeping CMT around and when could we possibly consider moving to strictly SCons?
- The SSC and CMT and SCons - Eric (This will have to wait til the next core meeting, due to the rescheduling of this meeting)
- Toby's request for set up on UW TS
- Interesting SCons features: <http://www.scons.org/wiki/GoFastButton>

Minutes

Attendees: Joanne Bogart, Toby Burnett, Jim Chiang, Navid Golpayegani, Heather Kelly

Toby wondered about the GSSC response to SCons and how they plan to handle the transition. We will ask Eric Winter about this at the next software meeting, in the meantime, Jim offered that they are now basing their hmake files on our CMT requirements files. When we move to SCons, they will have to reconfigure what they create to be based on our SConscript files. The process is somewhat automated, however much is still done by hand.

While waiting to really get the meeting started, Heather mentioned that maintaining both CMT and SCons at time is difficult, but will probably be our mode of operation for some months to come.

Jim wondered about MRStudio and SCons. Joanne is working on becoming more experienced with MRStudio and Ruby. She is concerned that the packages are not as independent as before and what that means for the interface. She hopes to really take a good look in a couple of weeks after the software freeze is dealt with. Joanne did reiterate that no help from Riccardo expected at this point. There's a chance Joe Perl will be involved in supporting FRED and perhaps MRStudio.

After Navid's audio issue, Toby suggested that we might consider Skype. They no longer seem to have a limit of five participants. (Let's see how closely Richard is reading this)

Navid then reported on the general SCons status. ScienceTools and SCons is just about set up. There are just a few more bug fixes to commit and 13 binaries to get set up. Most of these are test applications that were just skipped when Navid was creating the original SConscript files. The new RM is 90% working. Navid has been testing it manually. There are a few issues to resolve, but nothing complicated. No point starting up the automated builds until the web interface is available. Karen is working on that, after being held up by Pipeline-II issues last week. Heather will be sending her a note to get an update on the status. Heather has been helping out with the Windows testing and that seems just about ready to go. Navid has asked Emmanuel to start testing for the Mac next week. We really are not expecting many issues on the Mac due to its similarity to linux.

Toby noted that he had updated his ScienceTools version using CVS update on UW TS and tried to run `scons`. It failed due to not finding `cfitsio`. Navid pointed out that we need to do:

```
scons with-GLAST-EXT=myPathtoGlastExt
```

Since SCons does not import our full environment when it is started up. Toby would prefer that there be some way to pick up our `GLAST_EXT` env variable automatically or at least provide more useful error messages. Navid agrees, however, at this point he has just been working on getting something out the door that functions. Ultimately he would hope to provide appropriate error messages for having the wrong version of an external, or if one is missing entirely.

We spoke briefly about getting SCons updates tagged in ST. Jim would actually prefer that the CVS tags on the SCons files be moved, rather than creating a new tag each time. As it stands, new tags require him to determine what needs to be added to HEAD and what doesn't. Navid says that would be fine, and has since started to do just that. Then Navid asked about how to handle unresponsive authors. He provided an example concerning the `catalogAccess` package where a public header is currently located in the `src` directory. SCons really cannot deal with that, and the header must be moved. Jim asked that in the future he be included in those email requests, as he can help prod developers along, and in some cases, make the change himself.

Toby discussed his concern about all the LATEST tags, where they are applied to every package as a result of any package being tagged. He's been happy to see the release tags made available in this fashion, but the LATEST tags are too abundant and are filling the screen in CVS web and in MRvcmt when one desires to view the package tags. Navid suggests that the easiest fix is to just limit the lifetime of the LATEST tags and have the RM erase them from CVS. The downside, is that RM would then be updating the CVS repository. Another option is to change our build model, and have nightly builds on the HEADs of all package. Joanne and Toby like having the LATEST builds available. Jim suggests that MRvcmt/MRStudio could filter the tags. He also offered to ask Pat Nolan about the possibility of filtering in the CVS web. Navid also volunteered that the RM can start up builds every N hours, and just takes the code that has changed in that period using the date/time checkout feature of CVS. RM would still create an installer version and while there would be no explicit tag, developers could reproduce the checkout using the date/time. Heather doesn't have any real preference, though the one drawback of erasing tags, is that we lose reproducibility. Joanne prefers that we eliminate or filter tags. We can see what Jim finds out from Pat and we will plan to discuss this at the software meeting on Tuesday to reach a final decision.

We spoke a little bit about how to get package owners to support SCons files now that Navid is just about done with the implementation. Toby points out that with the different configurations and not easy transition, it makes it more difficult for developers to get involved. Heather hopes that the new RM builds will provide some stimulus to package owners to maintain their SConscript files. Since the meeting, Toby has started to explore the possibility of getting SCons to work with our current directory structure while we still have CMT available for checkouts.

Heather asked about the complexity of maintaining both CMT and SCons and in particular how the binary releases will carry on. Navid states that RM can continue to make binary releases. There are also the hand made releases for ST where Navid takes the entire directory structure and creates something that is similar to the SCons structure and released as a tar.gz. He did this for DC2 for example. It takes a weeks to create such a release by hand, where 2/3 of the time is devoted to the Mac release, where the RM is unable to help due to the CMT's inability to build it and the other 1/3 is for Linux and Windows combined. Navid did state that he could get SCons to prepare the distributions, and Jim stated that while we should check with Richard, if using SCons will save Navid a week and the build works, then he should do that instead.