

# Check-in

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## 1 Updates on previous goals

- Finish debugging
- Design and add unit testing
- Hold a meeting with Josh and Alex about the summer project

## 2 Progress up to now

### 2.1 Debugging progress

Last week after meeting with Josh and Alex, we decided that the migrating work for the material properties will be done by myself while Alex put all the efforts on Google protocol buffers (See Sec. 2.3).

So the migrated material properties is with a lot of new interfaces that needs me to adapt the other pieces of codes in the debugging process. The ideas are

- to fix all the data structure to using map type containers;
- to fix all the return-type functions (interfaces) to return const values.

At the end, Alex's new material prooerties class has to keep these data structures and interfaces however it differs internally.

After the moving finished yesterday, the re-debugging has to be done for the data structure change and corresponding syntax change. Up to now, roughly half of the classes can go through compilation and re-debugging should be finished by the end of this week.

### 2.2 Marissa

We held a half-hour long meeting on Monday to clarify the methodology about how to apply two-grid method. I suggest Marissa test the two-grid method in fixed-source problems with diffusion and we'll see if it works after Marissa get test results today or tomorrow.

### 2.3 Alex's progress and summer plan

As mentioned in the Subsection 2.1, I eventually asked Alex not to do the moving the MaterialProperties from dev branch to restart branch as I think the protocol-related way is the better way to do material-related work. Instead, I suggested Alex directly work with Josh on protocol buffer and I rewrite the MaterialProperties (for the purpose of restarting BART).

As Alex's style, I requested he staying in Josh's office whenever Josh's in office. It turns out that this works super well in terms of efficiency (he's not a home-working person).

After the interactions between Josh and Alex during the past week, Josh came up a plan which looks reasonable and detailed enough with work to be done and certain measures to see how's Alex's work at the end of the summer.

## 3 Goals/Things will be going on

- Finish debugging.
- Continue to add unit tests.
- Help Marissa get two-grid to work.