# Summary – Internal development Priority group
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My basic summary is that we're about finished making the shell that NIH requires around the software. That is, we have a web-based interface that one can "surf". Now need to think *very* carefully about what we want inside of that shell, because resources are limited.

One could merely create a repository of programs ranging from LAPACK to applications run in the labs of individual faculty (such as Scott's muscle stuff). Even a repository could have strengths in that it could export the research "pipeline" of a faculty member - this could even be formalized into a "wizard" of sorts that guides one through all the steps required. For example, from segmentation to modeling to simulation to data analysis using individual programs on the web site. It should be noted that this *is* what we are doing now.

If deeper internal development is desired, then things get more tricky in the resource limited climate. Two obvious options are to start ripping apart existing tools into components in order to build a library, and putting together other tools from scratch while creating a library. Themore sharing we're going to want, the more careful we'll have to be in building a library... for example, because copying data could be expensive. The goal of this would be to create a bunch of helpful tools that one could swap in and out to find the best algorithms for efficiency and accuracy,and to share code and algorithms across research disciplines. If we fail, then hopefully the code base can at least serve as a teaching and training tool. We noted that success would mean that the faculty members continue to use the code in the database and do not branch off of it on their own as the core code base becomes too slow and cumbersome. One promising note is that computation is new in these areas, and we're hoping that what is lost in code unification and generalization can be gained back (and more) through better algorithms and sharing of ideas among disciplines.

In the closed faculty meeting, this discussion continued, and we made two strong recommendations.
(1) We start merging code bases. Someone should take a look at Scott and Charlie's work, while others look at the work of Vijay and Michael. Merging code bases in pairs typicallyremoves 90% of the idiosyncrasies, and thus the final merge should be very little work. Meeting of some sort will occur for this.
(2) A committee of a few faculty should be put together to explore the internal development. We agreed that a fantastic job had been done so far, and that this was the exact right time to take a strong look
at internal development - and to put some faculty stake into it.