

Summary of the ESMF Change Review Board Meeting on June 13, 2006 in Boulder, CO.

Attendance:

Robert Ferraro/JPL, Cecelia Deluce/NCAR, Atanas Trayanov/NASA GSFC, Alan Walcraft/NRL SSC, Chris Hill/MIT, Mark Iredell/NOAA, Mariana Vertenstein/NCAR, Tom Clune/NASA GSFC

Agenda

The CRB covered the following topics during its meeting:

- Development status review
- Recap of the May 23 meeting, with proposed change to the schedule process
- Review of JST telecon
- Review and amend current schedule
- Discussion about how we will review the public release
- Schedule next meeting

A synopsis of the discussion and decisions from the meeting is presented below. It is organized by agenda item. These notes attempt to capture the high points of the discussions, and any decisions that resulted.

Development Status Review (Cecelia Deluca)

ESMF v3.0.0 was released in May. This beta release has major changes to infrastructure with respect to arrays.

Limited progress on tasks due for release 3.0.1 was reported, due to the delay in getting version 3.0.0 released. Cecelia noted that the CCSM evaluation of the ESMF would commence this fall, and requested that the board consider an interim public release v2.2.2r which could be used for the evaluation. Discussion was deferred to later in the meeting.

Review of JST Telecon input

Notes from the joint CRB/JST telecon held on June 8 were reviewed. The telecon contained discussions about CCSM interest in I/O, C++ contributed interfaces, the design review process for contributions, and scaling of the ESMF to petaflop computers. Most of the functionality discussed is already captured in existing tasks. However, two new tasks were captured: Carrington time clock for space weather, and evaluation of component overhead on 1000+ processors (this is a DOD milestone next year)..

The telecon participants also discussed the need for more detailed descriptions for each task on the development schedule. There was general agreement that the few word descriptions currently used are insufficient to communicate the content and expected outcome of each task. Task proposers, or the core team developers, will now write a one page description of each task that is to be posted to the schedule, which will be available for public inspection (likely via weblinks from the schedule itself).

Recap of the May 23 meeting, with proposed change to the schedule process

The CRB held a special process meeting coincident with the ESMF community meeting in Baltimore. The CRB Chair had raised issues regarding the fidelity of the scheduling process, and the CRB's ability to accurately assess the resources required to complete tasks on the schedule. The Chair was concerned that every schedule published to date has turned out to be optimistic, in part because the complexity of each task was not adequately understood at the time the schedule was approved. Many tasks in future releases have not completed design reviews, making their inclusion on the schedule speculative. Also, design reviews take developer resources which have not been accounted for in the scheduling process.

The Chair proposed two possible changes to the schedule process, and the format of the schedule published. In both cases, design tasks were explicitly included in the schedule. The differences between the two proposals were how the design tasks would be carried on the schedule, and how far out the schedule would continue to be populated. Various members disagreed with the proposals, in whole or in part. There was consensus that design tasks need to be book kept by the core team managers, and those resources considered when assessing task implementation requirements. SourceForge will now contain design tasks as well as development tasks, but the public schedule will continue as it is (development and maintenance tasks only).

Review and amend current schedule

The CRB considered the proposal for an interim public release v.2.2.2r, which would contain the v2.2.2 beta release plus build and performance enhancements. Since the release will not contain any newly developed code, a beta release of the performance enhancements was not deemed necessary. Internal release v2.2.2 has been out since Feb, and is considered to be stable by the core team. There were no objections to this proposal.

In keeping with the policy of defining design tasks in advance of development tasks, the core team manager spent some time revising the SourceForge task list to explicitly incorporate design tasks for each development task. This has resulted in the renaming and/or rescheduling of several tasks. Measurement of component overhead on 1000+ processors was added to the schedule in order to satisfy the DoD funding workplan.

Discussion about how we will review the public release

To date, internal releases have been approved based on task completion reports from the Core Team. As these are beta releases, this level of review has been deemed sufficient. For public releases, the CRB discussed the level of review that should be required prior to release approval. The core team testing does not go much beyond integration testing for the entire distribution. The purpose of a delay between an internal release and its public release is to afford outside users the opportunity to beta test new implementations. How does the CRB determine that such testing has taken place? One indication of such testing is the bug report list maintained by the core team. Lack of any bug reports is probably an indication that no beta testing has occurred. Prior to public release, all bugs should be fixed, or documented in the release notes. The CRB will look

at this evidence prior to approval, and decide at that time if the beta testing has been sufficient.

Next Meeting

The next CRB meeting will take place in October. GSFC has volunteered to host the meeting.