

CABLE version control and model releases

Governance and aims

- CABLE coordinator (R. Law) and committee (CSIRO Aspendale, Canberra, UNSW, ~monthly phone meeting)
- Guidelines for developers, <https://trac.nci.org.au/trac/cable/wiki/DevelopmentGuidelines>
 - Code developed in repository
 - Code for trunk documented, ticketed, tested
 - Material reviewed by committee, approved, trunk updated
- Coding standards, <https://trac.nci.org.au/trac/cable/wiki/CableCodingConvention>
- Tagged versions, CABLE2.x.y. Increment x for science changes, y for technical changes
- Note need to accommodate offline and ACCESS users of CABLE
- CABLE provided to ACCESS as a pre-compiled library (built from identified revision of trunk)

Reality

- Push to trunk sooner rather than later
 - Ticket with at least basic information
 - Switchable
 - Default behavior (switch off) unchanged through basic offline and ACCESS (atmosphere only) test
- Tag versions (in hindsight) when getting significant use (and version number useful for documentation)
 - CABLE2.2.3 is ACCESS1.4 and ACCESS-ESM1 version
- CABLE library for ACCESS not always built from the trunk
- Use of repository generally good, use of tickets could be improved

Challenges

- Science consistency between offline and ACCESS applications
- Science developments in individual branches, not a priority for some researchers to bring back changes to the trunk (overhead of doing this), 'just look in my branch'
- 'Urgent' requests for fixes (mostly in ACCESS context) can undermine testing across all applications for trunk submission – trying to enforce that always at least committed to a branch i.e. don't pass on working copies.
- 'Small changes too scattered through code to put on a switch'
- Old habits die hard
- Parameter files, switch selection – recommended options for different applications? Being clear about what was used for any given simulation.

Future

- CABLE now open source
 - Can be freely distributed (e.g. Met Office shared repositories, LIS) and developed
 - Don't intend to change current working practice (development in NCI repository and hence registration required to access)
- CABLE in JULES repository
 - Just trunk?
 - How often to synch?
 - How to bring any development in JULES repository back to CABLE repository? NCI CABLE repository serving a much larger group of users/developers than just ACCESS.
- Planning
 - Better documentation of development plans/priorities and testing required for tuning/optional parameterisations – both generally and application specific
 - CABLE for ACCESS-CM2 plans: <https://trac.nci.org.au/trac/cable/wiki/ACCESS-CM2>
- Takes people time to do this well, adequately resourced?

