

Gekko steering committee meeting, Sept. 16, 2019, at Statistics Denmark¹

Proposed agenda

Part 1

1. Welcome + choice of minute taker + approval of last year's minutes.
2. Editor's report regarding 2018-19.
3. Status regarding Gekko 2.4 and 3.0
4. Feedback regarding Gekko 2.4 and 3.0
5. Prioritization of main lines regarding 2019-20

Part 2

6. Commentaries regarding detailed checklist + prioritization of this
7. Other potential users
8. Status regarding documentation, help systems, etc.
9. Organization and choice of editor for the next period
10. Date of the next meeting + any other business

¹ Links: Gekko main webpage: www.t-t.dk/gekko, organization: www.t-t.dk/gekko/organization. Gekko on GitHub: <https://github.com/thomsen67/GekkoTimeseries>.

Re 5. Main lines

1. Further development of the solver, e.g. different number of goals and means, sub-blocks, equation and model objects, OLS that spits out equations etc.
2. Gekko 64-bit, primarily to use more ram. GAMS has transitioned to pure 64-bit now, should Gekko follow suit? What about security, signing, etc.?
3. Seasonal adjustment: Implementation of DST standard, X13, TRAMO-SEATS, JDemetra +?
4. Further development of PLOT? Some work will be done related to a MAKRO project, but what are the needs of other users?
5. Interfaces? Gekko databases are stored in so-called protobuffers, which are supported by, among other things, Python and R, so an API could offer to read/write Gekko databanks via e.g. data frames. Other interfaces? Excel?
6. Documentation, examples, getting-started-guides, source code documenation, Gekko-API.
7. What to do with the user forum? Questions and answers could also be located on e.g. on GitHub, Stack Overflow or something else?
8. Improved translators from AREMOS or Gekko 2.4 to Gekko 3.0?
9. The longer run: what should Gekko aim for?

Re 6. More detailed check list

1. Improving the interface to StatBank Denmark? For instance interactive selection from tables and their fields/columns? Write to PC-Axis format?
2. Upcoming green REFORM model, with energy supply sector, etc. Compatibility with Gekko?
3. Metadata, more possibilities?
4. Showing Gekko options in clickable tree structure with explanations.
5. Logic regarding ini files, gekko.exe parameters, procedure libraries, etc. What should be run with RESET/RESTART? Also: namespaces and packages. User-developed procedures/functions could possibly be hosted on Gekko's website.
6. More remote control of Gekko (e.g. Sublime Text or Spyder) and/or improvement of the Gekko input window, inspired by for instance RStudio?
7. Variable versions. It has been discussed before, syntax for this? If the dot could be used (it probably can't ...), we would for example have x.predict, x.sa, x.new_baseyear, x.wanted and the like. DST has also shown some ideas. In GAMS you would probably solve it via dimensions, ie. array series x[predict], x[sa], etc.
8. Autocomplete of variable names in the Gekko window? Other autocomplete or highlighting? Since Gekko 3.0 requires more {}-parentheses, these could perhaps also be autocompleted. For example, the F4 key could put {} parentheses around e.g. %x or #x, a bit like F4 in Excel can put \$ characters on a cell reference.
9. Modernization of the user interface, using so-called WPF (vector-based, like the DECOMP window), so that high-resolution screens are better supported. Colors in font and background.
10. Better description of Gekko table syntax, especially the part where the user can custom design a table cell by cell.
11. More advanced general Gekko solver.