Draft Workshop Outline

ADMB Developers' Workshop

June 20 - 23, 2011

National Center for Ecological Analysis and Synthesis

Santa Barbara, California

Workshop Preliminaries:

Hours of operation: 9:00 AM to 5:00 PM; lunch 12:00AM - 1:30PM; breaks 10:AM, 3:00PM

Assignment of rapporteurs

Workshop participants should have the tools required for working with the ADMB source code installed and working on their computers, i. e., ssh, subversion, text editor, C++ compiler, flex, make, awk, sed, grep. See http://admb-project.org/documentation/installation/build

If they haven't done so already, workshop participants may want to arrange repository access with Johnoel, johnoel@hawaii.edu, prior to workshop.

Plenary Session:

Introduction: Working with the ADMB source code

- Repository access, modification and organization - Johnoel Ancheta
- ADMB version control system, Subversion - Johnoel Ancheta
- Repository administration: repository organization, write access vs read access, public and private access, fate of code.google repository - group discussion
- Organization of the ADMB source code - John Sibert
- Coping with C++, variable types and overloading - John Sibert
- Adding functions to ADMB with a worked example - Anders Nielsen
- Building and testing the binaries

User-contributed libraries - Steve Martell

Organization of breakout sessions

Potential topics for breakout sessions:

To be determined by levels of interest among participants

API documentation with Doxygen

Presentation on minimal documentation of files and functions - Sibert
Adding the "big picture" to API documentation - Hans Skaug

Writing adjoint code and interfacing to ADMB - volunteer (Sibert, Fournier, Seiple?)

Modifications to flex scripts - Arni Magnusson,
Merge tpl2cpp and tpl2rem - volunteers needed
Create PRIORS_SECTION - Mark Maunder

Norm who? - intuitive function names, e.g. NOT norm2(...) - Arni Magnusson

glimm.ADMB - Ben Bolker

Source code organization - Arni Magnusson

Parallelization - Derek Seiple

Additional topics

References

C++:

On-line reference and tutorial: http://cplusplus.com
Library: http://cplusplus.com/reference
Tutorial: http://cplusplus.com/doc/tutorial

On-line FAQ: C++ FAQ — Frequently Asked Questions by Marshall Cline.

The definitive reference:, "C++ Programming Language", by Bjarne Stroustrup, 3rd Edition, 1997. (Available in paperback from Amazon http://www.amazon.com/Programming-Language-3rd-Bjarne-Stroustrup/dp/0201889544

Programming style: "The Elements of C++ Style" by Misfeldt, Bumgardner, and Gray. (Available in paperback from Amazon http://www.amazon.com/Elements-Style-Sigs-Reference-Library/dp/0521893089).

Flex:

Flex references now available on the ADMB Project website (thanks, Arni): http://admb-project.org/community/related-software/flex

Subversion:

General information: http://subversion.apache.org.
PDF Manual: http://svnbook.red-bean.com/en/1.5/svn-book.pdf

Doxygen:

General information: http://www.stack.nl/~dimitri/doxygen/index.html.
PDF Manual: ftp://ftp.stack.nl/pub/users/dimitri/doxygen_manual-1.7.3.pdf.zip