LAMARC pre-homework: Summer Institute 2011

Before the LAMARC lab sessions, you should verify that all the programs we will be using work on your machine. Pre-compiled executables should be provided on the class USB drives. You can also fetch pre-compiled executables or full sources (which you can compile on your machine) from the LAMARC web site.

Get the LAMARC executables: `lam_conv` and `lamarc`

- Fetch the executables for your platform (LINUX, OSX, Win-32, or Win-64) from the USB drive or from the LAMARC home page:
  http://evolution.gs.washington.edu/lamarc/download.html

- Unpack the archive

  - Linux: copy to your Desktop or favorite working directory and issue command:

    `tar xfvz lamarc-2.1.6.Linux-i686-gtk.tar.gz`

  - Windows: copy `lamarc-2.1.6.zip` to your Desktop (do not have your browser open it) and extract the archive by clicking on it with the right-hand mouse button and selecting `Extract All...`

  - Mac OS X: open the `.dmg` file and drag the `lamarc-2.1.6` folder to your Desktop (you will have problems if you try to run from the mounted image directly)

Test lam_conv

- Start up the program:

  - Linux: from the `lamarc-2.1.6` directory type `./lam_conv`

    or, from another directory, use a fully qualified path name

  - Windows: double click on giraffe icon inside the Desktop `lamarc-2.1.6` folder

  - Mac OS X: double click on giraffe icon inside the Desktop `lamarc-2.1.6` folder

- Use menu item `File > Read Data File` to get the file browser

- Read in the file `lamarc-2.1.6/doc/html/batch_converter/chrom1.mig`

  - Windows: file name extension might not be visible

- If a grid of boxes appears in the panel labeled `Data Partitions`, you are good to go

Test lamarc

- Start up the program:

  - Linux: from the `lamarc-2.1.6` directory type `./lamarc`

    or, from another directory, use a fully qualified path name

  - Windows: double click on tree icon inside the Desktop `lamarc-2.1.6` folder

  - Mac OS X: double click on tree icon inside the Desktop `lamarc-2.1.6` folder

- When prompted for a file, enter `doc/testfiles/sample_infile.xml`
    - Linux: if you invoked `lamarc` from an alternative directory, use a fully qualified path name pointing to the above path under the `lamarc-2.1.6` directory
- Start the run and let it complete (this should only take a few minutes)

Get and test `Tracer`

- Get `Tracer` from its website: http://tree.bio.ed.ac.uk/software/tracer/ . `Tracer` is a Java program provided as a `.jar` file and a wrapper script. Refer to the Tracer website for help
- Start up the program
    - Linux: you may need to change the permissions on `Tracer_v1.5/bin/tracer` or invoke Tracer like this: `java -jar Tracer_v1.5/lib/tracer.jar`
- Use menu command `File > Import Trace File` to read in the file `sample_tracefile_coal_1.txt` produced by your lamarc run.
    - Linux: the file will be in the directory you invoked `lamarc` from
    - Windows: the file will be in the `Desktop` folder `lamarc-2.1.6`

        note: `.txt` extension may not be visible in file dialog
    - Mac OS X: the file will be in the `Desktop` folder `lamarc-2.1.6`
- Verify that you can display data using the `Trace` tab near the top right-hand side of the display.

Get the class demo files

Class demo files are not on the USB stick. You don't need them to test the programs, but you'll be happy to have them for the demo. Download the class demo files here:

http://evolution.gs.washington.edu/lamarc/sisg-2011/demo/

Compiling lam_conv and lamarc

If either lam_conv or lamarc does not work for you, you should try compiling from source. Follow the directions here:

http://evolution.gs.washington.edu/lamarc/documentation/compiling.html

Compiling lam_conv is much more difficult than compiling lamarc. If any of the provided executables work for you, use them.

Getting Help

If you run into problems you cannot resolve, please send a detailed email including your operating system type and version to `ewalkup@u.washington.edu` .

This document is also available at
http://evolution.gs.washington.edu/lamarc/sisg-2011/lamarc-test.pdf