

# R-ICE - A Modular R GUI

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R is an environment which is powerful in statistical computation and graphics. A number of R GUIs have been developed using different approaches and computer languages. Some are limited to a specific platform and a few are available in all main platforms, namely Windows, Linux, and Macintosh OSX.

R-ICE is another R GUI abbreviated from Integrated Computing Environment for R. The main concepts underlying R-ICE are its customizability, open environment, modularity, and platform independence. It is created with the tcltk package within R itself. Customizability means that R-ICE can be modified to speak any human language. Users can select some of its components to fit their works and also create new GUIs to do many things more. Open environment means users can use it, share it, and modify the source code under the basic concepts of the GPL license. It is open for developers to create their own modules and share with others. Modularity means it comprises a number of modules that may or may not be dependent on the others and it is a plug and play environment. Platform Independence means that R-ICE modules are, in fact, R packages that depend on the tcltk library in R.

R-ICE consists of four groups of modules; global, main, associated, and extended. At the moment there is only one global module called *ice*, one main module called *ice.main*, and 6 associated modules, *ice.dataman*, *ice.summary*, *ice.graph*, *ice.statis*, *ice.commands* and *ice.objects*, and two extended modules which are *epid*, *ice.epid*.

The global module, *ice*, collects additional functions, especially those for data management and summaries, thus, it does not have its own GUI interface. The main module, *ice.main*, is the GUI responsible for basic file and object management, and setting some preferences in the ICE environment. The associated modules deal with basic data frame management, object summary, graphics, basic statistics, and other basic functions. The extended modules are the plug for creativity. Basically, this plug is designed for developers to encapsulate an existing R package with a GUI with the same fashion of menus and dialog boxes. This is demonstrated with the *epid* and *ice.epid* modules, where *epid* contains some functions for epidemiology and *ice.epid* is the GUI which calls the *epid* functions.

R-ICE is open for developers to join. The R-ICE web site is <http://www.r-ice.org>.