

User's Web Browser

User selects data files and analysis options in a web form and submits the form to the web server.

Status updates and output from R are displayed to the user.

Web Server

R.cgi

- 1) A session ID is generated.
- 2) Submitted form data is stored in temporary files.
- 3) A temporary file that can be used by the R script to store status updates is created.
- 4) A hidden HTML element is created, and a thread is created which sends a '.' to the browser every second.
- 5) R is called to run the desired R script.
- 6) Output from R is captured by the R.cgi script; when R exits, the thread printing '.'s is killed. Status updates and output from R are sent to the web browser.
- 7) Temporary files created in steps 2 and 3 above are deleted.

R

- 1) Submitted data is read from temporary files and stored in native R variables.
- 2) Data is processed in R; R script outputs HTML which will be returned to the user's web browser.