

Work Log for November 3rd-7th

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1 Goals for the Week

1. PSUADE for the DIEL
2. R library in DIEL
3. C calling R in the DIEL

2 Progress/Notes

2.1 PSUADE for the DIEL

2.2 R for the DIEL

2.2.1 R libraries

```
./configure --enable-R-shlib --prefix=/home/lbrown/iel-2.0/EXTLIB/R/inst  
make  
make install
```

2.2.2 C calling R

I added a folder to the iel called RC.

The key points of rc.c are...

```
#include <R.h>  
#include <Rinternals.h>  
#include <Rembedded.h>  
#include <stdio.h>  
#include <string.h>
```

```
extern int R_running_as_main_program; /* in ../unix/system.c */  
.  
.  
.
```

```
R_running_as_main_program = 0;  
Rf_initialize_R(3, arguments);  
Rf_mainloop();
```

The rest is merely a matter of parsing and generating the command line arguments for `Rf_initialize_R(3, arguments)`

I'm working on getting an example together now.

2.2.3 R standalone Math library

```
/home/lbrown/ie1-2.0/EXTLIB/R/R-3.1.2/src/nmath/standalone
```

All of the R math functions are actually written in C. This directory has all of those `c` functions. For better performance, we may want to link the R standalone math library.

3 Goals for next Week

1. RC example
2. Load external R packages, use them with RC