Installation instructions for the Cogent Simulation

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The Cogent simulation requires a specially instrumented engineered version of the kaffe virtual machine. Information about kaffe can be found at http://www.kaffe.org.

Installation

1. Download the kaffe source to your home directory (or other preferred location).

```
     cd ~
     wget ftp://ftp.kaffe.org/pub/kaffe/v1.1.x-development/kaffe-
1.1.5.tar.gz
```

2. Decompress the package.

```
     tar -xvzf kaffe-1.1.5.tar.gz
```

3. Enter the top level directory of the decompressed source.

```
     cd kaffe-1.1.5/
```

4. Download the cogent instrumentation patch from Jon Misurda's website.

```
     wget
http://www.cs.pitt.edu/~jmisurda/research/cogent/cogent_instrumentation
.diff
```

5. Apply the patch to the kaffe source.

```
     patch -p1 < ../cogent_instrumentation.diff
```

6. Now we are going to build the kaffe virtual machine. It is absolutely imperative that it be configured to use the interpreting engine (called "intrp"). It is also advised that you install this to some special prefix, so that it doesn't interfere with your currently installed java packages. In the example below, it will be installed to "/usr/local/kaffe-instr". (Note: if you do not have root access on the machine you are using, be sure to specify a directory to which you can write.)

```
./configure --prefix=/usr/local/kaffe-instr --with-engine=intrp
```

7. Compile the source code.

```
make
```

8. Install the compiled code to the location specified in step 6 (you will need to be root to do this, or have write access the destination directory).

```
make install
```

9. At this point, you will have a working copy of the kaffe virtual machine installed on your system. To run java bytecode with it, you should specify the full path to the executable:

```
/usr/local/kaffe-instr/bin/java [the program you wish to run]
```

If you installed to a different location than was specified in step 6, then your command should look like this:

```
[location you specified]/bin/java [the program you wish to run]
```

10. Make a directory for the simulator code and download the source distribution of the Simulator

```
cd ~
mkdir simulator
cd simulator
wget http://www.cs.pitt.edu/~jmisurda/research/cogent/simulator-
8-3-05.zip
```

11. Unzip the distribution and then build it using the java compiler

```
unzip simulator-8-3-05.zip
javac Simulator.java
```

12. To run the example do:

```
/usr/local/kaffe-instr/bin/java Simulator
```