ProNoC

Installation Manual for the Ubuntu Linux Environment

Alireza Monemi

1 Installation

1. You can download the ProNoC source code from ProNoC homepage or optionally open the *terminal* and run:

```
svn co http://opencores.org/ocsvn/an-fpga-implementation-of-low-
    latency-noc-based-mpsoc/an-fpga-implementation-of-low-latency-
    noc-based-mpsoc/trunk/
```

2. To give execution permission, open `trunk/mpsoc` in terminal and run

```
sudo chmod +x -Rf ./
```

3. Install required packages dependencies

```
sudo apt-get install build-essential
sudo apt-get install libgtk2.0-dev libglib2.0-dev
sudo apt-get install libpango1.0-dev
sudo apt-get install clang
sudo apt-get install lib32z1
sudo apt-get install libgd-graph-perl
sudo apt-get install cpanminus
sudo apt-get install libusb-1.0
```

4. Install required Perl modules:

```
sudo cpanm ExtUtils::Depends
sudo cpanm ExtUtils::PkgConfig
sudo cpanm Glib
sudo cpanm Pango
sudo cpanm Gtk2
sudo cpanm String::Similarity
sudo cpanm Gtk2::Ex::Graph::GD
sudo cpanm IO::CaptureOutput
sudo cpanm Proc::Background
```

5. Install Verilator simulator (optional)

```
sudo apt-get install verilator
cpan install Verilog::Language
```

6. Add `mpsoc_work` path to the PATH variable in `.bashrc` file:

```
gedit ~/.bashrc
```

   Add `PRONOC_WORK` variable to `.bashrc` file then save and close it:

```
export PRONOC_WORK={path_to_mpsoc_work_directory}
# e.g   export PRONOC_WORK=/home/alireza/Mywork/mpsoc_work
```

   Now run following command in terminal

```
source ~/.bashrc
```

7. Download soft-core processors' GNU toolchain:

(a) aeMB

(b) Lm32 or from Lm32

Unzip the files and copy them in `mpsoc_work/toolchain` directory:

```
mv lm32  mpsoc_work/toolchain/lm32
mv aemb  mpsoc_work/toolchain/aemb
```

8. Give execution permission to GNU toolchains. Open terminal in `mpsoc_work/toolchain` and run

```
sudo chmod +x -Rf ./
```

9. Open `/mpsoc/src_c` in terminal and run

```
make
```

10. Now you can run the GUI application by

```
cd mpsoc/perl_gui
./ProNoC.pl
```