FOSSi Foundation

libreChainEDA Project:
Design for Reuse Tool Flow Scripts

One stop shopping for a completely open source concept → FPGA tool flow.

Supported Tools

Kactus2

Kactus2 Version 3.2.35 sourceforge.net/projects/kactus2/

Kactus2 is a gui based design tool that can enter or modify hardware IP modules.It supports IP-Xact 1685-2014 design files.

Fusesoc Version 1.5 github.com/olofk

Fusesoc is a package manager that can fetch component IP from a IP host server such as opencores.org or github.com. It can also run tool flow scripts from the command line.

Socgen Version 1.0.0 sourceforge.net/projects/socgen/

Socgen is a package of scripts for processing IP-Xact files and running IP-Xact componentGenertors

Icarus Verilog

Icarus verilog Version 10 iverilog.icarus.com/

Icarus verilog is a semi complete verilog only simulator

Verilator Version 3.886 www.veripool.org/projects/verilator/wiki/Installing

Verilator is a verilog simulator that is limited to synthesize able only verilog.

Verilog-perl Version 3.418 www.veripool.org/wiki/verilog-perl

Verilog-perl provides some very useful support utilites.

Gtkwave Version 3.3.76 gtkwave.sourceforge.net/

Gtkwave is a VCD file wave viewer for simulations.

Covered Version 0.7.10 covered.sourceforge.net

Covered is a VCD file analyzer that provides code coverage metrics for simulations.

Yosys version 0.6 www.clifford.at/yosys/

Yosys is a HDL synthesizer.

Arachne-PNR version 0.0 www.clifford.at/arachne-pnr/

Arachhne-pnr performs place and route for fpgas

ICE Storm version 0.0 www.clifford.at/icestorm/

Ice Storm creates programming files for fpgas

Fizzim version 5.20 www.fizzim.com/

Fizzim state machine tool

LibreChainEDA Supported Development Boards

Digilent Nexys2

Lattice IceStick

DE0_nano

Installation

Ubuntu

Install git from Ubuntu apps store

sudo apt-get install git

download libreChainEDA repo from github.com

```
johne@server:~/fossi$
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johne@server:~/fossi$
johne@server:~/fossi$
johne@server:~/fossi$
johne@server:~/fossi$
johne@server:~/fossi$
johne@server:~/fossi$
johne@server:~/fossi$ mkdir github.com
johne@server:~/fossi$ cd github.com/
johne@server:~/fossi/github.com$ mkdir ouabache
johne@server:~/fossi/github.com/ouabache$ git clone http://github.com/ouabache/fossi
Cloning into 'fossi'...
remote: Counting objects: 13365, done.
remote: Compressing objects: 100% (136/136), done.
remote: Total 13365 (delta 103), reused 0 (delta 0), pack-reused 13228
Receiving objects: 100% (13365/13365), 203.76 MiB | 911.00 KiB/s, done.
Resolving deltas: 100% (6099/6099), done.
Checking connectivity... done.
Checking out files: 100% (12473/12473), done.
johne@server:~/fossi/github.com/ouabache$ cd fossi/install/Ubuntu/
johne@server:~/fossi/github.com/ouabache/fossi/install/Ubuntu$ make install
```

Install remaining tools
cd fossi/tools
./install_all

Testing

copy development area

cp -r ~/github.com/ouabache/fossi/DESIGN ~/my_name

chdir my_name

./test_fusesoc <= run a fusesoc demo

./test_socgen <= run a socgen demo