

# VLSI Free/Open Source Software Tools

Shakthi Kannan

GNU Free Documentation License

December 2007

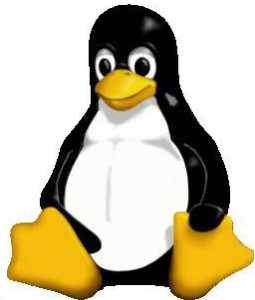
Version 1.0

# Classification of Labs

- **Embedded Labs**



- **Hardware Labs**



- **VLSI Labs**

# Hardware

- **Desktop Systems**  
High-end and low-end configurations
- **Large displays**  
17", 19", 21" onwards
- **Cables**  
(Ethernet, power, serial, USB, JTAG, "domain-specific" cables, etc.)
- **Power supply units**
- **Antistatic mat, wristband**

# LAN

- **Ethernet-based LAN**
- **Servers:**  
FTP, sshd, mail, apache, ircd
- **Client software:**  
ftp, ssh, scp, firefox, xchat, gaim
- **CVS, Sub Version**
- **Project management**  
mrproject, bugzilla
- **Internet access**

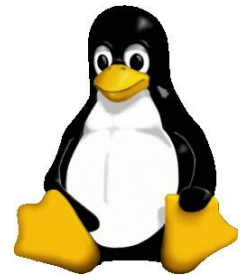
# Software

- GNU/Linux distros  
(CDs, floppy, USB, etc.)
- PCB Tool
- Scripting (perl, bash)
- Gerbv
- Emulation software
- GNU toolchains
- PDF viewer

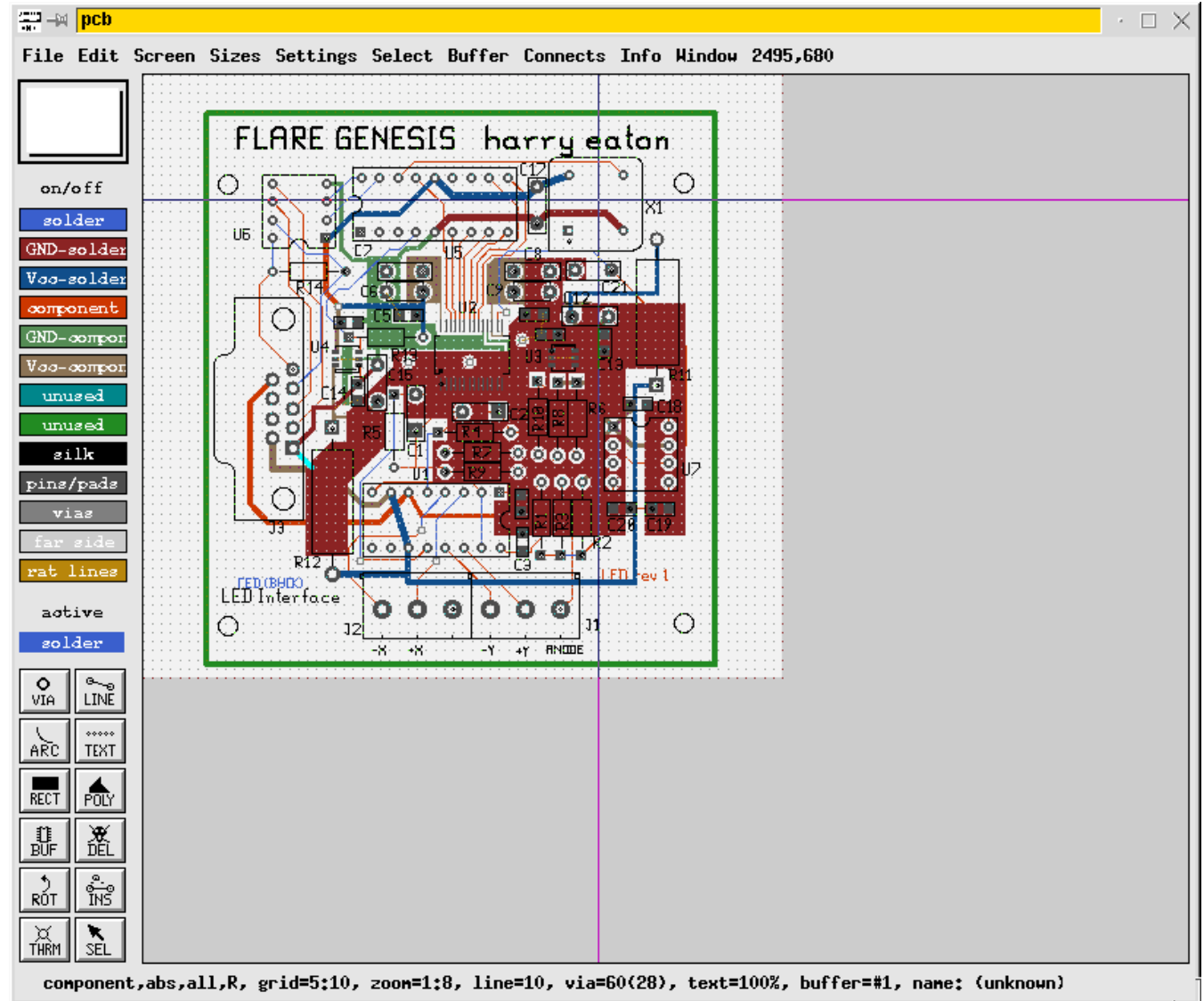


# Software

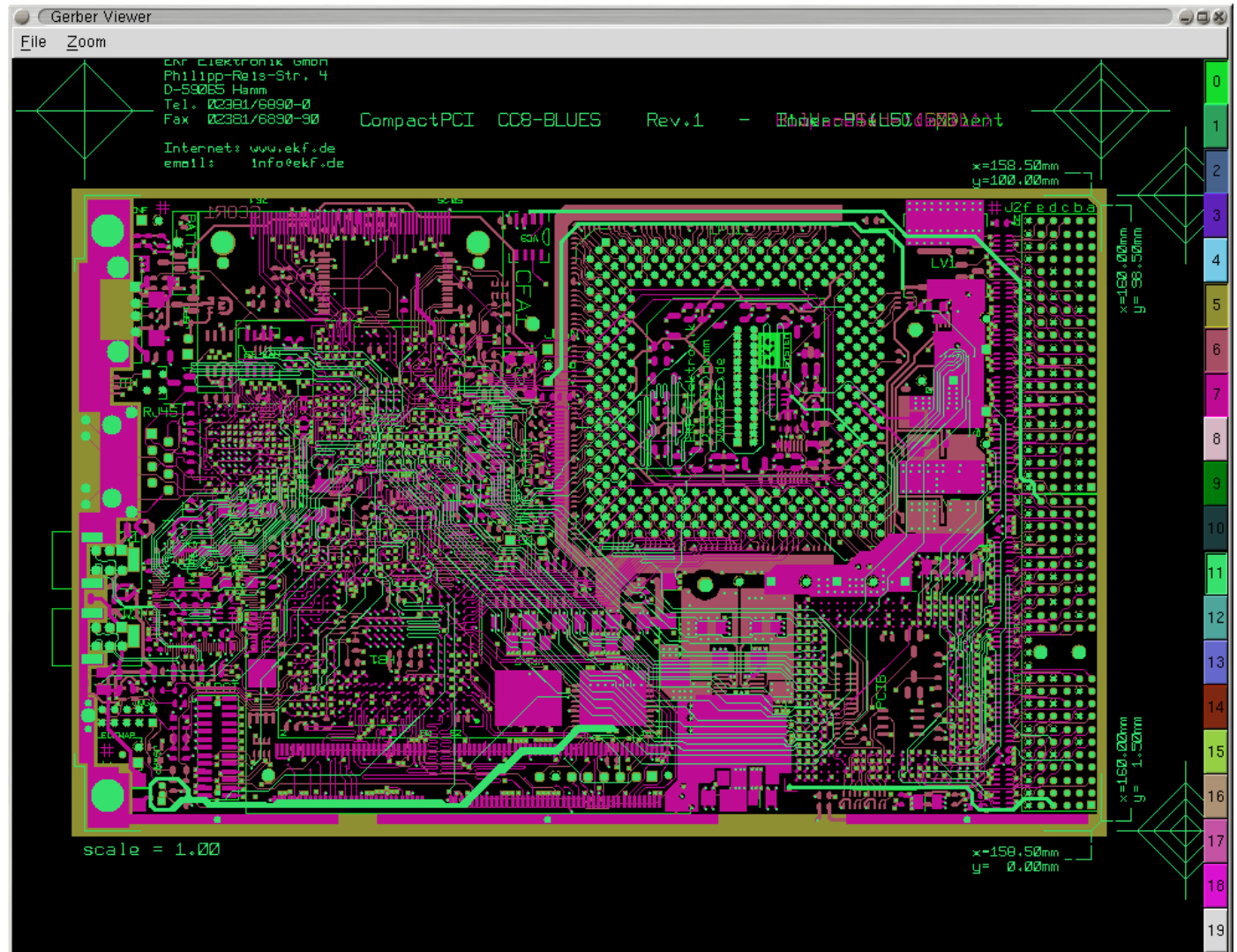
- Alliance VLSI CAD Tools
- Icarus verilog
- Spice
- Magic VLSI
- gEDA
- TkGate



# PCB

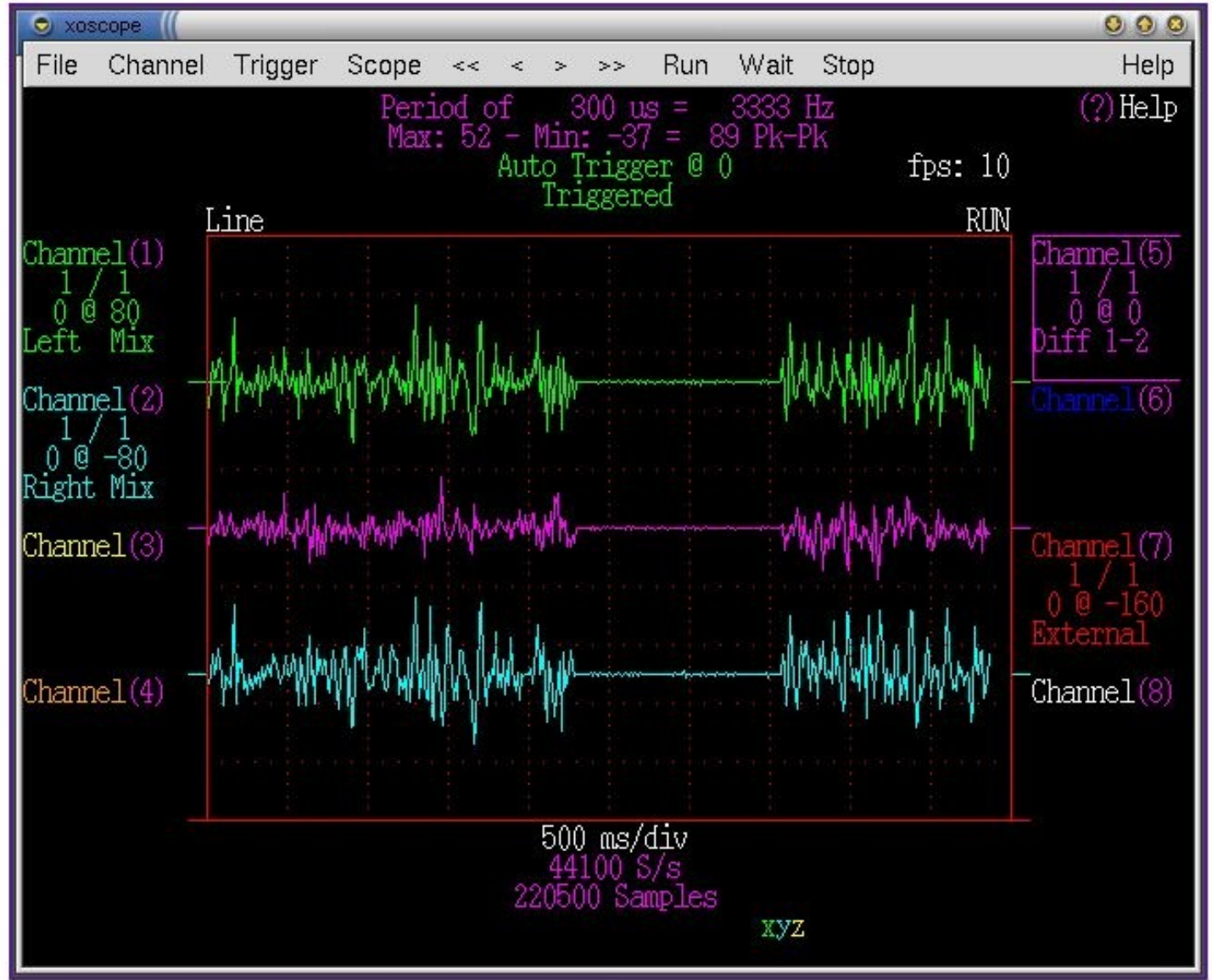


# Gerber Viewer

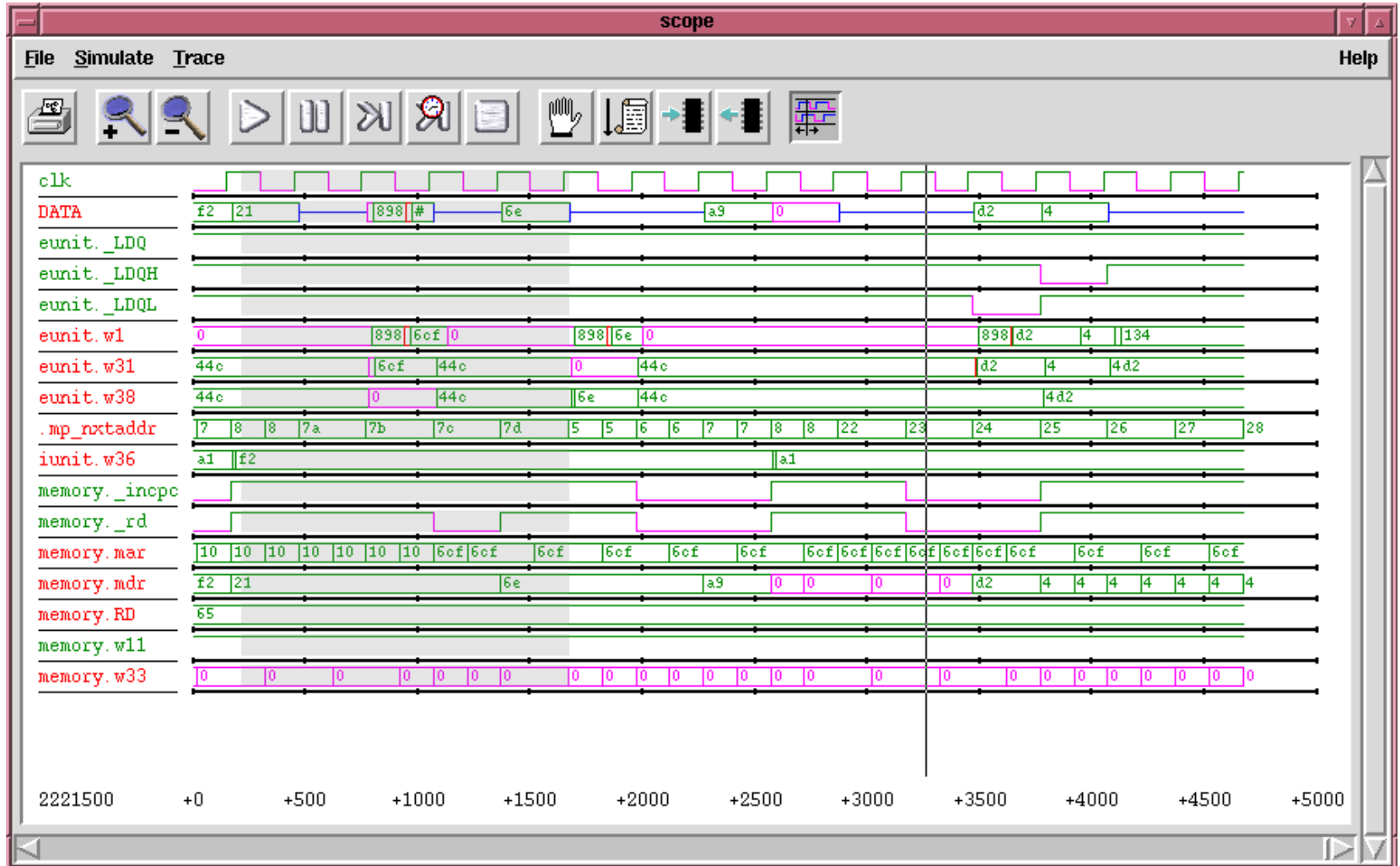




# Xoscope



# TkGate

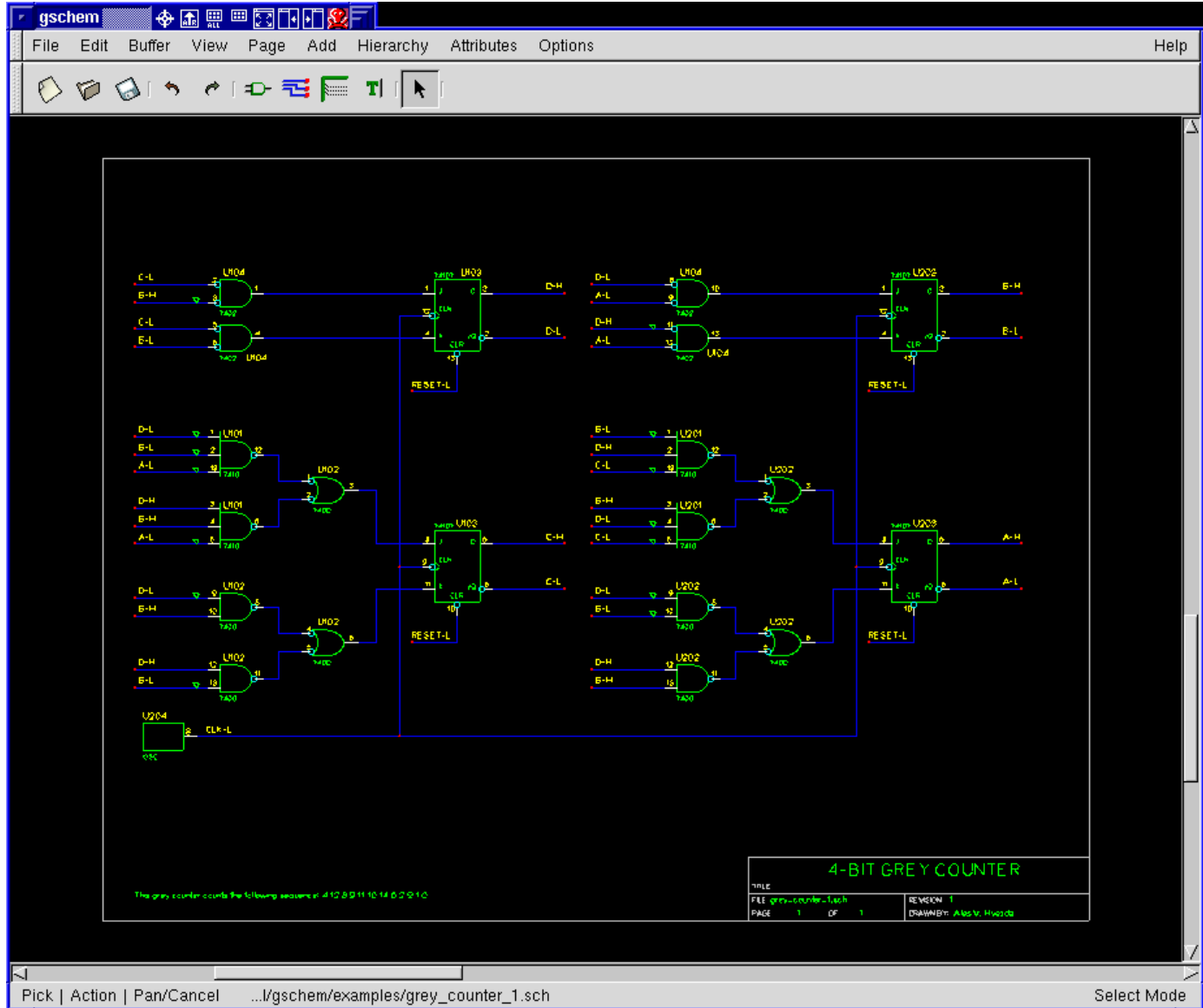


**Welcome to TkGate 2.0**

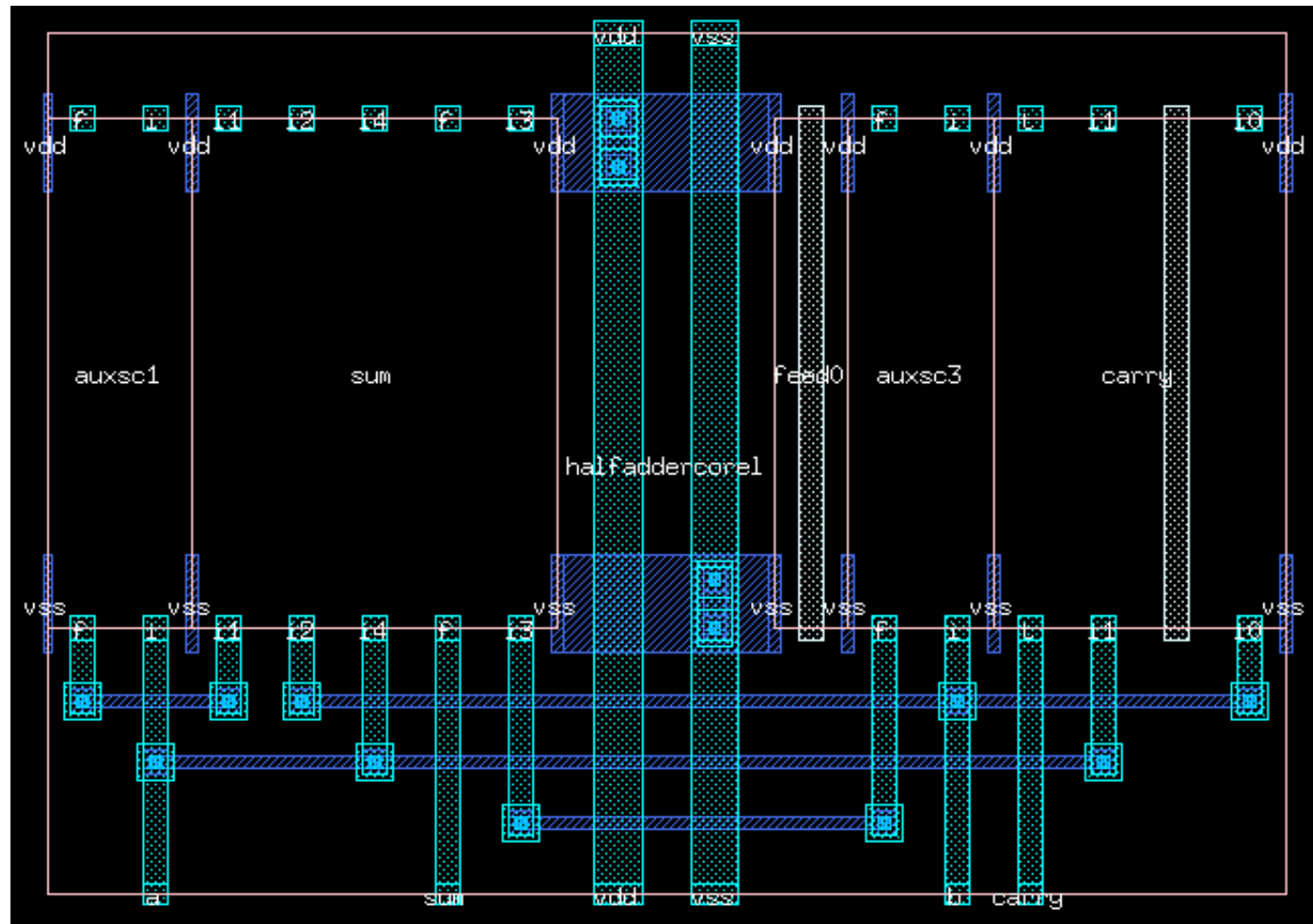
Copyright (C) 1987-2004 by Jeffery P. Hansen  
TKGate comes with ABSOLUTELY NO WARRANTY; see 'Help...License' menu for license and warranty details. Report problems to [hansen@tkgate.org](mailto:hansen@tkgate.org)

Click on a link below to start using tkgate!

- [Go to the tutorial](#)
- [Edit a new circuit](#)
- [See the documentation at http://www.tkgate.org](http://www.tkgate.org)



# Alliance VLSI CAD



# GtkWave

The screenshot displays the GtkWave application window titled "GTKWave - Simulation/rtl/tc\_fifo.vcd". The interface includes a menu bar (File, Edit, Search, Time, Markers, View, Help), a toolbar with navigation and zoom controls, and a status bar at the bottom. The main area is divided into a "Signals" list on the left and a "Waves" display on the right. The "Signals" list contains various signals such as `clk_cflib`, `din[7:0]`, `dout[7:0]`, and `poppointer[1:0]`. The "Waves" display shows a time-based waveform with a vertical cursor at 300 seconds. The `dout[7:0]` signal is highlighted in red and shows hexadecimal values: 55, AA, 33, BB, B7, 38, 0F, F0. The `poppointer[1:0]` signal shows values 1, 2, 3, 0. The status bar at the bottom indicates "GTKWave Analyzer v1.3.34 (w)1999-2003 BSI" and shows the current time range from [0] to [530] seconds.

# Links

- <http://www.opencores.org>
- <http://opencollector.org>
- <http://free-electrons.com>
- <http://free-opensource.qvantel.net>
- <http://www.linuxdevices.com>
- <http://shakthimaan.com/downloads.html>

# Free/Open Source User Groups, Hyderabad

- **ilug-hyd**  
<http://tech.groups.yahoo.com/group/ilughyd/>
- **twincling**  
<http://www.twincling.org/>
- **IIIT LUG**  
<http://students.iiit.net/tech/lug/>



# Thank You

Visit us at ...

- <http://www.qvantel.com>
- <http://free-opensource.qvantel.net>
- [shakthi.kannan@qvantel.com](mailto:shakthi.kannan@qvantel.com)