



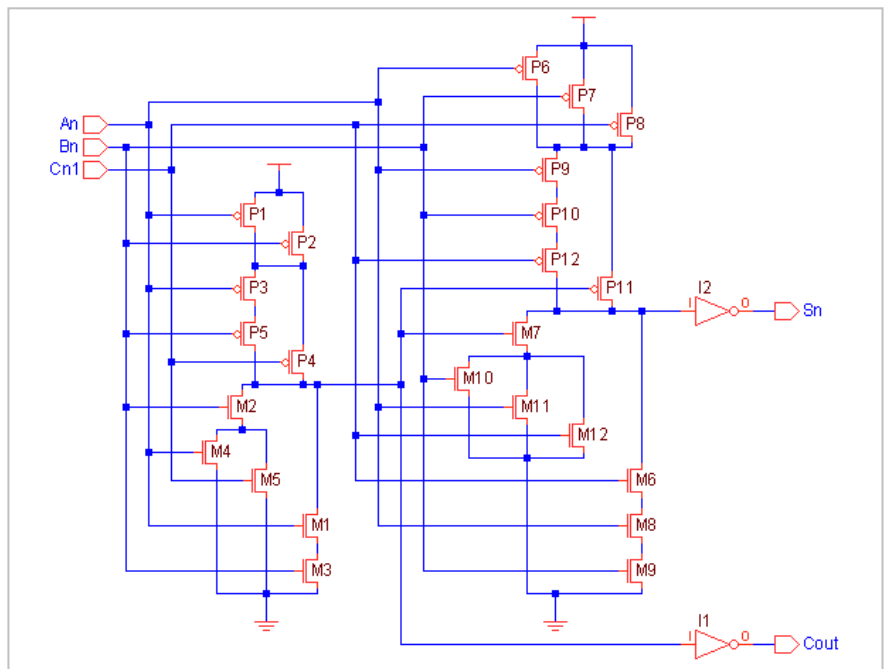
T-engine™: A Transistor-Level Visualization Engine for EDA Tools

With the T-engine, Concept Engineering provides advanced visualization technology to EDA tool developers working with transistor-level-structures.

When integrated with EDA tools the T-engine helps designers of ICs and SoCs visualize such critical information as circuit structures, timing data and signal values at the transistor level, making fine-tuning for maximum performance easier and more accurate. T-engine makes it easier to understand the output from cell and IP-block characterization tools.

T-engine recognizes common device-level circuit patterns, and detects and analyzes serial/parallel circuit paths. It performs current flow analysis and logic flow analysis including both left-to-right flow and reverse-flow detection for feedback.

Place-and-route techniques developed by Concept Engineering produce clean transistor-level schematics for complex transistor designs. The schematic engine also supports a mix of transistor-level technology with gate-level or block-level technologies in a single schematic diagram.



- Transistor level schematics from netlist connectivity data
- Easy integration into EDA tools through simple APIs
- Broad platform availability includes Qt, Tcl/Tk, MFC, Java, wxWidget, Perl/Tk
- Schematics generated quickly, easy to read and can be extended incrementally
- Software components are production proven and highly customizable
- Two-way communication with host application for cross-probing etc.
- Built in symbols can be extended to include symbol libraries

At a Glance

FEATURES	BENEFITS
Simple and robust API	Ensures easy integration and reliable applications
Production-proven software components	Performance and quality of application is very high
Highly customizable component	Widget and application fit together
Qt, Tcl/Tk, MFC, Java, wxWidget and Perl/Tk components	Easily fits into your existing software development flow
Proprietary algorithms	Result in easy-to-read schematics and short response times
On-the-fly schematic creation	Results in very high speed and capacity
Bi-directional communication between widget and application	Allows interaction with the application (e.g. cross-probing, highlighting, attribute display, ballooning)
Incremental schematic viewing	Allows interactive modification of schematic fragments
Windows, Linux and UNIX platform support	Application will work on most hardware platforms
Built-in transistor and device-level symbols	Application works without symbol libraries
Symbol translation tools	Provide access to existing symbol libraries

Widest Platform Availability

GUI Platform	NlviewTK	NlviewJA	NlviewMFC	NlviewQT	NlviewPTK	NlviewWX
Supported GUI environment	Tcl/Tk 8.0 or later	JDK 1.1 Java 2	Microsoft Foundation Classes	Nokia's Qt Framework	Perl/Tk	wxWidgets 2.42 or later
Available as	Tk Widget	Component (AWT) JComponent (Swing)	Class derived from CWnd	Class derived from QWidget	Perl/Tk Widget	Class derived from wxWindow
Deliverable	Tcl package Loadable extension	Java Bean	MFC Extension DLL and Sources + Core Lib	Sources + Core Lib	Perl Package and Sources + Core Lib	Sources + Core Lib
Customizable by	Configure Options Property Command	Java Bean Properties Property Command	Class Attributes Property Command	Qt Properties	Configure Options	Property Command
API Interface	Tcl Commands and Callbacks	Component Methods and Event-Listeners	Class Methods and Notification Messages	Class Methods and Signals / Slots	Tk Commands and Callbacks	Class Methods and Notification Messages
Printing	PostScript, PDF, SVG and Native Windows	PostScript, PDF, SVG and Native Java	PostScript, PDF, SVG and Native Windows	PostScript, PDF, SVG and Native Qt	PostScript, PDF, SVG	PostScript, PDF, SVG and Native wxWidgets

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