CircuitLab Launches In-Browser Electronic Circuit Simulator

_CircuitLab.com to host a user-friendly schematic capture tool and integrated browser-based SPICE-like, mixed-mode electronic circuit simulation engine for electrical engineers, students, and hobbyists._

San Diego, CA (PRWEB) February 28, 2012 -- CircuitLab today announced the public release of its suite of web-based electronics design tools, including the first web-based circuit simulator with the power and accuracy needed for board-level design tasks. CircuitLab is now available free of charge to practicing electrical engineers, engineering students, and electronics hobbyists around the world at [https://www.circuitlab.com/](https://www.circuitlab.com/).

Computers have almost completely replaced pencil and paper for note taking, grocery lists, calendars, and even post-it notes, yet the back of an envelope still remains the quickest way for an electrical engineer to sketch out a circuit idea. CircuitLab brings the ease of envelope sketching to the notebook you carry around with you the most -- your computer -- and combines it with the power of the web browser to let you simulate, refine, and then share your creations with other designers around the world.

CircuitLab's groundbreaking user interface puts easy-to-use, powerful tools at the hands of designers. A quick-access build box lets designers access basic circuit elements quickly, while allowing access to a wide assortment of non-linear elements, feedback elements, digital / mixed-mode components, and custom drawing tools. Easy-wire mode allows designers to wire up their circuits with fewer clicks and less frustration than conventional schematic capture tools. Mixed-mode circuit simulation with SPICE-like models allows the designer to quickly tackle a wide range of design tasks, from digital to analog, DC to VHF and beyond.

CircuitLab’s novel user interface runs entirely in the web browser, providing instant cross-platform compatibility to Windows, Mac OS X, and Linux users, in contrast to most software EDA tools which are Windows-only. The custom-built JavaScript-based circuit simulation engine runs directly in web browsers like Google Chrome and Mozilla Firefox without requiring any plug-ins, and takes advantage of recent improvements in browser performance to allow the simulator to rapidly solve circuits that generate hundreds or even thousands of simultaneous non-linear equations.

As a web-based platform for electronics design, CircuitLab is able to provide unique features that desktop-based EDA tools can not match. Every circuit has a unique URL, making it effortless to share with collaborators, or paste into an online forum post for discussion. CircuitLab users can also rapidly search through other users' publicly-posted circuits, find one with functionality they need, and immediately copy-and-paste the relevant circuit block into their own work.

Electrical engineering students and students in related fields are set to be the earliest adopters of CircuitLab. “As an educational tool, CircuitLab is so easy to use and its simulation capabilities so powerful that we think we’ll see lecturers using it live in EE classes -- something that hasn’t really been possible with existing tools,” said Humberto Evans, co-founder and developer of CircuitLab. The tool also makes it simple for students to generate beautiful [printed schematics](https://www.circuitlab.com/) for lab reports, and in-browser simulations provide SPICE-like accuracy that will translate to successful prototyping and less frustration.

The growing online community of electronics hobbyists -- from ham radio operators, and audiophiles designing their own amplifiers, to amateur roboticists tinkering in their garages -- can take the most advantage of the easy
ability to share and collaborate. “If you look at any electronics forum online, it's normal to see scanned hand-drawn schematics, or static screenshots from various desktop tools. There’s no reason why we shouldn’t instead be sharing useful URLs that enable editing and simulation,” said Mike Robbins, co-founder and developer of CircuitLab. Hobbyists who post a public CircuitLab URL can enable thousands of designers online to easily open their circuit, make a few changes, and share the new version.

The CircuitLab schematic editor and simulation tool and a wide range of example circuits can be found at https://www.circuitlab.com/.

About CircuitLab

CircuitLab provides online, in-browser tools for schematic capture and circuit simulation. These tools allow students, hobbyists, and professional engineers to design and analyze analog and digital systems before ever building a prototype. Online schematic capture lets hobbyists easily share and discuss their designs, while online circuit simulation allows for quick design iteration and accelerated learning about electronics. CircuitLab is a division of NerdKits, L.L.C. CircuitLab is now available to the public at https://www.circuitlab.com/.

About NerdKits

Inspired by a shared electronics hobby and the fateful microcontroller-powered repair of a broken commercial freezer, NerdKits co-founders Humberto Evans and Mike Robbins teamed up to develop a powerful microcontroller kit with top-notch documentation and educational material. Tapping in to their garage-startup do-it-yourself attitude, their first kits were built and shipped from their fraternity basement in late 2007, while the pair were still students in MIT's Department of Electrical Engineering and Computer Science. NerdKits now ships thousands of microcontroller kits every year to students and hobbyists in over 50 countries from its El Paso, TX facility. Several NerdKits projects have been featured on various blogs, websites, and publications, including Slashdot, Hack A Day, Hacked Gadgets, Make Magazine, and the MIT Undergraduate Research Journal. For more information, visit http://www.nerdkits.com/

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