

Centro Federal de Educação Tecnológica de Santa Catarina
Departamento Acadêmico de Eletrônica
Retificadores



Simulação da Fonte Linear

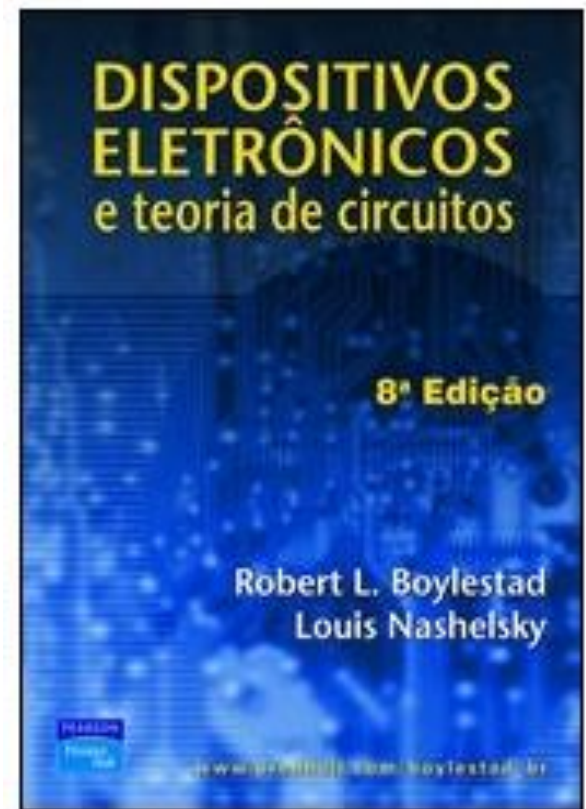
Prof. Clóvis Antônio Petry.

Florianópolis, novembro de 2008.

Bibliografia para esta aula

Seqüência de conteúdos:

1. Simulação da fonte linear.



Nesta aula

Seqüência de conteúdos:

1. Introdução ao Proteus;
2. Simulação da fonte linear.

Desenvolvedor do Proteus

<http://www.labcenter.co.uk/>

Labcenter Electronics - Internet Explorer provided by Dell

http://www.labcenter.co.uk/

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Labcenter Electronics

...the home of PROTEUS

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Proteus VSM

Co-simulation of microprocessor software within a mixed mode SPICE simulator.

- Available for PIC, 8051, AVR, HC11, ARM7/LPC2000 and Basic Stamp processors.
- See your code interact with simulated hardware in real-time.
- Interactive peripheral models for displays, keypads, etc.
- Over 8000 analogue and digital device models.
- Extensive single step and debugging facilities including system wide diagnostics.
- Works with popular compilers and assemblers.

CCS KEIL IAR HI-TECH
Image Craft BYTE CRAFT MICROCHIP Proton HP InfoTech

Proteus PCB Design

Professional schematic capture and PCB

Latest...

Join the Support Forums for Latest Product News

Proteus Design Suite 7.2

Latest Releases

Register on our Support Forum for News of the Latest Software Releases.

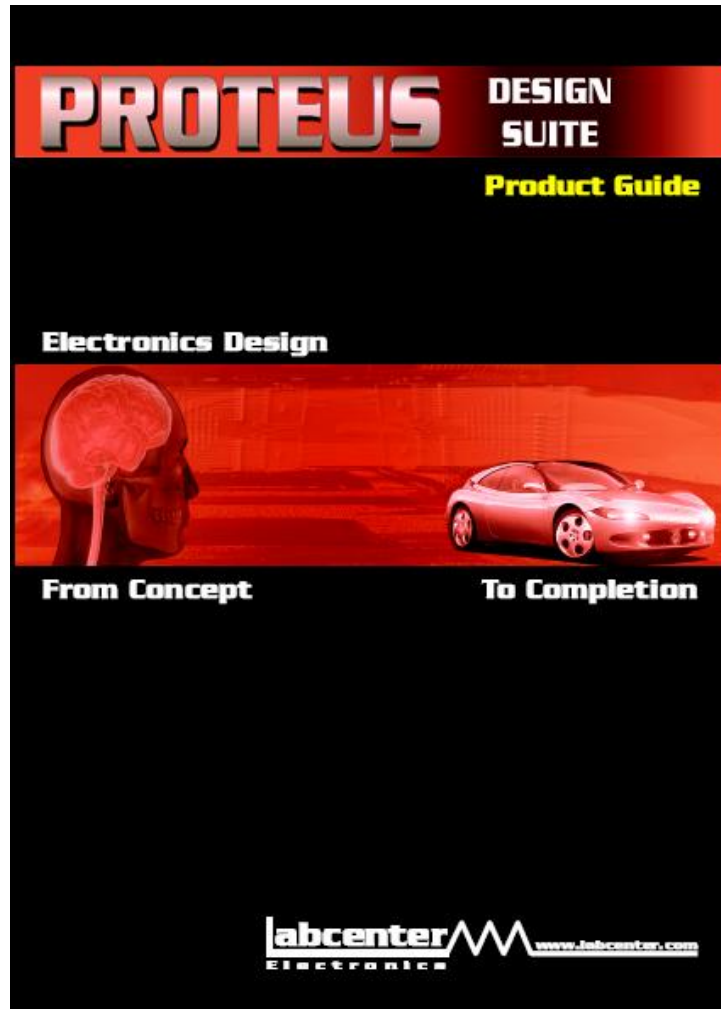
Magazine Review

Proteus VSM is highly recommended for designers frequently working on circuits containing digital as well as analogue electronics.

Elektor Electronics Review

Done Internet | Protected Mode: On 100%

Uma visão rápida do Proteus



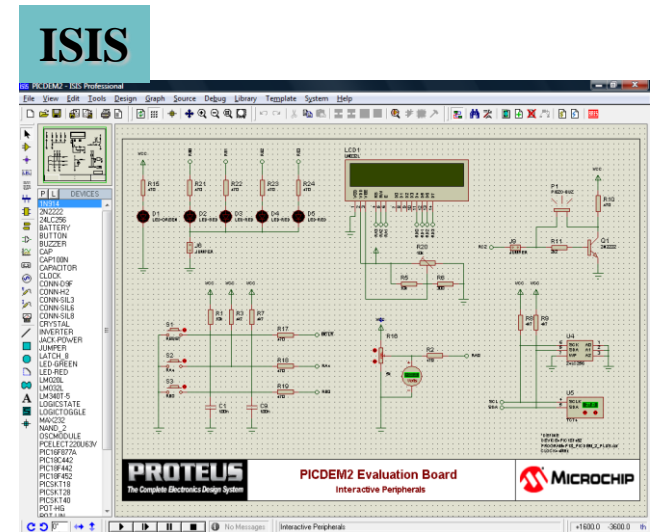
PROTEUS DESIGN SUITE
Product Guide

Electronics Design

From Concept To Completion

labcenter
Electronics www.labcenter.co.uk

The image shows the cover of the Proteus Design Suite Product Guide. It features a red and black color scheme. At the top, the text 'PROTEUS DESIGN SUITE' is written in large, bold, white letters. Below it, 'Product Guide' is written in yellow. The central part of the cover has a red background with a white silhouette of a human head and a white car. The text 'Electronics Design' is written in white. At the bottom, 'From Concept To Completion' is written in white. The Labcenter Electronics logo and website URL are at the bottom.

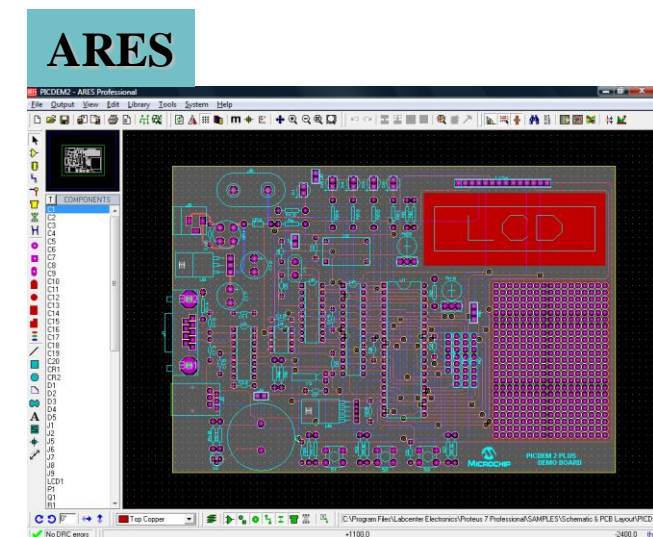


ISIS

PICDEM2 Evaluation Board
Interactive Peripherals

MICROCHIP

The image is a screenshot of the ISIS software interface. It shows a schematic diagram of a PICDEM2 Evaluation Board. The diagram includes various components like resistors, capacitors, and an LED. The interface has a menu bar at the top with options like 'File', 'Edit', 'Tools', 'Design', 'Graph', 'Source', 'Debug', 'Library', 'Template', and 'System'. A toolbar is below the menu bar. On the left, there is a component library with a search bar and a list of components. The main workspace shows the schematic diagram. At the bottom, there is a status bar with 'No Messages' and 'Interactive Peripherals'.



ARES

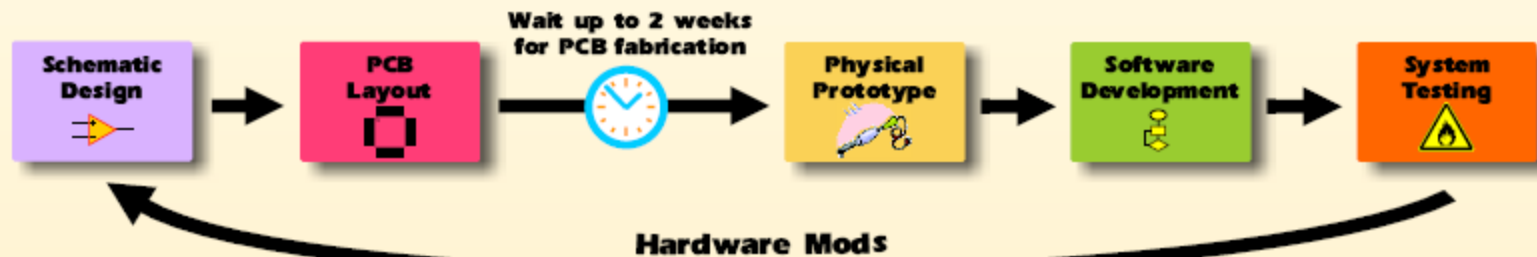
PICDEM2 PLUS DEMO BOARD

The image is a screenshot of the ARES software interface. It shows a PCB layout for a PICDEM2 PLUS DEMO BOARD. The layout is a top-down view of the board with various components placed on it. The interface has a menu bar at the top with options like 'File', 'Design', 'Tools', 'Zones', and 'System'. A toolbar is below the menu bar. On the left, there is a component library with a search bar and a list of components. The main workspace shows the PCB layout. At the bottom, there is a status bar with 'No DRC errors' and '3460.0'.

<http://www.labcenter.co.uk/>

Uma visão rápida do Proteus

The VSM Advantage



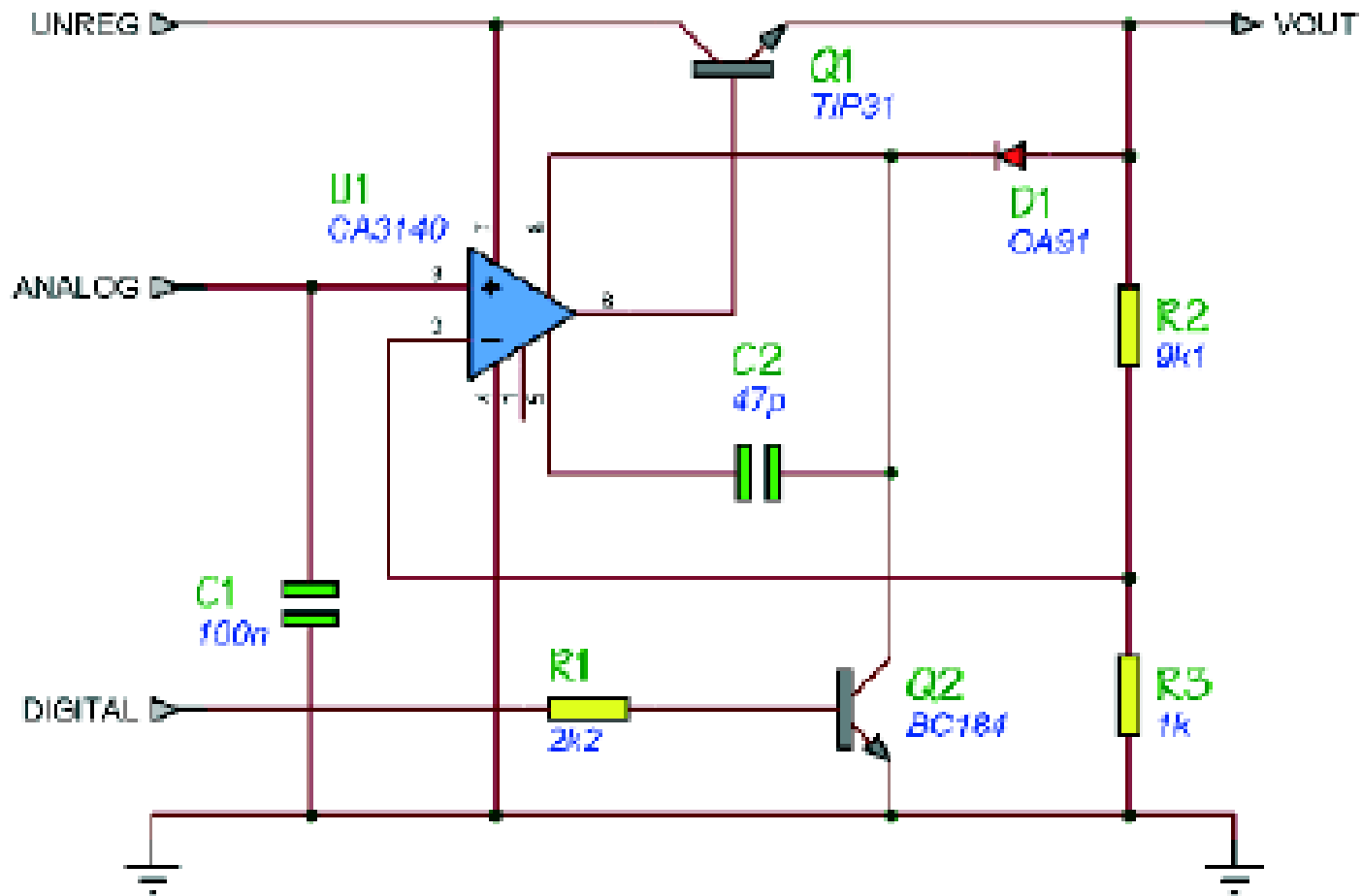
With traditional design tools, software development and system testing cannot begin until a PCB and physical prototype are available - incurring a delay of up to 2-3 weeks. And if something is wrong with the hardware design, the whole process must be repeated.



Using Proteus VSM, software development can begin as soon as the schematic is drawn, and the combination of hardware and software can be thoroughly tested before physical prototyping.

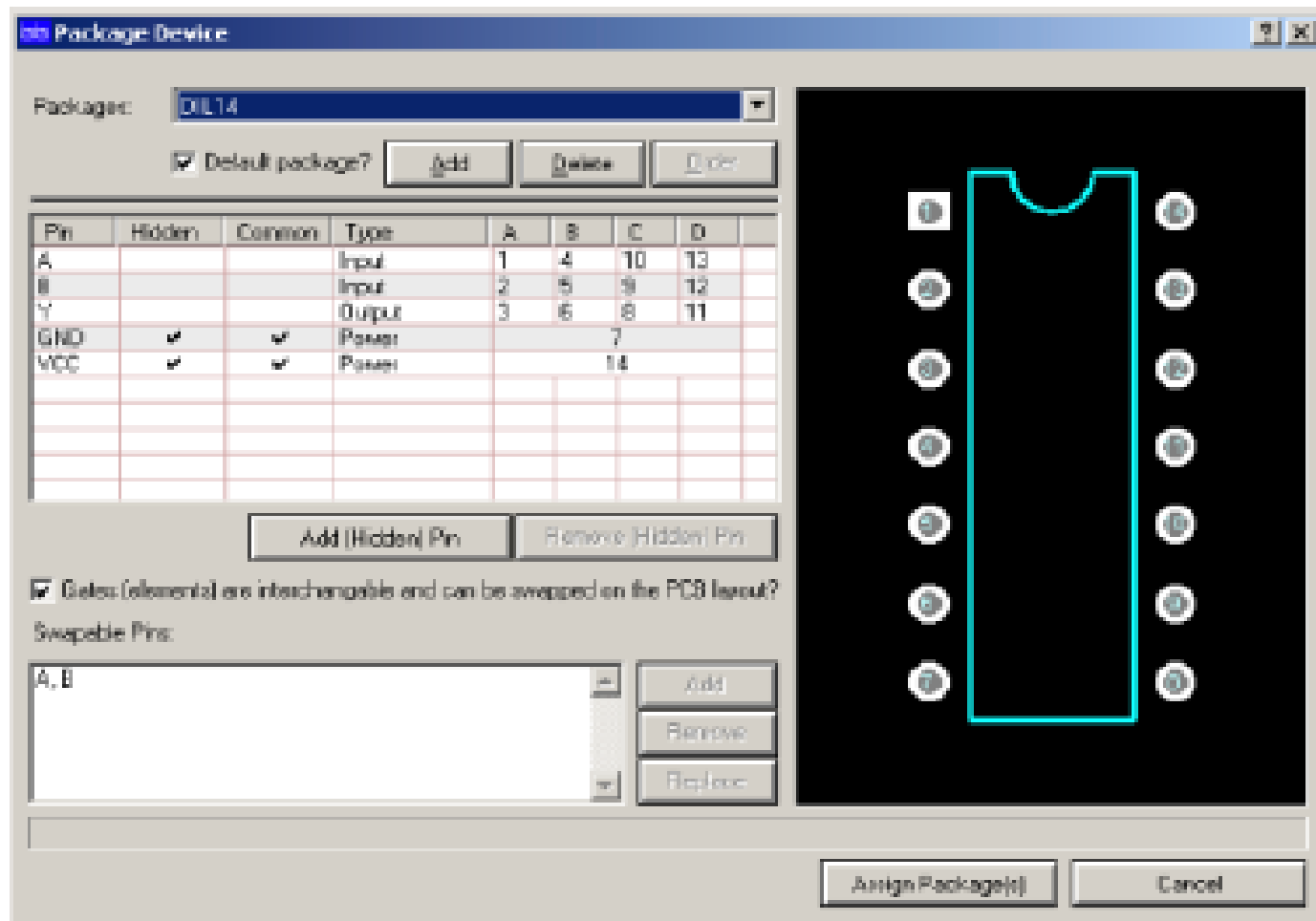
Uma visão rápida do Proteus

Esquemáticos de qualidade para publicações e impressões



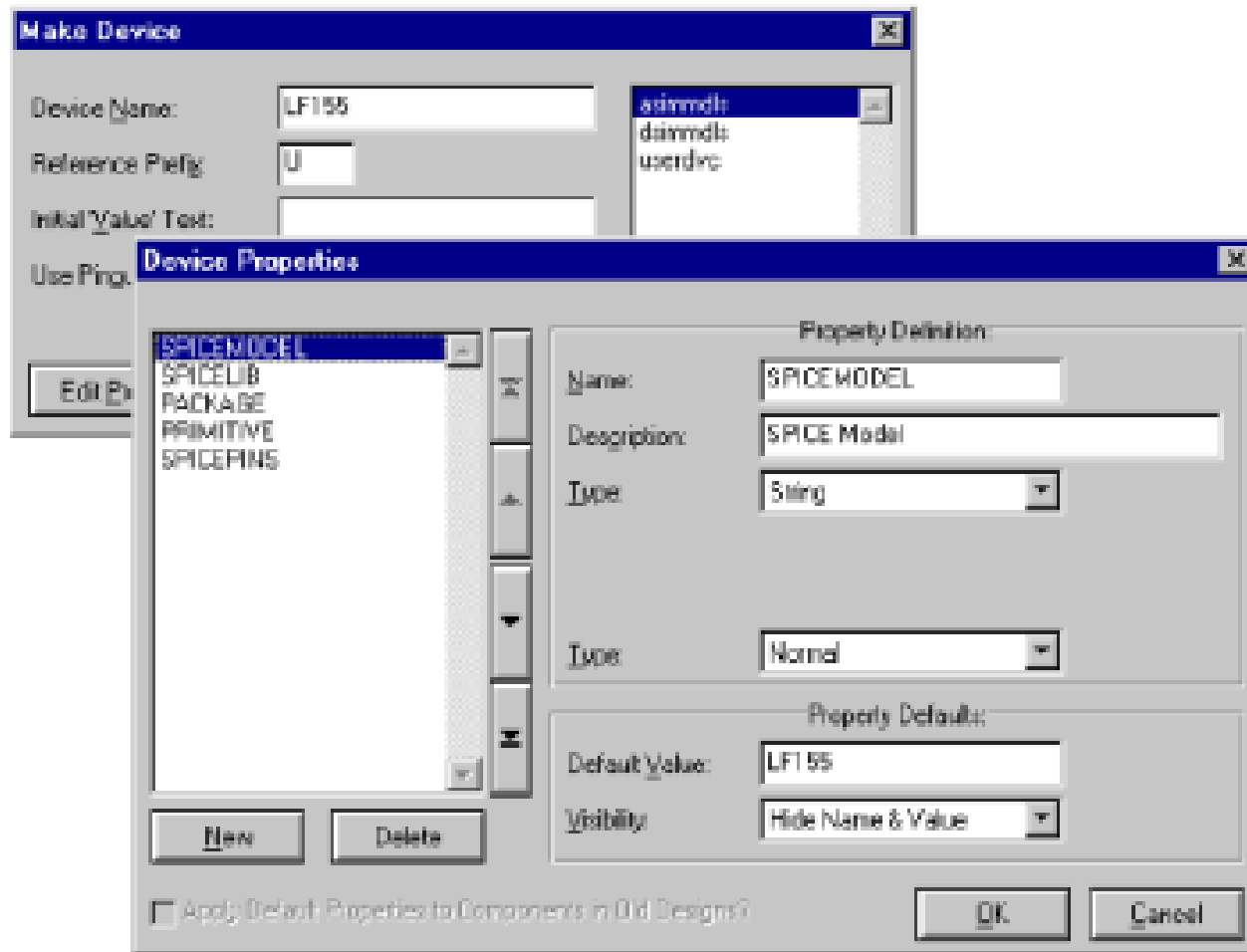
Uma visão rápida do Proteus

Visualização do encapsulamento do componente durante o desenho do esquemático



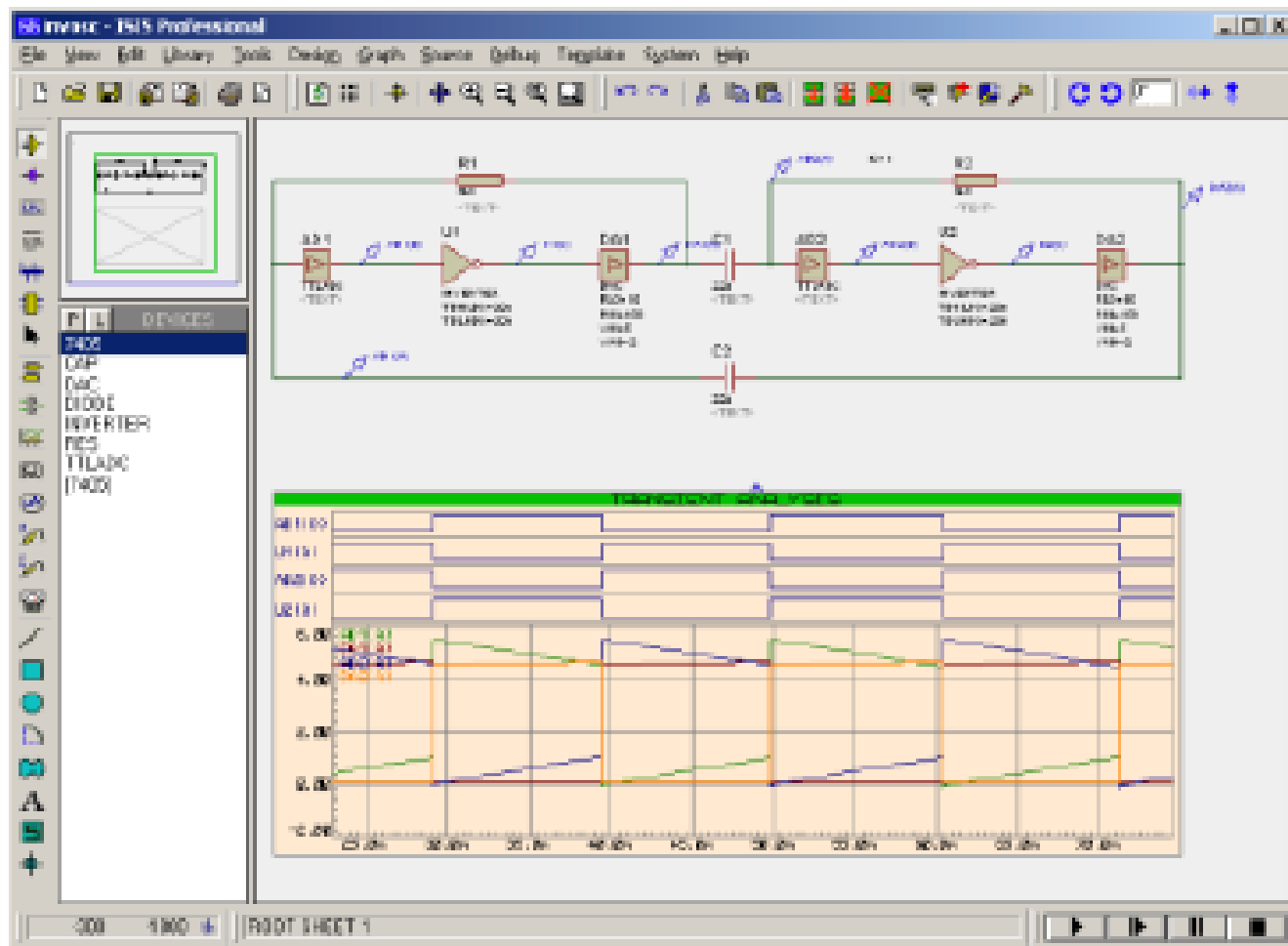
Uma visão rápida do Proteus

Possibilidade de alterar parâmetros de componentes



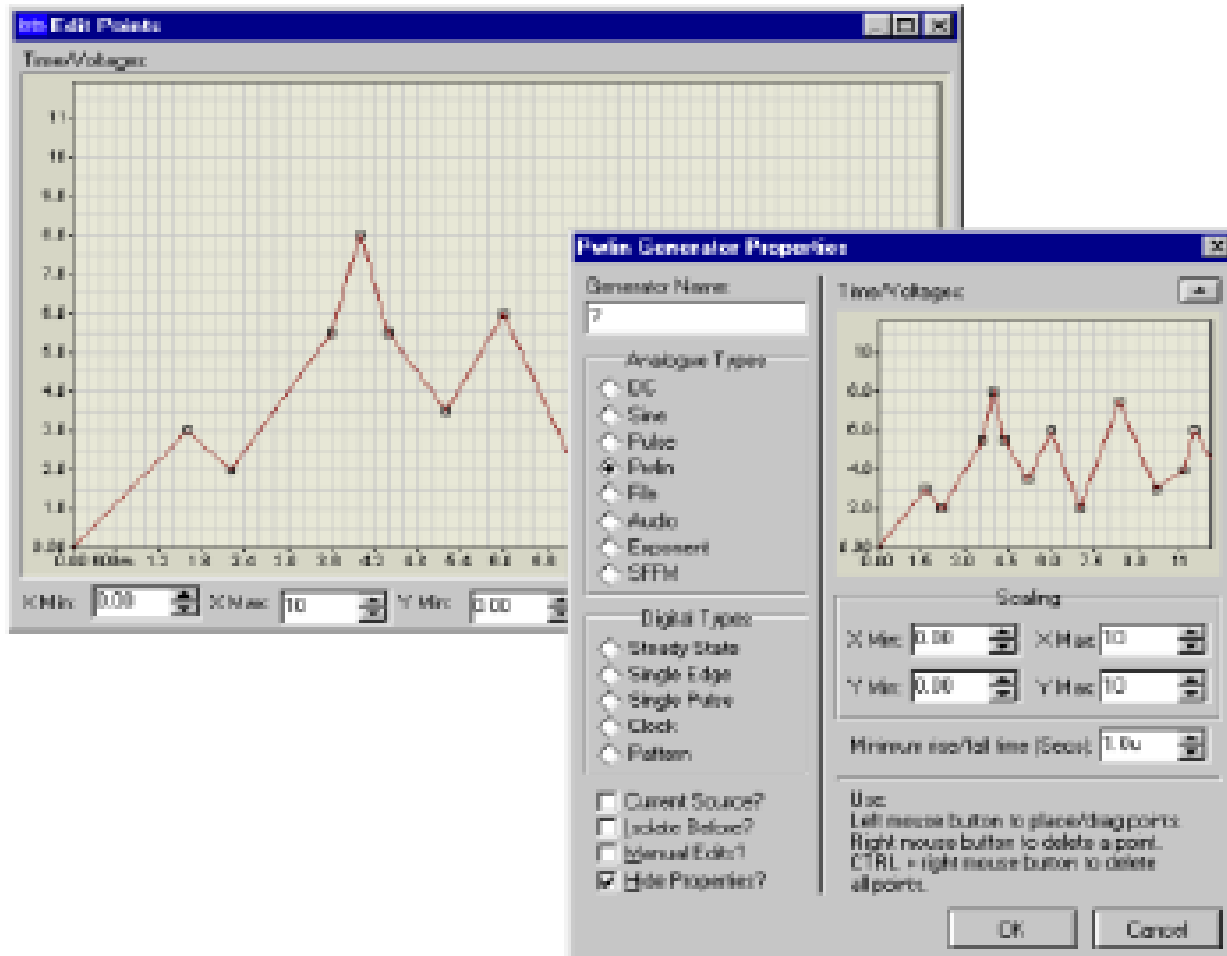
Uma visão rápida do Proteus

Simulação completa em apenas uma janela



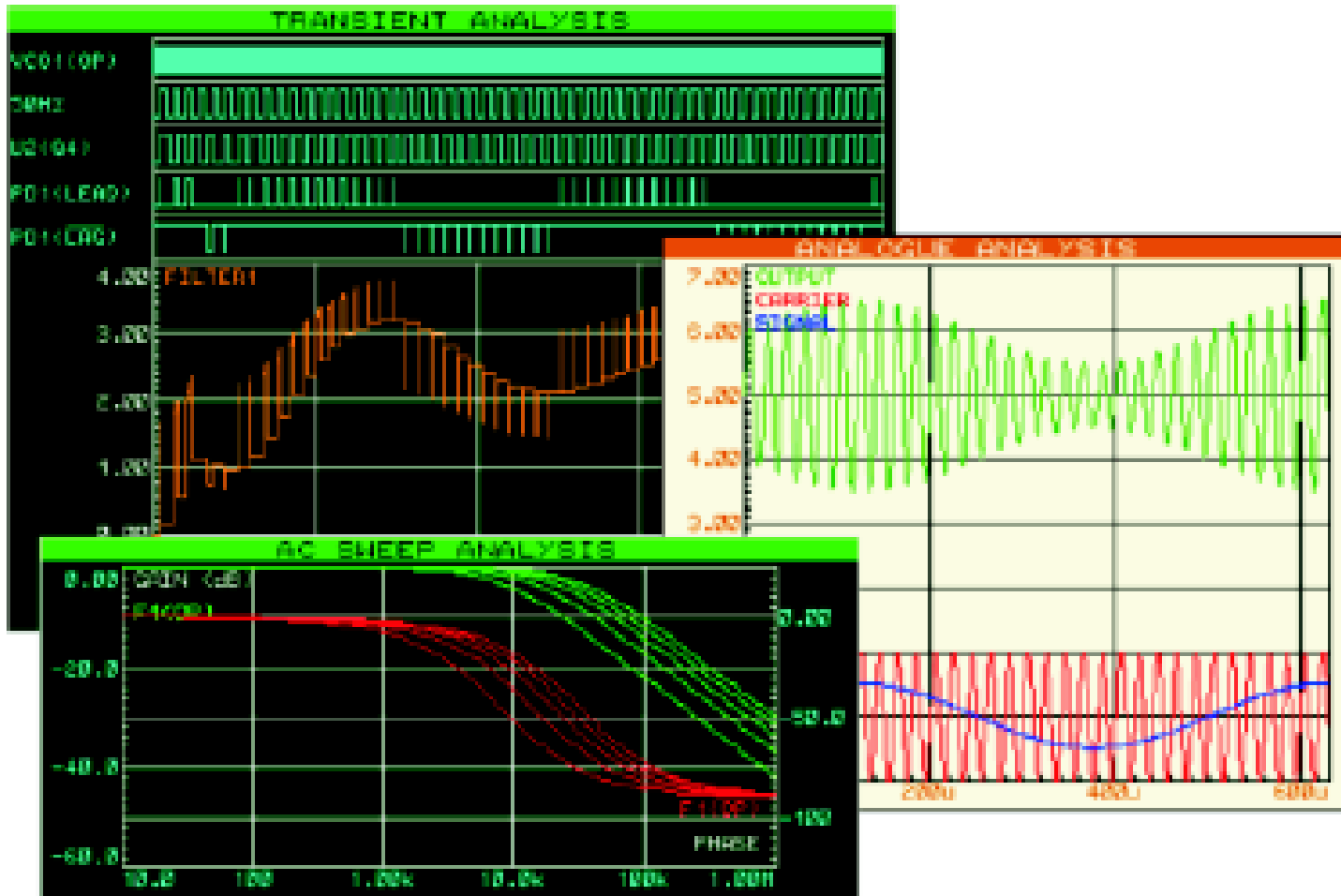
Uma visão rápida do Proteus

Núcleo de simulação do Pspice



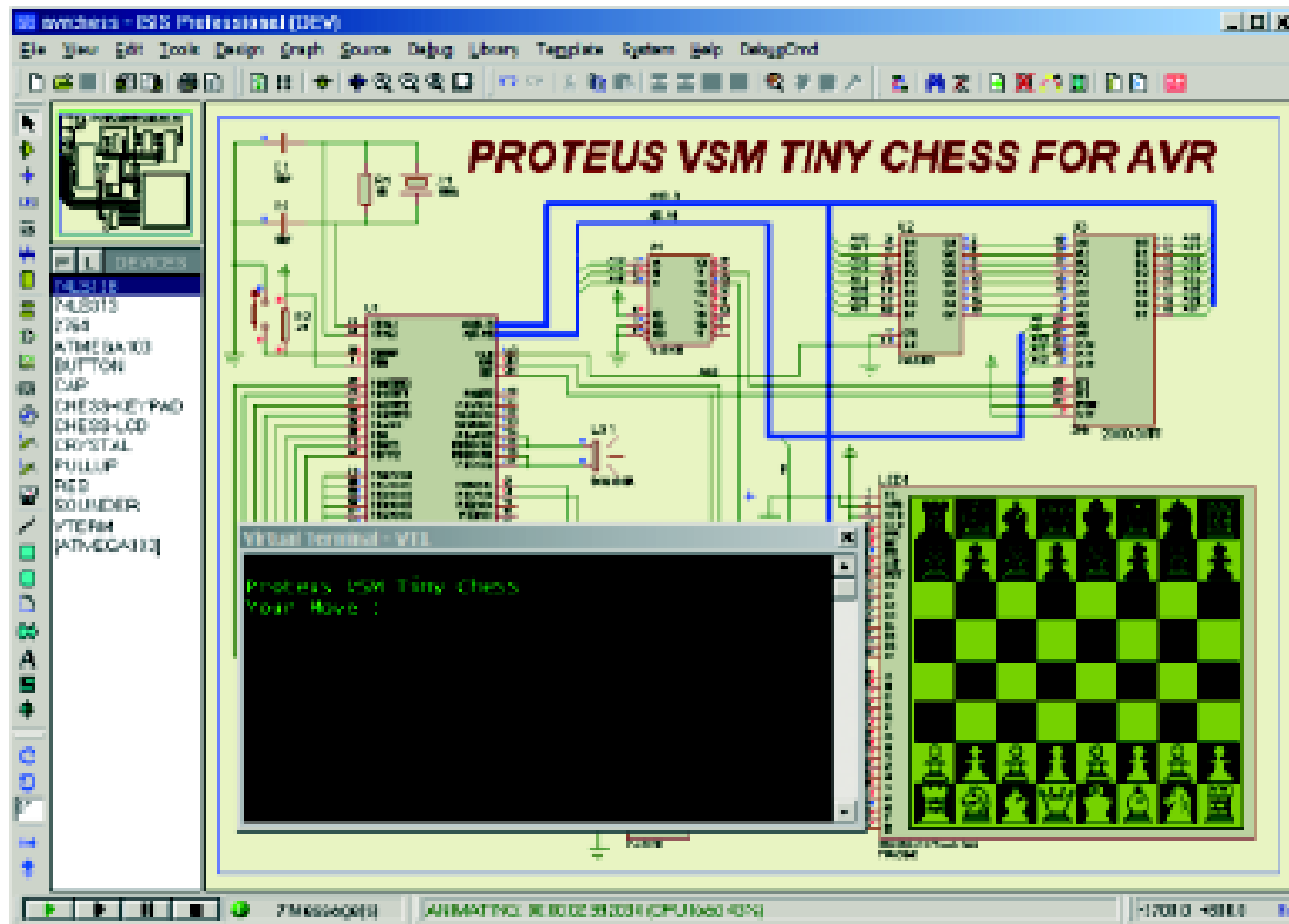
Uma visão rápida do Proteus

Simulação off-line para análise de formas de onda



Uma visão rápida do Proteus

Simulação com código embarcado em microcontroladores



Uma visão rápida do Proteus

Integração com outros softwares, por exemplo Mplab

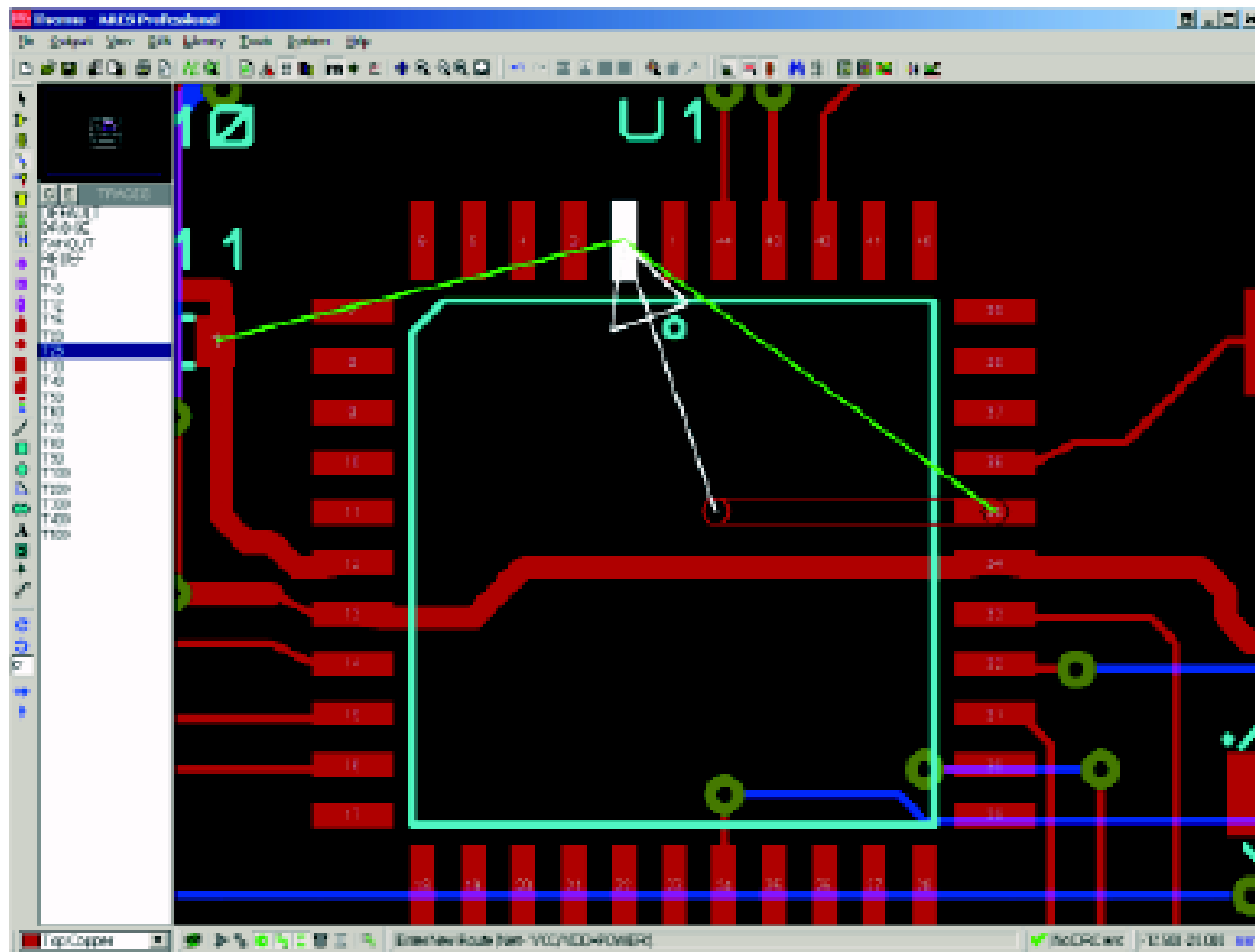
The screenshot displays the MATLAB environment with the MPLAB IDE V3.01 window open. The MATLAB window shows a script for interfacing with a PIC18F4550 microcontroller. The script includes comments in Portuguese and code for setting up I/O pins, reading the temperature sensor (1-Wire), and converting the raw data to a temperature value. The MPLAB IDE window shows the PIC18F4550 hardware schematic and the execution of the code. The 'Watch' window in MPLAB IDE shows the following data:

Address	Symbol Name	Value
0300	ADCON0	0x0000
0B04	Temperature	15
0B08	# filename	**

Two large orange arrows point from the MATLAB code to the MPLAB IDE schematic and from the MPLAB IDE Watch window to the MATLAB code, illustrating the integration between the two environments.

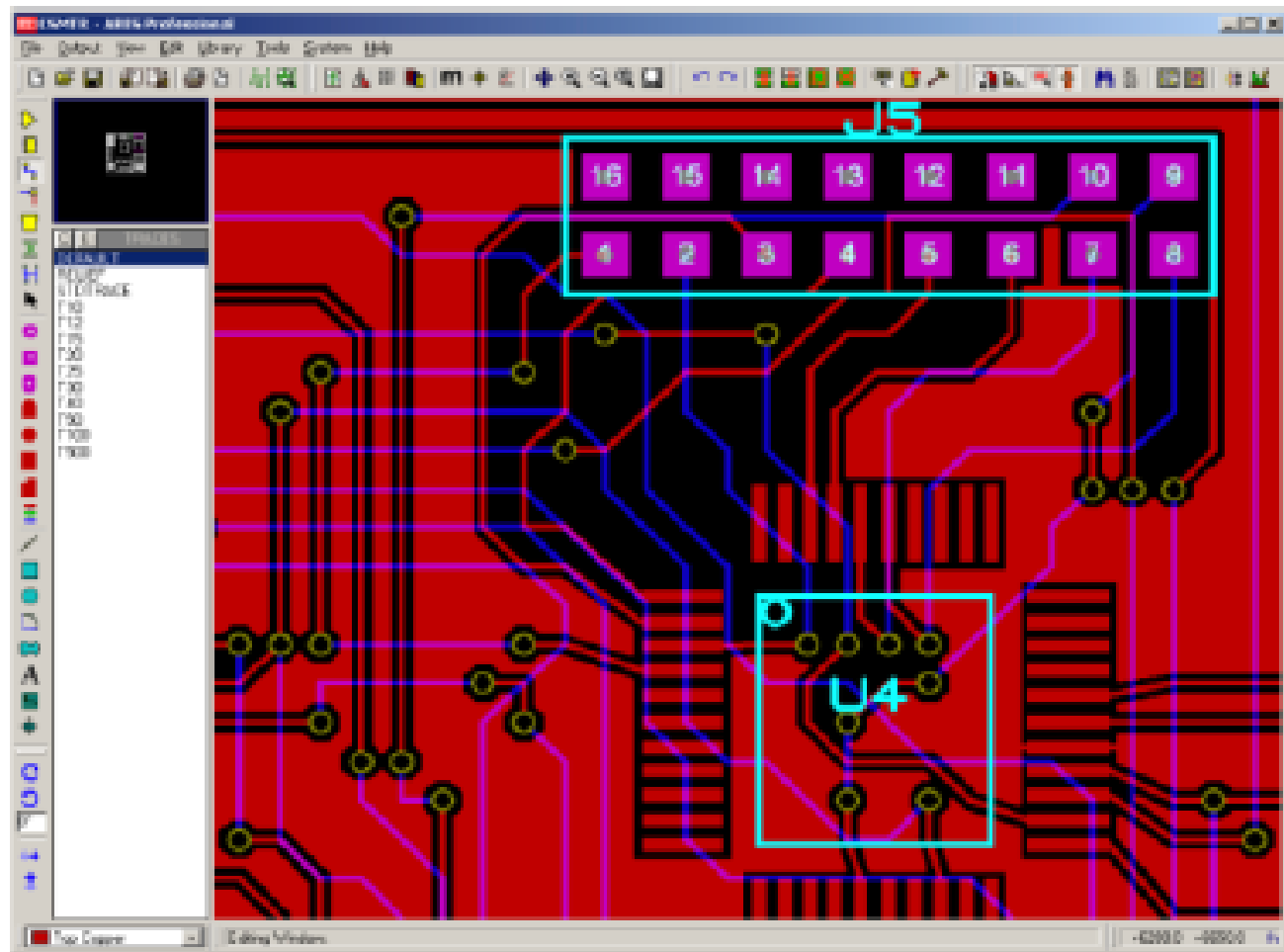
Uma visão rápida do Proteus

Roteamento automático para placas de circuito impresso



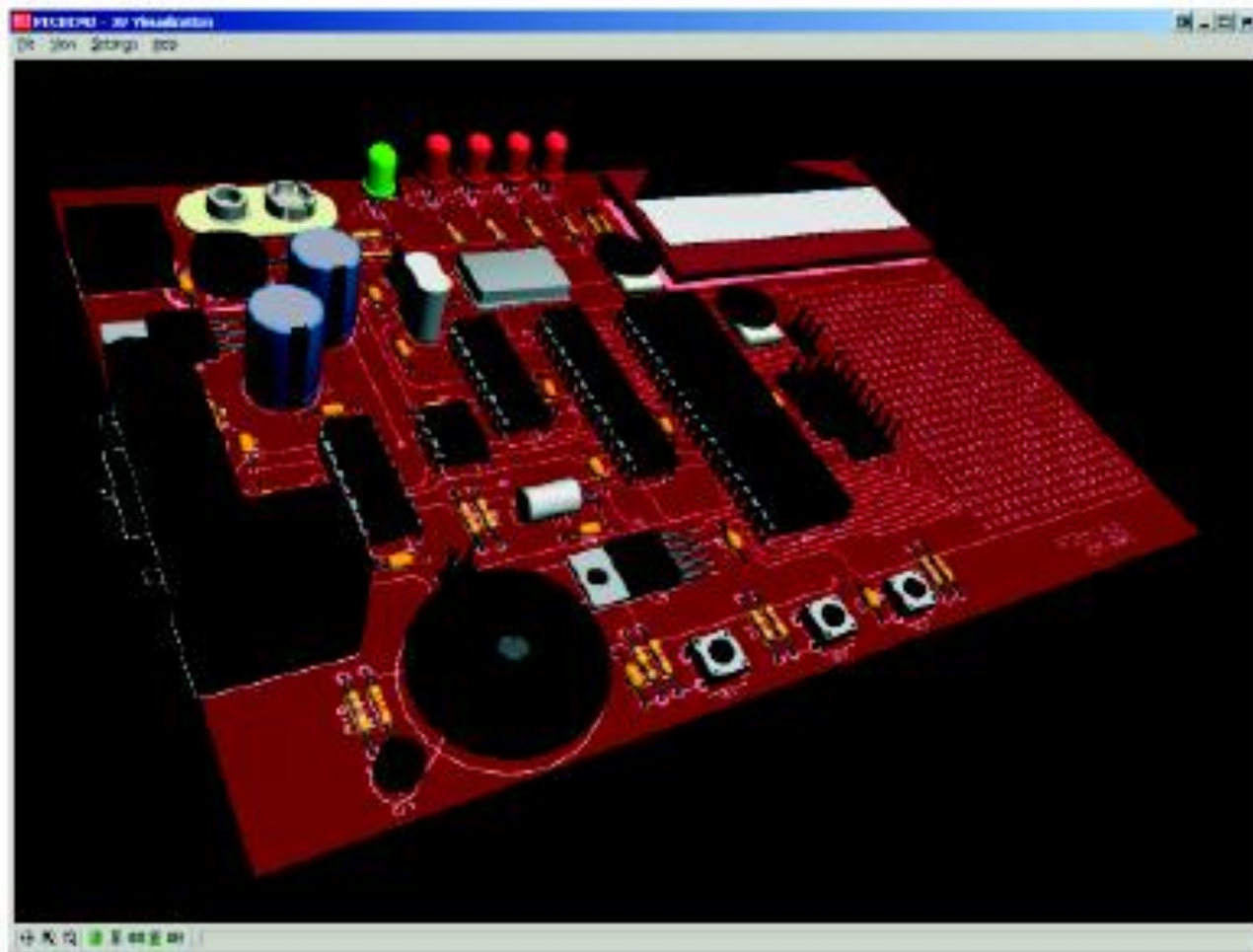
Uma visão rápida do Proteus

Trilhas de potência e malhas de terra

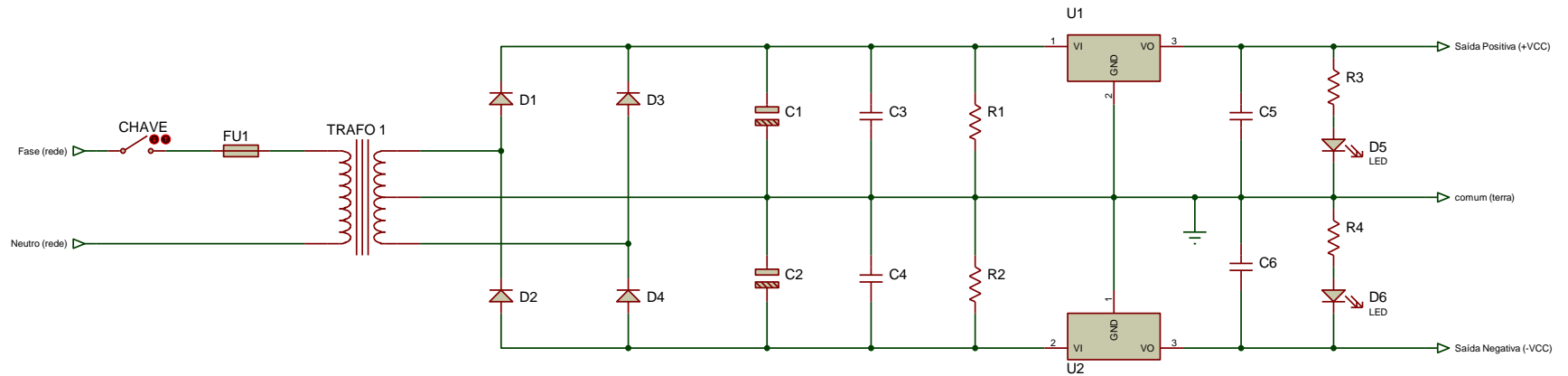


Uma visão rápida do Proteus

Visualização 3D da placa



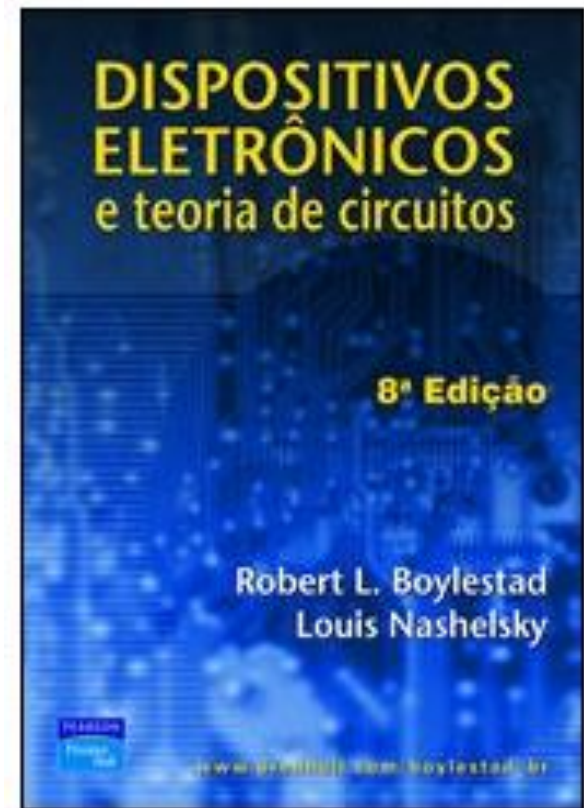
Simulação da fonte linear



Na próxima aula

Seqüência de conteúdos:

1. Desenho da placa de circuito impresso.



www.cefetsc.edu.br/~petry