Remote Labs – Electrical Engineering Experiments

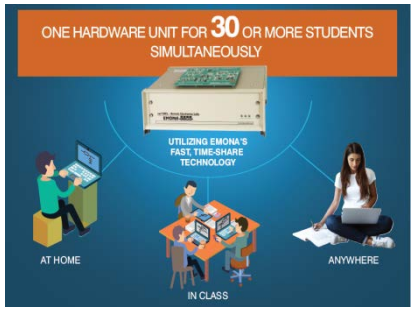
In the next 8 slides you will learn:

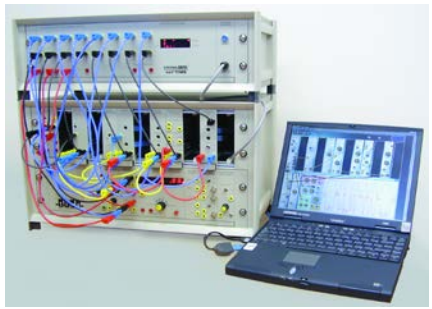
What are “Remote Engineering Labs”?

How do they work?

and

You can try them out for yourself.

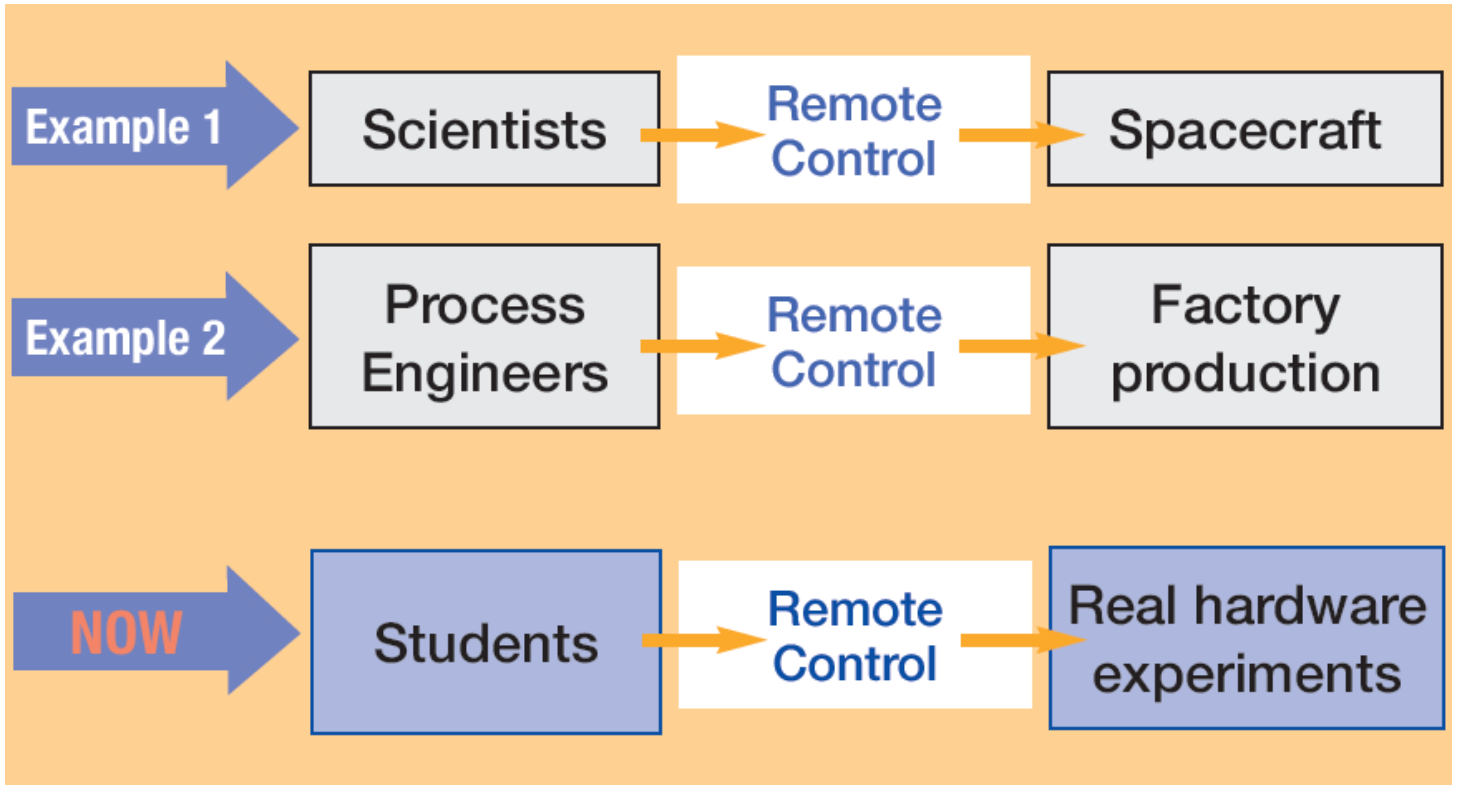




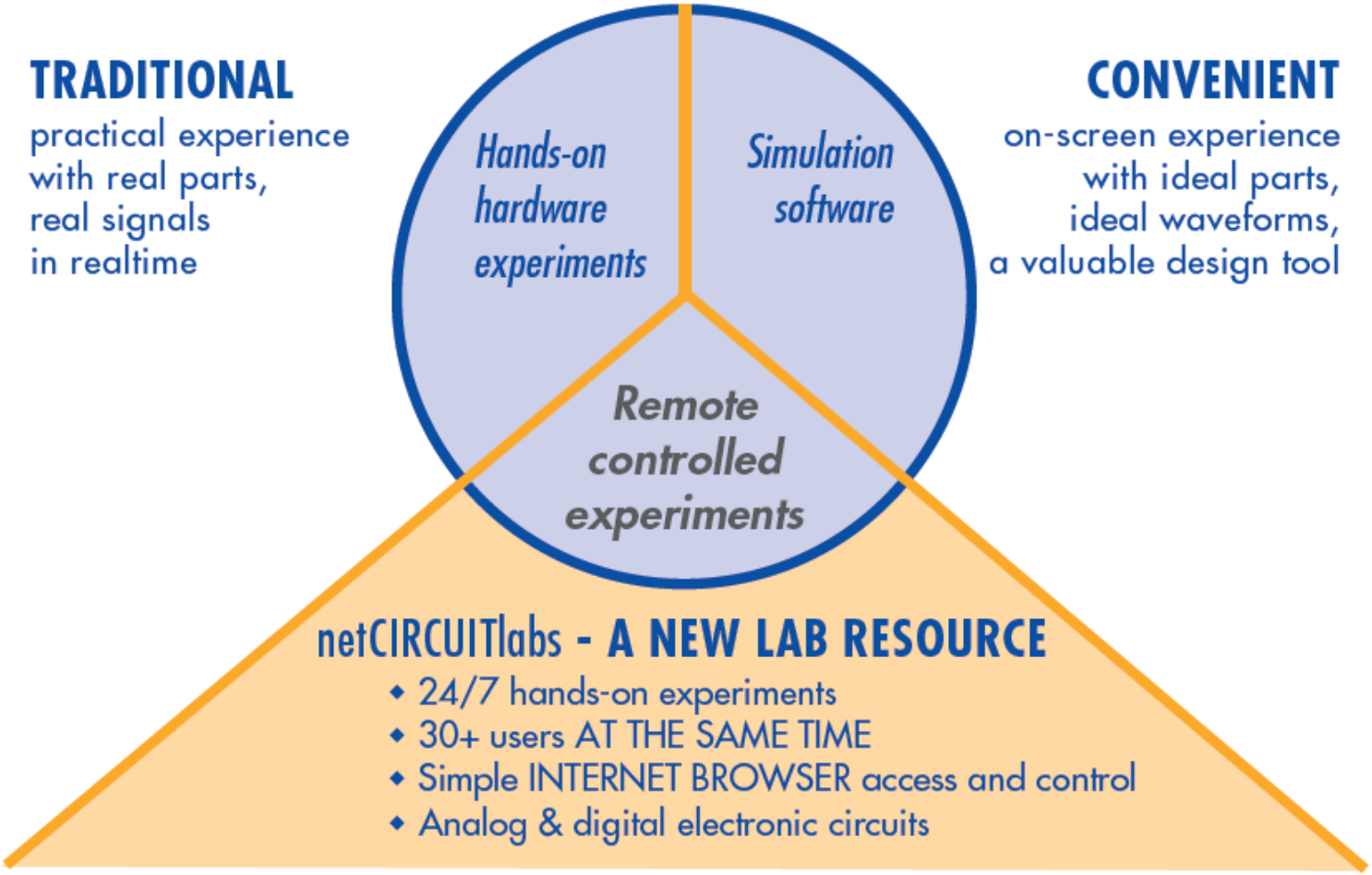
NEXT >

With Remote Labs, students control real hardware…

in the same way as scientists and engineers control spacecraft and factory processes

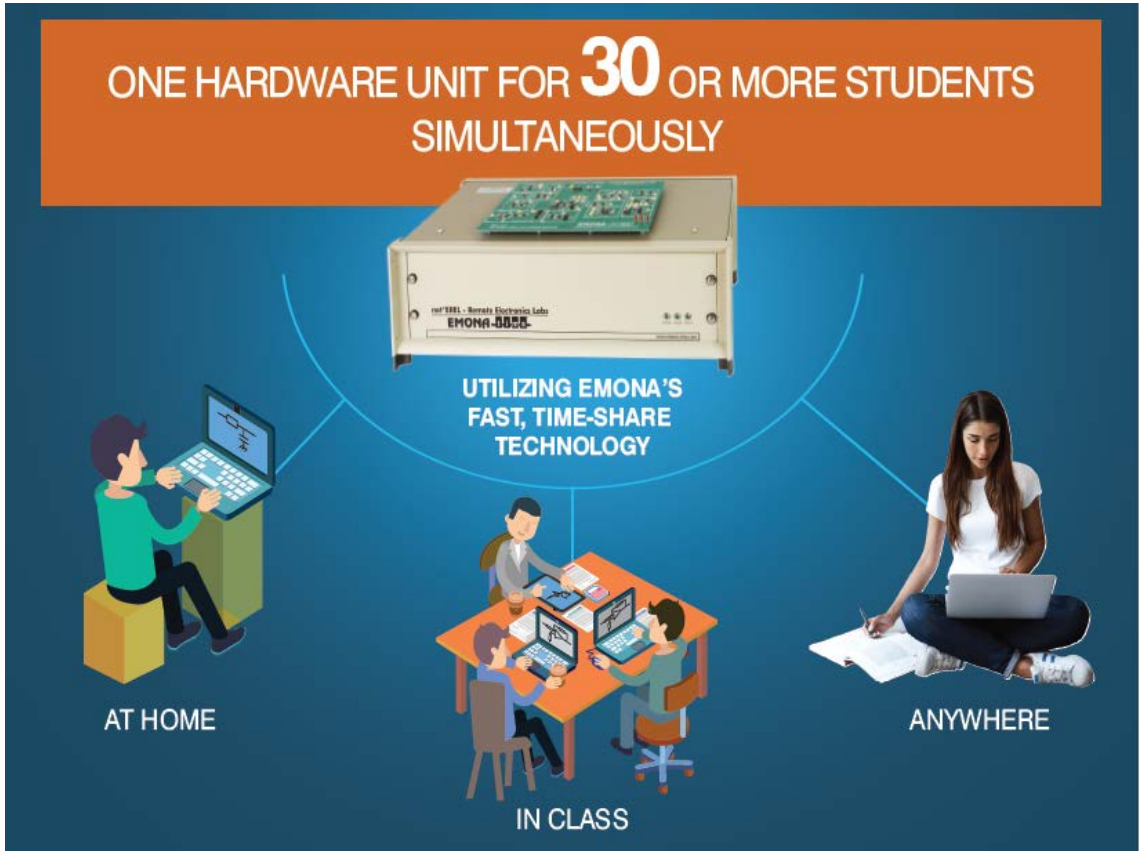


Remote Labs provide a third alternative and enhancement to traditional hardware experiments and simulation experiments



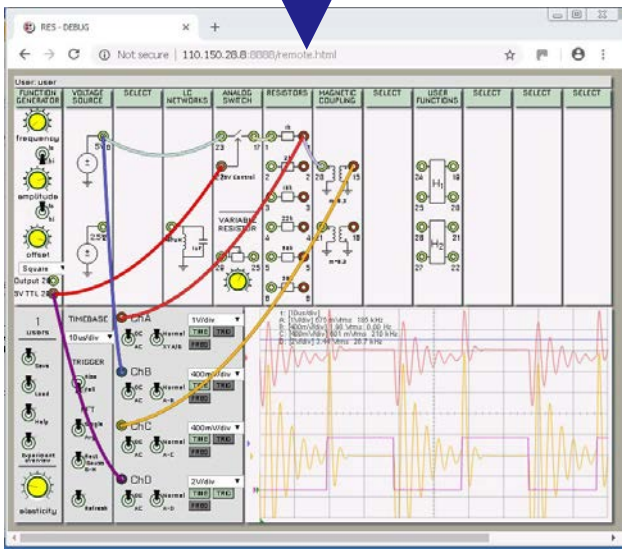
Remote Labs offer

- Lab programs for multiple classes, with one piece of hardware
- Providing hands-on hardware experiments
- 24/7 access to experiments for up to 70 students AT A TIME



Remote Lab Attributes

INTERNET



1 – DIRECT EXTENSION OF THE PHYSICAL LAB

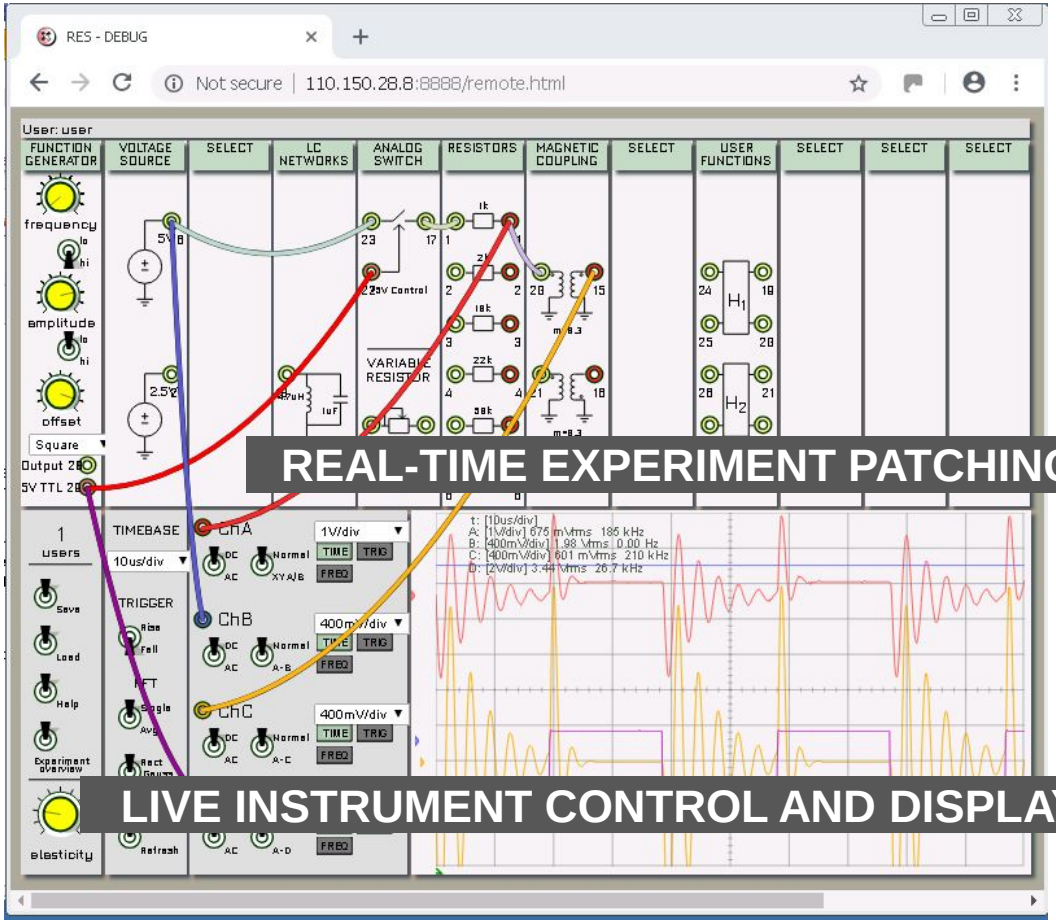
2 – FAST RESPONSE

3 – REAL “non-ideal” PARTS

4 – MULTIPLE EXPERIMENTS: all students can do the same OR different experiments, AT THE SAME TIME

Student transition from a traditional lab to a remote lab is seamless

Student experiment access via web browser



netCIRCUITlabs includes a webcam so students can see the hardware

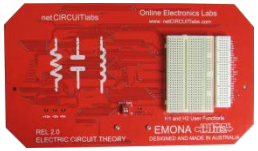
Two EMONA TIMS – Remote Lab Experiment Platforms

1. ELECTRONICS CIRCUITS EXPERIMENTS:

netCIRCUITlabs Control Unit:

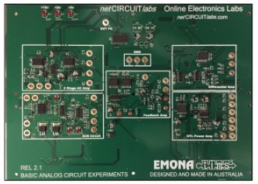
The **experiment board** plugged-in, contains a number of experiments.

netCIRCUITlabs Experiment Boards:

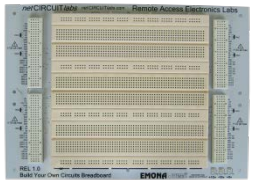


CIRCUIT THEORY

DIGITAL LOGIC

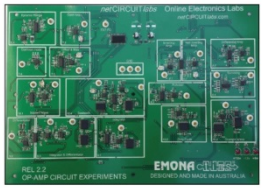


TRANSISTORS



CUSTOM CIRCUITS

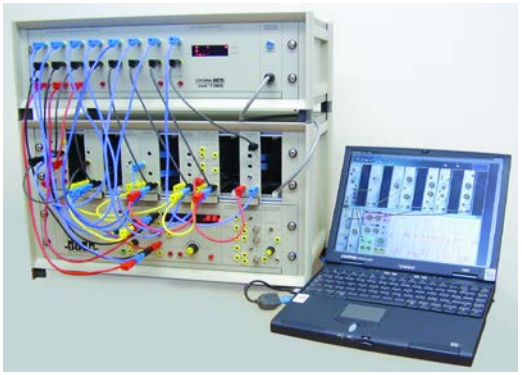
Professor built, analog or digital custom circuits for students to control remotely.



OP-AMPS

2. TELECOMS EXPERIMENTS:

netTIMS-System:



net*TIMS for ADVANCED Telecoms and signals & Systems experiments.

netTIMS-FreeWire:

netTIMS-FreeWire for FUNDAMENTAL Telecoms experiments.

Recapping - the Benefit for Institutions:

- With one piece of equipment

30 students at one time carrying out multiple experiments.

- 24 x 7, 365 days

Extreme flexibility for students, teachers and course schedules.

- Savings

Save cost, save storage space, increase lab time.

TEST DRIVE REMOTE LABS TODAY

Go to www.emona-tims.com and click on ”IoT BASED HARDWARE LABS”