

New Product Development:

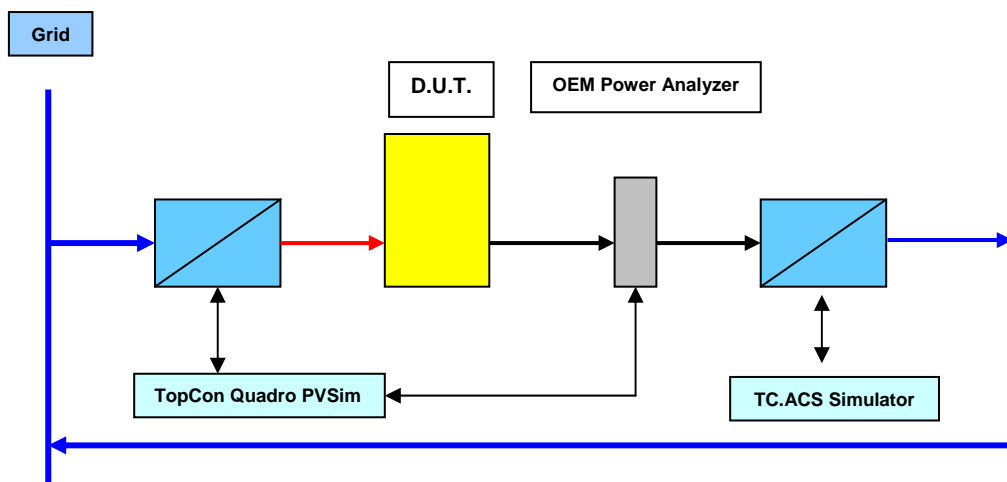
## **Grid Simulator - full digital, full 4-quadrant, full regenerative operation**

*Press Release*

Rorschach, October 10<sup>th</sup>, 2012

### **Are SMART GRID, E-MOBILITY, PV or Wind Energy your topics?**

On the occasion of electronica 2012 in Munich REGATRON introduces the newly developed 4-Quadrant Grid Simulator TC.ACS. Along with the existing DC power supply series TopCon Quadro and TC.GSS REGATRON now offers a complete test and simulation environment for grid-tied inverters and systems.



**Picture 1:** Example of a complete PV- / grid simulation environment

Three powerful building blocks for your development- and test departments:

### **New Development**

#### **TC.ACS Series: 4-Quadrant Grid Simulator**

Simulation port 3P + active N (4 outputs), voltage 0 – 280 V per phase

Unit power 50 kVA, full 4-quadrant operation, full regenerative (feedback of energy to grid)

Power upgrading in 50 kVA steps up to 700 kVA

State-of-the-art multilevel double inverter technology allowing for highest efficiency both in source and sink operation.

Further characteristics:

- Frequency range 16 – 1000 Hz (fundamental wave), DC operation possible
- Modulation bandwidth 3 kHz
- Allows for test procedures according to EN- and country standards
- 4-quadrant-amplifier operation, "hardware-in-the-loop" possible
- Comprehensive application software ACSControl

**TopCon Quadro Series: DC Power Supplies**

Voltages from 52 VDC up to 1200 VDC, in series connection up to 1500 VDC

Power from 10 kW up to 1.2 MW modular

Full digital, full programmable

User-definable series / parallel / matrix connection

Worldwide field-proven in e.g.:

- Real time simulation of solar arrays of any order
- Simulation of energy-, onboard- and storage systems
- Demanding DC supply tasks, laboratory applications
- Optional application software TFEAAP, SASControl

**TC.GSS Series: Regenerative DC Source / Sink Systems**

Voltages 400 / 500 / 600 VDC, in series connection up to 1500 VDC

Power from 20 kW up to 1.2 MW modular

Full digital, full programmable

PFC functionality, user-definable series / parallel / matrix connection

Worldwide field-proven in e.g.:

- Simulation of batteries and bidirectional storage systems
- Programmable tests of battery systems, micro- and full cycling
- Programmable tests of drive trains, hybrid technology
- Optional application software BatControl, BatSim

For more information about these products please refer to:

<http://www.regatron.com/en/products-topcon.html>



**Picture 2:** 192 kW battery simulator, nominal output voltage up to 1500 VDC, depending on user defined master-slave configuration of the single devices. System contains 6 bidirectional DC power supply units TC.GSS.

**About REGATRON:**

REGATRON AG develops and manufactures technologically advanced products in the field of power electronics. The company has 100 employees and is domiciled in Rorschach, SWITZERLAND. TopCon AC/DC and AC/AC products are used in development-, test- and process technology applications, throughout industry, R&D and science. Typical application examples are simulation of solar arrays of any order, test and simulation of batteries, test of hybrid and electronic drive trains, plasma surface technology, simulation of the utility grid to test grid-tied inverters and supplies according to standards.

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