IC-CAP

IC-CAP introduces major new capabilities to the IC-CAP Platform. In addition to the new Gallium nitride (GaN) extraction package, the new Python programing environment and the extension of the PNA-X driver to nonlinear measurements, IC-CAP 2013.01 brings an array of other new features, such as support for the Smartspice simulator and for National Instrument interfaces and cards on the LINUX platform.

IC-CAP WaferPro, a powerful automated on-wafer measurement solution, now features new usability and user interface enhancements to facilitate test plan development. IC-CAP DataPro adds batch processing capability to automate automated multi-size devices analysis.

IC-CAP Angelov-GaN Extraction Package

Keysight's IC-CAP Angelov-GaN Extraction Package was developed in conjunction with industry partners. The software add-on provides a dedicated environment that enables users to perform the necessary measurements and extraction of the Angelov-GaN model. The model was developed by Professor Iltcho Angelov at Chalmers University of Technology and is quickly establishing itself as the industry's solution for GaN modeling. The software supports DC and S-parameter measurements and de-embedding. A turn-key extraction flow is provided as a starting extraction procedure and the flow can be fully customized. Simulations are performed using Keysight's Advanced Design System (ADS).
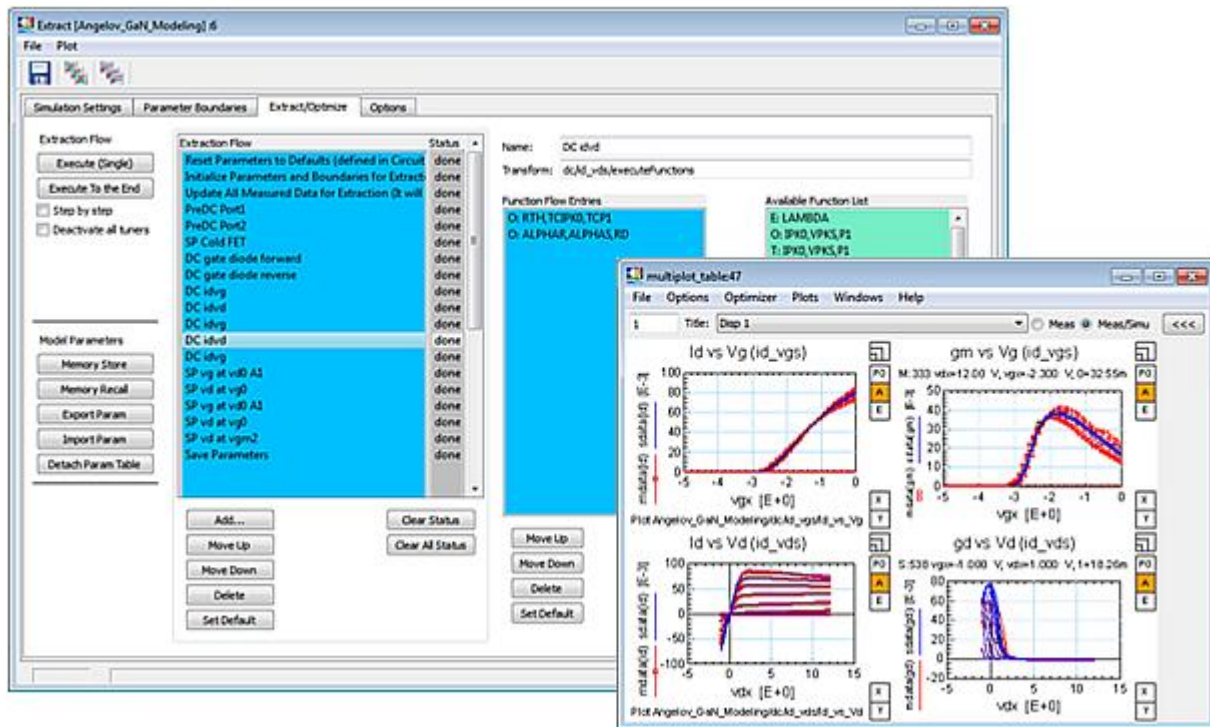

Figure 1. *Angelov-GaN Toolkit*

IC-CAP Python Programming Environment

IC-CAP also features a new Python programing environment that brings a dramatic speed increase—up to 100X for typical tasks such as parameter extraction, data analysis, instrument control, and UI responsiveness—and productivity improvements to custom applications. The Python programing environment enables better code organization and provides an extensive set of libraries, such as math, instrument control and statistical analysis. With IC-CAP Python, users experience major efficiency gains when developing their programs. Python programs can coexist and are interoperable with existing PEL programs, ensuring compatibility with existing IC-CAP projects. IC-CAP PEL programming language remains fully supported. Please refer to the IC-CAP Product Documentation on how to get started and to view examples of IC-CAP Python programs. For more information about Python, including training and references, refer to the official Python website at http://www.python.org/.

PNA-X Driver Support for nonlinear measurements

A new driver has been added for the Keysight PNA-X network analyzer. The driver is a superset of the current PNA driver; in addition to linear S-parameter measurements, the new driver supports gain compression and two-tone intermodulation distortion measurements. These nonlinear measurements are essential to verifying model accuracy in real applications by comparing ADS harmonic balance simulation with measured data. Automated on wafer measurements with the PNA-X can be used to monitor circuit specifications.

IC-CAP WaferPro

IC-CAP Wafer Professional Measurement (WaferPro) includes major functionalities and usability enhancements that make the program easier to learn and use. New test routines that implements simple I-V or C-V sweeps no longer require any programming effort. For example, defining a new test routine is now very simple and only requires the Inputs/Outputs setup definition and the creation of a few variables to control start, stop, etc. values. It is now possible to load and explore measured data from a previously run test plan. Other major UI improvements include a new log window, new confirmation dialog displayed before a test plan is run, the ability to define and save benches from the user interface and many others
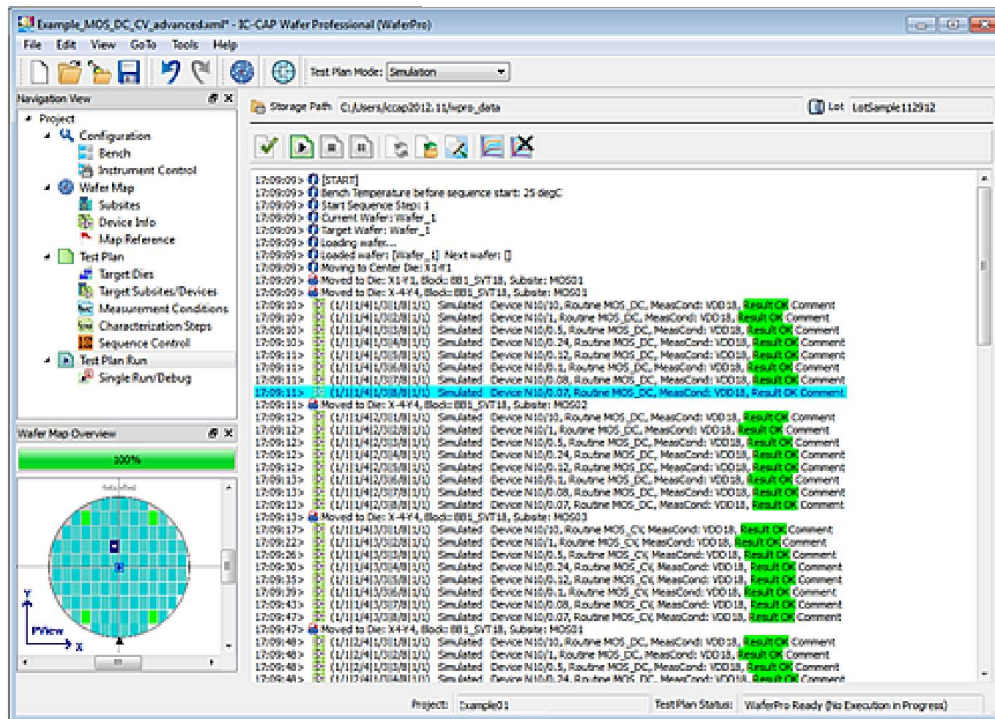
Figure 2. *The New WaferPro User Interface*

Solaris Discontinuance

As previously announced, the Solaris (SUN OS) platform support has been discontinued and IC-CAP 2013.01 is only supported on the LINUX Red Hat and Windows® operating systems.

Get Started

If you are ready to get started using IC-CAP, click **Trials & Licenses > Details & Download > Request Free Trial License**.