



News Release

CyboSoft to Present New Model-Free Adaptive (MFA) Control Solutions at Intersolar and SEMICON West

May 15, 2014 – CyboSoft (Rancho Cordova, California) today announced that it will present new Model-Free Adaptive (MFA) control products and solutions at Intersolar North America and SEMICON West on July 8-10, 2014 in San Francisco, California. The MFA control technologies can offer powerful solutions for PV solar, thermal solar, and semiconductor industries. Specific MFA control solutions can be delivered in hardware, software, or embedded software in customer’s selected platform.

CyboSoft CEO Dr. George Cheng said, “Model-Free Adaptive (MFA) control, as its name suggests, is an adaptive control method that does not require process models. Since its introduction in 1997, MFA control products have been widely deployed for process control, building control, and equipment control. MFA users have achieved significant economic benefits such as improved product quality, safer and more efficient operations, energy and cost savings, faster time to market, and competitive advantages. MFA is often an enabling technology for emerging high-tech processes, devices, and equipment.”

For instance, in the PV solar industry, CyboSoft’s Model-Free Adaptive (MFA) control technology and software have been embedded in CyboEnergy’s CyboInverter, a patented and award-winning solar power Mini-Inverter. CyboInverter has 4 input channels, each of which has its own control and maximum power point tracking (MPPT) mechanism so that power production is maximized and the partial shading problem is eliminated. “CyboInverter has 4 DC inputs with varying power levels due to sunlight variations and 1 AC output that must be synchronized with the grid AC waveform at 50 Hz or 60Hz. From a control point of view, the CyboInverter is a 4-input-1-output (4x1), high-speed, and nonlinear process. It is extremely difficult to control using conventional or model-based control methods,” Dr. Cheng explained.

As shown in the following picture, CyboInverter is a solar power Mini-Inverter possessing the key merits of both central inverters and microinverters. Both on-grid and off-grid CyboInverters have been successfully deployed in many locations around the world. This validates MFA’s powerful capabilities in high-speed, multivariable, nonlinear control and optimization.



At Intersolar (Booth 8717, Moscone West Convention Center - 2nd Level), CyboSoft will present MFA control solutions in the following application areas:

- (1) Thermal solar power plant control for superheater temperature, steam turbine, and boiler water treatment processes;
- (2) Silicon and thin-film PV solar panel manufacturing process control,
- (3) Advanced process control for semiconductor furnaces, deposition, etching, rapid thermal processing (RTP), chemical mechanical polishing (CMP), and
- (4) High-speed adaptive motion control for nanopositioners and piezo-motors.

About CyboSoft

CyboSoft, General Cybernation Group, Inc., is the leader in control technology serving the worldwide process control, building control, and equipment control markets. CyboSoft's patented Model-Free Adaptive (MFA) control technology for automatically controlling physical processes is a major breakthrough. No other comparable technology possesses all the attributes of MFA. CyboSoft received the 2007 Frost & Sullivan "North America Technology Leadership Award" in the field of Industrial Automation.

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