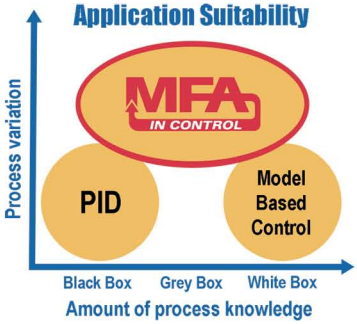
Comparison of Control Methods

	PID	MBC	MFA
General Purpose	✓	×	✓
Adaptive	×	✓	✓
No Process Model	✓	×	✓
No Identification	✓	×	✓
No Controller Design	✓	×	✓
No Manual Tuning	×	✓	✓
Controls Complex Systems	×	✓	✓
Easy to Use and Maintain	×	×	✓

Application Suitability



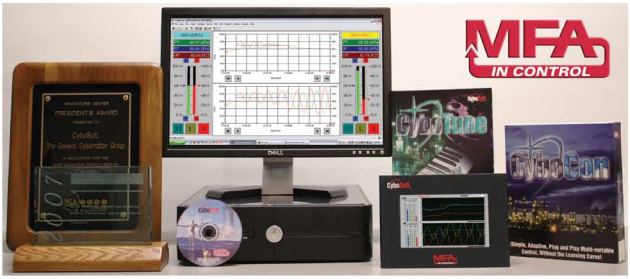
MFA is suitable for Grey box problems, where the process has uncertainties including load, fuel, and dynamic changes. PID – one algorithm for all, MBC – one algorithm fits one system, MFA – one algorithm solves one control problem.

MFA Control Toolset for LabVIEW®

- Embedded Model-Free Adaptive (MFA) controller VI's in LabVIEW for simulation and real-time control.
- Suitable for high-speed control of equipment that has varying operating conditions.
- Runs in PC, PXI, cRIO, and cFP.
- Tens of thousands of MFA VI's in operation (ex: drilling control, rapid thermal processing).

MFA Control Toolbox for MATLAB®

- Embedded MFA controllers inside MATLAB/Simulink as S-functions. A seamless integration.
- Run simulation first to prove the concept and then implement with ease. Reduces R&D cost, risks, and time to market.
- Suitable for teaching and R&D.



MFA at a Glance

- SISO MFA to replace PID.
- MIMO MFA to control multivariable processes.
- Nonlinear MFA to control extremely nonlinear processes.
- Anti-delay MFA to control processes with large time delays.
- Robust MFA to force the process variable to stay in defined bounds.
- Feedforward MFA to deal with measurable disturbances.
- MFA pH controller to control pH processes.
- Anti-delay MFA pH controller for pH process with large time delays.
- Time-varying MFA controller for processes with large process time constant and delay time changes.
- Flex-phase MFA to control open-loop oscillating processes.

CyboSoft
www.cybosoft.com
E-Mail: info@cybosoft.com Phone: 1-916-631-6313
2868 Prospect Park Drive, Suite 300
Rancho Cordova, CA 95670 USA