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## Integration of Variable Frequency Drives into the Logix Programming Environment

# Goals of Lab

- Learn how to configure your drive system using a single software tool, single network to simplify commissioning of the entire control solution
- This lab exercise demonstrates the following concepts of using RSLogix 5000 embedded motion instructions with a PowerFlex 755 AC drive:
  - Time efficient nature of using a single software tool for your programming environment
  - Power and performance-oriented nature to the Integrated Architecture solution
  - Ease of system setup utilizing the *'Drives & Motion Accelerator Toolkit'*

# What You'll Do

- You will be introduced to the RSLogix 5000 software environment as the single software tool for configuring, commissioning, and troubleshooting PowerFlex 755 drives.
- You will see how easy it is to integrate Intelligent Motor Control devices into the Rockwell Automation Integrated Architecture
  - Create and configure PowerFlex drives using RSLogix 5000 software
  - Learning basic motion control commands with in RSLogix 5000 software
  - Use the *'Drives & Motion Accelerator Toolkit'* to speed programming of your application.
  - Learn some basic troubleshooting techniques
  - Introduction to the advanced diagnostic and configuration tools available within the PowerFlex drive
  - Introduction to the new Motion Drive Start or MDS instruction

# The Equipment

- ControlLogix (CL41) Demo Box (03P303A):
  - 1756-L75 controller
  - 1756-EN2TR EtherNet/IP bridge module
- IMC Demo Box (11P012A):
  - PowerFlex 755
  - 1783-ETAP
- IMC Motor Demo Box (10P007A)
- Computer

# Notes About the Lab

- The HMI should have loaded on your desktop
  - Do not click “OK” until instructed to do so
- Optional Lab – PowerFlex 755 Webpage
  - Click Connect if asked to Work Online.
- The labs are running inside of virtual machines
  - This improves consistency between labs
- This lab extensively utilizes the ‘Drives and Motion Accelerator Toolkit’
  - This modular framework provides electrical drawings, panel layouts, sample code and HMI screens to speed new machine development and design

# CIP Motion & EtherNet/IP

Common Industrial Protocol (CIP) Motion and CIP Sync technology from ODVA is defined as:

- A scalable and comprehensive solution that provides a common application interface and services for general purpose and motion control drives using the same profile.
- Allen-Bradley CIP Motion is based on embedded profiles in RSLogix 5000 software and drives on EtherNet/IP.
- CIP Motion on EtherNet/IP provides an open, high bandwidth, high performance solution for multi-axis, distributed motion control.
- CIP Motion on Ethernet/IP allows multiple axes to be coordinated for precision, synchronized motion control.
- Compatible with standard Ethernet topologies.



# CIP Motion for PowerFlex Drives Feedback

- Please join us for a 90 minute feedback session to provide us with additional feedback on today's programming experience.
- Share your likes, dislikes, and the requirements and/or improvements you would like to see in CIP Motion—single programming tool environment—for PowerFlex drives

Thursday, November 17, 2011

2 PM to 4 PM

Hyatt McCormick Conference Center, CC 20 A

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Questions?  
Comments?  
Concerns?

Please ask your lab instructor.