Foxboro Evo™ Process Automation System

Product Specifications

Foxboro®

by Schneider Electric

PSS 31H-7SMIEXP

SPECTRUM Migration Integrator Expert

The SPECTRUM Migration Integrator Expert (SMIE) consists of software and appropriate hardware to convert existing SPECTRUM process database media and format into Foxboro Evo™ Control Processor blocks. This toolset decreases the overall time of project execution.

PRODUCT DEFINITION

The SMIE consists of software and hardware that provide a “front end” conversion and documentation of an existing SPECTRUM database. Results of this conversion are input specifications for the Foxboro® Computer Aided Engineering (FoxCAE) tool.

Hardware

An Intel® compatible personal computer (PC) is required to operate SMIE. This PC must be Microsoft® Windows capable and have an available parallel port. The FOX 3, 300, and SPECTRUM Multistation (SMS) process computers and VIDEOSPEC operator displays Version 3 (VS3) and Version 4 (VS4) systems store control strategy information on floppy disks. SMIE reads this media using an outboard 8-, 5.25-, or 3.5-inch floppy disk drive tool. Alternately, Foxboro® provides media conversion and/or complete migration services.

The SMIE diskette drive assembly accepts input voltages from 85 V ac to 264 V ac with input frequencies from 47 to 63 Hz. Input current is 2 A maximum at 115 V ac.

Software

SMIE is a preprocessor software package to be used with or without FoxCAE. The SMIE is a Microsoft Windows based package which resolves a plant database sourced from one or more Foxboro SPECTRUM systems and provides reporting and conversion to Foxboro Evo control blocks. FoxCAE accepts output from the SMIE for documentation, verification, and editing purposes. Loadable Foxboro Evo control strategies result from SMIE preprocessing and FoxCAE processing.

SYSTEM CONFIGURATION FUNCTIONALITY

Original media includes 8-inch floppy disks (VS3, FOX 3, 300), 5.25-inch floppy disks (VS4, SMS), and 3.5-inch floppy disks (some SMS, VS4).

After reading original media, SMIE translates control structure information from SPECTRUM control structures into Foxboro Evo control structures. SPECTRUM control structures include FCP (FOX 3, 300, SMS), MICROSPEC (SMS storage, VS storage), FIO (SMS storage, VS storage), and Faceplate Display (VS3, VS4). The converted and resolved plant database exports to FoxCAE for verification and adjustment by engineering personnel. This graphical engineering tool maintains and produces loadable databases for Foxboro Evo processing modules.

Control functions that are accomplished in Foxboro Evo systems by different and technically advanced means are not converted. This avoids extensive reverse engineering of automatic conversions that could not offer technically acceptable results. Migration for functions which offer advanced solutions is accomplished using technically competent engineers to reengineer these functions. Functions not migrated include EASYBATCH, historians, reports (are SMS), graphic operator displays (FOX 3, 300, SMS) and any application programming.

Larger SPECTRUM systems have more than one host system which reference process points or control loops. The SMIE resolves station, nest, block, and point addresses among all defined SPECTRUM host devices. Duplicate control loops are not created for multiple SPECTRUM host references.

SMIE also recreates Foxboro Evo system scan blocks for process points that are not associated with a control loop.

The entire conversion process adheres to Foxboro Evo Control Processor (CP) guidelines. Block counts are maintained for specified target CP images.

CONTROL DATABASE SOURCES

FCP Migration

Foxboro Control Package (FCP) is the control package used in FOX 3, 300, and SMS. FCP databases are stored on disk files as text source. Any FCP database can be “back translated” into source using a simple command on the host computer. The resulting source is stored in a fixed data file as character (ASCII) format.

SMIE reads the character format file from native 8-inch floppy disk (FOX 3, 300) or 5.25-inch floppy disk (SMS) media. SMIE control loop translation maps each FCP scheme into Foxboro Evo control compounds. SMIE creates appropriate Foxboro Evo control blocks within compound structures corresponding to the FCP scheme structures. The same translation maps applicable control block parameters from the FCP block structures to appropriate parameters in corresponding Foxboro Evo blocks.

MICROSPEC Migration

MICROSPEC (UCM) databases are stored on SPECTRUM host disk files in a fixed, regular operational format. SPECTRUM hosts which store images of UCM include FOX 300, SMS, VS3, and VS4.

SMIE reads each UCM fixed format file from native 8-inch floppy disk (FOX 3, 300, VS3) or 5.25-inch floppy disk (SMS, VS4) media.

SMIE maps each UCM into Foxboro Evo control compounds. The created compounds are named using operator defined naming defaults.

SMIE creates appropriate Foxboro Evo control blocks within compound structures corresponding to the UCM being processed. The same translation maps applicable control block parameters from the UCM block structures to appropriate parameters in corresponding Foxboro Evo blocks.

FIO Migration

Field Input/Output module (FIO) databases are stored on SPECTRUM host disk files in a fixed, regular operational format. SPECTRUM hosts which store images of FIO include FOX 300, SMS,VS3, and VS4).

SMIE reads each FIO fixed format file from native 8-inch floppy disk (FOX 300,VS3) or 5.25-inch floppy disk (SMS, VS4) media.

SMIE translates group/slot/point addressing into appropriate Foxboro Evo input and output type blocks.

VIDEOSPEC Display Sources

VIDEOSPEC (VS3, VS4) databases determine where and how process information is displayed on an operator console. These databases (DBC) are stored on VIDEOSPEC host disk files in a fixed, regular operational format.

SMIE reads each DBC fixed format file from 8-inch floppy disk (VS3) or 5.25-inch floppy disk (VS4) media. The operator faceplate translation takes place within a Foxboro Evo system.

SMIE translates displays into appropriate Foxboro Evo default displays.

Only default faceplates of participating primary process data points is supported. Nonstandard connections (such as MID) must be displayed by custom built faceplates. SMIE places a default faceplate for the primary process point. The Display Builder is used later on the target Foxboro Evo system to modify the default faceplate to emulate the original VIDEOSPEC faceplate operation.

ORDERING INFORMATION

Part Number	Description
K0200EX	SPECRTUM Migration Expert Software
P0903PQ	SPECTRUM Migration Expert Disk Drive

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