|  |  |  |
| --- | --- | --- |
| SSI #: 181982 | Rev. | Task ID / Description |
| A | MC3 AVT PLC - Comexi Sweep Control - Profibus Bridge - Press Simulator |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Type (Select 1) | Requirements Spec Status | | | Design Spec Status | | | Code Inspection Status | | |
| Enhancement | For Review  Accepted  Rejected | | | For Review  Accepted  Rejected | | | For Review  Accepted  Rejected | | |
| New Feature | Process | Name | Date | Process | Name | Date | Process | Name | Date |
| Bug Fix | Originator |  |  | Originator |  |  | Originator | Mark Colvin | 10/31/18 |
|  | Reviewed |  |  | Reviewed |  |  | Reviewed |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Impact | Check-In | | Carry back/over | |
| High Risk  Medium Risk  Low Risk | Checked into PVCS  Baseline: | Date | Carry back  Carry over  Branch:       Branch: | Date |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Systems Affected (Select all that apply) | | | | |
| Host/Console | Subsystems | Peripherals | OEM (must also select Host) | \*OEM Type |
| Autosmart | CCU– PQ Camera Ctrl Unit | Autosmart Cmgr | ABB | Standard |
| Clarios | Clarios/CQD On-Press | CIP– CIP Interpreter | CANbus | Master |
| Microcolor II | Client | CN2 – Colornet II | Goss Colortrol | Slave |
| Mercury | Configuration | CQCM – CQ Cmgr | Goss Nantes |  |
| PressAnalysis | CQFG – CQ Frame Grabber | PS – PlateServer | Goss OV3 \* |  |
| PrintQuick | L&A – Lights & Alarms | PDE – Press Data Export | Goss PCQ II PLC |  |
| RibbonQuick | NGOP (NGPH) | PQCM – PQ Cmgr | Goss TCS PCQ |  |
| Simulators | OCU3 |  | Goss TCS/O2 \* |  |
| Internal Tools (      ) | PCU |  | HWS CPC |  |
|  | PHCM |  | KBA Colortronic \* |  |
|  | PQCAM – PQ Camera |  | KBA Densitronic |  |
|  | RCU – Ribbon Control Unit |  | KBA Colortronic SCL | Documentation |
|  | RPLC – RIO PLC | PLC | Komori PQC-IV | Manual(s) |
|  | RQCAM – RQ Camera | Chambon | MAN Pecom04 | Service Note(s) |
|  | Server | Goss | MAN Pecom95 | Release Notes(s) |
| Other Systems | Servo2+ | Hantscho | MAN Pecom90 | Install Docs |
| Jupiter | SVO – Servo | Mitsubishi | MLP API | Theory of Operation |
|  | SpectralLab SMU | Toshiba | Mitsu II \* | (Other) |
|  | SPU | RIO/Rabbit |  |  |
|  | SPU3 | Beckhoff AVT\_PLC | (Other) |  |
|  | TCM – CQ Timing Control |  |  |  |
|  | TCMR–PQ Timing Control |  |  |  |
|  | (Other) |  |  |  |

Requirement Specification Details: (If separate document) See SDS

# General Description of the Task and its Desired End Result / Description of the Problem Found (Bug Fix)

# Interface Requirements (Specify type of interface such as User, Communication, etc.)

# Functional Requirements

# Performance Requirements

# Other Requirements

Design Specification Details: (If separate document) See SDS:

# Root Cause Analysis: (Bug fix)

# Theory of Operation: (Describe all algorithms and sequence of events within the task)

See document **Comexi\_Simulator\_20181023.docx** for theory of operations

See document **Setup\_Comexi\_Simulator.docx** on how the Hilscher NetTAP50 Gateway works and setup.

The latest Hilscher project file **PressSim15.spj** and folder can recreate the data convert gateway setup.

See document **SSI-177002-182050-A.docx** for complete description of the Mercury changes for the Comexi Sweep interface.

See email thread **Comexi PLC 0\_4 - testing 20181101.msg**

This document describes the changes to create the MODBUS Master software for the Comexi Press control logic and GUI.

# User Interface Related Changes/Additions: (Describe all UI additions and changes expected)

## Purpose

## Inputs

## Processing

## Outputs

## Changes/Additions to Title/Configuration/Menu

# Internal System Related Changes/Additions: (Describe all additions and changes expected)

## Purpose

## Inputs

## Processing

## Outputs

## Change/Addition title

# Global Structure (Class) Requirements: (List all global structure changes and additions expected)

|  |  |  |  |
| --- | --- | --- | --- |
| NEW / REV | CLASS / STRUCTURE NAME | TYPE (Size) | DESCRIPTION |
|  |  |  |  |

# Global Variable Requirements: (List all global variable changes and additions expected)

|  |  |  |
| --- | --- | --- |
| NEW / REV | TYPE (Size) | DESCRIPTION |
|  |  |  |

# Network Message Requirements: (List all network message changes and additions expected)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NEW / REV | SYSTEM | | PROTOCOL  (Ethernet, Serial) | DESCRIPTION |
| FROM | TO |
|  |  |  |  |  |

# Resource String Changes/Additions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NEW/ REV | MESSAGE ID | TEXT | MAX LTH | TRANSLATE  (Y/N) |
|  |  |  |  |  |

Implementation Details: (If separate document) See SDS:

# Changes Made to Implement the Task: (Describe changes made)

Changes to ModRSsim2 code base – working MODBUS master Windows application via VS2010 project and open source code.

Comexi\_Press.cpp & .h files – This is the code for the Comexi Press Sim dialog.

mod\_RSsim.rc – new GUI and modified main toolbar dialog

MOD\_RSsimDlg.cpp & h files – changes to timer threads to perform OUTPUT to INPUT data transfer in MODBUS registers so the Hilscher gateway can appear like the Comexi press at the Profibus interface.

The rest of the source code is a functional MODBUS/TCP master tool. See other files for original source and support at this URL :"http://sourceforge.net/projects/modrssim2"

# Function Changes / Additions: (List all functions affected by the change)

|  |  |  |  |
| --- | --- | --- | --- |
| NEW / REV | FILENAME | ARCHIVE REVISION | FUNCTION NAMES |
|  |  |  |  |

# Global Structure (Class) Changes / Additions: (List all global structures changed or added)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NEW / REV | CLASS / STRUCTURE NAME | CLASS / STRUCTURE MEMBERS | | DESCRIPTION |
| TYPE (Size) | VARIABLE NAME |
|  |  |  |  |  |

# Global Variable Changes / Additions: (List all global variables changed or added)

|  |  |  |  |
| --- | --- | --- | --- |
| NEW / REV | TYPE (Size) | VARIABLE NAME | DESCRIPTION |
|  |  |  |  |

# Network Message Changes / Additions: (List all messages changed or added)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| NEW / REV | MSG #  (0x0100) | SYSTEM | | PROTOCOL  (Ethernet, Serial) | MESSAGE FORMAT (Data Content) | DESCRIPTION |
| FROM | TO |
|  |  |  |  |  |  |  |

# Resource String Changes/Additions: (List all messages changed or added)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NEW/ REV | MESSAGE ID | TEXT | MAX LTH | TRANSLATE  (Y/N) |
|  |  |  |  |  |

Test Plan Details: (If separate document) See STP:

# Steps to reproduce the problem: (Bug Fix)

## Test Setup

|  |  |
| --- | --- |
| Load used to produce problem |  |
| Lab testable (YES/NO) |  |
| Spin fixture needed(YES/NO) |  |
| OEM, configuration and setup required |  |
| Supporting Software |  |
| Other (Specify) |  |

## Test Steps

See test steps in file **SSI-177002-182050-A.docx** for complete description of the Mercury changes for the Comexi Sweep interface.

# Test Summary

|  |  |  |  |
| --- | --- | --- | --- |
| NAME/NUMBER | DESCRIPTION (PURPOSE) | ALPHA OR BETA TEST | REQUIREMENT |
|  |  |  |  |

# Test Procedures

## Alpha Tests

### Test Name/Number

#### Purpose (Describe the capabilities to be verified)

#### Method (Describe steps for conducting the test)

Input (Describe any input data to be supplied for the test)

Output (Describe any output data to be collected)

Evaluation Criteria (Describe how to determine test success or failure)

Errors/Retesting (Describe error handling)

Results (Describe expected/actual results of the test)

## Beta Tests

### Test Name/Number

#### Purpose (Describe the capabilities to be verified)

#### Method (Describe steps for conducting the test)

#### Input (Describe any input data to be supplied for the test)

#### Output (Describe any output data to be collected)

#### Evaluation Criteria (Describe how to determine test success or failure)

#### Errors/Retesting (Describe error handling)

#### Results (Describe expected/actual results of the test)

Inspection Details: (If separate document):

# General Information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | DATE | MEETING LENGTH | INSPECTION TYPE | DESCRIPTION |
|  |  |  |  |  |

# Attendees

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | MODERATOR | PREP TIME | READER | PREP TIME | TESTER | PREP TIME | AUTHOR | GUEST |
|  |  |  |  |  |  |  |  |  |

# Code Inspected

|  |  |  |
| --- | --- | --- |
| MODULE NAME | LINES OF CODE INSPECTED | COMMENTS |
|  |  |  |

# Defects

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # | DEFECT  TYPE | SEVERITY | MODULE | LINES | DESCRIPTION |
|  |  |  |  |  |  |

The following table lists the types of standard defects:

| **Number** | **Name** | **Description** |
| --- | --- | --- |
| COM | Comments | Code, documentation, messages & manuals |
| SYN | Syntax | General syntax problems |
| TYP | Typos | Spelling and punctuation |
| IF | Instruction Format | General format problems |
| BE | Begin-end | Improper operation delimiters |
| BU | Build | Package change management, library, version control, system build |
| ASN | Assignment | General assignment problems |
| NC | Naming convention | Naming declaration, duplicate names |
| SVR | Scope of Variables |  |
| IC | Initialize and close | Variables, objects, etc. |
| RVL | Range variable limits | Array range |
| IF | Interface | General interface problems |
| IN | Internal | Procedure calls and references |
| IO | Input/Output | File, display, printer, communication |
| UF | User formats | Contents |
| CEM | Checking error messages | Inadequate checks |
| DSC | Data Structure | Content |
| DSS | Data Structure | Scope |
| FUN | Function | General logic |
| PTR | Pointers | Pointers, strings |
| LP | Loops | Off-by-one, incrementing, recursion, etc. |
| AG | Algorithmic | Application computations |
| SC | System Configuration | Timing, memory, etc. |
| ENV | Environment | Design, compile, test, other support system problems |
| REQ | Requirement | Missed, incomplete or incorrect requirement |
| STD | Standards | Non-conformance to the coding standard |
| MIS | Missing | Overlooked, left out |
| X | Extra | Not needed |
| PF | Performance | Impacts the performance of the code |
| OI | Open Item | Unresolved item assigned as an action item |

Documentation Details:

# Manuals:

# Service Notes:

# Release Notes:

# Install Docs:

# Theory of Operation:

# Other (Specify):