

Systems Associates, Incorporated

ControlIQ Building Automation Solutions
SynergyMMS Maintenance Management Software



Interface: Delphi - Hilton
Version: 1.00 (revision history listed at the end of this document)
Date: December 15th, 2008
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Document Requirement: New Market / Hilton IT
Document Title: Vendor Functional Summary

Interface Specifications

1. Intellectual Property:

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2. Purpose:

It is desired to interface between Delphi meeting room scheduling and Control IQ for the purpose of the Hilton Hotels installations of ControlIQ (CIQ). This will enable CIQ to intelligently schedule the HVAC loads in the properties to economize on utility usage. Previous attempts to interface with Delphi have proved to be unreliable do to the format of the data and the methodology of using network shares within the Hilton LAN

3. Sponsoring Property:

The interface is being developed as an overall product enhancement and is not for any specific property, however, all of the previous testing and debugging was accomplished at the New York Hilton. Properties identified for immediate use for this interface are:

- New York Hilton
- Anaheim Hilton
- Chicago Hilton
- Palmer House Hilton
- San Francisco Hilton
- San Jose DoubleTree
- New Orleans Hilton
- The Waldorf=Astoria

4. SAI Associated Products:

☒ ControlIQ version 2.12.0.0
☐ SynergyMMS version _____

5. General Description of the Interface:

The interface is to collect the following information from the Delphi:

Room Name – Unique name of the meeting room or combination of rooms

Start Date/Time – What date / time does the event start

End Date / Time – What date / time does the even end

Event Type – Setup, Dining, Meeting, etc

Number of Guests expected

Specifics:

Room Name – ControllIQ has a one-to-many cross reference list of Delphi Room Name vs Building Mechanical equipment. When the room is scheduled in Delphi, ControllIQ references the proper mechanical equipment

Start Date/Time – ControllIQ uses the starting date and time as a reference for the need for mechanical equipment operation. Based on the nature of the mechanical equipment, the engineers build an AddOnTime value into the database so the room is properly conditioned by the start time of the event. This is done in minutes and is subtracted from Event Start Time.

End Date/Time – ControllIQ uses the ending date and time as a reference for the need for the mechanical equipments duration. The engineers build an AddOffTime value into the database to continue the operations of the mechanical equipment for events operating past their scheduled time and cleanup / tear down.

Event Type – ControllIQ does not schedule the mechanical equipment for items such as “Room Hold” and “Setup”.

Number of Guests – This can be used to adjust setpoints and fresh air requirements of the spaces

For example:

<u>DelphiRoom</u>	<u>ScheduleAlias</u>	<u>AddOnTime</u>	<u>AddOffTime</u>
Murray Hill	AHU-3-1	120	60
Murray Hill	VAV312	120	60
Murray Hill	VAV313	120	60
Murray Hill	MHLights	180	120

This data then gets added to the Class_Schedules table of Control IQ as an “exception” type of schedule to be processed once then discarded after completion.

For example, if an event in Murray Hill was schedule from 11:00am to 4:00pm the Class_Schedules table would contain:

<u>Alias</u>	<u>StartDate</u>	<u>OnTime</u>	<u>OffTime</u>	<u>Type</u>
AHU-3-1	2008-12-15	0900	1700	E
VAV312	2008-12-15	0900	1700	E
VAV313	2008-12-15	0900	1700	E
MHLights	2008-12-15	0800	1800	E

Class_Schedules is automatically processed as part of the ControllIQ Processing Engine’s event processing.

6. Supporting Documents:

Documents have been provided by New Market for the development of this interface. Specifically:

Events & BEOs Toolkit v2.0 (including documentation and programming)
SAI_Hilton Certification SOW.pdf

7. Interface Specifics:

The interface between Delphi and ControllQ will utilize Web Services. ControllQ will store the results in its mySQL database that resides locally on the ControllQ Processing Engine workstation, normally located in Property Operations. The ControllQ Processing Engine is responsible for data collection and control of the mechanical equipment at the facility as well as 3rd Party interfaces such as the one with Delphi.

ControllQ will make scheduled requests to the web service for updates to the information. This schedule is define at the property level, but is generally no more often than every 30 minutes to accommodate last minute entries and room reassignments in Delphi.

8. Structure of the message (Fields of interest in the View)

na

9. Sample Communications:

confidential

10. Tested functions:

Add meeting rooms
Add schedules
Delete Schedules
Delete meeting rooms
Move events from one room to another

11. Known Limitations to the Interface:

None at this time

12. ControllQ Driver:

Administrative Tools / Data Sources / System DSN. Add a new system DSN / ODBC called "CIQDelphi". This uses the mySQL database engine. Database Name is "Delphi". The database should reside on the same computer as the ControllQ database. The structure of the database is entered by SAI and is generated using a script that has been set up per property.

Delphi.Preferences Table

URL	- Set the URL of the New Market I Server
PropertyID	- Provided by New Market. This is similar to a UserID
LicenseKey	- Provided by New Market. This is similar to a Password
UpdateSchedules	- Set to non-zero to activate schedule updates

The ControllIQ Driver has been modified to accept this connection. Specifically in the Subsystems table:
Type = "Delphi"

Settings = "Delphi Interface"

Personality

Variables are shown with their default settings

DelphiType =BEOWebService
RefreshInterval=60 -Minutes between web service calls (refresh)

In Points

Setup a status point for Delphi	
Alias	Delphi
Name	Delphi Status
Subsystem	Delphi
Address	0

This point calls the driver. If this point is "open" or "0" then everything is working properly and the connection to the iServer is working as designed. If this point "closes" or "1" then the communications with the iServer has been lost. Contact your local IT or SAI if this happens.

ControllIQ will review the Delphi data once per hour and make adjustments as needed. Further documentation about implementing the Delphi Driver in Control IQ can be found at <ftp://controlliq.com/documents/drivers> Note that the Delphi database and table structures (SAI's version) must be installed on the CIQ computer for this to work.

In ControllIQ / Setup / Delphi you need to associate the Function Room (automatically inserted by the Delphi Interface, with any and all related schedules, already built into CIQ. This should be reviewed periodically to catch any Function Room name changes or additions.

Revision History:

None