MultiSpeak Version 3.0 Interoperability Assertion

Statement of Interoperable Functionality Between:

Vendor(s)	Product	Product Version	Role	Batch Interface	Web Client Interfaces	Web Server Interfaces
Longshine technology Co.,Ltd	EEOS	1.0	CB		CB	
Longshine technology Co.,Ltd	MS	1.0	MR			MR
Longshine technology Co.,Ltd	EEOS	1.0	CB			CB
Longshine technology Co.,Ltd	MS	1.0	MR		MR	
Longshine technology Co.,Ltd	EEOS	1.0	CB		CB	
Longshine technology Co.,Ltd	MS	1.0	CD			CD
Longshine technology Co.,Ltd	EEOS	1.0	CB			CB
Longshine technology Co.,Ltd	MS	1.0	CD		CD	

Summary:

Web Service interfaces using MultiSpeak® 3.0 standards were developed in order to provide the following capabilities to utilities that have Longshine MS (Metering System) Advanced Metering Infrastructure (AMI) and EEOS (Electric Energy Operation System) Meter Data Management (MDM):

- Enable on-demand reads to be initiated from EEOS MDM system so that readings collected by MS can be returned to EEOS for use by utility personnel in customer service processes.
- Enable EEOS MDM to command the MS AMI system to send a real time request to immediately disconnect or reconnect power at a meter for manual reconnection.
- Enable MS AMI to send real time events to EEOS MDM. Events include outage and restoration notifications.

Prerequisites:

The Longshine MS AMI system must be deployed, including MS-enabled meters,

communications infrastructure and MS Head End System (HES) head end server. The MultiSpeak interface must be enabled and configured in MS.EEOS MDM system must be deployed. The MultiSpeak interface must be enabled and configured in EEOS.

Specific Vendor Assertions:

1. EEOS MDM will request an instantaneous meter reading from MS AMI.

Importance to User: Utility users can respond to customer questions and better provide answers by verifying a meter read instantaneously during a conversation with the customer. This capability will also verify communications and power status at the meter to verify a reported outage.

How Achieved: Utility user can initiate the request through the EEOS web user interface, at which time EEOS requests a read from the meter by sending an InitiateMeterReadByMeterNumber request to the HES. The HES pings the meter and returns the data to EEOS through a ReadingChangedNotification, for display to the user. Optionally, the action can be initiated by another application or automated workflow, with the results returned to the requesting application.

2. EEOS initiates a remote disconnection or reconnection of service, which is executed via the MS AMI system.

Importance to User: The utility can perform a service disconnect on a single meter or list of meters remotely in situations such as move-out, termination of service or to suspend service for reasons of non-payment. The utility can reconnect service remotely in situations such as move-in, or to restore service following receipt of payment from a customer previously disconnected for non-payment.

How Achieved: Utility user initiates the command in the EEOS web user interface, at which time EEOS requests the MS system, via an InitiateConnectDisconnect, to send a real time request to immediately disconnect power, reconnect power for manual reconnect. After the meter responds, MS returns the new connect/disconnect state of the meter asynchronously with a CDStatesChangedNotification.If the meter doesn't communicate the EEOS process will time out.

Product: CIS

Summary of Interoperability Test Results (CD->CB)

Table 1

Recommended MultiSpeak Methods (CD)

Method	CD-CB	Importance to User	Supported by Server1(CD)	Supported by Client2(CB)	Verified inter-operable3
InitiateConnectDisconnect	OPT	CB initiates a connect or disconnect action by issuing one or more connectDisconnectEvent objects to the CD	X	X	X
GetMethods	REQ	Requester requests list of methods supported by CD	X	X	X
PingURL	REQ	Requester pings URL of CD to see if it is alive	X	X	X

Product: CIS

Summary of Interoperability Test Results (CB->CD)

Table 2

Recommended MultiSpeak Methods (CB)

Method	CB-CD	Importance to User	Supported by Server1(CB)	Supported by Client2(CD)	Verified inter-operable3
CDStatesChangedNotification	REC	CD notifies CB of state change(s) for connect/disconnect device(s).	X	X	X
GetMethods	REQ	Requester requests list of methods supported by CB	X	X	X
PingURL	REQ	Requester pings URL of CB to see if it is alive	X	X	X

Product: CIS

Summary of Interoperability Test Results (MR->CB)

Table 3

Recommended MultiSpeak Methods (MR)

Method	MR-CB	Importance to User	Supported by Server1(MR)	Supported by Client2(CB)	Verified inter-operable3
GetLatestReadingByMeterNo	REC	Returns the most recent meter reading data for a given MeterNo.		X	X
GetReadingsByMeterNo	REC	Returns meter reading data for a given MeterNo and date range.		X	X
InitiateMeterReadByMeterNumber	OPT	CB requests a new meter reading from MR, on meters selected by meter number.	X	X	X
GetMethods	REQ	Requester requests list of methods supported by MR	X	X	X
PingURL	REQ	Requester pings URL of MR to see if it is alive	X	X	X

Product: CIS

Summary of Interoperability Test Results (CB->MR)

Table 4

Recommended MultiSpeak Methods (CB)

Method	CB-MR	Importance to User	Supported by Server1(CB)	Supported by Client2(MR)	Verified inter-operable3
ReadingChangedNotification	OPT	MR Notifies CB of a change in Meter Reads by sending the changed meterRead objects.	X	X	X
GetMethods	REQ	Requester requests list of methods supported by CB	X	X	X
PingURL	REQ	Requester pings URL of CB to see if it is alive	X	X	X

1) Supported by Server means that the server has demonstrated in some interoperability test (not necessarily with this client) that it can support the method.

2) Supported by Client means that the client has demonstrated in some interoperability test (not necessarily with this server) that it can call the method.

3) Verified Interoperable means that both the client and server have demonstrated in this interoperability test that they can usefully transfer data using this method.

Certified by:
For Longshine technology Co., Ltd:

Name: Yang Lu Title

Date: 12/14/2015

Assertions Verified by:

Name: Hannu Huhdanpaa Title: MultiSpeak Testing Agent

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Testing Agent
12/14/2015
Date :

Disclaimer:

The assertions made in this document are statements of the vendors offering the products listed above. The Testing Agent has observed the software performing the tasks described in these vendor assertions.

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