

# 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
Chinasoft International Technology Services Ltd	EPMS	1.0	CB		MR → CB	
Chinasoft International Technology Services Ltd	AMI	1.0	MR			MR → CB
Chinasoft International Technology Services Ltd	EPMS	1.0	CB			CB → MR
Chinasoft International Technology Services Ltd	AMI	1.0	MR		CB → MR	
Chinasoft International Technology Services Ltd	EPMS	1.0	CB		CD → CB	
Chinasoft International Technology Services Ltd	AMI	1.0	CD			CD → CB
Chinasoft International Technology Services Ltd	EPMS	1.0	CB			CB → CD
Chinasoft International Technology Services Ltd	AMI	1.0	CD		CB → CD	

### **Summary:**

Web Service interfaces using MultiSpeak® 3.0 standards were developed in order to provide the following capabilities to utilities that have Electric Power Management System (EPMS) named as MS (Metering System) and Chinasoft Advanced Metering Infrastructure (AMI) named as Meter Data Management (MDM):

- Enable EPMS can obtain historical meter data from the AMI system.
- Enable on-demand readings to be initiated from EPMS system so that readings collected

by AMI can be returned to EPMS for use by utility personnel in customer service process.

- Enable EPMS can command the AMI system to send a real-time request to immediately disconnect or reconnect power at a meter for manual reconnection.

### **Prerequisites:**

The AMI system must be deployed, including AMI-enabled meters, communications infrastructure and AMI Head End System (HES) head end server. The MultiSpeak interface must be enabled and configured in AMI.

EPMS system must be deployed. The MultiSpeak interface must be enabled and configured in EPMS.

### **Specific Vendor Assertions:**

#### **1. EPMS will obtain historical meter readings from AMI**

**Importance to User:** Utility users can respond to customer questions and better provide answers by verifying a historical meter reading during a conversation with the customer.

**How Achieved:** Utility user can initiate the request through the EPMS web user interface, at which time EPMS requests a read from AMI database with a GetReadingsByMeterNo or GetLatestReadingByMeterNo for a given meter, GetReadingsByMeterNo will return all readings taken between two dates, GetLatestReadingByMeterNo will return the most recent meter reading.

#### **2. EPMS will request an on-demand meter reading from AMI**

**Importance to User:** Utility users can respond to customer questions and better provide answers by verifying a meter reading on-demand 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 EPMS web user interface, at which time EPMS requests a read from the meter with an InitiateMeterReadByMeterNumber request to the HES. The HES pings the meter and returns the data to EPMS with a ReadingChangedNotification, for displaying to the user.

Optionally, the action can be initiated by another application or automated workflow, with the results returned to the sponsor application.

### **3. EPMS initiates a remote disconnection or reconnection of service, which is executed via the AMI system.**

**Importance to User:** The utility can perform a service disconnect on a single meter or a list of meters remotely in situations such as move-out, termination of service or to suspend service for reason 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 EPMS web user interface, at which time EPMS requests the AMI system to send a real-time request for immediately disconnecting or reconnecting power with an `InitiateConnectDisconnect`. After the meter responds, AMI returns the new connect/disconnect state of the meter asynchronously with a `CDDStatesChangedNotification`. If the meter doesn't communicate, the EPMS process will time out.

## Product: AMI

### Summary of Interoperability Test Results (MR → CB)

Table 1

#### Recommended MultiSpeak Methods (MR)

Method Name	MR→CB	Importance to User	Supported by Server MR (1)	Supported by Client CB (2)	Verified inter-operable (3)
GetLatestReadingByMeterNo	REC	Returns the most recent meter reading data for a given MeterNo.	X	X	X
GetReadingsByMeterNo	REC	Returns meter reading data for a given MeterNo and date range.	X	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

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.

## Product: EPMS

### Summary of Interoperability Test Results (CB->MR)

Table 2

#### Recommended MultiSpeak Methods (CB)

Method Name	CB → MR	Importance to User	Supported by Server CB (1)	Supported by Client MR (2)	Verified inter-operable (3)
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
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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.

### Product: AMI

#### Summary of Interoperability Test Results (CD → CB)

**Table 3**

#### Recommended MultiSpeak Methods (CD)

Method Name	CD → CB	Importance to User	Supported by Server CD (1)	Supported by Client CB (2)	Verified inter-operable (3)
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

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.

### Product: EPMS

#### Summary of Interoperability Test Results (CB → CD)

**Table 4**

#### Recommended MultiSpeak Methods (CB)

Method Name	CB → CD	Importance to User	Supported by Server CB (1)	Supported by Client CD (2)	Verified inter-operable (3)
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CDDStatesChangedNotification	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

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:**  
**Chinasoft International Technology Services Ltd**  
**EPMS (Electric Power Management System)**  
**Meter Data Management (MDM)**

Signature: \_\_\_\_\_

Date:

Name: Daniel Ding

Title: Chinasoft Project Coordinator

**For:**  
**Chinasoft International Technology Services Ltd**  
**Advanced Metering Infrastructure (AMI)**  
**Metering System (MS)**

Signature: \_\_\_\_\_

Date:

Name: Daniel Ding

Title: Chinasoft Project Coordinator

**Assertions Verified by:**

Signature:  \_\_\_\_\_

Date: August 31, 2018

Name: Alex Abogado

Title: MultiSpeak Testing Agent

Testing Agent: KLM Technologies LLC

**Disclaimer:**

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

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