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
Elster Integrated Solutions Inc.	EnergyAxis MAS	6.0.2	OD			OD→OA
Milsoft Utility Solutions	DisSPatch	7.2	OA		OD→OA	
Milsoft Utility Solutions	Milsoft Web Server	7.2	OA			OA→OD
Elster Integrated Solutions Inc.	EnergyAxis MAS	6.0.2	OD		OA→OD	
Milsoft Utility Solutions	DisSPatch	7.2	EA		MR→EA	
Elster Integrated Solutions Inc.	EnergyAxis MAS	6.0.2	MR			MR→EA

Summary:

Milsoft's DisSPatch Outage Management System is capable of requesting the outage status for one or more AMR meters on Elster Integrated Solutions' EnergyAxis MAS platform using MultiSpeak web services. EnergyAxis MAS is capable of notifying Milsoft of the current communication status of the meters. EnergyAxis MAS can also send asynchronous outages and restorations reported by individual meters as they experience a sustained loss of power or as power is restored to them. Milsoft can also use the interface to "ping" Elster Integrated Solutions' AMR endpoints to determine their current communication status. Additionally, asynchronous outage and restoration notifications from EnergyAxis MAS allow Milsoft to process outages more efficiently or display them in "real-time".

Prerequisites:

For this interface to be useful, the Milsoft system must have knowledge of all Elster Integrated Solutions AMR meters on the EnergyAxis MAS instance. Each meter number in the Milsoft model for which meter outage status is desired must correspond to a meter number in the EnergyAxis MAS software. Furthermore, Elster Integrated Solutions' EnergyAxis MAS platform must be accessible from the machine on which Milsoft is running and vice versa.

Specific Vendor Assertions:

1) DisSPatch can request all AMR supported meters from EnergyAxis MAS. DisSPatch can also verify if a given meter is supported by EnergyAxis MAS.

Importance to user: The user can determine which consumers in the DisSPatch model are Elster Integrated Solutions' AMR meters connected through the EnergyAxis AMI solution.

How Achieved: The user selects the "Import AMR vendor tags" box in the AMR Data Importer in DisSPatch. When the Run button is clicked, DisSPatch calls the GetAMRSupportedMeters method on the MR-EA interface supported by EnergyAxis MAS. If EnergyAxis MAS reports that a meter is AMR supported, the appropriate AMR type will be visible in DisSPatch on the Consumer Data page of the Circuit Element Editor or displayed graphically with an Elster Integrated Solutions AMR Icon for the consumer having that meter number.

DisSPatch may also call EnergyAxis MAS to verify if a given meter is supported by EnergyAxis MAS, through the IsAMRMeter method of the MR server.

2) Milsoft DisSPatch can request EnergyAxis MAS to provide the outage status of one or more meters

Importance to user: The user can determine the current outage status of an Elster Integrated Solutions AMR meter without sending a line crew to the site. The user can select a particular meter or may select a group of meters downline from a selected circuit element and receive notification of the meter's current outage status.

How Achieved: The user can select a meter or any number of meters downline a circuit element in order to verify power on or potential outages. This request can be performed graphically or from the Customer and Circuit Element Locate dialog. The EnergyAxis MAS server performs a ping (a request to communicate) to the meter(s), determines the communication status of the ping, and then sends an outage detection event notification, via the ODEventNotification method, containing the current communication status of each meter to Milsoft.

3) EnergyAxis MAS can send outages and restorations reported asynchronously and autonomously by individual meters in the field to Milsoft.

Importance to user: Elster meters have the capability to report outages and restorations asynchronously. These outages and restorations are forwarded to

Milsoft allowing the user to observe in “real time” how the outage event is progressing. It also facilitates quicker resolution of outages.

How Achieved: Upon loss of power or subsequent to power restoration, the meter informs the EnergyAxis MAS system. EnergyAxis MAS creates the corresponding outage or restoration event and forwards it to Milsoft DisSpatch using the ODEventNotification method. The outage or restoration almost immediately appears in Milsoft’s graphical network view or in other places in DisSpatch.

Products: Milsoft DisSPatch and Elster Integrated Solutions EnergyAxis MAS platform

Summary of Interoperability Test Results
Interface #5
OD→OA

Table 1
Recommended MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (OD)	Supported by Client[2] (OA)	Verified Inter-operable[3]
GetMethods	Requests a list of methods supported by the server.	X	X	X
PingURL	Verifies that the server is running and reachable.	X	X	X
GetAllOutageDetectionDevices	Returns all Outage Detection Devices.	X		
GetOutageDetectionDevicesByMeterNo	Returns an Outage Detection Device Associated with the Given Meter Number.			

Table 2
Optional MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (OD)	Supported by Client[2] (OA)	Verified Inter-operable[3]
CancelODMonitoringRequestByObject	Cancel outage detection monitoring on the list of supplied circuit elements.			
DisplayODMonitoringRequests	Requests a list of circuit elements being monitored.			
GetDomainMembers	Requests the members of a given domain (type of fixed information, such as all of the counties in the database).		X	
GetDomainNames	Requests the domains (lists of fixed information, such as the counties served, or the acceptable status codes for this installation).		X	
GetOutageDetectionDevicesByStatus	Returns all outage detection devices with a given status.			
GetOutageDetectionDevicesByType	Returns all outage detection devices with a given type			
GetOutagedODDevices	Returns the outage detection devices that are currently experiencing an outage.			
InitiateODEventRequestByObject	Initiates an outage detection event request on service locations experiencing an outage downline from a circuit element.			
InitiateODMonitoringRequestByObject	Initiates an outage detection monitoring request on service locations downline from a circuit element at a given time interval.			
InitiageOutageDetectionEventRequest	Initiates an outage detection event request on the list of meter numbers.	X	X	X
ModifyODDataForOutageDetectionDevice	Allow OA to Modify OD data for a specific Outage Detection Device object.			

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.

Products: Milsoft DisSPatch and Elster Integrated Solutions EnergyAxis MAS platform

Summary of Interoperability Test Results
Interface #5
OA → OD

Table 3
Recommended MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (OA)	Supported by Client[2] (OD)	Verified Inter-operable[3]
GetMethods	Requests a list of methods supported by the server.	X	X	X
PingURL	Verifies that the server is running and reachable.	X	X	X
ODEventNotification	Notifies a change in outage detection events	X	X	X

Table 4
Optional MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (OA)	Supported by Client[2] (OD)	Verified Inter-operable[3]
GetActiveOutages	Returns the outage Event IDs for all active outage events.	X		
GetAllCircuitElements	Returns all circuit elements.	X		
GetChildCircuitElements	Returns circuit elements immediately fed by the given line section or node (eaLoc).	X		
GetDomainMembers	The client requests from the server a list of names of domains supported by the server.	X		
GetDomainNames	Requests the domains (lists of fixed information, such as the counties served, or the acceptable statusCodes for this installation).	X		
GetDownlineCircuitElements	Returns all circuit elements downline from the given circuit element.	X		
GetDownlineMeterConnectivity	Returns the meter connectivity for all meters down line from a given meter	X		
GetModifiedCircuitElements	Returns all circuit elements that have been modified since the previous session identified	X		
GetOutageEventStatus	Returns the current status of an outage event, given the outage event ID.	X		
GetOutageEventStatusByOutageLocation	Returns the current status of an outage event, given the outage location.	X		
GetParentCircuitElements	Returns circuit elements immediately upstream of the given line section or node (eaLoc).	X		
GetSiblingMeterConnectivity	Returns all meters on the same transformer as the given meter.	X		
GetSubstationNames	Returns all substation names	X		
GetUplineCircuitElements	Returns circuit elements in the shortest route to source from the given line section or node (eaLoc).	X		
GetUplineMeterConnectivity	Returns all meters from the first up line distribution transformer.	X		
ODDeviceChangeNotification	Notifies of a change in outage detection events	X		

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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.

Products: Milsoft DisSPatch and Elster Integrated Solutions EnergyAxis MAS platform

Summary of Interoperability Test Results

Interface #4

MR→EA

Table 5
Recommended MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (MR)	Supported by Client[2] (EA)	Verified Inter-operable[3]
GetMethods	Requests a list of methods supported by the server.	X	X	X
PingURL	Verifies that the server is running and reachable.	X	X	X
GetAMRSupportedMeters	Requests a list of all AMR supported meters.	X	X	X
GetLatestReadingByMeterNo	Requests the most recent meter reading for a given meter.		X	
GetLatestReadings	Returns the most recent readings for all AMR supported meters.		X	
GetReadingsByDate	Requests all meter readings taken between two dates.		X	
GetReadingsByMeterNo	Returns all readings for a given meter taken between two dates.			
IsAMRMeter	Return true if given meterNo has AMR	X	X	X

Table 6
Optional MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (MR)	Supported by Client[2] (EA)	Verified Inter-operable[3]
GetDomainMembers	Requests the members of a given domain (type of fixed information, such as all of the counties in the database).			
GetDomainNames	Requests the domains (lists of fixed information, such as the counties served, or the acceptable statusCodes for this installation).			
GetHistoryLogByMeterNo	Requests data about meter events for a specific meter.			
GetHistoryLogsByDate	Requests all outage events occurring between two dates.		X	
GetHistoryLogsByDateAndEventCode	Requests data about meter events for a specific event type and date range.			
GetHistoryLogsByMeterNoAndEventCode	Requests data about meter events for a specific meter and date range.			
GetModifiedAMRMeters	Requests changes in AMR meters since a specific data exchange session.			
GetReadingsByUOMAndDate	Requests all meter readings taken between two dates for a specific type of reading (UOM = unit of measure, e.g. kW).			

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.
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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 Elster Integrated Solutions, Inc.:

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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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