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
DCSI	Optimum	0.1	OD			OD→OA
Milsoft Utility Solutions	DisSPatch	7.1	OA		OD→OA	
Milsoft Utility Solutions	Milsoft Web Server	7.1	OA			OA→OD
DCSI	Optimum	0.1	OD		OA→OD	
Milsoft Utility Solutions	DisSPatch	7.1	EA		MR→EA	
DCSI	Optimum	0.1	MR			MR→EA

Summary:

DisSPatch is an object oriented derived product from Milsoft's Engineering Circuit Model Engine. DisSPatch uses the same WindMil Engineering distribution model as WindMil; therefore DisSPatch is capable of functioning as an EA system and supports all the functions available in the EA interface without the use of Milsoft's WindMil product. DisSPatch is capable of requesting AMR data from DCSI's Optimum using MultiSpeak web services. Assuming consumers in the DisSPatch model are assigned the appropriate meter numbers, DisSPatch can use this interface to determine which of those meters have DCSI AMR endpoints and the type of endpoint each meter has. DisSPatch can use the MR-EA interface to perform this task. DisSPatch can request and verify meters that have power via responses from the meter, and also those that have no power, or those meters that have failed to respond from a "ping" command.

Prerequisites:

For this interface to be useful, the user's electrical system must be modeled to the consumer level in DisSPatch. Each consumer in the DisSPatch model for which meter data is desired must have an associated meter number which corresponds to a meter number in DCSI's TNS software. DisSPatch provides several different ways to import these meter numbers from a billing system, but that dataflow is not part of this interface.

Specific Vendor Assertions:

1) DisSPatch can request all AMR supported meters from Optimum

Importance to user: The user can determine which consumers in the DisSPatch model have meters with DCSI AMR endpoints.

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-CB interface supported by Optimum. If Optimum 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 a DCSI TWACS Icon for the consumer having that meter number.

2) DisSPatch can request meter readings from Optimum.

Importance to user: The user can retrieve kW demand and/or kWh readings for every AMR supported meter with an associated consumer in DisSPatch. This load data can be used directly by WindMil's engineering analysis functions, or it can be used indirectly to facilitate the allocation of load on the model. The DisSPatch user requests all readings taken by the AMR system on some given day.

How Achieved: The user selects the "Import AMR meter readings" box in the AMR Data Importer in DisSPatch and then chooses a date in the past for which he would like to receive meter readings. The user selects whether the readings should be imported into calculated load and/or billing load and chooses the appropriate billing load group for the imported data. When the Run button is clicked, DisSPatch calls the GetReadingsByDate method on the MR-CB interface supported by Optimum. The returned load data for each meter is stored in the fields the user requested.

3) DisSPatch can verify instantaneous power on or power off conditions from Optimum.

Importance to user: Utility customers that use DisSPatch for their OMS product can verify outage conditions and restorations by "pinging" a meter or meters on any given feeder that is TWACS capable in their system.

How Achieved: This is achieved by DisSPatch sending a meter or series of meters to OPTIMUM to verify the condition of the meter or meters power. OPTIMUM then sends the command to TNS to "ping" the meter or series of meters for power verification and posts the results back to OPTIMUM for delivery to DisSPatch.

Products: Milsoft DisSPatch and Optimum

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.			
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).			
GetDomainNames	Requests the domains (lists of fixed information, such as the counties served, or the acceptable status codes for this installation).			
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 Web Server and Optimum

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.			
GetDomainNames	Requests the domains (lists of fixed information, such as the counties served, or the acceptable statusCodes for this installation).			
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		
GetUplineCircuiteElements	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 Optimum

Summary of Interoperability Test Results
Interface #4
MR→EA

Table 5
Recommended MultiSpeak Methods

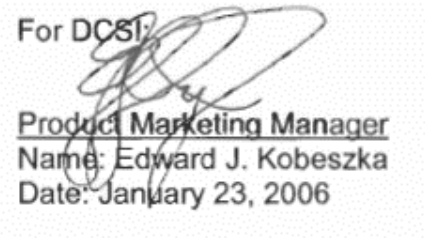
Method Name	Importance to User	Supported by Server[1] (MR)	Supported by Client[2] (EA)	Verified Inter-operable[3]
GetMethods	Requests a list of methods supported by the server.	X	X	X
PingURL	Verifies that the server is running and reachable.	X	X	X
GetAMRSupportedMeters	Requests a list of all AMR supported meters.	X	X	X
GetLatestReadingsByMeterNo	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	X	X
GetReadingsByMeterNo	Returns all readings for a given meter taken between two dates.	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.		X	
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.
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:



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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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