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
Tantalus	TUNet	2.11	OD			OD→OA
National Information Solutions Cooperative	NISC OMS	1.7	OA		OD→OA	
Tantalus	TUNet	2.11	OA			OA→OD
National Information Solutions Cooperative	NISC OMS	1.7	OD		OA→OD	

Summary:

Web Service interfaces were implemented according to the MultiSpeak™ 3.0 standards in order to provide NISC OMS and Tantalus customers a way to utilize the TUNet AMI system for outage verification. Assuming consumers in the NISC OMS model are assigned the appropriate meter numbers, NISC OMS can use this interface to determine which of those meters have Tantalus AMR endpoints and the type of endpoint each meter has. NISC OMS can request meter status to identify or confirm meters that do or do not have power, or those meters that have failed to respond for a “ping” command. Also, the TUNet AMI system can actively detect outages and/or restorations as they occur and send/push notifications to the NISC OMS system.

Prerequisites:

NISC OMS retrieves information about TUNet AMR meters through the iVUE system. For integration to work between TUNet AMR and NISC OMS, there is a field in iVUE/cis that needs to be populated so that AMI meters are identifiable to the OMS system. This table and field in iVUE is BI_MTR_INV.BI_AMR_TYPE and should be ‘TTLUS’. The NISC/cis Multispeak support team will assist the customer with this set up.

Enable the Integration in TUNet

Minimal setup is required to define a MultiSpeak interface in TUNet. A MultiSpeak setup page is provided to define the interface(s) to NISC iVUE and/or NISC OMS. Here, one will enter the Vendor’s Company and Application names, along with the URL for the NISC MultiSpeak webservices. Interfaces are enabled by checking the supported interfaces check boxes.

Enable the Integration in iVUE OMS

Minimal setup is required to define a MultiSpeak interface in NISC OMS. A MultiSpeak setup page is provided under Admin > MultiSpeak Interfaces. Here, one will enter the Vendor's Company, along with the URL for the TUNet MultiSpeak webservices and any user/password information. Interfaces can also be tested from this page. Once the interfaces are defined, the integration can be enabled from Admin > Server Settings under the Integration tab.

Specific Vendor Assertions:

1) NISC OMS can request TUNet to provide the outage status of one or more meters

Importance to user: The user can determine the current outage status of a TUNet AMR meter without sending a line crew to the site. The user can also confirm the restoration of power to meters.

How Achieved: When an outage call is entered into the NISC OMS or an outage is restored from NISC OMS, a process within NISC OMS will send requests for current outage status of affected meters to TUNet, using the InitiateOutageDetectionEventRequest web service method. The TUNet system determines the outage status of the meter, and then sends an outage detection event notification containing the current outage status of each meter to NISC OMS. TUNet determines the status of *all* of the requested meters from NISC OMS's outage detection initiation but sends the meter status back to NISC OMS for *each* individual meter as soon as the status is determined, using the ODEventNotification web service method. The NISC OMS can then update the status of the outage, if necessary, to agree with the status provided by the TUNet system.

2) TUNet can send unsolicited outage detection events to the NISC OMS Server.

Importance to user:
TUNet sends unsolicited outage detection events in order for NISC OMS to predict outages and confirm restoration.

How Achieved:
TUNet automatically monitors AMR endpoints and sends any outage status changes to the NICS OMS server, using the ODEventNotification web service method.

Summary of Interoperability Test Results Interface #5 OD→OA
Products: TUNet and NISC iVUE OMS

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.

Summary of Interoperability Test Results Interface #5 OA → OD
Products: TUNet and NISC iVUE OMS

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.			
GetAllCircuitElements	Returns all circuit elements.			
GetChildCircuitElements	Returns circuit elements immediately fed by the given line section or node (eaLoc).			
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.			
GetDownlineMeterConnectivity	Returns the meter connectivity for all meters down line from a given meter			
GetModifiedCircuitElements	Returns all circuit elements that have been modified since the previous session identified			
GetOutageEventStatus	Returns the current status of an outage event, given the outage event ID.			
GetOutageEventStatusByOutageLocation	Returns the current status of an outage event, given the outage location.			
GetParentCircuitElements	Returns circuit elements immediately upstream of the given line section or node (eaLoc).			
GetSiblingMeterConnectivity	Returns all meters on the same transformer as the given meter.			
GetSubstationNames	Returns all substation names			
GetUplineCircuitElements	Returns circuit elements in the shortest route to source from the given line section or node (eaLoc).			
GetUplineMeterConnectivity	Returns all meters from the first up line distribution transformer.			
ODDeviceChangeNotification	Notifies of a change in outage detection events			

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 Tantalus:

_____ Product Manager

Name: Richard Auerweck Title

1/5/2010

Date : _____

For National Information Solutions Cooperative:

_____ E-Solutions Manager

Name: Randall Schroder Title

1/5/2010

Date : _____

Assertions Verified by:

_____ MultiSpeak Testing Agent

Name: Hannu Huhdanpaa Title

UISOL,Inc.. .

Testing Agent

1/5/2010

Date : _____

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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