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
Central Service Association	Orbit-CMB	9.0.24.12	CB		MR->CB	
ACLARA	TWACS Net Server ™ (TNS) with OPTIMUM ™	1.10	MR			MR->CB
Central Service Association	Orbit-CMB	9.0.24.12	CB			CB->MR
ACLARA	TWACS Net Server ™ (TNS) with OPTIMUM ™	1.10	MR		CB->MR	

Summary:

The Orbit-CMB system will interface using MultiSpeak with TWACS Net Server ™ with OPTIMUM ™ to allow meter, customer and service location data to be synchronized. This will remove the need to manually update and maintain data in both systems. Orbit-CMB will also send changes in usage-monitoring status using the CancelUsageMonitoring and InitiateUsageMonitoring calls.

Prerequisites:

Enable the Integration in Orbit-CMB

There is minimal setup required on the MR_CB setup window in Orbit-CMB to enable the interface. The Utility Name, URL for the ACLARA TWACS ™ OPTIMUM ™ web services server, as well User ID and Password are required along with checking the essential choices to define the integration options.

Enable the Integration in TWACS ™ OPTIMUM ™

TWACS ™ OPTIMUM ™ must be installed and configured to connect to TWACS™ Net Server (TNS). A user name and password must be setup in OPTIMUM™ to allow Orbit-CMB to access the system.

Initial Data Load

To initially load TWACS Net Server ™ with OPTIMUM ™ with the customer and service information (such as, but not limited to: name, meter, account, address, etc…) a data file is generated and imported into TWACS Net Server ™ with

OPTIMUM ™. After the initial data is uploaded, all changes and/or adds of location, customer, and meter data will be sent to TWACS ™ OPTIMUM ™.

Specific Vendor Assertions:

1) **Orbit-CMB will notify TWACS ™ OPTIMUM ™ of all electric meter installs.**

   Importance to user: This will save the utility time by removing the need for manually adding electric meter data in their TWACS ™ OPTIMUM ™ system.

   How Achieved: When an electric meter is installed at a service location in Orbit-CMB, a MeterAddNotification is generated and sent to TWACS ™ OPTIMUM ™.

   Notification of meter deployment is sent to TWACS ™ OPTIMUM ™ and is processed by TWACS ™ OPTIMUM ™. TWACS ™ OPTIMUM ™ processes the call by adding an entry to ACLARA's TNS Software. If an error is generated by TNS an error message is sent back to Orbit-CMB.

2) **Orbit-CMB will notify TWACS ™ OPTIMUM ™ of all electric meter exchanges.**

   Importance to user: This will save the utility time by removing the need for manually updating meter data in TWACS ™ OPTIMUM ™ when an electric meter is exchanged.

   How Achieved: When an electric meter exchange is processed in Orbit-CMB, a MeterRemoveNotification is generated for the outgoing meter and a MeterAddNotification is generated for the incoming meter.

3) **Orbit-CMB will notify TWACS ™ OPTIMUM ™ of all electric meter removals.**

   Importance to user: This will save the utility time by removing the need for manually removing electric meters in the TWACS ™ OPTIMUM ™ system.

   How Achieved: When an electric meter is removed at a service location in Orbit-CMB using the Meter Removal window, a MeterRemoveNotification is generated and sent to TWACS ™ OPTIMUM ™.

4) **Orbit-CMB will notify TWACS ™ OPTIMUM ™ of all meter/customer/service location information changes.**

   Importance to user: This will save the utility time by removing the need for manually updating and maintaining customer and service location information in TWACS ™ OPTIMUM ™.

   How Achieved: When any of the service location and/or customer and/or meter options are changed, a ServiceLocationChangedNotification and/or CustomerChangedNotification and/or MeterChangedNotification will be sent to TWACS ™ OPTIMUM ™. In addition, all change notifications are sent when a tenant change occurs in Orbit-CMB through the service order transfer process. This is accomplished when all tasks in the service order are

completed and the final bill is posted. Once the user transfers the account by clicking the transfer button a ServiceLocationChangedNotification, CustomerChangedNotification and MeterChangedNotification are all sent to update TWACS ™ OPTIMUM ™ with the current tenant's information.

5) **Orbit-CMB will notify TWACS ™ OPTIMUM ™ of all usage monitoring status notifications.**

Importance to user: This will save the utility time and money by being able to quickly see which meters are currently booted/inactive that are registering usage, and possibly stealing power.
How Achieved: The user will send an InitiateUsageMonitoring notification when a service order transfer is processed and the account goes to a vacant status. When service is removed from a vacant status, a CancelUsageMonitoring call is sent to cancel the monitoring status.

6) **Orbit-CMB will retrieve from TWACS ™ OPTIMUM ™ all supported AMI meters daily.**

Importance to user: This will allow the utility to see if a particular meter is an AMI meter without having to access the TWACS ™ OPTIMUM ™ server**.**
How Achieved: A daily job will send a GetAMRSupportedMeters notification and all supported meters will have the AMR Meter Status field in Orbit-CMB will be updated to ACTIVE. All non-supported meters will have the AMR Meter Status field set to INACTIVE.

7) **Orbit-CMB will retrieve from TWACS ™ OPTIMUM ™ daily all AMI readings by date.**

Importance to user: This will allow the utility to use a particular day's reading for billing and/or service order processing without having to access the TWACS ™ OPTIMUM ™ server or having to send a service rep onsite.
How Achieved: A daily job will send a GetReadingsByDate notification and all AMI readings for that day will be add to the Orbit-CMB database to be used when a user opens the Meter Reading Entry window. When an AMI reading is used the reading type is set to AMI for future reference.

8) **Orbit-CMB will retrieve from TWACS ™ OPTIMUM ™ a single meter's readings by date range.**

Importance to user: This will allow the utility to see a particular meter's readings for a date range without having to access the TWACS ™ OPTIMUM ™ server**.**
How Achieved: The user will send a GetReadingsByMeterNo notification for a particular meter and date range using the AMI Readings window in Orbit-CMB. The readings that are returned are displayed on the AMI Readings window for the user to see.

9) **Orbit-CMB will retrieve from TWACS ™ OPTIMUM ™ a meter's AMI status.**

Importance to user: This will allow the utility to see if a particular meter is an AMI meter without having to access the TWACS ™ OPTIMUM ™ server**.**

How Achieved: The user will send an IsAMRMeter notification for a particular meter when clicking the AMR Meter button on the AMI Command window. The user is display a message stating the AMI status of the meter.

10) Orbit-CMB will retrieve from TWACS ™ OPTIMUM ™ a meter's latest reading value.

Importance to user: This will allow the utility to see the latest reading for a particular meter without having to access the TWACS ™ OPTIMUM ™ server**.**

How Achieved: The user will send a GetLatestReadingByMeterNo notification for a particular meter when clicking the Latest Read button on the AMI Command window. The user is display the latest reading in the reading field on the AMI Command window.

Products: Orbit-CMB and TWACS™ OPTIMUM™

Summary of Interoperability Test Results (#2A CB>MR)

Table 1
Recommended MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (CB)	Supported by Client[2] (MR)	Verified Inter-operable[3]
GetMeterByAccountNumber	Returns the requested Meter(s) data given Account Number.			
GetMeterByMeterId	Returns the requested Meter data given meterID			
GetMeterByServLoc	Returns the requested Meter(s) data given Service Location.			
GetMeterByMeterNo	Returns the requested Meter data given Meter Number.			
GetAllCustomers	Returns all required customer data for all customers			
GetServiceLocationByCustId	Returns the requested Service Location data given Customer ID.			
GetServiceLocationByServLoc	Returns the requested Service Location data given Service Location ID		X	
GetCustomerByCustId	Returns the requested Customer if it exists.			
GetAllServiceLocations	Returns all required Service Location data for all Service Locations			
GetMeterByCustID	Returns the requested Meter(s) data given Customer ID			
GetServiceLocationByAccountNumber	Returns the requested Service Location data given Account Number			
GetAllMeters	Returns all required Meter data for all Meters			
GetMethods	Requests a list of web service methods supported by the AMR application	X	X	X
PingURL	Queries status of the AMR application.	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.

Table 2
Optional MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (CB)	Supported by Client[2] (MR)	Verified Inter-operable[3]
GetCustomerByName	Returns the requested Customer(s) data given First and Last name			
GetServiceLocationByServiceType	Returns the requested Service Location(s) data given the Service Type			
GetModifiedMeters	Returns all required Meter data for all Meters that have been modified since the specified sessionID			
GetDomainNames	Enables systems to exchange information about application-specific or installation-specific lists of information, such as the lists of counties for this installation or the list of serviceStatusCodes used by the server			
GetCustomerByMeterNo	Returns the requested Customer data given a Meter Number			
GetCustomerByDBAName	Returns the requested Customer given the Doing Business As (DBA) name			
ModifyCBDataForMeter	Allows MR to Modify CB data for a single Meter.			
GetServiceLocationByLoadGroup	Returns the requested Service Location(s) data for a given Load Group			
GetServiceLocationByGridLocation	Returns the requested Service Location(s) data given a single Grid Location			
GetServiceLocationByMeterNo	Returns the requested Service Location data given the meter number of a meter served at that location			
GetServiceLocationByShutOffDate	Returns the requested Service Location(s) data given the Service ShutOff Date			
HistoryLogChangedNotification	MR Notifies CB of a change in the History Log by sending the changed historyLog object			
ReadingChangedNotification	MR Notifies CB of a change in Meter Reads by sending the changed meterRead objects		X	
GetDomainMembers	Enable systems to exchange information about application-specific or installation-specific lists of information, such as the lists of			

	counties for this installation or the list of serviceStatusCodes used by the server			
GetModifiedServiceLocations	Returns all required Service Location data for all Service Locations that have been modified since the specified sessionID			
GetServiceLocationByPhaseCode	Returns the requested Service Location(s) data given the Phase			
GetServiceLocationByServiceStatus	Returns the requested Service Location(s) data given the Service Status			
ModifyCBDataForCustomer	Allow MR to Modify CB data for a specific customer			
GetModifiedCustomers	Returns all required customer data for all customers that have been modified since the specified sessionID			
GetMeterByAMRType	Returns the requested Meter(s) data given AMR Type.			
ModifyCBDataForServiceLocation	Allow MR to Modify CB data for the Service Location			

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Products: Orbit-CMB and TWACS™ OPTIMUM™

Summary of Interoperability Test Results (#2A MR>CB)

Table 3
Recommended MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (MR)	Supported by Client[2] (CB)	Verified Inter-operable[3]
CustomerChangedNotification	CB Notifies MR of a change in the Customer object by sending the changed customer object	X	X	X
GetAMRSupportedMeters	CB requests MR Return a value that indicates if the meter is reading as an AMI meter or not. This value is stored in CIS in the meter user defined field AMR Meter Status as Active or Inactive.	X	X	X
GetHistoryLogByMeterNo	Returns History Log Data for a given MeterNo and Date Range			
GetHistoryLogsByDate	Returns History Log Data for a all Meters Given a Date Range			
GetHistoryLogsByDateAndEventCode	Returns History Log Data for a all Meters Given the eventCode and a Date Range			
GetHistoryLogsByMeterNoAndEventCode	Returns History Log Data for a given MeterNo, eventCode and Date Range			
InitiateMeterReadByMeterNumber	CB requests a new meter reading from MR, on meters selected by meter number.	X		
GetReadingsByDate	CB requests MR Return Bulk Reading Data Given a Date Range for All Meters that have AMR Meter Status in CIS set as Active. These reads are used when any process in CIS requires a meter reading. Billing Read, Turn Off Read or Turn On Read. This method is invoked by a scheduled nightly job.	X	X	X
GetLatestReadingByMeterNo	From AMI Command Window CB requests MR Return Latest Meter Reading Data for a given MeterNo. CIS displays this data.	X	X	X
GetReadingsByMeterNo	CB requests MR Return Meter Reading Data for a given MeterNo and date range. This information is displayed in CIS.	X	X	X

IsAMRMeter	CB requests MR Return true if given meterNo is AMR Meter. This command is issued prior to sending information across to make sure we are only sending information to MR for AMR meters.	X	X	X
MeterAddNotification	CB Notifies MR to Add the associated Meter(s).	X	X	X
MeterChangedNotification	CB Notifies MR of a change in the Meter object by sending the changed meter object.	X	X	X
MeterRemoveNotification	CB Notifies MR to remove the associated Meter(s).	X	X	X
ServiceLocationChangedNotification	CB Notifies MR of a change in the Service Location	X	X	X
GetMethods	Requests a list of web service methods supported by the Customer Billing program.	X	X	X
PingURL	Queries status of the Customer Billing program.	X	X	X

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Table 4
Optional MultiSpeak Methods

Method Name	Importance to User	Supported by Server[1] (MR)	Supported by Client[2] (CB)	Verified Inter-operable[3]
CancelDisconnectedStatus	CB Notifies MR of Meters that should be removed from disconnected status.(i.e. made active).	X		
CancelPlannedOutage	Notify MR of Cancellation of Planned Outage Given a List of MeterNumbers	X		
CancelUsageMonitoring	Notify MR of Cancellation Of Zero Usage Monitoring.(ie Move Ins).	X	X	X
GetDomainMembers	enable systems to exchange information about application-specific or installation-specific lists of information, such as the lists of counties for this installation or the list of serviceStatusCodes used by the server			
GetDomainNames	enable systems to exchange information about application-specific or installation-specific lists of information, such as the lists of counties for this installation or the list of serviceStatusCodes used by the server.			
GetModifiedAMRMeters	Returns all meters that support AMR and that have been modified since the specified sessionID			
GetReadingsByBillingCycle	Returns all required Reading Data for a given BillingCycle and Date Range	X		
InitiateDisconnectedStatus	CB Notifies MR of Meters that have been disconnected and no AMR reading is expected.	X		
InitiatePlannedOutage	Notify MR of Planned Outage Meters Given a List of MeterNumbers and Start and End Dates of the Outage	X		
InitiateUsageMonitoring	Notify MR of Meters Where Zero Usage is Expected.(ie Move outs).	X	X	X

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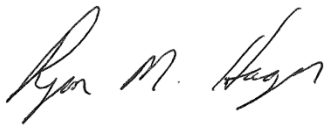
3) Verified Interoperable means that both the client and server have demonstrated in this interoperability test that they can usefully transfer data using this method.

Certified by:

For Aclara:



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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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