



RNI 3.1.0
MultiSpeak v3.0 Data Sheet

Document Revision: 0.5

© 2012 Sensus, North America. All rights reserved. This document contains proprietary information. It may not be copied, transmitted or distributed, in whole or in part, without the consent of Sensus Metering Systems.

Contents

- 1 Introduction 3
 - 1.1 Scope..... 3
 - 1.2 Terminology 3
- 2 Interface 2A (Meter Reading) 3
 - 2.1 MRCB..... 3
 - 2.2 CBMR..... 4
- 3 Interface 5 (Outage Detection) 5
 - 3.1 ODOA 5
 - 3.2 OAOD 5
- 4 Interface 2B (Connect Disconnect) 5
 - 4.1 CDCB..... 5
 - 4.2 CBCD..... 6

1 Introduction

The RNI implements a subset of the Meter Reading (interface 2A), Outage Detection (interface 5) and Connect Disconnect (interface 2B) functions from Multispeak as SOAP web services.

1.1 Scope

The scope of this document is the set of Multispeakv3 web methods available in RNI 2.x and RNI 3.x. These are developed to build 30j of the specification. (Available on request from <http://www.multispeak.org/>).

1.2 Terminology

TERM	MEANING
Customer Billing (CB) system	The system of record for customer information and meter deployments. This provides the Customer Billing function defined in the Multispeak specification.
Gateway	A collection of related web services deployed as a single application in the RNI.
Meter Reading system (MR)	The AMR system i.e. the Sensus RNI in the context of this document. This provides the Meter Reading function as defined in the Multispeak specification.
Multispeak	Specification for utility information exchange developed by the Multispeak initiative (http://www.multispeak.org/)
Regional Network Interface (RNI)	The head end system for the Sensus FlexNet AMR/AMI.
SOAP	A data format for communicating with web services. Usually used with the HTTP protocol as a transport.
Web service	A collection of related web methods
Web method	An operation that can be invoked remotely

2 Interface 2A (Meter Reading)

2.1 MR CB

Web service implemented by the MR function on the RNI.

On a deployed RNI gateway, the SOAP web service URL will be [http://\[rniweb.mycompany.com\]/multispeak/mrcb](http://[rniweb.mycompany.com]/multispeak/mrcb) and the WSDL will be published at [http://\[rniweb.mycompany.com\]/multispeak/mrcb/MR_CB.wsdl](http://[rniweb.mycompany.com]/multispeak/mrcb/MR_CB.wsdl)

2.1.1 PingURL

Verifies that the MR service is available.

2.1.2 GetMethods

Gets the list of methods supported by the MR service.

2.1.3 GetAMRSupportedMeters

Gets meters from the Sensus AMI head end.

2.1.4 MeterAddNotification

CB notifies MR of meters that have been newly installed. This will enable monitoring, meter reading and outage detection (if applicable) for these meters.

2.1.5 MeterChangedNotification

CB notifies MR of a change in the meter properties.

2.1.6 MeterRemoveNotification

CB notifies MR of a meter that has been uninstalled.

2.1.7 ServiceLocationChangedNotification

CB notifies MR of a change in a service location (i.e. address changes)

2.1.8 InitiateMeterReadByMeterNumber

CB requests a new meter reading from MR, on meters selected by meter number.

2.1.9 GetLatestReadingByMeterNo

Returns the most recent Meter Reading data for a given meter number.

2.1.10 InitiateUsageMonitoring

CB notifies MR of meters where Zero Usage is expected (i.e. move out)

2.1.11 CancelUsageMonitoring

CB notifies MR of cancellation of Zero Usage monitoring (i.e. move in)

2.1.12 InitiateDisconnectedStatus

CB notifies MR of meters that have been disconnected and no AMR reading is expected

2.1.13 CancelDisconnectedStatus

CB notifies MR of meters that should be removed from disconnected status (i.e. made active)

2.2 CBMR

Web service client implemented by the MR function in the RNI to invoke the following methods on the remote CB service.

2.2.1 GetAllMeters

The MR gets meter data for all meters in the CB. This synchronizes the relevant meter data in the RNI with the CB (system of record)

2.2.2 GetAllServiceLocations

The MR gets the service location data for all meters in the CB. This synchronizes the relevant service location data in the RNI with the CB (system of record)

3 Interface 5 (Outage Detection)

3.1 ODOA

Web service implemented by the OD function on the RNI.

On a deployed RNI gateway, the SOAP web service URL will be [http://\[rniweb.mycompany.com\]/multispeak/odoa](http://[rniweb.mycompany.com]/multispeak/odoa) and the WSDL will be published at [http://\[rniweb.mycompany.com\]/multispeak/odoa/OD_OA.wsdl](http://[rniweb.mycompany.com]/multispeak/odoa/OD_OA.wsdl)

3.1.1 PingURL

Verifies that the OD service is available.

3.1.2 GetMethods

Gets the list of methods supported by the OD service.

3.1.3 InitiateOutageDetectionEventRequest

Requests an update on the outage status of a meter. The result is returned using the ODEventNotification method.

3.2 OAOD

Web service client implemented by the OD function in the RNI to invoke the following methods on the remote OA service.

3.2.1 ODEventNotification

Sends solicited and unsolicited notifications for outage events on meters managed by the RNI.

4 Interface 2B (Connect Disconnect)

4.1 CDCB

Web service implemented by the CD function on the RNI.

On a deployed RNI gateway, the SOAP web service URL will be [http://\[rniweb.mycompany.com\]/multispeak/cdcb](http://[rniweb.mycompany.com]/multispeak/cdcb) and the WSDL will be published at [http://\[rniweb.mycompany.com\]/multispeak/cdcb/CD_CB.wsdl](http://[rniweb.mycompany.com]/multispeak/cdcb/CD_CB.wsdl).

4.1.1 PingURL

Verifies that the CD service is available.

4.1.2 GetMethods

Gets the list of methods supported by the CD service.

4.1.3 GetCDMeterState

Gets the last known service connection status for a meter

4.1.4 InitiateConnectDisconnect

Requests a remote service connect/disconnect/arm for a meter. The result is returned through an asynchronous CDStateChangedNotification.

4.2 CBCD

Web service client implemented by the CD function in the RNI to invoke the following methods on the remote CB service.

4.2.1 CDStateChangedNotification

Notifies the CB of a change in the connection status of a meter. This may be solicited or unsolicited.