# CELLFIND MESSAGING GATEWAY CLIENT SDK

# TECHNICAL SPECIFICATION

**October 2014**

| | |
|---|---|
| Version: | 1 |
| Filename: | Cellfind Messaging Gateway SDK - Technical Specification |
| Last Revision Date: | 10-10-2014 |

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# INTRODUCTION

Cellfind have developed a Web service for the submission of messages to the Cellfind Messaging Gateway. This Web service uses XML SOAP as its interface protocol. In order to simplify the coding required to make SOAP calls, a Software Development Kit (SDK) has been developed encapsulating all the SOAP method calls of the Web service. This SDK includes all the various utilities required to correctly format the SOAP messages to the Cellfind Messaging Gateway.

This document details the Client SDK COM interfaces to the Cellfind Messaging Gateway Web Service.

A client can interface with the–Cellfind Messaging Gateway either by using the SDK or by directly invoking the Cellfind Messaging Gateway Webservice.

The Cellfind Web Service page can be found at:
https://www.cellfindportal.co.za/mpgproxy/service.asmx

The WSDL for the MPG Webservice can be viewed at:
https://www.cellfindportal.co.za/mpgproxy/service.asmx?WSDL=1

The-Cellfind Messaging Gateway Webservice is invoked with
https://www.cellfindportal.co.za/mpgproxy/service.asmx

The XML specification for the BatchRequest document and related XMLInterfaces can be viewed in Appendix A

# 1 TECHNICAL OVERVIEW

## 1.1 Cellfind Client SDK

The Cellfind Client SDK is a set of Windows COM Automation objects that are packaged in an executable DLL called NMMPGSDK.DLL.

The object is named NMMPGSDK, and encapsulates all classes and methods required to communicate with Cellfind's Web service. Thus the Web service is communicated with by means of standard COM interfaces.

The following SDK object interfaces are provided:

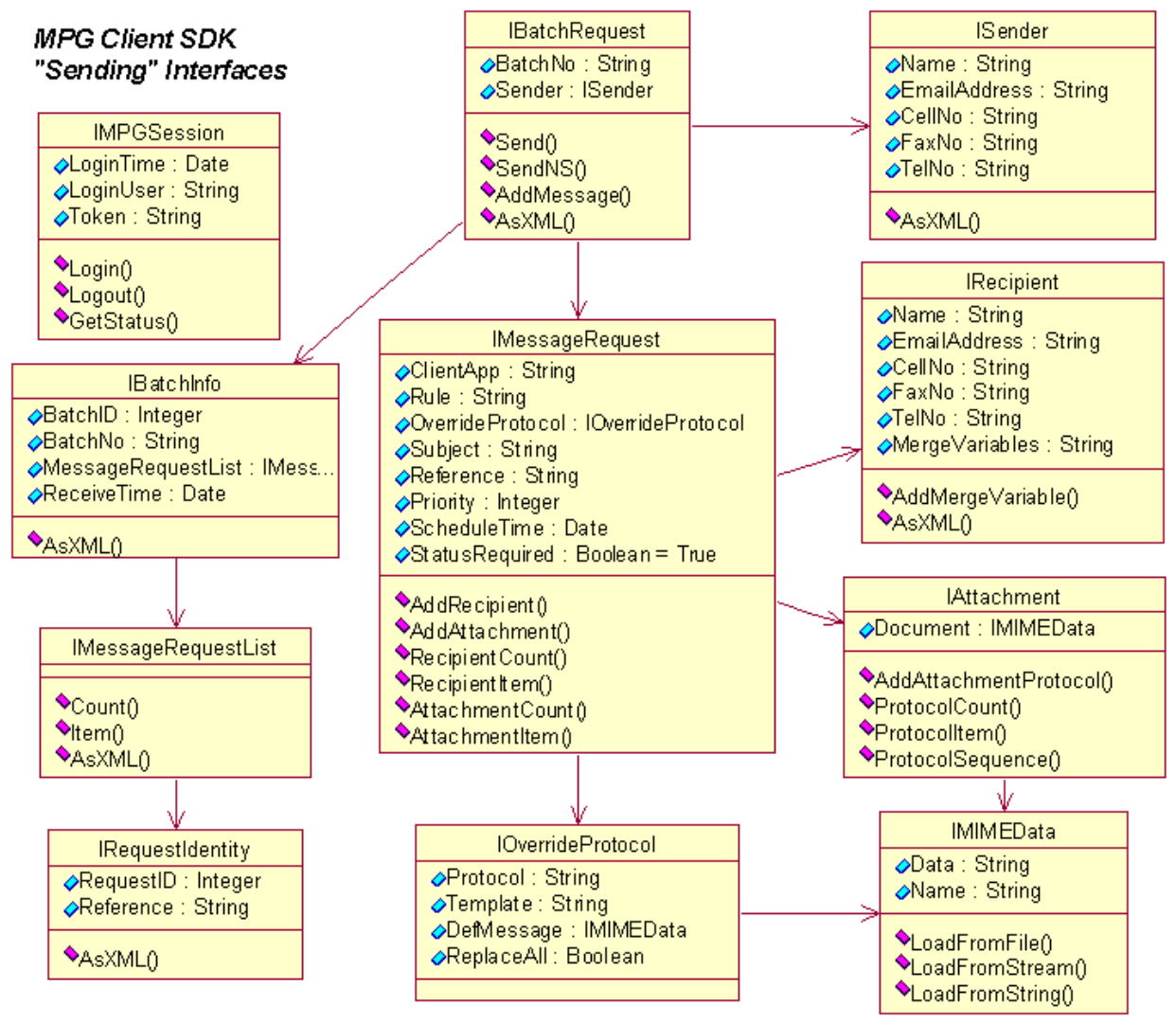
- IMPGSession – Controls the login session with the Cellfind Messaging Gateway;
- IBatchRequest – Defines a request for a batch of messages;
- ISender – Defines the sender details;
- IBatchInfo – An interface to all the properties of a submitted BatchRequest;
- IRequestIdentity - An interface to the properties that can be used to identity a request;
- IMessageRequestList – An interface to a collection of IRequestIdentity interfaces;
- IMessage – Defines a message to be requested;
- IOverrideProtocol – Defines an instruction to override the defined rule;
- IRecipient – Defines a recipient of a message;
- IAttachment – Defines a document attachment to a message;
- IMIMEData – Provides an interface to load and MIME a document;
- IMessageController – Provides an interface to draw report information from the Cellfind Messaging Gateway;
- IMessageIdentity – An interface to the properties that can be used to identity a message;
- IMessageDetail – An interface to all the properties of a message;
- IMessageList – An interface to a collection of IMessageDetail interfaces;
- IMessageStatus – An interface to the properties of a message's status information;
- IMessageStatusList – An interface to a collection of IMessageStatus interfaces;
- IReplyDetail – An interface to all the properties of a message reply;
- IReplyList – An interface to a collection of IReplyDetail interfaces;
- IRequestLog – An interface to all the processing details of a request batch;
- IRuleProcess – An interface to all the details of a single rule process;
- IRuleProcessLog – An interface to a collection of IRuleProcess interfaces;
- IRule – An interface to the details of a MPG Rule;
- IRuleList – An interface to a collection of IRule interfaces;
- ITemplate – An interface to all the details of a message template;
- ITemplateList – An interface to a collection of ITemplate interfaces;
- IMergeVariableList – An interface to a collection of merge variable names within a Template.

# 2 CELLFIND SDK – SENDING

## 2.1 Introduction

The SDK has a subset interfaces that represent the "sending" classes. These interfaces are used to build up and send a batch request to the Cellfind Messaging Gateway.

The Sending Interfaces are depicted in the following diagram:




## 2.2 MPGSession Object

The MPGSession Object is interfaced by the IMPGSession COM interface. An MPGSession object maintains the state of the logged on session with the Cellfind Messaging Gateway. It is used to interface with the security system of the Cellfind Messaging Gateway.

### 2.2.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| LoginTime | **String** | Time user logged in – format: CCYYMMDDHHMMSS | R |
| LoginUser | String | The User name of the logged in user | R |
| Token | String | The session token | R |

### 2.2.2 Methods

#### 2.2.2.1 Login Method

**void Login(String Username, String Password);**

***Description**:* This function is used to establish a client session with the Web service.

***Parameters*:**

Username: The system user name as registered with Cellfind;

Password: The authentication password for the system user as registered with Cellfind;

***Returns*:** Boolean True is successful. Note that an exception will be raised in the event of an unsuccessful login, for whatever reason.

***Usage***: Login must be called before any other function is called. An MPGSession object validly logged on can be used to authenticate other communication with the Web service. In the event of an unsuccessful login, an exception will be raised containing the reason for the failure, in the format of errornumber/errormsg.

#### 2.2.2.2 Logout Method

**int Logout;**

***Description:*** This function is used to terminate the open session.

***Returns*:** An integer representing the previous Login status, as defined below:

| Status | Description |
|---|---|
| 0 | Logged in |
| 1 | Session expired |
| 2 | Not logged in |

***Usage*:** Logout will not raise an exception if the session is not validly logged in

#### 2.2.2.3 GetStatus Method

**int GetStatus;**

***Description**:* This function is used to determine the current login status of the session.

***Returns***: An integer representing a Login status, as defined below:

| Status | Description |
|---|---|
| 0 | Logged in |
| 1 | Session expired |
| 2 | Not logged in |

***Usage***: GetStatus will return a status regardless of whether the object has been validly logged in or not.

## 2.3 BatchRequest Object

The BatchRequest Object is interfaced by the IBatchRequest COM interface. A BatchRequest object aggregates all the information making up a request batch, and is used to actually submit the request to the Cellfind Messaging Gateway.

### 2.3.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| BatchNo | **String** | **A user-defined identifier to identify the request batch** | R/W |
| Sender | ISender | A reference to the Sender object | R |

### 2.3.2 Methods

#### 2.3.2.1 Send Method

**IBatchInfo Send(IMPGSession Session);**

***Description:*** This method is used to send a request batch to the Cellfind Messaging Gateway.

***Parameters*:**

**Session**: A validly logged in MPGSession interface;

**Compress**: If True, XML document is sent compressed to Web service.

***Returns***: An IBatchInfo interface detailing the identification of the batch and the message requests contained in it.

***Usage***: Send is used to submit a request batch to the Cellfind Messaging Gateway. Send will first validate that all the required data to formulate the batch has been supplied. An exception will be raised if any errors are encountered during the execution of this method.

#### 2.3.2.2 SendNS Method

**IBatchInfo SendNS(String Username, String Password);**

***Description:*** This method is used to send a request batch to the Cellfind Messaging Gateway without requiring a session to be established.

***Parameters***:

**Username**: The system user name as registered with the Cellfind Authentication Server;

**Password**: The authentication password for the system user as registered with the Cellfind Authentication Server;

**Compress**: If True, XML document is sent compressed to Web service.

***Returns***: An IBatchInfo interface detailing the identification of the batch and the message requests contained in it.

***Usage***: SendNS is used to submit a request batch to the Cellfind Messaging Gateway. SendNS will first validate that all the required data to formulate the batch has been supplied. An exception will be raised if any errors are encountered during the execution of this method.

#### 2.3.2.3 AddMessage Method

**void AddMessage(IMessageRequest MessageRequest);**

***Description:*** This method is used to add a MessageRequest object to the request batch.

***Parameters***: MessageRequest: The MessageRequest object interface;

***Usage***: AddMessage locally adds a MessageRequest object to the list of messages in the BatchRequest batch. An exception will be raised if any errors are encountered during the

execution of this method. At least one MessageRequest must be sent with each BatchRequest.

#### 2.3.2.4 AsXML Method

**String AsXML;**

***Description:*** This method is used to locally create and return an MPGBatchRequest XML document.

***Returns***: A string representing an MPGBatchRequest XML document. See Appendix A for the definition of this document.

***Usage***: AsXML formats an MPGBatchRequest XML document from the current properties of the BatchRequest object. AsXML will first validate that all the required data to formulate the batch has been supplied. An exception will be raised if any errors are encountered during the execution of this method.

## 2.4 Sender Object

The Sender Object is interfaced by the ISender COM interface. A Sender object is a structure holding various contact details of the request sender.

### 2.4.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Name | String | The sender's name | R/W |
| EMailAddress | String | The sender's email address | R/W |
| CellNo | String | The sender's cell phone number | R/W |
| FaxNo | String | The sender's fax number | R/W |
| TelNo | String | The sender's phone number | R/W |

### 2.4.2 Methods

#### 2.4.2.1 AsXML Method

**String AsXML;**

***Description:*** This method formats an XML string of the node representing the Sender object.

***Returns***: A string representing the Sndr sub-node of a Cellfind Messaging Gateway generated XML document. See Appendix A for the definitions of Cellfind Messaging Gateway generated XML documents.

***Usage***: AsXML formats a Sndr XML document, being a sub-node of a document returned from the Cellfind Messaging Gateway by one of the methods in MessageController. Note that AsXML will return an empty string if the Sender object was not automatically instantiated as part of an aggregate returned by a MessageController object.

## 2.5 BatchInfo Object

The BatchInfo Object is interfaced by the IBatchInfo COM interface. A BatchInfo object is a structure holding the identification details of a submitted BatchRequest, including the identifiers of the MessageRequests contained in the BatchRequest.

### 2.5.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| BatchID | Integer | The unique Cellfind Messaging Gateway identifier for the batch | R |
| BatchNo | String | The user-defined label for the batch on submission | R |
| MessageRequestList | IMessageRequestList | A pointer to a list of RequestIdentifier interfaces, making up the batch | R |
| ReceiveTime | String | The Date and Time when the batch was received by the Cellfind Messaging Gateway<br>Format: CCYYMMDDHHMMSS | R |

### 2.5.2 Methods

#### 2.5.2.1 AsXML Method

**String AsXML;**

***Description:*** This exposes the MPGBatchInfo XML document.

***Returns***: A string representing the MPGBatchInfo XML document generated by the Cellfind Messaging Gateway in response to a Send or SendNS call from the BatchRequest object. See Appendix A for the definition of the MPGBatchInfo XML documents.

***Usage***: AsXML returns an MPGBatchInfo XML document as a string.

## 2.6 RequestIdentity Object

The RequestIdentity Object is interfaced by the IRequestIdentity COM interface. A RequestIdentity object is a structure holding the identification details of a submitted MessageRequest.

### 2.6.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| RequestID | Integer | The unique Cellfind Messaging Gateway identifier of the submitted MessageRequest | R |
| Reference | String | The user-defines label for the Request on submission | R |

### 2.6.2 Methods

#### 2.6.2.1 AsXML Method

**String AsXML;**

***Description:*** This method formats an XML string of the node representing the RequestIdentity object.

***Returns***: A string representing the RqstIdent sub-node of the MPGBatchInfo XML document generated by the Cellfind Messaging Gateway. See Appendix A for the definition of the MPGBatchInfo XML document.

***Usage***: AsXML formats an RqstIdent Cellfind Messaging Gateway document, being a sub-node of the MPGBatchInfo XML document returned from the Cellfind Messaging Gateway by one of the object method calls.

## 2.7 MessageRequestList Object

The MessageRequestList Object is interfaced by the IMessageRequestList COM interface. A MessageRequestList object is a collection of IRequestIdentity interfaces belonging to the same RequestBatch.

### 2.7.1 Methods

#### 2.7.1.1 Count Method

**int Count();**

***Description:*** Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 2.7.1.2 Item Method

**IRequestIdentity Item (int Index);**

***Description:*** Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: An IRequestIdentity interface.

***Usage***: An individual IRequestIdentity interface can be accessed from the collection using the Item method. The index must be between 0 and Count() -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 2.7.1.3 AsXML Method

**String AsXML ();**

***Description:*** Used to return an XML document representing the collection.

***Returns***: The sub-node RqstList of the MPGBatchInfo XML document. See Appendix A for the definition of this document.

***Usage***: AsXML is called to create an XML document representing the collection.

## 2.8 MessageRequest Object

The MessageRequest Object is interfaced by the IMessageRequest COM interface. A BatchRequest object aggregates all the information making up a message, and is added to a BatchRequest object for submission to the Cellfind Messaging Gateway.

### 2.8.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| ClientApp | String | An optional, unique identifier, supplied by Cellfind for client application developed using the SDK | R/W |
| Rule | String | The identifier of the rule to use with this message | R/W |
| OverrideProtocol | IOverrideProtocol | An optional pointer to an OverrideProtocol object for this message | R/W |
| Subject | String | The subject of the message | R/W |
| Reference | String | A user-defined reference used to track the message | R/W |
| Priority | Integer | Priority for delivery message to network:<br>0 = Highest; 4 = lowest priority | R/W |
| ScheduleTime | String | Time for message to be sent. If not specified, default to on submission. Format CCYYMMDDHHMMSS. | R/W |
| StatusRequired | Boolean | If TRUE, update statuses for this message will be pushed to the client | R/W |

### 2.8.2 Methods

#### 2.8.2.1 AddRecipient Method

**void AddRecipient(IRecipient Recipient);**

***Description**:* This method is used to locally add a Recipient object to this message.

***Parameters***:

Recipient: A Recipient object interface;

***Usage***: AddRecipient locally adds a Recipient object to the list of recipients in the MessageRequest object. An exception will be raised if any errors are encountered during the execution of this method. At least one Recipient must be sent with each MessageRequest.

#### 2.8.2.2 AddAttachment Method

**void AddAttachment(IAttachment Attachment);**

***Description**:* This method is used to locally add an Attachment object to this message.

***Parameters***:

Attachment: An Attachment object interface;

***Usage***: Add Attachment locally adds an Attachment object to the list of attachments in the MessageRequest object. An exception will be raised if any errors are encountered during the execution of this method. Attachments are not required, and are only valid for certain protocols.

#### 2.8.2.3 RecipientCount Method

**int RecipientCount();**

***Description:*** Used to determine the number of Recipients added to the MessageRequest.

***Returns***: An integer value representing the absolute number of Recipients added.

***Usage***: Internal.

#### 2.8.2.4 RecipientItem Method

**IRecipient RecipientItem (int Index);**

***Description:*** Used to access a single Recipient item added to the MessageRequest object, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the internal collection of IRecipient interfaces. The collection index has a base of 0, being the first item in the collection.

***Returns***: An IRecipient interface.

***Usage***: Internal.

#### 2.8.2.5 AttachmentCount Method

**int AttachmentCount();**

***Description:*** Used to determine the number of Attachment added to the MessageRequest.

***Returns***: An integer value representing the absolute number of Attachments added.

***Usage***: Internal.

#### 2.8.2.6 AttachmentItem Method

**IAttachment AttachmentItem (int Index);**

***Description:*** Used to access a single Attachment item added to the MessageRequest object, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the internal collection of IAttachment interfaces. The collection index has a base of 0, being the first item in the collection.

***Returns***: An IAttachment interface.

***Usage***: Internal.

## 2.9 OverrideProtocol Object

The OverrideProtocol Object is interfaced by the IOverrideProtocol COM interface. An OverrideProtocol object defines an instruction to override the defined rule for the message.

### 2.9.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Protocol | **String** | The protocol class that should be used to send the message | R/W |

| | | | |
|---|---|---|---|
| Template | **String** | The name of the template to use to send the message | R/W |
| DefMessage | IMIMEData | The interface to a document which will be the default document for all recipients if the DEF template is specified. | |
| ReplaceAll | Boolean | Determines the scope of the rule override:<br>False – simply make the Protocol the first one in the rule execution list – Template is not required<br>True – completely replace the rule execution list with this Protocol/Template combination | R/W |

## 2.10 Recipient Object

The Recipient Object is interfaced by the IRecipient COM interface. A Recipient object aggregates all the information making up a recipient, and is added to a MessageRequest object for submission to the Cellfind Messaging Gateway.

### 2.10.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Name | **String** | **The recipient's name** | R/W |
| EMailAddress | **String** | **The recipient's email address** | R/W |
| CellNo | **String** | **The recipient's cell phone number** | R/W |
| FaxNo | **String** | **The recipient's fax number** | R/W |
| TelNo | String | The recipient's phone number | R/W |

### 2.10.2 Methods

#### 2.10.2.1 AddMergeVariable Method

**void AddMergeVariable(Name : String; Value : Variant);**

***Description***: This method is used to locally add a merge variable named value pair for this recipient. Merge variable are required to meet the requirements of the templates used by the specified rules.

***Parameters***:

Name: The name of the merge variable as defined in the template/s

Value: The value to be merged into the template/s.

***Usage***: AddMergeVariable locally adds a merge variable named value pair to the list of merge variables in the Recipient object. An exception will be raised if any errors are encountered during the execution of this method. Merge variables are not required by the Recipient object, but may be required by the Message Rule.

#### 2.10.2.2 AsXML Method

**String AsXML;**

***Description***: This method formats an XML string of the node representing the Recipient object.

***Returns***: A string representing the Rcpt sub-node a Cellfind Messaging Gateway generated XML document. See Appendix A for the definitions of Cellfind Messaging Gateway-generated XML documents.

***Usage***: AsXML formats a Rcpt XML document, being a sub-node of a document returned from the Cellfind Messaging Gateway by one of the methods in MessageController. Note that AsXML will return an empty string if the Recipient object was not automatically instantiated as part of an aggregate returned by a MessageController object.

## 2.11 Attachment Object

The Attachment Object is interfaced by the IAttachment COM interface. An Attachment object is used to define a document that the user requires to be attached to the message.

### 2.11.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Document | IMIMEData | The interface to the MIMEed document | R/W |

### 2.11.2 Methods

#### 2.11.2.1 AddAttachmentProtocol Method

**void AddAttachmentProtocol (Protocol String, Sequence int);**

***Description:*** For each attachment, one or more protocols must be listed for which the attachment is to be used.

***Parameters***:

Protocol: The protocol class for which the attachment can be used;

Sequence: The sequence (1 to n) in which the attachment must be added to the message, for the specified protocol.

***Usage***: This method defines which protocols can use the attachment, and in what sequence. An attachment must have at least one protocol defined. If more than one attachment is made, it is important to set the sequence that the particular protocol must include the attachment. If Sequence is set to 0, sequence will be automatically, sequentially assigned.

#### 2.11.2.2 ProtocolCount Method

**int ProtocolCount();**

***Description:*** Used to determine the number of Protocols added to the Attachment.

***Returns***: An integer value representing the absolute number of Protocols added.

***Usage***: Internal.

#### 2.11.2.3 ProtocolItem Method

**String ProtocolItem (int Index);**

***Description:*** Used to access a single Protocol item added to the Attachment object, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the internal collection of Protocols. The collection index has a base of 0, being the first item in the collection.

***Returns***: A string identifying the Protocol.

***Usage***: Internal.

#### 2.11.2.4 ProtocolSequence Method

**int ProtocolSequence (int Index);**

***Description:*** Used to access the specified sequence of a single Protocol item added to the Attachment object, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the internal collection of Protocols. The collection index has a base of 0, being the first item in the collection.

***Returns***: The specified sequence of the protocol.

***Usage***: Internal.

## 2.12 MIMEData Object

The MIMEData Object is interfaced by the IMIMEData COM interface. This object is used to load a document and convert it into a MIME string ready for incorporation in an XML document.

### 2.12.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Data | String | **The MIME string representing the loaded document** | R |
| Name | String | The required display filename of the document | R/W |

### 2.12.2 Methods

#### 2.12.2.1 LoadFromFile Method

**void LoadFromFile (String FileName);**

***Description:*** This method is used to load a document from disk.

***Parameters***:

FileName: The fully qualified file name of the document to be attached.

***Usage***: Disk-based documents are loaded using this method. The file name must be a fully qualified UNC. On loading, the file name is stripped from the UNC and assigned to the Name property. An exception will be raised if any errors are encountered during the execution of this method, including invalid file and file names.

#### 2.12.2.2 LoadFromStream Method

**void LoadFromStream (IStream Stream);**

***Description:*** This method is used to load a document from a stream.

***Parameters***:

Stream: A standard COM IStream interface into which the document has been written.

***Usage***: Documents written to a stream are loaded using this method. On loading, the string "Stream" will assigned to the Name property. An exception will be raised if any errors are encountered during the execution of this method, including invalid IStream interface.

#### 2.12.2.3 LoadFromString Method

**void LoadFromString (String StringData);**

***Description:*** This method is used to load document from a string.

***Parameters***:

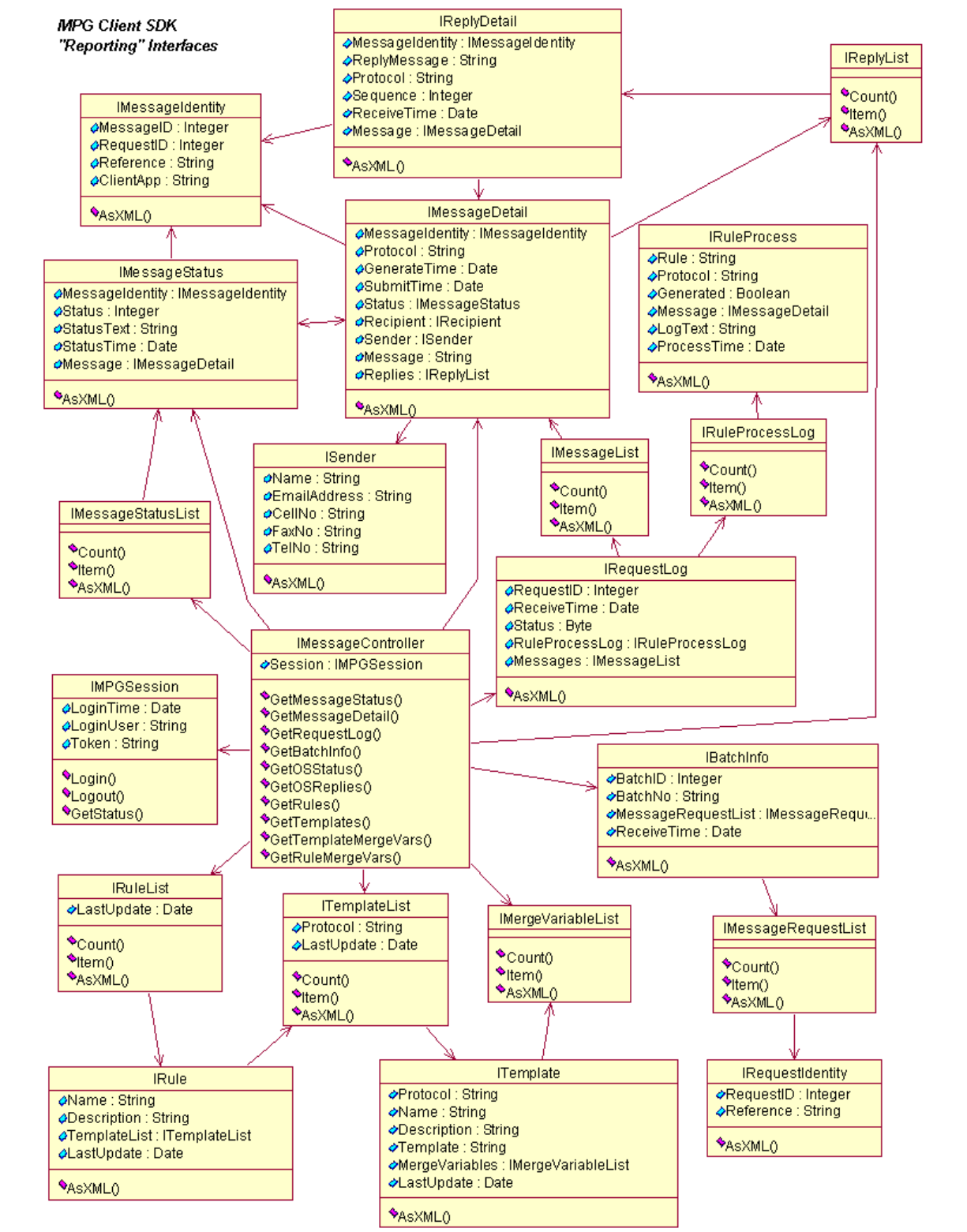
StringData: A string of text or characters representing a document.

***Usage***: Text or documents represented in a string are loaded using this method. On loading, the string "String" will assigned to the Name property. An exception will be raised if any errors are encountered during the execution of this method.

# 3 CELLFIND MESSAGING GATEWAY SDK - REPORTING

The SDK has a subset interfaces that represent the "reporting" classes. These interfaces are used to retrieve message detail and status information from the Cellfind Messaging Gateway.

The Reporting Interfaces are depicted in the following diagram:



## 3.1 MessageController Object

The MessageController Object is interfaced by the IMessageController COM interface. A MessageController object provides an interface to draw report information from the Cellfind Messaging Gateway.

### 3.1.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Session | IMPGSession | A pointer to an MPGSession object interface which need do have a valid current login with the Cellfind Messaging Gateway before any of the methods can be called | R/W |

### 3.1.2 Methods

#### 3.1.2.1 GetMessageStatus Method

**IMessageStatus GetMessageStatus (int MessageID);**

***Description:*** Used to retrieve the current status information of a message previously submitted to the Cellfind Messaging Gateway.

***Parameters***:

MessageID: Unique identifier for a Message as generated by the Cellfind Messaging Gateway.

***Returns***: An IMessageStatus interface to the status properties of the message.

***Usage***: The method is called when the status of a specific message, whose MessageID is known, is required. An exception will be raised if any error is encountered during the execution of this method, including supplying an invalid or inaccessible MessageID.

#### 3.1.2.2 GetMessageDetail Method

**IMessageDetail GetMessageDetail (int MessageID);**

***Description:*** Used to retrieve the details of a message previously submitted to the Cellfind Messaging Gateway.

***Parameters***:

MessageID: Unique identifier for a Message as generated by the–Cellfind Messaging Gateway.

***Returns***: An IMessageDetail interface to the properties of the message.

***Usage***: The method is called when the details of a specific message, whose MessageID is known, is required. An exception will be raised if any error is encountered during the execution of this method, including supplying an invalid or inaccessible MessageID.

#### 3.1.2.3 GetRequestLog Method

**IRequestLog GetRequestLog (int RequestID);**

*Description:* Used to retrieve the details of the processing of a MessageRequest previously submitted to the Cellfind Messaging Gateway.

***Parameters***:

RequestID: Unique identifier of a MessageRequest as generated by the–Cellfind Messaging Gateway.

***Returns***: An IRequestLog interface to the properties of the log of the rule processing of the MessageRequest..

***Usage***: The method is called to examine the details of the processing of a MessageRequest by a Rule. This is useful in determining exactly what steps the rule went through and for accessing the messages generated by the Rule. An exception will be raised if any error is encountered during the execution of this method, including supplying an invalid or inaccessible RequestID.

#### 3.1.2.4 GetBatchInfo Method

**IBatchInfo GetBatchInfo (String BatchNo);**

***Description:*** Used to retrieve the properties of a submitted BatchRequest.

***Parameters***:

BatchNo: The user-defined label for the batch as submitted to the Cellfind Messaging Gateway.

***Returns***: An IBatchInfo interface representing all the details of the submitted batch.

***Usage***: The details of a previously submitted RequestBatch can be retrieved using a unique identifier, the BatchNo supplied when submitting the batch. An exception will be raised if any error is encountered during the execution of this method, including supplying an invalid or non-unique BatchNo.

#### 3.1.2.5 GetOSStatus Method

**IMessageStatusList GetOSStatus (String ClientApp, Boolean GetDetail);**

***Description:*** This method is used to retrieve a collection of message statuses that have not already been retrieved. Only outstanding messages sent by the user logged in using the MPGSession object are returned.

***Parameters***:

ClientApp: The Cellfind registered name of the client application making use of this SDK. If supplied, only those outstanding statuses of messages submitted by the specified client application will be returned. If not submitted (null string), all outstanding messages are returned.

GetDetail: If TRUE, the Message property of each IMessageStatus interface retuned will be populated.

***Returns***: An IMessageStatus interface to a collection new message statuses.

***Usage***: This method is primarily used in a non-server-to-client push environment, such as the Web service. Typically, the client application will use this SDK method to poll the Web service to return message status updates to the client. Note: Cellfind will enforce that this method is invoked at a maximum of every 10 minutes.

#### 3.1.2.6 GetOSReplies Method

**IReplyList GetOSReplies (String ClientApp, Boolean GetDetail);**

***Description:*** This method is used to retrieve a collection of replies to messages that have not already been retrieved. Only outstanding replies to messages sent by the user logged in using the MPGSession object are returned.

***Parameters***:

ClientApp: The Cellfind registered name of the client application making use of this SDK. If supplied, only those outstanding replies to messages submitted by the specified client application will be returned. If not submitted (null string), all outstanding replies are returned.

GetDetail: If TRUE, the Message property of each IReplyDetail interface retuned will be populated.

***Returns***: An IReplyList interface to a collection of new replies.

***Usage***: This method is primarily used in a non-server-to-client push environment, such as the Web service. Typically, the client application will use this SDK method to poll the Web service to return new replies to the client. Note: Cellfind will enforce that this method is invoked at a maximum of every 10 minutes.

#### 3.1.2.7 GetRules Method

**IRuleList GetRules (String LastUpdate);**

***Description:*** This method is used to retrieve a collection of the Rules defined on the Cellfind Messaging Gateway.

***Parameters***:

LastUpdate: The date and time when the list was last obtained. If specified, only Rules that have been added or changed since that time will be returned. The string passed must either be empty or in the format of CCYYMMDDHHMMSS.

***Returns***: An IRuleList interface to a collection of Rules.

***Usage***: This method is usually used to provide a client application user interface with a list of Rules to use when sending messages. To facilitate local caching of these rules, the LastUpdate parameter ensures that the minimum of data is returned on refresh of the cache.

#### 3.1.2.8 GetTemplates Method

**ITemplateList GetTemplates (String Protocol, String LastUpdate);**

***Description:*** This method is used to retrieve a collection of the Templates defined on the Cellfind Messaging Gateway.

***Parameters***:

Protocol: The identifier of the protocol for which the templates are defined. For all protocols this should be an empty string.

LastUpdate: The date and time when the list was last obtained. If specified, only Templates that have been added or changed since that time will be returned. The string passed must either be empty or in the format CCYYMMDDHHMMSS.

***Returns***: An ITemplateList interface to a collection of Templates.

***Usage***: This method is usually used to provide a client application user interface with a list of Templates to use when sending messages. To facilitate local caching of these templates, the LastUpdate parameter ensures that the minimum of data is returned on refresh of the cache.

#### 3.1.2.9 GetTemplateMergeVars Method

**IMergeVariableList GetTemplateMergeVars (String Template);**

*Description:* This method is used to retrieve a collection of the merge variable names defined within a Template, defined on the Cellfind Messaging Gateway.

*Parameters*:

Template: The identifier of the template in which the merge variables are defined.

*Returns*: An IMergeVariableList interface to a collection of merge variable names.

*Usage*: This method is usually used to provide a client application user interface with a list of merge variables to assign values to when sending messages with a specific Template.

#### 3.1.2.10 GetRuleMergeVars Method

**IMergeVariableList GetRuleMergeVars (String Rule);**

***Description:*** This method is used to retrieve a collection of the merge variable names defined within all the Templates specified within a Rule, defined on the Cellfind Messaging Gateway.

***Parameters***:

Rule: The identifier of the Rule in whose Templates the merge variables are defined.

***Returns***: An IMergeVariableList interface to a collection of merge variable names.

***Usage***: This method is usually used to provide a client application user interface with a list of merge variables to assign values to when sending messages with a specific Rule.

## 3.2 MessageIdentity Object

The MessageIdentity Object is interfaced by the IMessageIdentity COM interface. A MessageIdentity object provides an interface to the properties that can be used to identity a message.

### 3.2.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| MessageID | Integer | The unique Cellfind Messaging Gateway generated identifier of the message | R |
| RequestID | Integer | The unique Cellfind Messaging Gateway generated identifier of the message request which generated the message | R |
| Reference | String | The user-defined label used to identify the message / request | R |
| ClientApp | String | The Client application identifier, as registered with Cellfind. | R |

### 3.2.2 Methods

#### 3.2.2.1 AsXML Method

**String AsXML;**

***Description***: This method formats an XML string of the node representing the MessageIdentity object.

***Returns***: A string representing the MsgIdent sub-node of an Cellfind Messaging Gateway generated XML document. See Appendix A for the definition of the Cellfind Messaging Gateway XML documents.

***Usage***: AsXML formats an MsgIdent XML document, being a sub-node of an XML document returned from the Cellfind Messaging Gateway by one of the object method calls.

## 3.3 MessageDetail Object

The MessageDetailObject is interfaced by the IMessageDetailCOM interface. The MessageDetail object provides an interface to all the properties of a message.

### 3.3.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| MessageIdentity | IMessageIdentity | A pointer to the MessageIdenty interface used to identify the message | R |
| Protocol | String | The protocol used to transport the message | R |
| GenerateTime | String | The date and time when the message was generated. Format: CCYYMMDDHHMMSS | R |
| SubmitTime | String | The date and time when the message was submitted for delivery. Format: CCYYMMDDHHMMSS | R |
| Status | IMessageStatus | A pointer to the IMessageStatus interface detailing the current delivery status of the message | R |
| Recipient | IRecipient | A pointer to the IRecipient interface detailing the contact details of the recipient | R |

| | | | |
|---|---|---|---|
| Sender | ISender | A pointer to the ISender interface detailing the contact details of the sender | R |
| Message | String | The actual message sent. If the message is over 1KB in size, the message string will not be supplied. | R |
| Replies | IReplyList | A pointer to the IReplyList interface to a collection of all the replies received to this message. If no replies have been received, this property will be null. | R |

### 3.3.2 Methods

#### 3.3.2.1 AsXML Method

**String AsXML();**

***Description:*** Used to return an XML document representing the properties and related collections of a message.

***Returns***: An MPGMessageDetail XML document if called as an upper level object. If embedded in another Cellfind Messaging Gateway generated XML document it will be the sub-node MsgDet. See Appendix A for the definition of the MPGMessageDetail document.

***Usage***: AsXML is called to create an XML document representing the properties of the entity.

## 3.4 MessageList Object

The MessageList Object is interfaced by the IMessageList COM interface. The MessageList object provides an interface to a collection of IMessageDetail interfaces.

### 3.4.1 Methods

#### 3.4.1.1 Count Method

**int Count();**

***Description:*** Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 3.4.1.2 Item Method

**IMessageDetail Item (int Index);**

***Description:*** Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: An IMessageDetail interface.

***Usage***: An individual IMessageDetail interface can be accessed from the collection using the Item method. The index must be between 0 and Count() -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 3.4.1.3 AsXML Method

**String AsXML ();**

***Description:*** Used to return an XML document representing the collection.

***Returns***: The sub-node MsgList of a Cellfind Messaging Gateway generated XML document. See Appendix A for the definition of these documents.

***Usage***: AsXML is called to create an XML document representing the collection.

## 3.5 MessageStatus Object

The MessageStatus Object is interfaced by the IMessageStatus COM interface. A MessageStatus object provides an interface to the properties of a message's status information;

### 3.5.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| MessageIdentity | IMessageIdentity | A pointer to the IMessageIdentity interface used to identify the message | R |
| Status | Integer | The current message status**:**<br>**-1=Pending**<br>**0 =Undelivered**<br>**1 =Delivered**<br>**2 =Merge Failure**<br>**3 =Submitted - No Status Received**<br>**4 =Expired**<br>**5 =Blocked by Exclusionrule**<br>**6 =Rejected**<br>**7 =MPG Deliverymechanism Failure**<br>**8 =Invalid Recipient**<br>**9 =Submitted - No ACK Received**<br>**99=Held Back**<br>**"" =Submitted - No Status Received** | R |
| StatusText | String | The message describing the status | R |
| StatusTime | String | The date and time the status was received. Format: CCYYMMDDHHMMSS | R |
| Message | IMessageDetail | A pointer to the IMessageDetail interface to all the properties of the message. Note: It is not guaranteed that this interface will always be available. | R |

### 3.5.2 Methods

#### 3.5.2.1 AsXML Method

**String AsXML();**

***Description:*** Used to return an XML document representing the properties and related collections of a MessageStatus object.

***Returns***: An MPGMessageStatus XML document if called as an upper level object. If embedded in another Cellfind Messaging Gateway generated XML document it will be the sub-node MsgStat. See Appendix A for the definition of the MPGMessageStatus document.

***Usage***: AsXML is called to create an XML document representing the properties of the entity.

## 3.6 MessageStatusList Object

The MessageStatusList Object is interfaced by the IMessageStatusList COM interface. A MessageStatusList object provides an interface to a collection of IMessageStatus interfaces.

### 3.6.1 Methods

#### 3.6.1.1 Count Method

**int Count();**

***Description:*** Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 3.6.1.2 Item Method

**IMessageStatus Item (int Index);**

***Description:*** Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: An IMessageStatus interface.

***Usage***: An individual IMessageStatus interface can be accessed from the collection using the Item method. The index must be between 0 and Count() -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 3.6.1.3 AsXML Method

**String AsXML ();**

***Description:*** Used to return an XML document representing the collection.

***Returns***: An MPGMessageStatusList XML document. See Appendix A for the definition of this document.

***Usage***: AsXML is called to create an XML document representing the collection.

## 3.7 ReplyDetail Object

The ReplyDetail Object is interfaced by the IReplyDetail COM interface. A ReplyDetail object provides an interface to all the properties of a message reply.

### 3.7.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| MessageIdentity | **IMessageIdentity** | **A pointer to the IMessageIdentity interface used to identify the original message** | R |
| ReplyMessage | **String** | **The reply string / document** | R |
| Protocol | **String** | **The Protocol by which this message was transported** | R |
| Sequence | **Integer** | **The sequence of this reply, starting at 0, of all replies received to this message.** | R |
| ReceiveTime | **String** | **The date and time the reply was received. Format: CCYYMMDDHHMMSS** | R |
| Message | IMessageDetail | A pointer to the IMessageDetail interface to all the properties of the message. Note: It is not guaranteed that this interface will always be available. | R |

### 3.7.2 Methods

#### 3.7.2.1 AsXML Method

**String AsXML();**

***Description:*** Used to return an XML document representing the properties and related collections of a MessageStatus object.

***Returns***: The sub-node RepDet of a Cellfind Messaging Gateway generated XML document. See Appendix A for the definition of Cellfind Messaging Gateway XML document.

***Usage***: AsXML is called to create an XML document representing the properties of the entity.

## 3.8 ReplyList Object

The ReplyList Object is interfaced by the IReplyList COM interface. A ReplyList object provides an interface to a collection of IReplyDetail interfaces.

### 3.8.1 Methods

#### 3.8.1.1 Count Method

**int Count();**

***Description:*** Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 3.8.1.2 Item Method

**IReplyDetail Item (int Index);**

***Description***: Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: An IReplyDetail interface.

***Usage***: An individual IReplyDetail interface can be accessed from the collection using the Item method. The index must be between 0 and Count() -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 3.8.1.3 AsXML Method

**String AsXML ();**

***Description***: Used to return an XML document representing the collection.

***Returns***: An MPGReplyList XML document if called as an upper level object. If embedded in another Cellfind Messaging Gateway generated XML document it will be the sub-node RepList. See Appendix A for the definition of the MPGReplyList document.

***Usage***: AsXML is called to create an XML document representing the collection.

## 3.9 RequestLog Object

The RequestLog Object is interfaced by the IRequestLog COM interface. A RequestLog object provides an interface to all the processing details of a MessageRequest.

### 3.9.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| RequestID | Integer | The unique Cellfind Messaging Gateway generated identifier for the message request | R |
| ReceiveTime | String | The date and time the request was received by the Cellfind Messaging Gateway. Format: CCYYMMDDHHMMSS | R |
| Status | Integer | The status of the request:<br>0 = Awaiting processing<br>1 = Processed awaiting final status<br>2 = Processing complete | R |
| RuleProcessLog | IRuleProcessLog | A pointer to the current IRuleProcessLog interface for the request | R |
| Messages | IMessageList | A pointer to the IMessageList interface containing a collection of IMessageDetail interfaces for all messages generated from the request. | R |

### 3.9.2 Methods

#### 3.9.2.1 AsXML Method

**String AsXML();**

***Description**:* Used to return an XML document representing the properties and related collections of a RequestLog object.

***Returns***: An MPGRequestLog XML document. See Appendix A for the definition of the MPGRequestLog document.

***Usage***: AsXML is called to create an XML document representing the properties of the entity.

## 3.10 RuleProcess Object

The RuleProcess Object is interfaced by the IRuleProcess COM interface. A RuleProcess object provides a interface to all the details of a single rule process.

### 3.10.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Rule | String | The name of the Rule doing the processing | R |
| Protocol | String | The transport protocol attempted by the Rule | R |
| Generated | Boolean | Indicates if a message was generated for the Protocol | R |
| Message | IMessageDetail | A Pointer to the message interface, if a message was generated | R |
| LogText | String | Descriptive output by the Rule in processing the request for this particular protocol | R |
| ProcessTime | String | Date and time the processing occurred. Format: CCYYMMDDHHMMSS | R |

## 3.11 RuleProcessLog Object

The RuleProcessLog Object is interfaced by the IRuleProcessLog COM interface. A RuleProcessLog object provides an interface to a collection of IRuleProcess interfaces.

### 3.11.1 Methods

#### 3.11.1.1 Count Method

**int Count();**

***Description**:* Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 3.11.1.2 Item Method

**IRuleProcess Item (int Index);**

***Description**:* Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: An IRuleProcess interface.

***Usage***: An individual IRuleProcess interface can be accessed from the collection using the Item method. The index must be between 0 and Count() -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 3.11.1.3 AsXML Method

**String AsXML ();**

***Description***: Used to return an XML document representing the collection.

***Returns***: The sub-node RulePrcLog of an MPGRequestLog XML document. See Appendix A for the definition of this document.

***Usage***: AsXML is called to create an XML document representing the collection.

## 3.12 Rule Object

The Rule Object is interfaced by the IRule COM interface. A Rule object provides an interface to all the details of an MPGRule.

### 3.12.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Name | **String** | **The unique name given to the rule** | R |
| Description | **String** | **The description of the rule** | R |
| TemplateList | ITemplateList | A pointer to an ITemplateList interface | R |
| LastUpdate | String | Date and time the rule was last updated. Format: CCYYMMDDHHMMSS | R |

### 3.12.2 Methods

#### 3.12.2.1 AsXML Method

**String AsXML();**

***Description***: Used to return an XML document representing the properties and related collections of a Rule object.

***Returns***: The sub-node Rule of a Cellfind Messaging Gateway generated XML document. See Appendix A for the definition of these documents.

***Usage***: AsXML is called to create an XML document representing the properties of the entity.

## 3.13 RuleList Object

The RuleList Object is interfaced by the IRuleList COM interface. A RuleList object provides an interface to a collection of IRule interfaces.

### 3.13.1 Methods

#### 3.13.1.1 Count Method

**int Count();**

***Description**:* Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 3.13.1.2 Item Method

**IRule Item (int Index);**

***Description**:* Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: An ITemplate interface.

***Usage***: An individual ITemplate interface can be accessed from the collection using the Item method. The index must be between 0 and Count() -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 3.13.1.3 AsXML Method

**String AsXML ();**

***Description**:* Used to return an XML document representing the collection.

***Returns***: An MPGRuleList XML document. See Appendix A for the definition of the MPGRule document.

***Usage***: AsXML is called to create an XML document representing the collection.

## 3.14 Template Object

The Template Object is interfaced by the ITemplate COM interface. A Template object provides an interface to all the details of a message template.

### 3.14.1 Properties

| Name | Type | Description | Access |
|---|---|---|---|
| Protocol | String | The transport protocol using this template | R |
| Name | String | The unique name given to the template | R |
| Description | String | The description of the template | R |
| Template | String | The actual template | R |
| MergeVariables | IMergeVariableList | A pointer to an IMergeVariableList interface | R |
| LastUpdate | String | Date and time the template was last updated. Format: CCYYMMDDHHMMSS | R |

### 3.14.2 Methods

#### 3.14.2.1 AsXML Method

**String AsXML();**

***Description**:* Used to return an XML document representing the properties and related collections of a Template object.

***Returns***: The sub-node Tmpl of a Cellfind Messaging Gateway generated XML document. See Appendix A for the definition of these documents.

***Usage***: AsXML is called to create an XML document representing the properties of the entity.

## 3.15 TemplateList Object

The TemplateList Object is interfaced by the ITemplateList COM interface. A TemplateList object provides an interface to a collection of ITemplate interfaces.

### 3.15.1 Methods

#### 3.15.1.1 Count Method

**int Count();**

***Description:*** Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 3.15.1.2 Item Method

**ITemplate Item (int Index);**

***Description:*** Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: An ITemplate interface.

***Usage***: An individual ITemplate interface can be accessed from the collection using the Item method. The index must be between 0 and Count () -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 3.15.1.3 AsXML Method

**String AsXML ();**

***Description:*** Used to return an XML document representing the collection.

***Returns***: An MPGTemplateList XML document if called as an upper level object. If embedded in another Cellfind Messaging Gateway generated XML document it will be the sub-node TmplList. See Appendix A for the definition of the MPGTemplateList document.

***Usage***: AsXML is called to create an XML document representing the collection.

## 3.16 MergeVariableList Object

The MergeVariableList Object is interfaced by the IMergeVariableList COM interface. A MergeVariableList object provides an interface to a collection of merge variable name strings.

### 3.16.1 Methods

#### 3.16.1.1 Count Method

**int Count();**

***Description****:* Used to determine the number of items on the collection.

***Returns***: An integer value representing the absolute number of items in the collection.

***Usage***: Count is usually called prior to accessing individual items in the collection.

#### 3.16.1.2 Item Method

**string Item (int Index);**

*Description:* Used to access a single item in the collection, indicated by the Index parameter.

***Parameters***:

Index: An integer value representing the index into the collection of the item to be retrieved. The collection index has a base of 0, being the first item in the collection.

***Returns***: A merge variable name as a string.

***Usage***: An individual merge variable name can be accessed from the collection using the Item method. The index must be between 0 and Count() -1. An exception will be raised if an invalid, out-of-range Index is supplied.

#### 3.16.1.3 AsXML Method

**String AsXML ();**

***Description****:* Used to return an XML document representing the collection.

***Returns***: An MPGMessageVarList XML document if called as an upper level object. If embedded in another Cellfind Messaging Gateway generated XML document it will be the sub-node MsgVarList. See Appendix A for the definition of the MPGMessageVarList document.

*Usage*: AsXML is called to create an XML document representing the collection.

# 4 APPENDIX A – XML DOCUMENT DEFINITIONS

## 4.1 MPGBatchRequest Document

This XML document contains all the data comprising a batch of Cellfind Messaging Gateway message requests. This document is formatted by the AsXML method of the BatchRequestObject.

### 4.1.1 MPGBatchRequest Node

This is main element of the MPGBatchRequest XML document. It contains all the data required to make up a batch of message requests.

#### 4.1.1.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
────< MPGBatchRequest>
```

#### 4.1.1.2 Sample:

```
< MPGBatchRequest  BatchNo="MyBatch1234"
                   GenTime="20030601130559">
  <Sndr>..</Sndr>
  <MsgRqstList>..</MsgRqstList>
</MPGBatchRequest>
```

| Attribute | Max. Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| BatchNo | 30a | Batch Number | User-defined label used to later identify the batch | ☒ | |
| GenTime | 14n | Generated Time | Date and time when batch file was generated. Format CCYYMMDDHHMMSS | ☒ | |
| Sndr | None | Sender | The Sender's contact details | ☒ | |
| MsgRqstList | None | Message Request List | The list of message requests | ☑ | |

### 4.1.2 Sndr Node

This element of the MPGBatchRequest XML document is a child node of the MPGBatchRequest element. An instance of this optional element will contain information with regards to the contact details of the sender of the original message.

#### 4.1.2.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
────< MPGBatchRequest >
  │────<Sndr>
```

#### 4.1.2.2 Sample:

```
<Sndr EMail="johnb@mymail.com"
      CellNo="27838876543"
      FaxNo="27128823456"
      TelNo="27128821234" />
```

| Attribute | Max Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| Email | 200a | E-mail address | The sender's e-mail address | ☒ | |
| CellNo | 11n | Cellular Number | Sender's Cellular Number | ☒ | |
| FaxNo | 15n | Fax Number | Sender's Fax Number | ☒ | |
| TelNo | 15n | Tel Number | Sender's Telephone Number | ☒ | |

### 4.1.3 MsgRqstList Node

This element of the MPGBatchRequest XML document is a child node of the MPGBatchRequest element. An instance of this required element will contain one or more MsgRqst elements.

#### 4.1.3.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
└──< MPGBatchRequest >
   ├──<Sndr>
   └──<MsgRqstList>
```

#### 4.1.3.2 Sample:

```
<MsgRqstList > </ MsgRqstList>
```

### 4.1.4 MsgRqst Node

This element of the MPGBatchRequest XML document is a child node of the MsgRqstList element. One or more MsgRqst elements are required in a MsgRqstList node. An instance of this element will contain information with regards to a message request to the ~~MPG~~ Cellfind Messaging Gateway.

#### 4.1.4.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
└──< MPGBatchRequest >
   ├──< Sndr >
   └──< MsgRqstList >
      └──< MsgRqst >
```

#### 4.1.4.2 Sample:

```
<MsgRqst    ClientApp="MyApp"
      Rule="Credit"
      Subj="Overdue Account"
```

```
      Ref="DBHH0098"
      Priority="2"
      SchedTime="200306012000"
      StatusReqd="1" >
  <RcptList>..</RcptList>
  <OvrdProt>..</OvrdProt>
  <AttchmntList>..</AttachmentList>
</MsgRqst>
```

| Attribute | Max Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| ClientApp | 10a | Client App | The NM registered label given to the generating client application | ☒ | |
| Rule | 10a | Rule name | The name of the MPG rule to be used to process the request | ☒ | |
| Subj | 100a | Message subject | The subject of the message | ☒ | |
| Ref | 50a | Reference | User-defined reference used to track the request/message | ☒ | |
| Priority | 1n | Priority | The priority (0 – 4) with which the message/s must be sent | ☒ | 3 |
| SchedTime | 12n | Schedule Time | The date & time the message must be sent Format CCYYMMDDHHMM | ☒ | |
| StatusReqd | 1n | Status Required? | Set if user requires status updates on message 0 = No, 1 = Yes | ☒ | 1 |
| RcptList | None | Recipient List | The List of Recipients of this message | ☑ | |
| OvrdProt | None | Override Protocol | The details to the protocol to override the message rule | ☒ | |
| AttchmntList | 1n | Attachment List | The list of attachments to the message | ☒ | 1 |

### 4.1.5 RcptList Node

This element of the MPGBatchRequest XML document is a child node of the MsgRqst element. An instance of this required element will contain one or more Rcpt elements.

#### 4.1.5.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
──┬──< MPGBatchRequest >
  ├──< Sndr >
  └──< MsgRqstList >
     └──< MsgRqst >
        ├──< RcptList >
```

#### 4.1.5.2 Sample:

```
<RcptList >  </RcptList >
```

### 4.1.6 Rcpt Node

This element of the MPGBatchRequest XML document is a child node of the RcptList element. One or more Rcpt elements are required in a RcptList node. An instance of this element will contain information with regards to the contact details of a recipient of the message request to the Cellfind Messaging Gateway.

#### 4.1.6.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
└─┬─< MPGBatchRequest >
  ├───< Sndr >
  └─┬─< MsgRqstList >
    └─┬─< MsgRqst >
      ├─┬─< RcptList >
      │ └───< Rcpt >
```

#### 4.1.6.2 Sample:

```
<Rcpt EMail="brainb@rth.co.za"
      CellNo="27828325674"
      FaxNo="27117056789"
      TelNo="27117056789"
      MergeVars="Initials=BR;Surname=Banner;Amount=R45623.56" />
```

| Attribute | Max Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| Email | 200a | E-mail address | The recipients's e-mail address | ☒ | |
| CellNo | 11n | Cellular Number | Recipient's Cellular Number | ☒ | |
| FaxNo | 15n | Fax Number | Recipient's Fax Number | ☒ | |
| TelNo | 15n | Tel Number | Recipient's Telephone Number | ☒ | |
| MergeVars | 1024a | Merge Variables | A semi-colon delimited list of merge variables in the format: Name1=Value1;Name2=Value2;..;NameN=ValueN | ☒ | |

### 4.1.7 OvrdProt Node

This element of the MPGBatchRequest XML document is a child node of the MsgRqst element. An instance of this optional node will provide the details of the protocol to use in overriding a rule on the Cellfind Messaging Gateway.

#### 4.1.7.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
└─┬─< MPGBatchRequest >
  ├───< Sndr >
  └─┬─< MsgRqstList >
    └─┬─< MsgRqst >
      ├───< RcptList >
      └───< OvrdProt >
```

#### 4.1.7.2 Sample:

```
<OvrdProt   Prot="FAX"
            Template="CreditLetter"
            ReplAll="1" >
  < MIMEData>..</ MIMEData>
</OvrdProt>
```

| Attribute | Max Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| Prot | 10a | Protocol Name | The name of the protocol to override the rule | ☑ | |
| Template | 10a | Template name | The name of the template to be used with the overriding protocol | ☒ | |
| MIMEData | None | MIME Data | A MIME Data node representing the MIMEed document | ☒ | |
| ReplAll | 1n | Replace All processing ? | Set if the entire processing sequence is overriding, else only the sequence of protocols is altered: 0 = No, 1 = Yes | ☑ | |

### 4.1.8 AttchmtList Node

This element of the MPGBatchRequest XML document is a child node of the MsgRqst element. An instance of this optional element will contain one or more Attchmt elements.

#### 4.1.8.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
└──< MPGBatchRequest >
   ├──< Sndr >
   └──< MsgRqstList >
      └──< MsgRqst >
         ├──< RcptList >
         ├──< OvrdProt >
         └──< AttchmtList >
```

#### 4.1.8.2 Sample:

```
<AttchmtList >  </AttchmtList >
```

### 4.1.9 Attchmt Node

This element of the MPGBatchRequest XML document is a child node of the AttchmtList element. One or more Attchmt elements are required in an AttchmtList node. An instance of this element will contain the details of an attached file to the message request to the–Cellfind Messaging Gateway.

#### 4.1.9.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
└──< MPGBatchRequest >
   ├──< Sndr >
   └──< MsgRqstList >
      └──< MsgRqst >
         ├──< RcptList >
         ├──< OvrdProt >
         └──< AttchmtList >
            └──< Attchmt >
```

#### 4.1.9.2 Sample:

```
<Attchmt >
  <MIMEData>..</MIMEData>
  <ProtList>..</ProtList>
</Attchmt>
```

| Attribute | Max Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| MIMEData | None | MIME Data | The MIMED document | ☑ | |
| ProtList | None | Attachment Protocol List | List of Attachment Protocols for the attachment | ☒ | |

### 4.1.10 ProtList Node

This element of the MPGBatchRequest XML document is an optional child node of the Attchmt element. An instance of this element will contain one or more Prot elements.

#### 4.1.10.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
└──< MPGBatchRequest >
   ├──< Sndr >
   └──< MsgRqstList >
      └──< MsgRqst >
         ├──< RcptList >
         ├──< OvrdProt >
         └──< AttchmtList >
            └──< Attchmt >
               └──< ProtList >
```

#### 4.1.10.2 Sample:

```
<ProtList > .. </ProtList >
```

### 4.1.11 Prot Node

This element of the MPGBatchRequest XML document is a child node of the ProtList element. One or more Prot elements are required in an ProtList node. An instance of this element will contain the details of an Attachment Protocol.

#### 4.1.11.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
< MPGBatchRequest >
  < Sndr >
  < MsgRqstList >
    < MsgRqst >
      < RcptList >
      < OvrdProt >
      < AttchmtList >
        < Attchmt >
          < ProtList >
            < Prot >
```

#### 4.1.11.2 Sample:

```
<Prot Prot="FAX"
      Seq="1"
</Prot>
```

| Attribute | Max Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| Prot | 10a | Protocol Name | The name of the protocol | ☑ | |
| Seq | 2n | Sequence | The sequence in which the attachment is attached for this protocol | ☑ | |

### 4.1.12 MIMEData Node

This element of the MPGBatchRequest XML document is a child node of the OvrdProt (optional) and Attchmt (required) elements. An instance of this element will contain the details of the MIMEed data.

#### 4.1.12.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchRequest SYSTEM " MPGBatchRequest.dtd" >
< MPGBatchRequest >
  < Sndr >
  < MsgRqstList >
    < MsgRqst >
      < RcptList >
      < OvrdProt >
        < MIMEData >
      < AttchmtList >
        < Attchmt >
          < MIMEData >
```

#### 4.1.12.2 Sample:

```
<MIMEData>
  < Data>a000003nnjjssla0000000sdddg00</Data>
  <Name>Anders.jpg</Name>
</MIMEData>
```

| Attribute | Max | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|

| | Len | | | | |
|---|---|---|---|---|---|
| Name | 50a | Data Name | The name of the file/data | ☑ | |
| Data | None | Attachment data | A child node containing a MIME string of data representing the document | ☑ | |

## 4.2 MPGBatchInfo Document

This XML document contains the identity of all messages requests submitted as a batch, typically using the MPGBatchRequest XML document.

### 4.2.1 MPGBatchInfo Node

This is main element of the MPGBatchInfo XML document. It contains the MPG-generated batch identity and a collection of message request identities.

#### 4.2.1.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchInfo SYSTEM " MPGBatchInfo.dtd" >
────< MPGBatchInfo>
```

#### 4.2.1.2 Sample:

```
< MPGBatchInfo BatchID="34523"
               BatchNo="MyBatch1234"
               RecTime="20030601131009" >
  < RqstList > .. </RqstList >
</MPGBatchInfo >
```

| Attribute | Max. Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| BatchID | 12n | Batch ID | Cellfind Messaging Gateway generated unique identifier for the batch | ☑ | |
| BatchNo | 30a | Batch Number | User-defined label used to later identify the batch | ☒ | |
| RecTime | 14n | Received Time | Date and time when batch file was received. Format CCYYMMDDHHMMSS | ☑ | |
| RqstList | None | Message Request List | The list of message requests submitted in the batch. | ☑ | |

### 4.2.2 RqstList Node

This element of the MPGBatchInfo XML document is a child node of the MPGBatchInfo element. An instance of this required element will contain one or more RqstIdent elements.

#### 4.2.2.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchInfo SYSTEM " MPGBatchInfo.dtd" >
──┬< MPGBatchInfo >
  └──<RqstList>
```

#### 4.2.2.2 Sample:

```
<RqstList > </ RqstList>
```

### 4.2.3 RqstIdent Node

This element of the MPGBatchInfo XML document is a child node of the RqstList element. One or more RqstIdent elements are required in an RqstList node. An instance of this element will contain identifying information for a message request submitted to the–Cellfind Messaging Gateway.

#### 4.2.3.1 Hierarchy:

```
<?xml version="1.0" encoding= "ISO-8859-1" ?>
<!DOCTYPE MPGBatchInfo SYSTEM " MPGBatchInfo.dtd" >
└──< MPGBatchInfo >
   └──< RqstList >
      └──< RqstIdent >
```

#### 4.2.3.2 Sample:

```
<RqstIdent  ReqID="345326"
            Ref="DBHH0098" />
```

| Attribute | Max Len | Field Name | Field Description | Required | Default |
|---|---|---|---|---|---|
| ReqID | 12n | Request ID | The unique MPG-generated identifier for the message request | ☑ | |
| Ref | 50a | Reference | User-defined reference used to track the request/message | ☒ | |

# 5 APPENDIX B – SOAP SAMPLE

## 5.1 MPGBatchRequest

This XML document contains sample data for a single SMS message request. This sample document can be submitted as the XMLString parameter of the SENDNS Method when invoking the Webservice directly.

**SendNS(**string **UserName,** string **Password,** string **XMLString,** boolean **Compressed)**

Sample MPGBatchRequest Document(XMLString parameter):

```
<MPGBatchRequest GenTime="2005-03-14 16:07:51">
  <MsgRqstList>
    <MsgRqst ClientApp="IMS" Subj="Nashua Mobile MPG Test Message" Ref="1234"
    Priority="1" SchedTime="2005-01-05 14:30:00" StatusReqd="true">
        <OvrdProt Prot="SMS" Template="DEF" MergeVars="Test SMS Message"
        ReplAll="false" />
        <RcptList>
          <Rcpt Email="Joeb@Whatever.com" CellNo="0833609827"
          FaxNo="0112078999" TelNo="0112078967" />

        </RcptList>
    </MsgRqst>
  </MsgRqstList>
</MPGBatchRequest>
```

# 6 APPENDIX B – XML DOCUMENT SAMPLE

## 6.1 MPGBatchRequest

This XML document contains sample data for a single SMS message request. This sample document can be submitted as the XMLString parameter of the SENDNS Method when invoking the Webservice directly.

**SendNS (**string **UserName,** string **Password,** string **XMLString,** boolean **Compressed)**

Sample MPGBatchRequest Document(XMLString parameter):

```
<MPGBatchRequest GenTime="2005-03-14 16:07:51">
  <MsgRqstList>
    <MsgRqst ClientApp="IMS" Subj="Nashua Mobile MPG Test Message" Ref="1234"
    Priority="1" SchedTime="2005-01-05 14:30:00" StatusReqd="true">
        <OvrdProt Prot="SMS" Template="DEF" MergeVars="Test SMS Message"
        ReplAll="false" />
        <RcptList>
          <Rcpt Email="Joeb@Whatever.com" CellNo="0833609827"
          FaxNo="0112078999" TelNo="0112078967" />

        </RcptList>
    </MsgRqst>
  </MsgRqstList>
</MPGBatchRequest>
```

# 7 APPENDIX C – SOAP SAMPLE

## 7.1 SENDNS

This XML document contains an example of a SOAP formatted packet for submitting a single SMS message request to the Cellfind Messaging Gateway via the SENDNS-method.


```
<?xml version="1.0" ?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:SOAP-
  ENC="http://schemas.xmlsoap.org/soap/encoding/">
  <SOAP-ENV:Body SOAP-
  ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">
  <NS1:SendNS xmlns:NS1="urn:uMPGWSIntf-IMPGWS">
      <UserName xsi:type="xsd:string">8880000688</UserName>
      <Password xsi:type="xsd:string">YourPassword</Password>
      <XMLString xsi:type="xsd:string"><MPGBatchRequest GenTime="2005-03-17
      12:04:38"><MsgRqstList><MsgRqst ClientApp="IMS" Subj="Nashua Mobile MPG
      Test Message" Ref="1234" Priority="1" SchedTime="2005-01-05 14:30:00"
      StatusReqd="true"><OvrdProt Prot="SMS" Template="DEF" MergeVars="Test SMS
      Message" ReplAll="false"/><RcptList><Rcpt Email="Joeb@Whatever.com"
      CellNo="0833609827" FaxNo="0112078999"
      TelNo="0112078967"/></RcptList></MsgRqst></MsgRqstList></MPGBatchRequest
      >
      </XMLString>
      <Compressed xsi:type="xsd:boolean">false</Compressed>
  </NS1:SendNS>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```