Write Back Functional Specification

Part D: The DRI Repository Search Service

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PART D: CONTENTS

1 RETRIEVE CLAIM DATA MESSAGE INTERACTIONS

This section describes the interface which will be offered by central systems for a Retrieve Claim Data service. It covers the data required to call the service together with the data returned in the response message.

1.1 Service Overview

Central systems will expose a service that will allow Carriers to retrieve claim data for a given UMR, UCR and TR. The message to the Carrier will consist of the following information:

- The current claim information that would normally be available to the Carrier from CAS

- A current list of policy and claim documents that would normally be available to the Carrier from the IMR. This will be in a similar format to that obtained from an ACORD DRI Search (see below)

The information will be provided in a structured XML format that resembles ACORD as far as practicable. This service will also contain appropriate failure, retry and exception handling to mitigate any risk of non-delivery.

The response message will contain an acknowledgment of successful receipt of the message or a rejection with the reason.

Please note that the technical content of the message e.g. SOAP or REST protocols, unique message identifiers etc. will be defined in detailed design which will likely involve further collaboration with Carriers and their software providers.

2 DRI: REPOSITORY SEARCH MESSAGE INTERACTIONS

This section describes the interface which will be offered by Central systems for a DRI Repository Search service. This covers the data required to call the service together with the metadata and list of documents returned in the response message. This can then lead to the DRI Repository Download Service being invoked (see Part E of the Functional Specification for details of the DRI Repository Download Service).

2.1 Service Overview

Central systems will expose a service that will allow Carriers to search documents on the IMR for a given combination of UMR, UCR and TR. The message to the Carrier will consist of the following information:

- A current list of policy and/or claim documents that are available to the Carrier (if they are authorised to see the document as part of the Access Control List) from the IMR based on the search criteria at the point at which the service is invoked.

- Document metadata i.e. unique keys to the documents that can invoke a DRI Download request.

The information will be provided in a structured ACORD XML format. This service will also contain appropriate failure, retry and exception handling to mitigate any risk of non-delivery.

The response message to Carriers will contain an acknowledgment of successful receipt of the message or a rejection with the reason. A success response message will also contain information about documents matching the search criteria. The exchange of messages is asynchronous, i.e. the response to the Search request will not be instantaneous.

The ACORD DRI messaging framework will be adopted, including message management, message construct and data definitions.

For Carrier organisations that already have an Outbound DRI implementation, Write Back should operate as a complementary service. Carrier systems will be able to compare the list of documents provided in this web service with the documentation already notified via the Outbound DRI channel using the unique identifier for the document (either Document ID or a combination of Document Ref and Document Version). If any documents are notified which are not currently held on the Carrier's own repository – for example, where the Carrier role on a claim has changed and previously loaded documents have not been notified via Outbound DRI or where documents have been loaded to the IMR but no CWT event has been triggered - the Carrier system can invoke the Document Download service in order to obtain copies of the documents. This will ensure for example that Carriers have a full set of claim documents when adjusting a claim.

2.2 Identification of Parties

Many of the elements within the DRI message and associated metadata include party ID. Many of these may validly include parties who are not identified by the Lloyd's, Institute of London Underwriters or London Insurance and Reinsurance Market Association code lists. The agency responsible for the code set from which each party's code is taken must be identified by a valid value from the ACORD Responsible Agency code list (3055).

Only Lloyd's, Institute of London Underwriters or London Insurance and Reinsurance Market Association codes will be used.

Note: Xchanging allow the DUNS code of the message sender to be quoted in the SOAP message.

A completed Party Aggregate example is shown below.

- Lloyd's example

```
<Party>
     <PartyId>urn:lloyds:5555</PartyId>
     <PartyRole>Insurer</PartyRole>
     <PartyName>InsurerName</PartyName>
</Party>
```

2.3 Identification of Documents

The Search response will include information about documents matching the search criteria. The information provided for each document includes the means by which the document is uniquely identified in the IMR. The response closely follows the guidelines established in the ACORD DRI Reference Guide.

ACORD Protocols for Identifying Documents

Extract from the ACORD DRI Reference Guide v 1.2.0:

"A document is uniquely identified with one of two exclusive methods:

1) A globally unique *<DocumentId>*; or

2) An Owner's repository reference <DocumentReference>, optionally augmented by a document version number *<DocumentVersion>*.

When *<DocumentVersion>* is provided in addition to *<DocumentReference>*, it should be considered part of the unique identifier. It should be used consistently for referencing this document. Note that <DocumentVersion> can be given with <DocumentId> as well, but then it is not part of the unique identifier."

- If the document was loaded to the IMR using the DRI standards, the *<DocumentId>* provided for the document received in a DRI message will be stored in the repository alongside any internal identifier for that document. It will be supplied in the outgoing Search response in the relevant Document identifier data elements.

- If the document was loaded to the repository on-line it *<DocumentID>* will be populated by the repository.

Additional Document Identifiers Provided by Central Systems

The current implementation of the IMR has meant that the standard ACORD Document Identifiers are not sufficient to uniquely identify a document on the repository. To facilitate document download, Xchanging introduced an additional Token ID element rlc:ServiceProviderContactDescription to outbound document information,

Carriers should quote all Identifiers provided in the inbound (to Carrier) message in their downstream Document Download request.

The data elements which enable unique identification of documents in the Search response are shown below:

```
<DocumentItem>
    <Document>
        <DocumentID>SomeDocumentID</DocumentID>
        <DocumentReference>SomeDocReference</DocumentReference>
        <DocumentVersion>01</DocumentVersion>
    </Document>
    <ReferredObjects>
        <rlc:ServiceProvider>
            <rlc:Party>
                <rlc:Name>Xchanging</rlc:Name>
            <rlc:Party>
            <rlc:Contact>
                <rlc:Description>SomeUniqXchID</rlc:Description>
            <rlc:Contact>
        </rlc:ServiceProvider>
    </ReferredObjects>
</DocumentItem>
```

2.4 Search Operation

2.4.1   Search Parameters

The DRI Repository Search message search criteria are shown in **Appendix Part D2**.

All search results will only include details of documents to which the sending organisation has access, i.e. if the Broker has indicated that a document is confidential, then this will not be supplied to any Syndicates/Companies that request a search.

If a combination of data elements is used in the search request the search results will include ONLY documents that meet ALL the search criteria. A list of Document Types may be supplied; in this case the search results will include any document that matches the other criteria AND the Document Types listed.

Only one set of Document Item elements (UMR, UCR, TR, Originator and Referred Objects) will be received in one Search Request, although the ACORD DRI message structure allows for multiple repeats of the Document Item group. If multiple sets are received an error message will be sent in the Search Response message.

In the most common Carrier initiated search scenarios, the Carrier will initiate searches based on a combination of the following three search parameters: UMR, UCR and TR.

- <u>Search initiated on UMR only</u> – the search results will include all matching documents containing the UMR including any claim related documents. This may result in a large number of document results being sent in the response to Carrier's request and should be avoided (where possible).

  A more refined search criteria as specified below should be used to avoid getting delays on the service request.

- <u>Search initiated on UMR and UCR</u>– the search results will include ALL matching documents containing the UCR and UMR irrespective of whether the document is allocated to a Transaction Reference.

- <u>Search initiated on UMR, UCR and TR</u> – the search results will include all matching documents relating to the UMR, UCR **and** TR.

The above search results can be further filtered by Document Type, Originator, Start Date etc. See **Appendix D2** *for details.*

2.5 Message Data Definition

The DRI Repository Search operation follows the messaging structure, data definition and conventions established in the ACORD DRI standards.

Each operation consists of a pair of request and response messages. The response messages will only report an "acknowledged" meaning fully completed or "rejected" meaning not completed status. A small selection of the data elements from a request message are echoed back in a response message to aid the receiver in processing the response message.

2.5.1   Search Request Message

Please refer to the Data Dictionary embedded in the ECF –WriteBack – DRI Services – Interface Specification for the Search Request Message structure, multiplicity and business usage.

### 2.5.2   Search Response Message

Please refer to the Data Dictionary embedded in the ECF –WriteBack – DRI Services – Interface Specification for the Search Response Message structure, multiplicity and business usage.

2.6 Operational Behaviours

The service will exhibit the following operational behaviours:

- Request Successful
- Request Failed – SOAP failure or Negative Post Rs

- Request Failed – DRI Repository Search Rejected

The diagram below illustrates the DRI Repository Search main success path. Note: the diagram does not show the HTTP handshake.
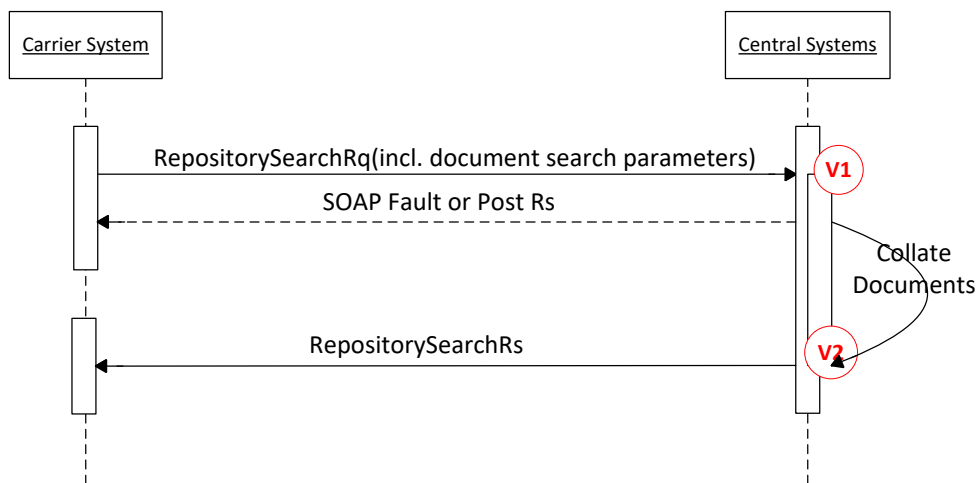
- The Carrier System submits a Repository Search Request to Central Systems based on specific criteria set by the Carrier User. The available search criteria are detailed in Appendix D3 below.

- **Validations**

   (V1) Initial Checks

- The gateway receives the request and performs SOAP level validation at point V1 on the diagram before sending a synchronous response back to the Carrier System. The SOAP validation performed will be in line with the current DRI implementation. The validation is included in Appendix D1 below.

   SOAP Failure or Negative Post Rs

   If the Search Request fails SOAP level validation at the gateway, the Carrier will receive a synchronous SOAP failure response / negative Post Rs notifying them of the failure and the process will terminate here.

Positive Post Rs

If the Search Request passes SOAP level validation at the gateway, the Carrier will receive a synchronous positive Post Rs response notifying them of the success and the request will continue to be processed. The gateway will then pass on the message to the Central System (IMR) to apply business level validation at point V2 on the diagram above.

(V2): Business Message Checks

The business level validation carried out by the system at this point is specified in Appendix D1 below.

DRI Message Validation: Rejected

- If the business level validation on the message fails, then the Search Response back to the Carrier will have an Acknowledgement Status of 'rejected' and will not provide a list of documents.

DRI Message Validation: Success

- If the business level validation on the message passes, then the Search Response back to the Carrier will have an Acknowledgement Status of 'acknowledged' and will provide a list of documents that match the search criteria. The Carrier can then optionally use the information in the response message to initiate a download of the document.

    Note: Only documents to which the Carrier has access (i.e. organisation appears on the Access Control List) will be returned in the Search Response message.

2.6.1 SOAP Faults and Post Rs Validation

Technical errors e.g. SOAP fault handling will be in line with the existing DRI implementation. These will be fully confirmed in the phase two ACORD design phase which is targeted for completion in January 2015.

See Appendix D1 for list of SOAP Post Rs validations and associated error message and descriptions.

2.6.2 DRI Repository Message Validation

A DRI Repository Search response must be issued for each valid, accepted DRI Repository Search request message. Each response message includes a response aggregate which informs the recipient of the processing status of the request message. The response aggregate will indicate that the request has been completed (and a list of matching documents if there are documents found to return) or that the request was not completed (and the reason).

Field Name	Definition
Message ID	The unique ID of the message being responded to.
Acknowledgement level	Code which indicates the level of acknowledgement provided in a response. Only two values from the RLC code table A43 are accepted: - "translation_validation": the response is given at a stage where the message is checked for syntax, unwrapping etc. before being validated according business rules - "application_validation": the response is given after message validation and processing by the application
Acknowledgement status	Code which indicates the status of the acknowledgment given within a response. - "acknowledged" : message successfully processed -- "rejected": message rejected - not processed at all
Error indicator	An error code from the A44 Codelist, "No document found" or "No result found for the given criteria", will be sent to identify the type of error
Error description	Either Error Indicator or Response Description must be present if response status is not "acknowledged"

In the event of a DRI request validation error, the response message will be completed as follows:

Acknowledgement Level:	translation_validation or application_validation whichever is appropriate.
Acknowledgement Status:	will be set to 'rejected'
Error Indicator:	Will be set to the appropriate value in the ACORD A44 code set, "No document found" or "No result found for the given criteria".

2.6.3   Timeout & Retry

It is expected that 98% of requests will have a response within 1 hour as per the SLA below (section 1. 7.3). However any responses not acknowledged within 24 hours should be considered lost. Carriers could consider setting the timeout and retry handling to 24 hours in line with this if they choose to.

2.6.4   Message Persistence

Sent DRI Repository Search messages will be persisted within central systems and retained for a period of 45 days (existing standard but to be confirmed in full NFS).

2.7 DRI: Repository Search Non-Functional Requirements

The DRI Repository Search service should comply with the following non-functional characteristics:

2.7.1 Security

The service will only succeed if the Carrier is registered for the XAG service and has the appropriate security certificates and digital certificates in place to handle the encrypted message. The details on the Carrier registration and certificate requirement for the write back services will be shared separately as part of the build and implementation phase.

2.7.2 Service Availability

DRI Repository events are triggered by XAG which has a service availability of 24/7 though scheduled and unscheduled downtime may be required from time to time(existing standard but to be confirmed in full Non Functional Requirement document).

2.7.3 Service Response Times

2.7.3.1 Message Transmission from XAG

A synchronous receipt must be issued from Xchanging's ACORD gateway within 1 service minute of receipt of a DRI submission (existing standard but to be confirmed in full NFS). Recommended practice suggests repeat requests should not be submitted until a synchronous response is received or a timeout threshold is exceeded.

The existing SLA states that 98% of DRI Repository Search Response messages will be transmitted within a period of 1 core service hour (existing standard but to be confirmed in full NFS) of the Search Request being received within central systems.

2.7.3.2 Message Response from Carriers System

DRI Repository Search Response acknowledgment messages will be transmitted by Carrier systems within a period (to be defined in a separate NFS developed during October) of the Search Response being issued by central systems.

2.7.4   Performance and Maximum Load

2.7.4.1 Message and Document Size

The maximum document upper limit size is 20MB (existing standard but to be confirmed in full Non Functional Requirement document).

2.7.4.2 Anticipated Volumes

The anticipated volumes are to be defined in a separate NFR document developed during October.

2.7.5   Service Support and Maintenance

The XAG is available 24/7, but service support will only be available during core business hours which are 7am-7pm UK time, Monday to Friday excluding public and bank holidays (existing standard but to be confirmed in NFR document)

2.7.6   Invoking the Service

Xchanging will provide a separate Production URL and outbound Xchanging public security certificates for the DRI Repository Search messages per carrier. The Carrier must provide their own inbound public security certificates to Xchanging. The URL will only succeed for those Carrier lines/stamps that have been registered and on-boarded for this service.

From time to time Xchanging will provide separate URLs for lower environments e.g. MAT to carry out testing but the outbound Xchanging public security certificates will be the same across all environments.

3 DOCUMENT CONTROL

3.1 Document Information

Prepared by:	Clarissa Montecillo
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3.2 Revision History

Version	Date	Author	Description
0.4.1	02/10/2014	Clarissa Montecillo	Initial Draft issued to Paul T.
0.4.2	13/10/2014	Parminder Kaur	Updated with the review comments received and various sections are updated.
0.4.2.1	14/10/2014	Parminder Kaur	Updated with the latest feedback received from Paul T on 13/10/14 via email. A very minor amendment, no material change.
1.0	14/11/2014	Kajal Bhardwa	Final signed off version
1.1	15/09/2015	Kajal Bhardwa	Updates in line with Write Back (Phase 1) functionality to be implemented in September 2015.
2.0	26/11/2015	Sonal Quadros	Incorporated review comments received from the market team.

3.3 PARCI

The following roles relate to the most recent version of this document as listed in the Revision History above.

PARCI	Project Role	Name	Signature	Date
Producer	Business Analyst	Parminder Kaur		
Approver	Business Requestor	Write Back Working Group (London Market Carrier community)		
Reviewer	Project Manager	Pat Bergin		
	Solution Architect	Vikas Acharya		
	Technical Consultant	Nitin Jain		
	Sponsoring Architect	Chris Hendry		
	Principal Architect	Rob Jillings, John Ticehurst		
	System Manager	David Burnett		
	Test Manager	Simon Taylor		
	Offshore Tech Project Mgr	Sonia Thakur		

PARCI	Project Role	Name	Signature	Date
	Technical Architect	Mark Fillier		
Consulted	Business Architect	Victoria Jandrell		
Informed	Configuration Manager	Robin Winfield		
	Enterprise Architecture Mgr	Kiwi Wilkinson		
	Design Team Manager	Stuart Plummer		
	Enterprise Apps Architect	Praveen Nagpal		
	Enterprise Info Architect	David Lee		
	Enterprise Infrastructure Architect	Aaron Goodship		
	Application Lead	Ross Daines		
	Technical Project Manager	Tarun Narang		
	PMO	Rubina Chaudhry		

Part D: Appendices

Appendix Part D1: Validation

SOAP and Post Rs Validation

Validation	Description	Error Message
Is the sender or owner valid?	The sender PartyId & PartyRoleCd (Broker, ServiceProvider etc) must be registered with Xchanging for the message type (Upload, Download, Search etc.) that they are sending in.	Either the Owner or the Sender is not a valid trading partner *Note:* Error message is not sent to the originator in this case, please contact Xchanging's support team in case the messages are not getting processed.
Is business message valid?	The business message was not well formed XML	SOAP Fault
Was SOAP body signed with valid key?	All incoming DRI messages have ACORD minimal security applied which means that they must have been signed with a valid certificate. The public version of this certificate needs to be registered on each gateway.	Signature validation failed
Is the business MsgId in the valid format?	The MsgId is not a valid GUID in the business message	The MsgId is not a valid GUID

DRI Repository Response Business Validation

Validation	Description	Error message
Is the component UUID unique?	Each DRI message must have a unique MsgId	Duplicate component UUID
Is the UMR/UCR/TR provided are valid?	No result(s) found based upon the search criteria provided in the search request.	No result found for the given criteria
Does the organisation have access to the UMR/UCR?	Requester does not have access to the UMR/UCR	Insufficient Privilege Error

Appendix Part D2: DRI Repository Search Criteria

Data Element	Result
Unique Market Reference (UMR)	The search results will include all documents related to the UMR (including those associated with UCRs related to the UMR)
Unique Claim Reference (UCR)	The search results will include all documents related to the UCR.
Transaction Reference (TR)	The search results will include all documents related to the UCR and TR. If a TR is included a UCR must always be provided. If not an error message will be returned in the Search Response.
Originator	The search results will include all documents with the specified Originator.
Search Limit (required)	Defines the maximum number of results to be returned. 0 = no limit.
Search Start (required)	Defines the first Search result to be returned. This will not be used and therefore search results will always be returned from the first result found.
Search Start Date and Time	Documents with a Document Version Date and Time equal to or later than the supplied date & time will be included in the search. (A time zone must also be supplied in the message). This will be the Document Version Date and Time supplied with the Unique Document ID if the document was received via inward DRI, otherwise it will be the Date and Time that the document was added to the market repository.
Search End Date and Time	Documents with a Document Version Date and Time earlier than or equal to the supplied date & time will be included in the search. (A time zone must also be supplied in the message). This will be the Document Version Date and Time supplied with the Unique Document ID if the document was received via inward

	DRI, otherwise it will be the Date and Time that the document was added to the market repository.
Document Type List	A list of document types (as identified by the RLC A54 Document Type code) to be included in the search. Any document that has one of the document types specified will be included in the search result.
Search All Indicator	It is not expected that this will be used. If sent it will be ignored. A Search Request message received without any criteria will have the same effect as setting the Search All Indicator.
Owner	The search results will include all documents with the specified Owner. (In this release no results will be returned as Owner is not stored).