**I&RS Attachment Implementation Specification**

November 2023

**Based on the ACORD Life and Annuity Standards v 2.20**

[1 Introduction 3](#_Toc147411608)

[1.1 Attachment Overview 3](#_Toc147411609)

[1.2 Attachment Process Types 4](#_Toc147411610)

[1.3 Supported Messages 5](#_Toc147411611)

[1.4 Basic message level choreography 6](#_Toc147411612)

[1.5 Requirements and Restrictions 7](#_Toc147411613)

[1.6 Technical Requirements 8](#_Toc147411614)

[1.7 Insurance Information Exchange (IIEX) - 8](#_Toc147411615)

[Trading Partner Transaction Management 8](#_Toc147411616)

[1.8 Hours of Operation 9](#_Toc147411617)

[1.9 Early Market Close Days 9](#_Toc147411618)

[2 Message Details 10](#_Toc147411619)

[2.1 ACORD Insurance Standards 10](#_Toc147411620)

[2.2 Attachment Message Principles 10](#_Toc147411621)

[2.3 ACORD XML Message Structure Overview 11](#_Toc147411622)

[2.3.1 Basic Message Construct 11](#_Toc147411623)

[3 DTCC MessAGing DashBOARD 12](#_Toc147411624)

# Introduction

The purpose of this specification is to explain how to utilize the DTCC network to send or receive a message with an attachment(s). This specification addresses the format of the message for attachments. The manner to capture, convert and index documents into the appropriate digital attachment format is outside the scope of this initiative as there are “ready now” services and tools provided by the vendor community that accomplish this step.

Accompanying this guide are several other related files:

- Attachments Technical Reference Guide

- Attachments Connectivity Guide

- Attachments Message Data Dictionary

- Attachments XML Schemas and WSDL files

- Attachments Sample Messages

- ACORD Life and Annuity Standard public schemas v2.20. For more information contact ACORD at Life@acord.org. The public standards are available on their website at www.acord.org.

- For DTCC implementation questions, please visit our website at www.dtcc.com/insurance or contact your I&RS relationship manager.

## Attachment Overview

An ‘attachment’ is any large ‘blob’ of data which is not structured such as the binary representation of a form, imaged data such as a scanned document, or is data that is intended to ‘pass through’ the DTCC network without edit from Sender to Receiver (e.g. a private stream of data; either private delimited data or XML document). This attachment data may to be in support of one of the existing DTCC IPS Service messages (XML or Flat File) or may be independent of the suite of messages DTCC currently supports.

There are 3 types of attachment processes. The first type of message supports the movement of documents related to IPS fixed format messages, such as APP. In this case, the attachment message would be sent including key data for the receiver to be able to associate the attached document to the original IPS data transaction. The second type of attachment message is a business message that does not have a related IPS fixed format message. The same message structure as example 1 would be used. Many of these messages will be converted to the third type of attachment message as DTCC extends our post trade functionality and continues to deploy the associated business messages. The third examples of attachment messages are unique business messages with imbedded attachment. The structure of these messages is based on the underlying business message and will be defined in separate documentation.

## Attachment Process Types

Attachments are generally used for ACORD 103 New Business and ACORD 510 Subsequent Payments. There are 5 permutations of using Attachments as a mechanism to transmit Application related documents from Distributor to Carrier.

1. A combination of DTCC APP and Attachment Message (Process Type 1)
2. A combination of Proprietary Data Files and Attachment Message (Process Type 1)
3. The ACORD 103 and 510 (NBfA) message and Attachment Message (Process Type 1)
4. The ACORD 103 and 510 (NBfA) messages with embedded attachment objects (Process Type 3)
5. Attachment Message by itself (Process Type 2)

For purposes of designing the Attachments Accept/Reject Process, there should be very few differences between these different process types and when there are differences, they will be noted.

The standalone attachment message represents an attachment process in its simplest form. Therefore, we will begin by examining the standalone message construct.

**Standalone Attachment Message Construct**

Logically, the receiver of an attachment message can choose to reject the entire message or a single attachment object in the message. Reject reasons could range from illegible content, invalid MIME type, unsupported document type, and more.

The reject process will apply only to the entire message and not to each attachment object

The logical construct for a standalone attachment message is shown in the diagram below.


##

**Data File and Related Attachment Message Construct**

An attachment message associated with a transactional data file or message such as DTCC IPS APP, or DTCC IPS LNA has similar qualities as a standalone attachment message. A request will contain single attachment message, which in turn contains one or more attachments objects.

As was the case of the standalone message, receiver will reject at the message level and not at the individual object level.

## Supported Messages

Attachment for messages that are sent through DTCC.

Examples of documents include:

* Application Package forms (Point of Sale forms)
* Replacement paperwork from Broker to Carrier and from Carrier to Carrier
	+ State Replacement forms
	+ Transfer forms
	+ NY Reg 60 forms
	+ Rollover forms
	+ Internal Replacement Questionnaire
	+ Power of Attorney/Affidavit/Questionnaire
* Identity Documents
	+ Birth Certificate
	+ Driver’s License
* Tax forms
* Client Correspondence
* Cross Border form
* Client e-Consent information
* Application related - Carrier specific form
* Bank Draft
* Contract
* Confirmations
* Trust Legal documents
* Charitable Remainder Trust
* Corporate Trust documents
* Agent Appointment and Licenses
	+ New Appointment
	+ Renewal
	+ Termination
	+ Change in agent information

Documents for attachment transactions that have no related DTCC business transaction.

This would follow the same format as example 1 but would not associate with a current IPS fixed format transaction.

* Statements
* Death claim package
* Prospectus
* Proof of Delivery for Free Look
* Trust Legal documents
* Charitable Remainder Trust
* Corporate Trust documents
* Post Issue – Carrier specific forms
* Fund Transfers/Allocations
* Asset Allocations
* DCA (Dollar Cost Average), Special and Regular, Interest Sweep
* Systematic Withdrawal
* RMDs
* Annuitization
* Full Liquidation
* Partial Liquidation
* Ownership changes
* Beneficiary changes
* Annuitant changes
* Custodial changes
* Rider/Service feature changes

## Basic message level choreography

1. Sender sends Attachments SOAP message with attachment(s) (MTOM format) to DTCC.
2. DTCC validates the message and sends acknowledgement to Sender if the message passes the edits or sends failure message if it doesn’t pass edits to Sender. In case of failure the process ends here.
3. DTCC forwards the Sender’s message that passed edits to Receiver. If DTCC is not able to connect to receiver, Sender will be notified with a SOAP message with status (5).
4. Receiver responds to DTCC message.

4a. DTCC validates the message received from Sender. If the message doesn’t pass DTCC edits, DTCC will send a failure message with failure information to Receiver and sends a message with failure status to Sender.

1. If the Receiver’s message passes DTCC edits, DTCC will forward the message to Sender.
2. Sender may respond to DTCC. DTCC won’t process this acknowledgement.

Here is the basic choreography of sending an Attachment Message



## Requirements and Restrictions

To ensure proper implementation, all parties involved in the messaging logic must adhere to the specified messaging guidelines.

1. DTCC Attachment participants must have the capability to send and/or receive messages to and/or from DTCC via web services.
2. An automatic re-transmittal is not allowed in this implementation because the re-transmittal request is highly dependent on the attachment business scenario, reject reason, and message type.
3. For an attachment that pertains to another DTCC message, the order of arrival of either the associated DTCC message or the attachment message(s) should not be used to determine the validity of attachment messages, for good reasons. For example, if the related IPS message has not arrived by *n* days, it is up to the business process (e.g., application, replacement, etc.) to reject the request. Such rule should not be reinforced by the attachment logic. N would be determined by individual firm.
4. **Firms will be required to use MTOM to send the attachments. Inline attachments will NOT be permitted though DTCC.**
5. **DTCC expects the receiver of attachment should respond message with non-MTOM content type (text/xml).**

**MTOM** is the W3C *Message Transmission Optimization Mechanism*, a method of efficiently sending binary data to and from web services. It uses XOP (XML-binary Optimized Packaging) to transmit binary data and is intended to replace both MIME and DIME (DIME is a lightweight, binary message format that can be used to encapsulate one or more application-defined payloads of arbitrary type and size into a single message construct) attachments. At the very beginning of web services people thought of sending text data with SOAP messages. But after some time, people thought of sending binary files as a SOAP request or sending a sound clip as a web service request. So as a solution to these problems MTOM came into the act.

http://www.w3.org/TR/soap12-mtom/

## Technical Requirements

Refer to DTCC Technical Guide for connectivity instructions, certificate usage, including SOAP Wrapper details.

**1.6.1 Security**

All companies using this functionality will be participants of DTCC. Clients can use SMART or Internet to send and receive messages. DTCC recommends SMART network. Clients can send the message using DTCC issued certificate and populating WSSE security headers in SOAP header. Clients that are receiving messages from DTCC can use one-way SSL with certificates from certified authority or 2-way SSL. Clients opting to receive messages via internet must implement 2-way SSL.

##  Insurance Information Exchange (IIEX) -

##  Trading Partner Transaction Management

Each message will have a standard format with a sub transaction code to indicate the business event the attached information is intended to support. To enable companies to implement independent business functionality and not be required to support or reject each type of business event, DTCC created a control table. The table will enable the receiver to authorize the type of transaction types, formats of documents (PDF or TIFF) and counterparties that they wish to receive electronic attachments. DTCC will validate against the IIEX Trading Partner Transaction Management Table on all inbound messages.

Please refer to the IIEX Help file on the DTCC Learning Center or within the IIEX User Interface for the procedure to establish and maintain trading partner relationships.


## Hours of Operation

DTCC Attachment Processing Hours of Operation

Monday to Friday – 1 AM to Midnight ET

Saturday – 1 AM to 3 PM

DTCC Attachments will process on all holidays

Please note: Sender should confirm receiving firm’s system availability during these hours

## Early Market Close Days

Early market close days are considered any day that the New York Stock Exchange (NYSE) closes earlier than its regular close time of 4pm ET. An early market close can be a scheduled early market close (such as the day after Thanksgiving) or an unscheduled early close due to an unforeseen event.

DTCC will not change its schedule on early market close days. Distributors and Carriers must integrate early market close days into their procedures.

# Message Details

## ACORD Insurance Standards

The message defined in this implementation guide is based on the ACORD Life and Annuity Standards. ACORD provides an open insurance industry XML vocabulary which defines a common, consistent view of insurance information. All messages herein are based on the ACORD Life Standards Data Model. This means every message regardless of Sender and/or receiver (or systems) and regardless of process all share a consistent means of describing like data – a Policy is always a Policy and is always formatted and defined the same. This consistency reduces translation effort (and errors) and ensures that all participants in the insurance value chain can share a common understanding as well as view of insurance data.

For more information contact ACORD at Life@acord.org. The public standards are available on their website at [www.acord.org](http://www.acord.org).

## Attachment Message Principles

The following basic premises apply all the Attachment messages.

* Message is based on ACORD’s Version 2.20.00.
* Real time message response is expected.
* DTCC will provide XML Schemas (XSD’s) for this message. These schemas serve two purposes, first allowing creators of these messages to validate their work against the schemas and second as the production reference from which DTCC will validate these XML messages passing through the DTCC IPS network.
* Several of the identifiers on objects, including the principle one identifying the message itself TXLife/TransRefGUID, all call for a Globally Unique Identifier (GUID) or UUID. This is a large string which is programmatically generated and virtually guaranteed to always be unique.
* Every Request message must have its own GUID. Every Response message, if applicable, MUST return the TrasnRefGUID of the original Request message.
* One or more attachment documents must be included within an attachment message.
* Each attachment message must be for a single recipient.
* Each attachment message must relate to single discreet business event.
* DTCC supports two MIME types (PDF or TIFF). It is up to the trading partners to determine the acceptable MIME type to be used. Note: There are various types of PDF formats that may need to be supported such as File-PDF, Image-PDF, Application-PDF. This needs to be confirmed with trading partners.
* Multiple documents may be imaged and transmitted as a single attachment object (glob). It is up to trading partner on how they image and transmit or receive and unbundled globed documents.

## ACORD XML Message Structure Overview

The ACORD Life and Annuity Standards are built first on a common data model. All specific insurance business processes, AKA messages, are then defined using the life data model, with only those elements necessary are used. All messages however will always define a given element in the same way, thus promoting reuse, consistency and a common vocabulary for describing insurance concepts. When looking at only a specific message the design of the message may seem un-optimal, and indeed it most likely is. This is due to the greater objective of always having insurance concepts modeled in the same consistent method regardless of process or message.

### Basic Message Construct

Every message begins with a message or transaction ‘header’. It defines the transaction type and transaction level information like date & time, etc. Its’ basic form is…

TXLife

 TXLife***Request*** (created by Sender)[[1]](#endnote-1)

 OLifE (specific message business data)

And then the response comes back as…

TXLife

 TXLife***Response***

 TransResult 🡨 Location of success or failure and details

 ResultInfo

Each message then has a specific set of expected business data to accompany or be returned in a request or response message. The basic form for the messages here (a subset of the overall ACORD Life Data Model) is…

For an Attachment we simply append the attached data as follows, in line, with where the attachment is relevant or applies. This mimics the pattern for all ACORD msgs (with or without an attachment, for reuse and consistency).

TXLife

 TXLifeRequest

 … Transaction Details

 OLifE

 Holding (*or <Party> or <FormInstance>)*

**Attachment**

 **… Attachment details**

 Party : Sending Party

 Party : Receiving Party

 Relation : Associate Sender with Primary Message Object (e.g Holding, Party of FormInstance)

 Relation : Associate Receiver with Primary Message Object (e.g Holding, Party of FormInstance)

# DTCC MessAGing DashBOARD

DTCC offers its web service clients a utility, the Messaging Dashboard within IIEX, to view their own Attachments processing transactions. The Messaging Dashboard offers its web services clients a web application utility to view their own transactions from submission request message through submission response message. This utility is offered to client operators, who have requested and granted access to Messaging Dashboard, as a client friendly lens to view their firm’s transaction status and transaction details. Messaging Dashboard is a client friendly way to view your firm’s transactions through a DTCC Portal application but should not be a substitute for directly processing web services messages. Messaging Dashboard is a recommended compliment for impacted Operations and Systems Department personnel to easily view their transaction’s status on a real time basis.

The Messaging Dashboard within IIEX will be provisioned automatically when subscribing to Attachments.

1. [↑](#endnote-ref-1)