Contactless Fare Media System Standard

Part III – Regional Central System Interface Standard

(APTA IT-UTFS-S-003-07)

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Prepared by members of the Work Package – 4 Group of the Financial Management Committee of the American Public Transportation Association (APTA) Universal Transit Fare System (UTFS) Task Force.

The APTA Rail Standards Policy and Planning Committee approved this standard for public release on January 27, 2007.

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Abstract: This Standard provides an interface to provide a uniform and consistent method of communication to a Regional Central System of a contactless fare media system for transit applications. This standardization allows transit agencies who are purchasing or expanding their fare collection systems to participate in a regional operating environment where common Contactless Fare Media based fare instruments can be used for fare payment with all the participating transit agencies.

Keywords: fare collection, system, public transportation, transit and smart card

Introduction

(This introduction is not a part of APTA IT-UTFS-S-003-07.)

This is part III (Part III) of a suite of standards that together form the Contactless Fare Media System Standard (Standard). Other parts of the Standard include the following:

— Part I-Introduction and Overview (Part I)

— Part II-Contactless Fare Media Data Format and Interface Standard (Part II)

— Part III- Regional Central System Interface Standard (Part III)

— Part IV-System Security Planning and Implementation Guidelines and Best Practices (Part IV)

— Part V-Compliance Certification and Testing Standard (Part V)

The parts of the Standard noted above are designed to be implemented as a package to complete an end-to-end integration of fare collection information processing. Detailed descriptions of all the parts of the Standard can be found in Part I - Introduction as well as within the introduction sections of each part.

The application of any standards, practices, or guidelines contained herein is voluntary. In some cases, federal and/or state regulations govern portions of a rail transit system's operation. In those cases, the government regulations take precedence over this Standard. APTA recognizes that for certain applications, the standards or practices, as implemented by rail transit systems, may be either more or less restrictive than those given in this document.

The intent of Part III of the Standard is to provide a uniform and consistent method for transit agency contactless fare payment systems to communicate with a common Regional Central System. This standardization allows transit agencies who are purchasing or expanding their fare collection systems to participate in a regional operating environment where common Contactless Fare Media based fare instruments can be used for fare payment with all the participating transit agencies. Transit authorities employing this Standard have the ability to procure varying system designs, from different suppliers, which are capable of exchanging messages with a common regional central system that supports a regional program that requires compliance with this Standard, and which has established and adopted a common set of business and implementation rules. This Standard also enables seamless Contactless Fare Media use by transit passengers using systems within the region where this Standard has been implemented.

Document Development Process

Development of this Standard and its parts was guided by the APTA Universal Transit Fare System (UTFS) Task Force. It is the mission of the Task Force to develop a series of documents that provides industry guidance for the creation of an open architecture payment environment that promotes greater access and convenience to the public transportation network and enables integration of independent payment systems. To accomplish this mission, the Task Force membership established a broad representation of the transit industry specifically including transit system operators, the Federal Transit Administration (FTA), manufacturers, engineering and consulting firms, transit labor organizations and others with an interest in the revenue management aspects of the transit industry.

To be effective and responsive to transit industry needs, the Task Force in its effort to develop fare collection standards relies on the following guiding principles:

— Promote economies of scale for agencies and enable more competitive procurements,

— Provide a platform to support agency independence and vendor neutrality,

— Strive for an open architecture environment for hardware and software utilizing commercially available products,

— Foster development for a multi-modal and multi-application environment and

— Provide information for informed decisions and development of partnership strategies.

Applying these guidelines and relying on a broadly consensus driven decision process has produced this important industry based standards.

To be successful, any consensus process involving organizations with diverse interests must have rules defining the procedures to be used. APTA developed the APTA UTFS Bylaws (Bylaws) as revised September 1, 2005 to govern the process. These bylaws contain the following basic principles:

— Membership open and broadly representative of industry

— Open process and open meetings

— Consensus based (defined as 75% super-majority)

— Mandatory minimum public comment period

— Response required to all reasonable comments received

— Final approval voting based on one vote per organization

— Maximum use of electronic communication

— The policy committee retains implementation authority

The bylaws and resulting process APTA used to develop these standards followed the process required by the American National Standards Institute (ANSI) to obtain ANSI Standards Development Organization (SDO) certification.

The specific approach of the Task Force for standard development is based on a consensus driven process broadly representing all the major revenue management industry groups and stake holders. Figure (i) is an organizational diagram depicting the relationships that have been established to develop, to approve and to implement revenue management standards, recommended practices and guidelines.

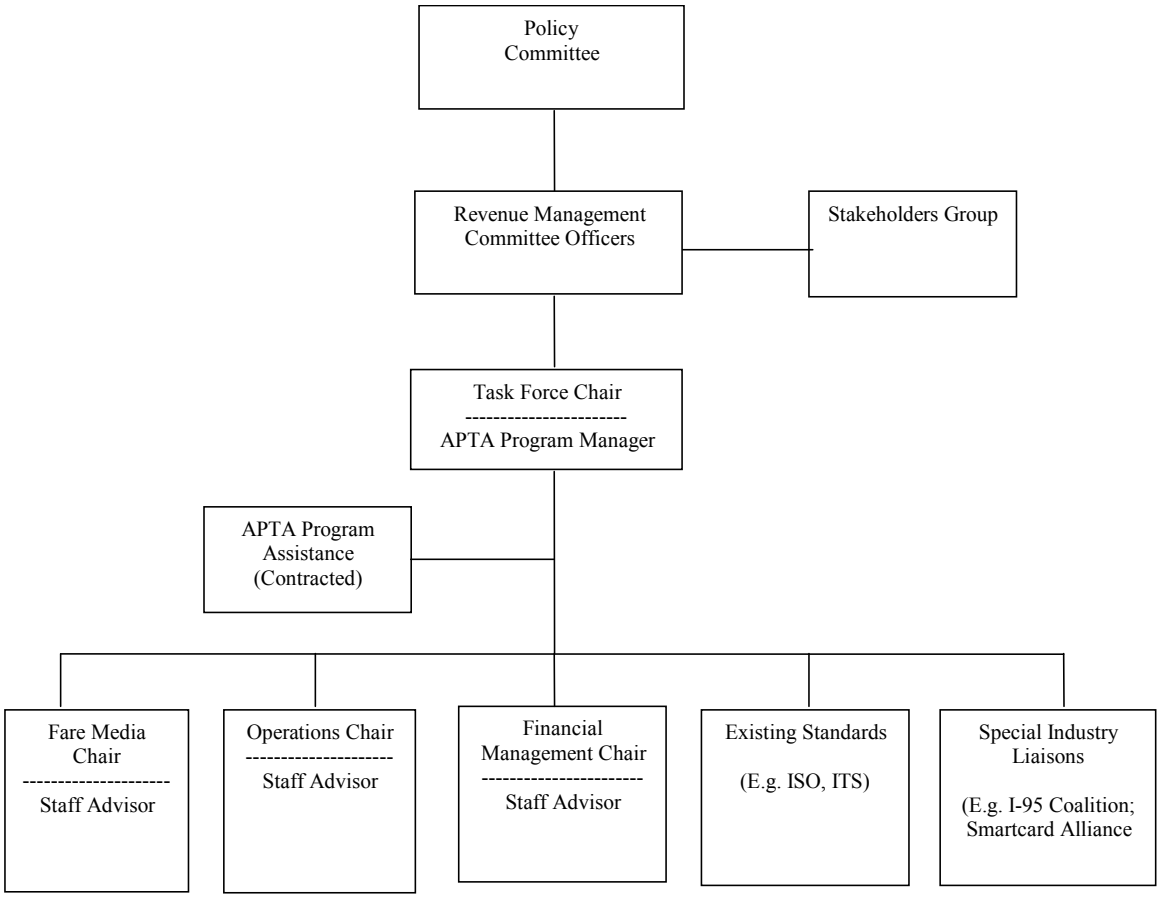

Figure (*i*)—Universal Transit Fare System Standards

The broad policies followed by the Task Force are set by the Rail Standards Policy and Planning Committee with oversight by the APTA Standards Development and Oversight Council (SDOC). APTA ensures that the policies set by the Policy Committee are followed. The officers of the Revenue Management Committee assist APTA staff in the implementation of policies set by the Policy Committee. The Task Force is organized into committees based on the priorities set by the stakeholders group and Revenue Management Committee officers and approved by the Policy Committee. Task Force committees develop individual work plans and schedules. Task Force committees may divide into sub-committees or working groups of subject matter experts to develop initial drafts of individual standards or recommended practices.

Given the consensus driven decision process of the Task Force, voting and balloting on release of this document for consideration by the APTA Rail Standards Policy and Planning Committee was approved using the following conditions:

— A quorum of at least 60% of the voting-eligible Task Force members participated by submitting a valid ballot or abstaining from voting.

— A super majority of 75% of the voting members cast ballots (did not abstain) voting in the affirmative for the Task Force to approve this document for release.

The document approval process necessary for release of an APTA UTFS standard follows the flowchart depicted in Figure (ii) as documented in the APTA UTFS Bylaws (Bylaws) as revised September 1, 2005 maintained and controlled by APTA. The Bylaws also provide policies on Task Force and committee organizational structure and document balloting requirements noted above.

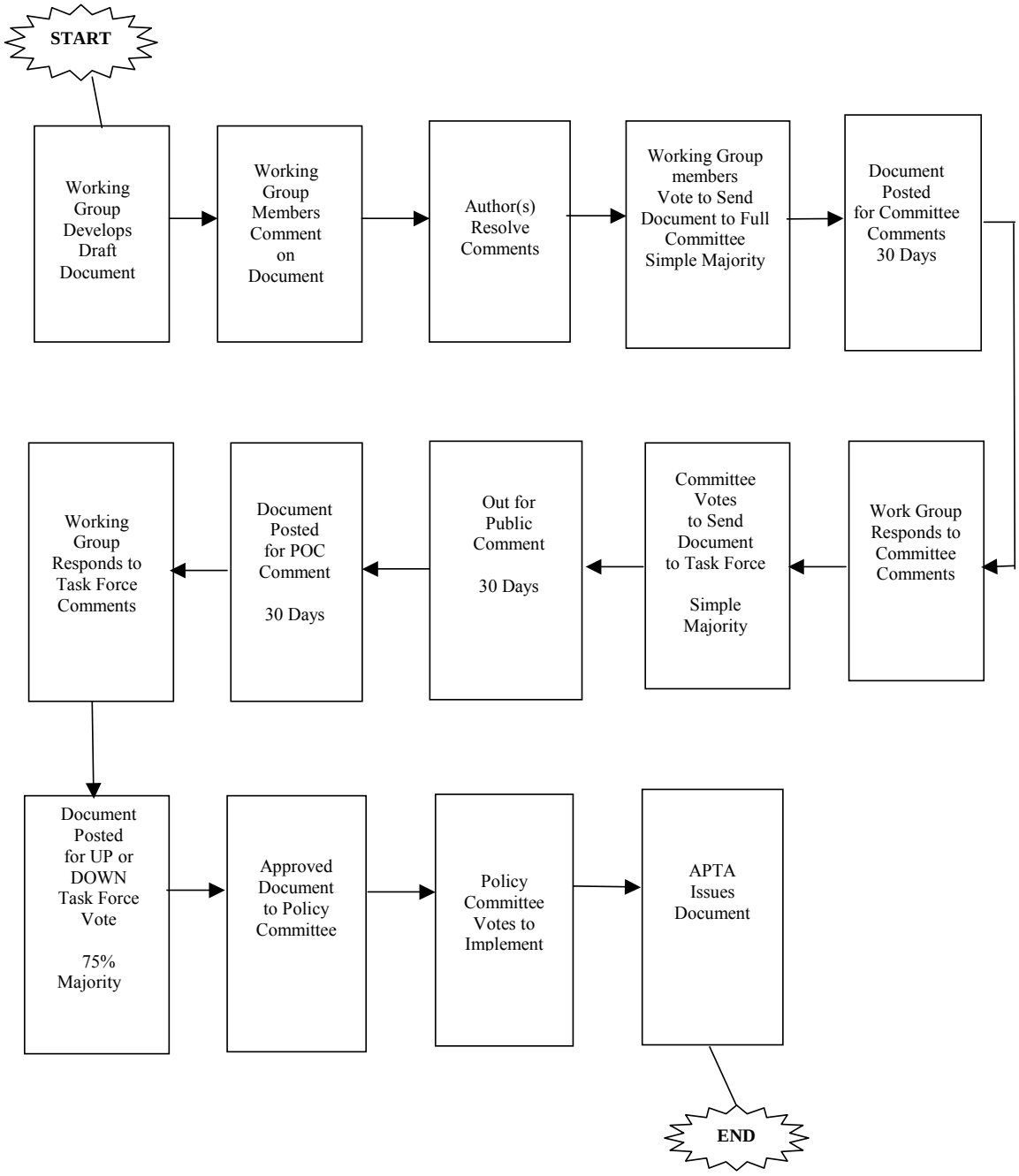

Figure (*ii*)—Document Comment and Approval Process

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To protect those offering technology during development of the Standard and those using the Standard from copyright and patent infringements, the UTFS Task Force implements an Intellectual Property Policy. The inclusion of intellectual property provisions addressing patents, copyrights or trademarks is in accordance with APTA's Universal Transit Fare System Standard Intellectual Property Policy and Procedures, issued September 1, 2005, and enforced beginning October 17, 2005. The terms of this IP Policy are subject to the Universal Transit Fare System Standard Task Force Bylaws and in accordance with APTA Scope document, "APTA Universal Transit Farecard Standard Work Scope Specification, ATPA UTFS-D-TC-01A-05." All other documents, besides the Bylaws, concerning UTFS IP policies and procedures are controlled by this IP Policy, and other documents shall have no effect on the interpretation of the IP Policy.

Under this policy all participants in the APTA UTFS program including but not limited to transit agencies, fare collection system suppliers, financial institutions, consultants and other third party application providers shall submit a Letter of Acknowledgement, which states that, on behalf of the Organization with which they are affiliated and/or themselves, they have received and reviewed the IP Policy, and acknowledge that their participation in the UTFS standards development process and the standard(s) adopted in the course of this process, will be subject to the IP Policy. Under this policy contributors are required to make known any patents, copyright material or other intellectual property that may be contained within the standard or essential to the standard. If contributors have intellectual property such as patents or copyright material contained within the standard/guideline, the IP Policy requires submission of a Letter of Assurance stating the terms and conditions for use of such intellectual property.

APTA further issues a call-for-patents during its public comment period prior to release of the Standard/Guideline.

Further, federal antitrust laws prohibit contracts, combinations and conspiracies in restraint of trade. Sanctions for violating the antitrust laws include civil damages (including treble damages) and criminal fines and imprisonment. The Policy of the American Public Transportation Association and the Task Force is to strictly adhere to the antitrust laws.

Standards vs. Guidelines/Recommended Practices

APTA develops standards and recommended practices/guidelines, and such distinction between these document types needs to be clear.

Characteristics of a Standard

A standard should be developed when the document:

a) Covers a system, component, process or task that is safety critical, or

b) Ensures interoperability between parts or equipment, or

c) Standardizes a design or process, or

d) Addresses an FRA or NISB concern, or

e) May become part of a regulation.

Characteristics of a Guideline/Recommended Practice

A recommended practice/guideline should be developed when:

a) The document describes only one of several acceptable approaches, or

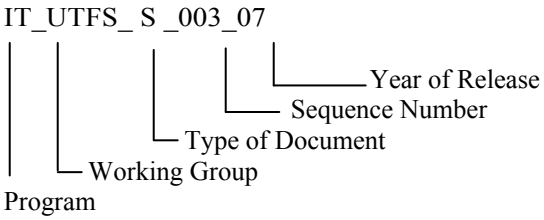
b) The document is tutorial in nature, or

c) The document does not meet one of the characteristics for a standard, or

d) Consensus could not be reached that the document should be a standard.

Document Numbering Nomenclature

Document numbering is composed of five parts. The first part designates the standard program the document falls under, in this case IT or Information Technology. The second part designates the working group or application where the standard was developed; which for this Standard is UTFS. The third part designates the type of document. A prefix "S" represents a general standard while recommended practices carry the prefix "RP" and Guidelines carry the prefix "GL." Finally, the last two sections attribute a document sequence number and the year the document was first released, respectively.



Document Maintenance & Requests for Revisions

APTA will review and update this document on an as needed basis, but at a minimum will review once every two years. The UTFS Task Force has responsibility for conducting reviews, addressing requests or suggestions for document revision or expansion and for implementing changes or revisions.

Requests for revisions of APTA standards and recommended practices/guidelines are welcomed from any interested party. Suggestions for changes to documents should be submitted in the form of a proposed change to the text along with the appropriate supporting documentation / rationale for the change.

Occasionally, questions may arise concerning the meaning of portions of these standards/guidelines as they are specifically applied. APTA will clarify such issues as necessary through the UTFS Task Force and the Rail Standards Policy and Planning Committee. Address comments, questions on interpretation or requests for changes to:

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Participants

The American Public Transportation Association (APTA) greatly appreciates the contributions of Thomas Parker, Chair of UTFS Task Force and the following individuals who provided the primary effort in the drafting of this Standard.

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Disclaimer

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CONTENTS

PART III – Regional Central System Interface Standard

1. Overview

This document establishes a Regional Central System interface standard for contactless fare media systems and is part of a larger Standard addressing other elements of fare collection standardization. The parts of the Standard are described in Part I-Introduction and Overview, include:

— Part I-Introduction and Overview (Part I)

— Part II–Contactless Fare Media Data Format and Interface Standard (Part II)

— Part III-Regional Central System Interface Standard (Part III)

— Part IV-System Security Planning and Implementation Guidelines (Part IV)

— Part V-Compliance Certification and Testing Standard (Part V)

These parts together complete the larger Standard entitled, Contactless Fare Media System Standard (Standard).

1.1 Scope

This document defines standards for the structure and components of the messages that are sent between the Regional Central System (RCS) and other components of a contactless fare media system. These messages are used to send data to the RCS resulting from a transaction or action performed by a Proximity Integrated Circuit Card (PICC) or Card Interface Device (CID), and for the RCS to send data and control messages relating to a CID or PICC to system components, such as an Agency Central System (ACS) or Sub-system Controller.

Although this Part III of the Standard defines and specifies a comprehensive set of messages, it is unlikely that all messages will be used in one system. A subset of messages may be selected, based upon the functions, fare products, and business rules of the system being implemented. Additionally, the message definitions contain optional elements that only need to be used if applicable to the situation or system.

The specification does not define the system architecture of the fare collection system. The system components and hierarchy will vary between implementations. Similarly, the specification does not address the functionality or implementation of any of the system components, including the RCS, since it is only concerned with the interface to the RCS.

The specification only applies to systems with the following characteristics:

a) Contains a single Regional Central System

b) Contains at least one common regional fare product that is recognized by all system participants

c) Uses PICCs for the fare media

The messages defined within the specification consist of data objects and data elements. The definition of these data objects and data elements is either contained within this document, or within Part II–Contactless Fare Media Data Format and Interface Standard (APTA IT-UTFS-S-002-06).

The communication medium and channel to and from the RCS is not specified except that it requires the use of XML. The messages are defined with the requirement that a high capacity, reliable communication channel is used to communicate between the RCS and the rest of the contactless fare media system.

1.2 Purpose

The purpose of this Part III of the Standard is to provide a well-defined, non-proprietary interface for communicating with the RCS of a regional contactless fare media system. The need for this Part III of the Standard is due to the following:

a) Allow transit service providers within a region to procure PICC based contactless fare media systems at different times, and possibly from different vendors, while still being able to use a common Regional Central System

b) Allow existing PICC based contactless fare media systems to amalgamate into a regional system, with a common Regional Central System

c) Allow an existing regional system to replace a Regional Central System, possibly from a different vendor, with minimal impact on the other components of the contactless fare media system.

This Part III has been developed as an ‘end to end’ standard, which assumes an implementation will be compliant to both Part II and Part III. However, it may be possible for Part III to be implemented with legacy systems that do not adhere to Part II. The feasibility of this is dependent upon the technical, financial, and business circumstances of each situation.

Compliance with this Standard is only the first important step toward interoperability between transit service provider systems. In order to achieve interoperability among multiple contactless fare media systems participating in a regional program, the transit service providers must also define and adopt a common implementation approach that utilizes the same data elements, RCS messages, cardholder services and configuration options in all systems. Interoperability also requires a common set of regional policies, fare products and operations functions.

The intended audience for this document is primarily the technical staff of transit agencies and system implementers, including engineers, technical managers, standards personnel, and technical consultants.

1.3 Document Approach

This document is organized into four main sections. The first section, the overview, contains all the information necessary to gain an understanding of how the Standard is applied and what it consists of. The remaining three sections contain the detailed definitions of the data elements, data objects and messages that constitute the Standard.

It is recommended that the overview is read first. The definition sections are most applicable to system designers and implementers, and it is not necessary to read these in order to gain a general understanding of the Standard.

The four main sections of the document are:

— **1. Overview**

The Overview provides information on the purpose and applicability of this Part III of the Standard; a description of the message structure and components; a list of the message categories and all the defined messages; and a description of the XML schema.

— **2. Data Object Definitions**

A Data Object Definition provides a definition of all data objects used in the message definitions. This includes a list of all PICC data objects, which are defined in Part II, and non-PICC data objects, which are defined in detail in this section.

— **3. Data Element Definitions**

A Data Element Definition defines all data elements that are used in messages individually, not as part of a data object.

— **4. Message Definitions**

A Message Definition provides a description and definition of each message in the specification. The description contains the message name, description of purpose, publisher and subscribers, and any additional explanatory notes.

1.4 Summary

1.4.1 System Architecture

This Standard applies to regional contactless fare media systems for transit that use PICCs as the common contactless fare media. It is not the intent of Part III to determine the system architecture of the contactless fare media system. A general system-architecture is illustrated in Figure 1, showing the interfaces defined by this Standard.

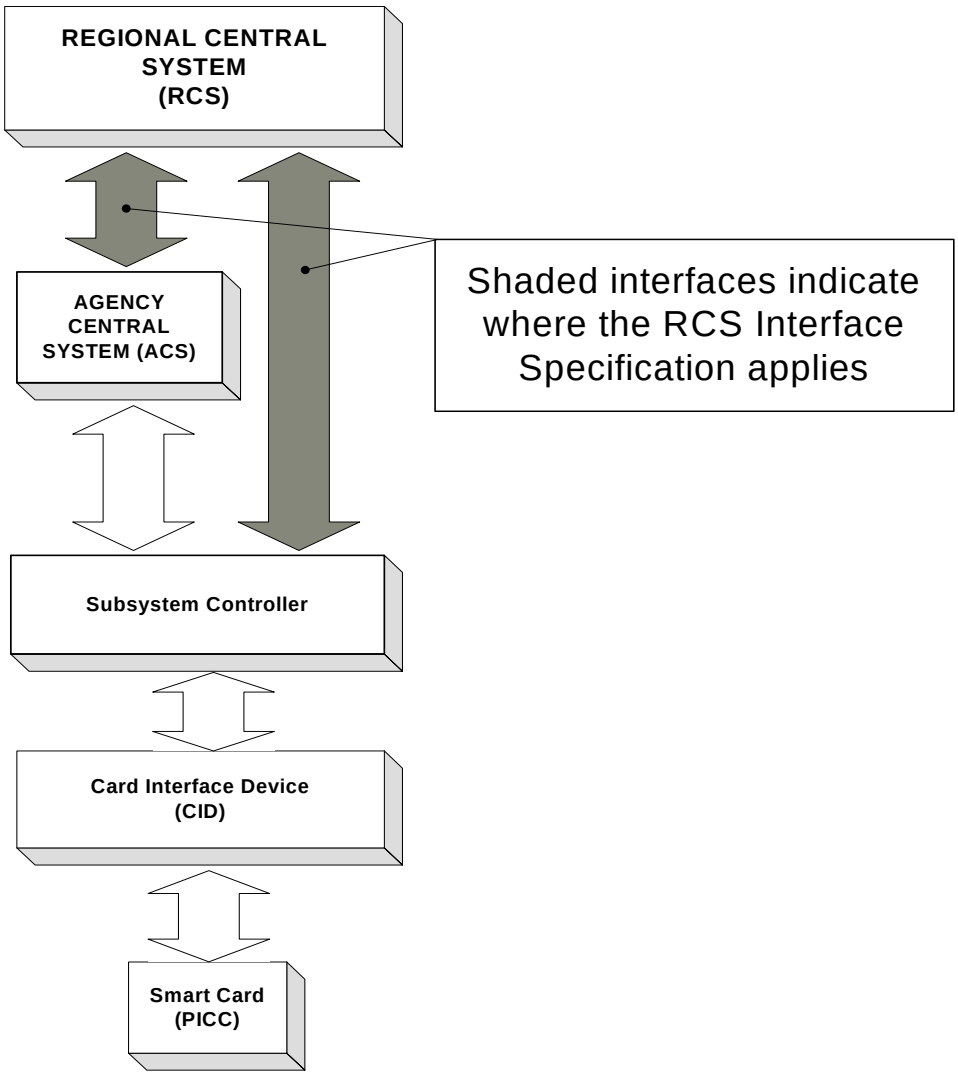

Figure 1—Document Comment and Approval Process

All messages defined in this Part III have a single origin (also called a publisher), and one or more destinations (or subscribers). The message definitions include the publisher and subscriber(s) for each message. Note that the subscriber of a message is the system component where the message terminates and where the content of the message is used.

Intermediary system elements, that may pass the message but not alter or use the content, are not regarded as subscribers. However, the intermediary systems may change the message format even though the content is unaffected. For example, a CID may originate a message for the RCS, and transmit it to the ACS in a binary format, which is not compliant with this Standard. The ACS will translate the message into an XML format that complies with this Part III for transmission to the RCS without changing the content of the message.

In general terms, transaction data originating from CIDs and transmitted to the RCS in a message from the ACS or Sub-system Controller contains information relating to an action performed at the CID, normally with a PICC in relation to a transit fare transaction. Messages sent from the RCS to the CIDs are used to send control messages for changing the actions performed by CIDs when performing a transaction with a PICC, or the way the CIDs interact with the PICC.

1.4.2 Message Types

The messages defined in this Standard are grouped in two categories. The categories are shown in Figure 2.

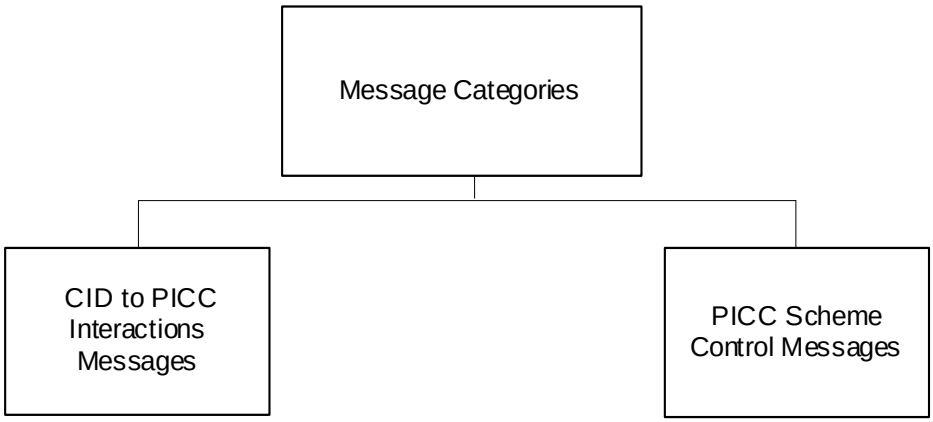

Figure 2—Message Categories

1.4.2.1 CID to PICC Interactions Messages

These are messages that are used to communicate PICC transaction data to the RCS. These messages are grouped into the categories of PICC Initialization (refer to Figure 3), Load and Unload Transactions (refer to Figure 4), and Use Transactions (refer to Figure 5).

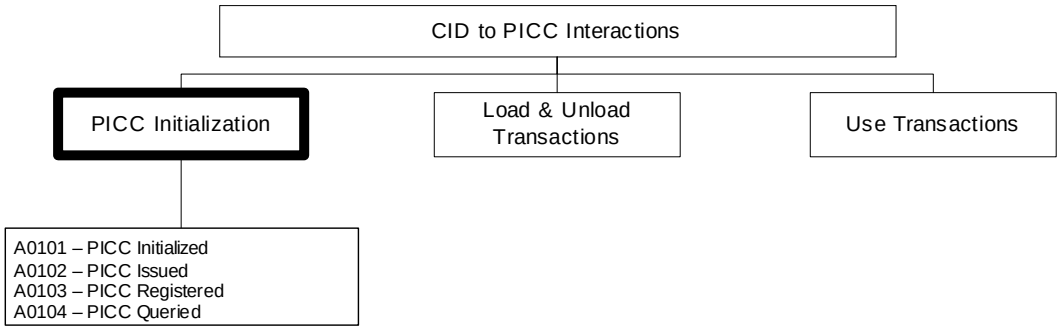

Figure 3—PICC Initialization and Issuance Messages

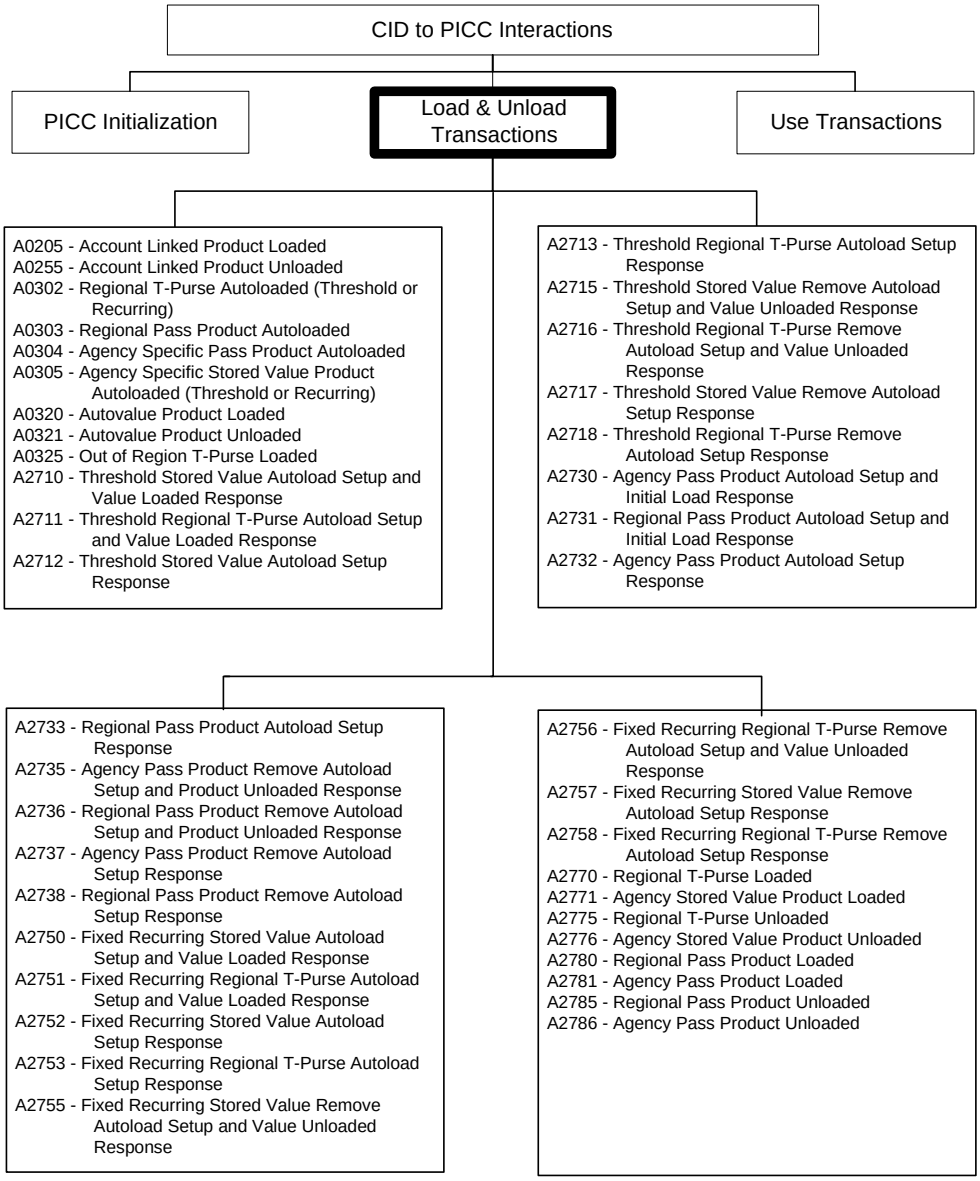

Figure 4—PICC Load & Unload Messages

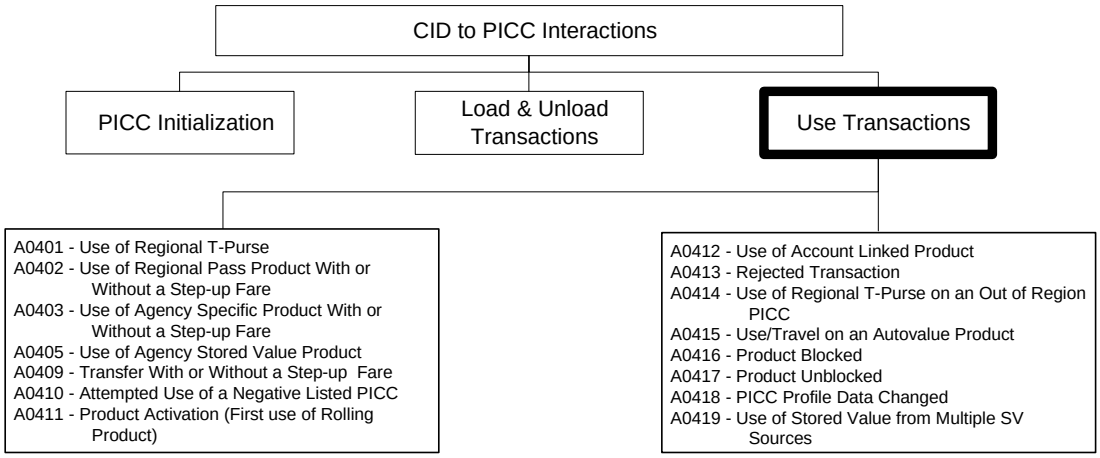

Figure 5—PICC Use Messages

1.4.2.2 PICC Scheme Control Messages

There are several elements of control that must be coordinated by a central body for the region. This Part III of the Standard does not define the format of these controls to the CID but rather details the output from the RCS. Implementers are free to use these formats at the CID but may also integrate this data into existing control schemes already deployed.

Figure 6 illustrates the PICC Scheme Control Messages pertaining to the Action Lists. Figure 7 illustrates the PICC Scheme Control Messages pertaining to the Negative Lists. Figure 8 illustrates the PICC Scheme Control Messages pertaining to the Fare Policy Framework. Figure 9 illustrates the PICC Scheme Control Messages pertaining to the Key Management.

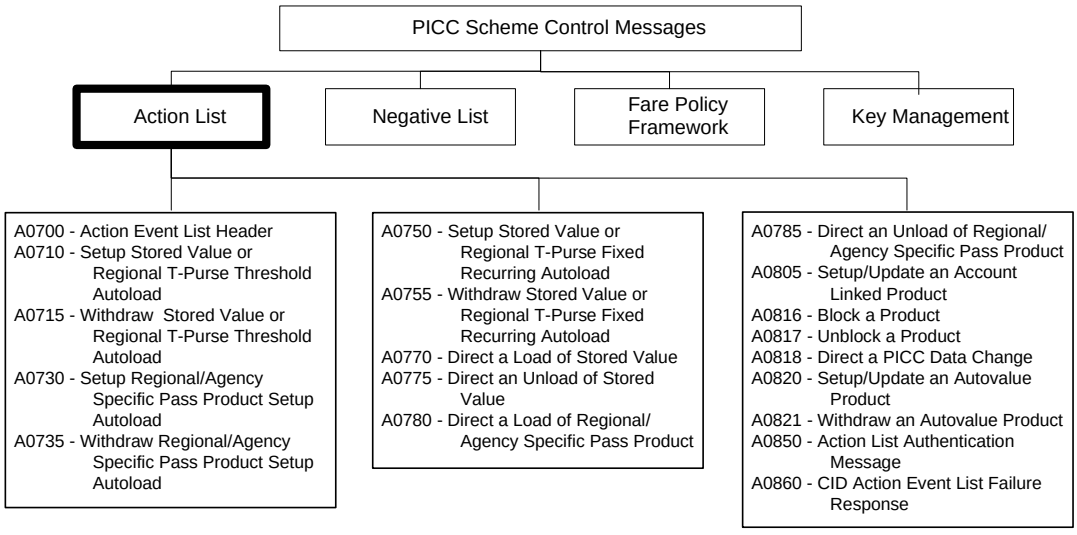

Figure 6—CID Action Messages

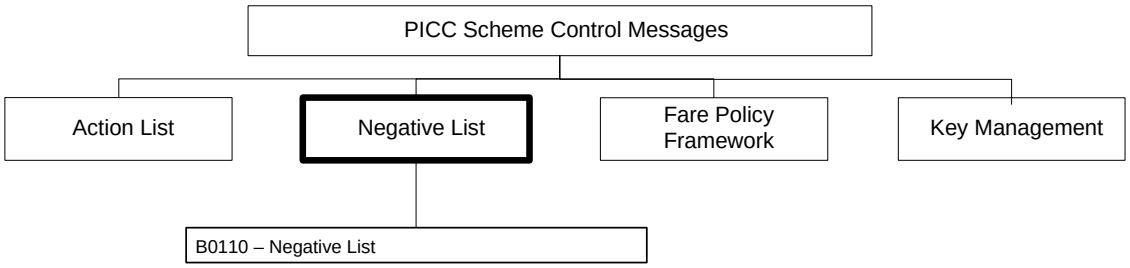

Figure 7—Messages that Document Negative List Contents

Note that the Fare Policy Framework does not specify any fares, only the prices of Regional Pass Products that need to be observed by all product retailers in the region.

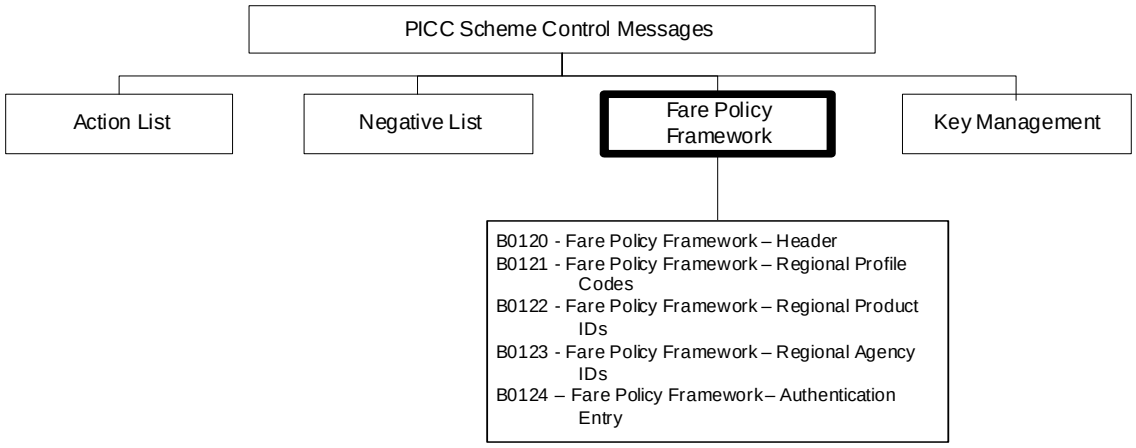

Figure 8—Centrally Managed Fare Policy Data Messages

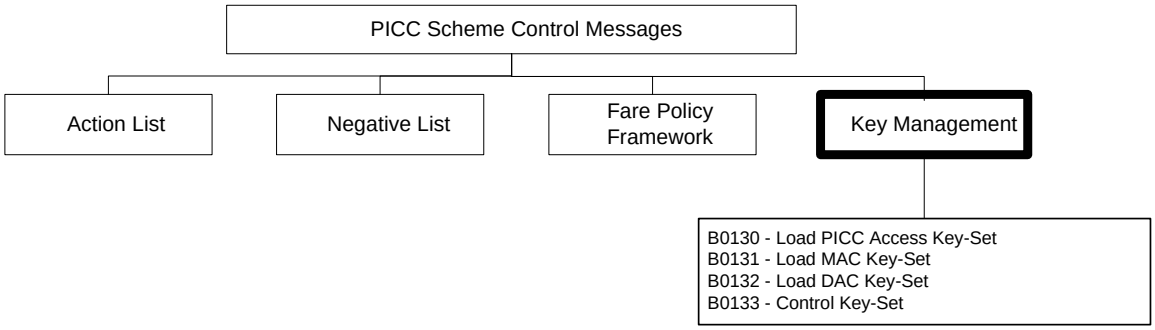

Figure 9—Centrally Managed Key Management Data Messages

The complete list of all the messages defined in the specification is shown in Table 1.

Table 1—List of Messages[1]

Message ID	Message Name	Response Message(s)[2]
CID to PICC Interactions Messages		
PICC Initialization/Issue Messages		
A0101	PICC Initialized	
A0102	PICC Issued	
A0103	PICC Registered	
A0104	PICC Queried	
A0105	Special LU PICC Initialized	
PICC Value/Product Load/Unload Transaction Messages		
A0205	Account Linked Product Loaded[3]	
A0255	Account Linked Product Unloaded3	
A2770	Regional T-Purse Loaded3	
A2771	Agency Stored Value Product Loaded3	
A2775	Regional T-Purse Unloaded3	
A2776	Agency Stored Value Product Unloaded3	
A2780	Regional Pass Product Loaded3	
A2781	Agency Pass Product Loaded3	
A2785	Regional Pass Product Unloaded3	
A2786	Agency Pass Product Unloaded3	
A0302	Regional T-Purse Autoloaded (Threshold or Recurring)	
A0303	Regional Pass Product Autoloaded	
A0304	Agency Specific Pass Product Autoloaded	
A0305	Agency Specific Stored Value Product Autoloaded (Threshold or Recurring)	
A0320	Autovalue Product Loaded	

[1] Note messages facilitating the use of Limited Use (LU) media have been kept within Part III of the Standard since support for this type of fare media is envisioned for the future. These messages are listed as optional.

[2] Response Messages are in response to directives from the RCS

[3] Message may be used to respond to a directive or to transmit an unload or load transaction to the RCS

Table 1—List of Messages (continued)

Message ID	Message Name	Response Message(s)
A0321	Autovalue Product Unloaded	
A0322	Special LU PICC Value Loaded	
A0323	Special Limited Use PICC Product Loaded	
A0324	Special LU PICC Value and Product Loaded	
A0325	T-Purse Out of Region Loaded	
A2710	Stored Value Threshold Autoload Setup and Value Loaded Response	
A2711	Regional T-Purse Threshold Autoload Setup and Value Loaded Response	
A2712	Stored Value Threshold Autoload Setup Response	
A2713	Regional T-Purse Threshold Autoload Setup Response	
A2715	Stored Value Remove Threshold Autoload Setup and Value Unloaded Response	
A2716	Regional T-Purse Remove Threshold TP & TP & SV Autoload Setup and Value Unloaded Response	
A2717	Stored Value Remove Threshold Autoload Setup Response	
A2718	Regional T-Purse Remove Threshold Autoload Setup Response	
A2750	Stored Value Fixed Recurring Autoload Setup and Value Loaded Response	
A2751	Regional T-Purse Fixed Recurring Autoload Setup and Value Loaded Response	
A2752	Stored Value Fixed Recurring Autoload Setup Response	
A2753	Regional T-Purse Fixed Recurring Autoload Setup Response	
A2755	Stored Value Remove Fixed Recurring Autoload Setup and Value Unloaded Response	
A2756	Regional T-Purse Remove Fixed Recurring Autoload Setup and Value Unloaded Response	
A2757	Stored Value Remove Fixed Recurring Autoload Setup Response	
A2758	Regional T-Purse Remove Fixed Recurring Autoload Setup Response	
A2730	Agency Pass Product Autoload Setup and Initial Load Response	
A2731	Regional Pass Product Autoload Setup and Initial Load Response	
A2732	Agency Pass Product Autoload Setup Response	

Table 1—List of Messages (continued)

Message ID	Message Name	Response Message(s)
A2733	Regional Pass Product Autoload Setup Response	
A2735	Agency Pass Product Remove Autoload Setup and Product Unloaded Response	
A2736	Regional Pass Product Remove Autoload Setup and Product Unloaded Response	
A2737	Agency Pass Product Remove Autoload Setup Response	
A2738	Regional Pass Product Remove Autoload Setup Response	
PICC Use Transaction Messages		
A0401	Use of Regional T-Purse	
A0402	Use of Regional Pass Product With or Without a Step-up Fare	
A0403	Use of Agency Specific Product With or Without a Step-up Fare	
A0405	Use of Agency Stored Value Product	
A0406	Use of Special LU Value PICC	
A0407	Use of Special LU Product PICC	
A0408	Transfer on Special LU Product PICC	
A0409	Transfer With or Without a Step-up Fare	
A0410	Attempted Use of a Negative Listed PICC	
A0411	Product Activation (First use of Rolling Product)	
A0412	Use of Account Linked Product	
A0413	Rejected Transaction	
A0414	Use of Regional T-Purse on an Out of Region PICC	
A0415	Use/Travel on an Autovalue Product	
A0416	Product Blocked	
A0417	Product Unblocked	
A0418	PICC Profile Data Changed	
A0419	Use of Stored Value from Multiple SV Sources	

Table 1—List of Messages (continued)

Message ID	Message Name	Response Message(s)
PICC Scheme Control Messages		
Action List Messages		
A0700	Action Event List Header	
A0710	Setup Stored Value or Regional T-Purse Threshold Autoload	A2710, A2711, A2712, A2713
A0715	Withdraw Stored Value or Regional T-Purse Threshold Autoload	A2715, A2716, A2717, A2718
A0730	Setup Regional/Agency Specific Pass Product Setup Autoload	A2730, A2731, A2732, A2733
A0735	Withdraw Regional/Agency Specific Pass Product Setup Autoload	A2735, A2736, A2737, A2738
A0750	Setup Stored Value or Regional T-Purse Fixed Recurring Autoload	A2750, A2751, A2752, A2753
A0755	Withdraw Stored Value or Regional T-Purse Fixed Recurring Autoload	A2755, A2756, A2757, A2758
A0770	Direct a Load of Stored Value	A2770, A2771
A0775	Direct an Unload of Stored Value	A2775, A2776
A0780	Direct a Load of Regional/Agency Specific Pass Product	A2780, A2781
A0785	Direct an Unload of Regional/Agency Specific Pass Product	A2785, A2786
A0816	Block a Product	A0416
A0817	Unblock a Product	A0417
A0818	Direct a PICC Data Change	A0418
A0820	Setup/Update an Autovalue Product	A0320
A0821	Withdraw an Autovalue Product	A0321
A0805	Setup/Update an Account Linked Product	A0205
A0850	Action List Authentication Message	
A0855	Withdraw an Account Linked Product	A0255
A0860	CID Action Event List Failure Response	

Table 1—List of Messages (continued)

Message ID	Message Name	Response Message(s)
Negative List		
B0110	Negative List	
Fare Policy Framework		
B0120	Fare Policy Framework - Header	
B0121	Fare Policy Framework – Regional Profile Codes	
B0122	Fare Policy Framework – Regional Product IDs	
B0123	Fare Policy Framework – Agency IDs	
B0124	Fare Policy Framework – Authentication Entry	
Key Management Messages		
B0130	Load PICC Key-Set	
B0131	Load MAC Key-Set	
B0132	Load DAC Key-Set	
B0133	Control PICC Key-Set	

1.4.3 Message Components and Structure

The messages generated by the CIDs as a result of an interaction with a PICC, referred to as PICC/CID transaction messages, have been defined with a structure that is consistent to them all.

Each PICC/CID transaction message is comprised of four distinct components as shown in Figure 10.

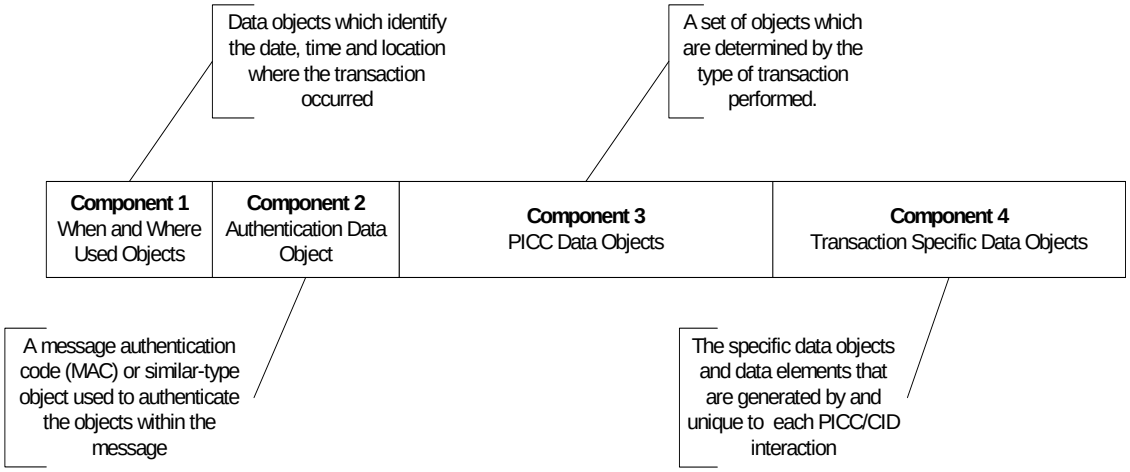

Figure 10—PICC/CID Transaction Message Layout as Delivered to RCS

The contents of each part of the message are as follows:

— **Component 1:** Consistent set of data elements that define the kind of transaction and when and where it occurred.

— **Component 2:** Message Authentication data. A set of data elements that convey the authentication information but do not specify the actual algorithm or targeted data attributes used in the calculation.

— **Component 3:** This component is comprised of the data objects that were viewed and/or updated as part of the processing of a specific transaction. Part III defines the minimum set of "As Read" or "As Written" objects that are needed for each type of PICC/CID transaction. The As Read and As Written objects may be supplemented with other data objects which the implementer may elect to include within this component of the message in addition to those defined within Part III. Component 3 of the message layout as illustrated in greater detail in Figure 12.

— **Component 4:** Transaction specific data objects that are unique to the specific type of PICC/CID interaction.

NOTE 1—Implementers may decide to perform several transactions as part of a single PICC/CID interaction. Implementers are cautioned to ensure that this results in multiple transaction Part III messages being generated as appropriate.

NOTE 2—Part III assumes that any of the pass products can be used in conjunction with the Regional T-Purse, and/or Account Linked Products or an Agency specific stored value (SV) product where allowed by the regional fare policies. Any combination of transactions involving these products are accommodated by the message structures defined in Part III. Part III does not support the use of two or more pass products, for example a daily pass and a weekly pass, being used in conjunction with each other to facilitate a single fare payment transaction. If a patron has two pass products on the PICC that are valid and acceptable at a given location, only one can be documented on the PICC and in the transaction message. The protocol for deciding which product is to be selected for use in a specific circumstance should be agreed upon by implementers and applied consistently within a region.

The messages are built from data available at the CID at the time the transaction is performed. Figure 11 illustrates the sources of data used to build the messages.

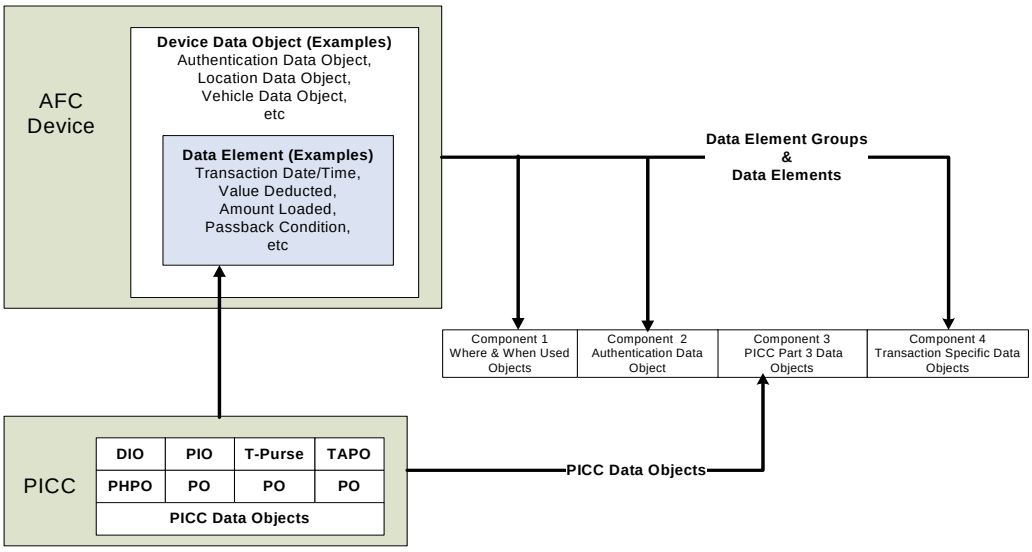

Figure 11—Message Source Data

Component 3 is built from the data objects that were relevant to the transaction. Many of those specified objects are optional and based upon the PICC configuration deployed in the region or the conditions of use. A list of all available PICC Data Objects is shown in Table 2 below.

The message formats in Part III define the minimum object list for each transaction generated from a PICC/CID interaction. Implementations are compliant with this Part III of the Standard if the specified minimum object set is included in each message. This technique also allows messages to be customized in order to meet any special requirements that may evolve in a region. Any additional object may be added by placing the objects in Component 3 of the message.

When the CID (or any element of a system) constructs Component 3 of the message, a 1 byte field shall be appended to the front of each object, identifying the agency that owns that object. This field is called the AgencyID. The organization of Component 3 of the message is shown in Figure 12 below.

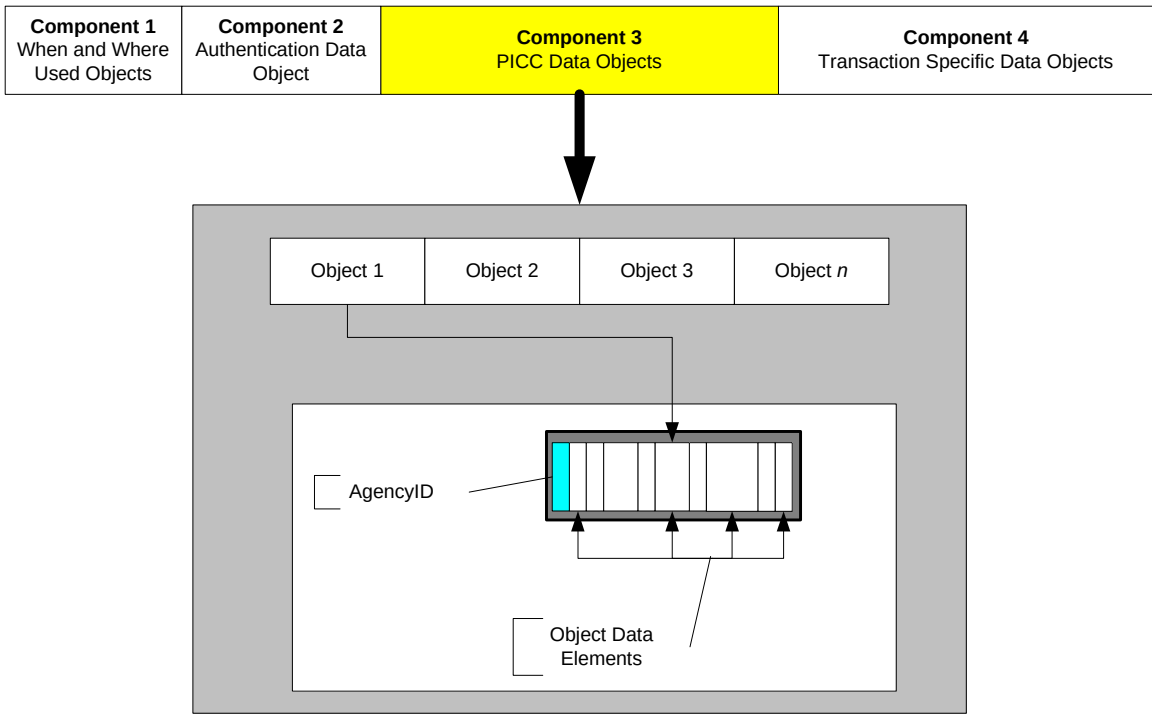

Figure 12—Organization of Message Component 3

NOTE 3—All product object extensions are optional if they are not used in the transaction.

1.4.4 Overview of XML Schema

Extensible Markup language (XML), a widely used standard for describing the structure of data, is the data transmission method to be employed in transferring messages to and from the RCS. XML also will be used for the "Schema" for defining the data validation, structuring, and elements of messages consistent with the formatting and content specifications defined within this Standard. By designing the message flow of a system to be compliant with this Standard and utilizing XML and the XML Schema, systems developed by different integrators can be interoperable with a common RCS. Electronic copies of the XML Schema will be made available by the RCS administrator to the participating entities in a regional scheme.

To ensure the validity of the XML Schema, each element is generated using the message objects definition tables within this Part III of the Standard. As way of an example, the data stream including some optional objects for the PICC Initialize Message (A0101) would be set up as follows:

<MessageIdentifier>A0101</MessageIdentifier>
<MessageVersion>1</MessageVersion>
<MessageRevision>2</MessageRevision>
<LocationDataObject>
    <country-ID>1</country-ID>
    <region-ID>2</region-ID>
    <agency-ID>4</agency-ID>
    <location-ID>1035</location-ID>
</LocationDataObject>
<VehicleDataObject>
    <ID><n><ID>
    <ID><n><ID>
    <ID><n><ID>
<VehicleDataObject>
<EquipmentDataObject>
    <ID><n><ID>
    <ID><n><ID>
</EquipmentDataObject>
<PICCDataObject>
    <PICCSerialNumber>1580489742</PICCSerialNumber>
    <PICCDataStatusAsRead>0</PICCDataStatusAsRead>
<PICCDataStatusAsWritten>0</PICCDataStatusAsWritten>
    <ID><n><ID>
    <ID><n><ID>
    <ID><n><ID>
    <ID><n><ID>
    <ID><n><ID>
</PICCDataObject>
<DateAndTimeDataObject>
    <ID><n></ID>
    <ID><n></ID> etc.
</DateAndTimeDataObject>
<EmployeeDataObject>
    <ID><n></ID>
    <ID><n></ID> etc.
</EmployeeDataObject>
<ActionEventDataObject>
    <ID><n></ID>
    <ID><n></ID> etc.
</ActionEventDataObject>
<AuthenticationDataObject>
    <ID><n></ID>
    <ID><n></ID> etc.
</AuthenticationDataObject>
<DIOAsWritten><n></DIOAsWritten>
<TAPOAsWritten><n></TAPOAsWritten>
<CorePIOAsWritten><n></CorePIOAsWritten>
<THOAsWritten><n></THOAsWritten>
<BatchEncodingDataObject><n></BatchEncodingDataObject>

Once all objects are represented within an XML database, the master Schema is developed and then pared down to the minimum required elements. Each message type is then validated against the Schema ensuring that the final product can be used as a tool to validate future developments designed to utilize the data model defined within Part III.

All meta-data information related to objects and elements is specified in the XML schema and not in the data object or element. The Object Identifier is needed in the data stream being sent up to the XML schema. XML is the standard method for data transmission, so the Object ID is its corresponding XML tag. Note, since XML is used, the XML tag is the object ID and therefore it is not necessary to send the object ID in addition to the object's XML tag.

An example of the Schema.DTD file would be as follows:

<!ELEMENT MessageIdentifierA0101 (MessageIdentifier, MessageVersion, MessageRevision, LocationDataObject,…, PICCDataObject, …,)>
<!ELEMENT MessageIdentifier (#PCDATA)>
<!ELEMENT MessageVersion (#PCDATA)>
<!ELEMENT MessageRevision (#PCDATA)>
<!ELEMENT agency-ID (#PCDATA)>
<!ELEMENT location-ID (#PCDATA)>
<!ELEMENT LocationDataObject (country-ID, region-ID, agency-ID, location-ID>
<!ELEMENT country-ID (#PCDATA)>
<!ELEMENT region-ID (#PCDATA)>
<!ELEMENT agency-ID (#PCDATA)>
<!ELEMENT location-ID (#PCDATA)>
.
.
.

NOTE 4— If non-XML methods were to be used by a participating agency system that system would need to emulate the XML method of transmitting the data to the RCC. For systems that rely on non-XML means for data transfer, the implementer would need to validate the data against the XML schema and convert to XML prior to sending it to the RCC. As a consequence, a custom interpreter would need to be installed on every system that is not using XML. This would defeat the requirement of interoperability and is therefore not permitted by the Standard.

2. Normative References

Refer to Part I of the Standard.

3. Definitions, Acronyms and Abbreviations

Refer to Part I of the Standard.

4. Approach to Security

A key element of any distributed system is well-defined security architecture. This defines the processes and technology required for the overall system, each system component and each system interface in order to achieve the desired level of protection against loss, theft, unauthorized access to, or unauthorized modification of, system information and system components.

Since security of the RCS interface cannot be specified in isolation, without consideration or knowledge of the overall system-architecture, the definition of the security specifications is beyond the scope of this Standard.

However, it needs to be recognized that the successful implementation of the RCS interface, and the regional fare collection system as a whole, is dependent upon well defined and implemented security architecture. This requires the involvement and consensus of all the regional participants.

To assist in the creation of security architecture, the Standard includes a security guideline that provides valuable information on what security elements should be considered, and how they can be defined. This document is *Part IV-System Security Planning and Implementation Guidelines (Part IV).*

5. Data Object Definitions

This section provides a detailed definition of the data objects (inclusive of their associated data elements) used in building each message associated with transactions involving PICC/CID interaction. The objects are required in different combinations and subsets depending on the specific message type and transaction(s) involved. This Standard includes specifications for messages not involving PICC/CID transactions, which utilize a different message structure.

5.1 PICC Data Objects

A list of all of the data objects that are defined in *Part II – Contactless Fare Media Data Format and Interface Standard*, and which are used in the construction of messages to transmit various types of PICC/CID transactions, is provided in Table 2.

NOTE 5—The Add and Deduct Value History Object (A&DVHO) defined in *Part II – Contactless Fare Media Data Format and Interface Standard* is not listed in any of the transactions in this document. Since all required transaction history information is included in the Transaction History Object (THO), the data elements stored within the A&DVHO on the PICC are redundant and useful only as a backup record of the data elements to support a customer service agent in the event of a network failure or data base access problem. The A&DVHO is listed in Table 2 since it is an object that may be sent to the RCS at the option of the Regional Scheme Operator.

Each data object associated with a fare product ("product object") is assumed to have an affinity to a transit organization (either a group of transit agencies within a region or a specific operator) which will accept the product for fare payment. The product owner is identified within a data field (agencyID) that precedes the data elements of each product object in a message. When included within a message, each product object must be preceded with an agencyID identifying the product owner. The agencyID data element is not included in the calculation performed to generate the cycle redundancy code (CRC) or data authentication code (DAC), which are created to provide a means to authenticate that the data object has not been altered since the original transaction was performed. Accordingly, the RCS must exclude the agencyID data element when validating the CRC/DAC for each object within a message.

Each PICC/CID data object will be represented in a message as follows:

AgencyID	Data Object elements

The objects in Table 2 are listed in alphabetic sequence. A detailed description of the data elements that comprise each data object can be found in *Part II – Contactless Fare Media Data Format and Interface Standard*. A message shall include an AsRead copy of an extension object if such an object exists on the PICC and it is listed herein as one of the optional data objects for that message. A message shall include an

AsWritten copy of the extension object if it was updated during the transaction associated with the message.

Table 2—PICC Objects

Object	Source	Description
A&DVHOAsRead	As read from PICC	This object refers to the entire 16 byte A&DVHO Object as read from the PICC.
A&DVHOXAsRead	As read from PICC	This object refers to the entire 16 byte A&DVHOX Object as read from the PICC.
A&DVHOAsWritten	As written to PICC	This object refers to the entire 16 byte A&DVHO Object as written to the PICC.
A&DVHOXAsWritten	As written to PICC	This object refers to the entire 16 byte A&DVHOX Object as written to the PICC.
AgencyPOAsRead	As read from PICC	This object refers to the entire 16 byte Agency Product Object as read from the PICC.
AgencyPOAsWritten	As written to PICC	This object refers to the entire 16 byte Agency Product Object as written to the PICC.
AgencyPOXAsRead	As read from PICC	This object refers to the entire 16 byte Agency Product extension as read from the PICC.
AgencyPOXAsWritten	As written to PICC	This object refers to the entire 16 byte Agency Product extension as written to the PICC.
AgencySVObjectAsRead	As read from PICC	This object refers to the entire 16 byte Agency Stored Value Product object as read from the PICC.
AgencySVObjectAsWritten	As written to PICC	This object refers to the entire 16 byte Agency Stored Value Product object as written to the PICC.
AgencySVXAsRead	As read from PICC	This object refers to the entire 16 byte Agency Stored Value Product extension as read from the PICC.
AgencySVXAsWritten	As written to PICC	This object refers to the entire 16 byte Agency Stored Value Product extension as written to the PICC.
ALPOAsRead	As read from PICC	This object refers to the entire 16 byte Account Linked product object as read from the PICC.
ALPOAsWritten	As written to PICC	This object refers to the entire 16 byte Account Linked Product Object as written to the PICC.
ALPOXAsRead	As read from PICC	This object refers to the entire 16 byte Account Linked product extension object as read from the PICC.
ALPOXAsWritten	As written to PICC	This object refers to the entire 16 byte Account Linked Product Object extension as written to the PICC.
ALROAsRead	As read from PICC	This object refers to the entire 16 byte Account Linked Reference Object as read from the PICC.

Table 2—PICC Objects (continued)

Object	Source	Description
ALROAsWritten	As written from PICC	This object refers to the entire 16 byte Account Linked Reference Object as written to the PICC.
ALROXAsRead	As read from PICC	This object refers to the entire 16 byte Account Linked Reference extension Object as read from the PICC.
ALROXAsWritten	As written from PICC	This object refers to the entire 16 byte Account Linked Reference extension Object as written to the PICC.
AutovalueProductObjectAsRead	As read from PICC	This object refers to the entire 16 byte Autovalue Product Object as read from the PICC and documented in the transaction.
AutovalueProductObjectAsWritten	As written to PICC	This object refers to the entire 16 byte Autovalue Product Object as written to the PICC.
AutovalueProductObjectXAsRead	As read from PICC	This object refers to the entire 16 byte Autovalue Product Object Extension as read from the PICC.
AutovalueProductObjectXAsWritten	As written to PICC	This object refers to the entire 16 byte Autovalue Product Object Extension as written to the PICC.
CorePIOAsRead	As read from PICC	This object refers to the entire 16 byte Core Product Index Object as read from the PICC. This is intended to be the current object. NOTE□If tear protection processing is invoked, the product object used here must be the one considered by the protection logic to be current.
CorePIOAsWritten	As written to PICC	This object refers to the entire 16 byte Core Product Index Object as written to the PICC.
DIOAsRead	As read from PICC	This object refers to the entire 16 byte Directory Index Object as read from the PICC. This is intended to be the current object.
DIOAsWritten	As written to PICC	This object refers to the entire 16 byte Directory Index Object as written to the PICC.
DIOXAsRead	As read from PICC	This object refers to the entire 16 byte Directory Index Object Extension as read from the PICC.
DIOXAsWritten	As written to PICC	This object refers to the entire 16 byte Directory Index Object extension as written to the PICC.
LUSFDOAsRead	As read from PICC	The LUSFDO is a special object that is only used on Limited Use (LU) PICCs that have between 48 and 96 bytes of available storage. This object contains the fixed data that is created during the initialization of the PICC.

Table 2—PICC Objects (continued)

Object	Source	Description
LUSFDOAsWritten	As written to PICC	The LUSFDO is a special object that is only used on LU PICCs that between 48 and than 96 bytes of available storage. This object contains the fixed data that is created during the initialization of the PICC.
LUSVDOAsRead	As read from PICC	The LUSVDO is a special object that is only used on LU PICCs that have between 48 and 96 bytes of available storage. This object contains the variable data that is updated during a transaction.
LUSVDOXAsRead	As read from PICC	The LUSVDOX is a special object extension that is only used on LU PICCs that have between 48 and 96 bytes of available storage. This object contains the variable data that is updated during a transaction.
LUSVDOAsWritten	As written to PICC	The LUSVDO is a special object that is only used on LU PICCs that have between 48 and 96 bytes of available storage. This object contains the variable data that is updated during a transaction.
LUSVDOXAsWritten	As read from PICC	The LUSVDOX is a special object extension that is only used on LU PICCs that have between 48 and 96 bytes of available storage. This object contains the variable data that is updated during a transaction.
PHPOAsRead	As read from PICC	This object refers to the entire 16 byte PICC Holder Profile Object as read from the PICC.
PHPOAsWritten	As written to PICC	This object refers to the entire 16 byte PICC Holder Profile Object as written to the PICC.
PHPOX1AsRead	As read from PICC	This object refers to the entire 16 byte PICC Holder Profile Object Extension 1 as read from the PICC.
PHPOX1AsWritten	As written to PICC	This object refers to the entire 16 byte PICC Holder Profile Object Extension 1 as written to the PICC.
PHPOX2AsRead	As read from PICC	This object refers to the entire 16 byte PICC Holder Profile Object Extension 2 as read from the PICC.
PHPOX2AsWritten	As written to PICC	This object refers to the entire 16 byte PICC Holder Profile Object Extension 2 as written to the PICC.
PHPOX3AsRead	As read from PICC	This object refers to the entire 16 byte PICC Holder Profile Object Extension 3 as read from the PICC.
PHPOX3AsWritten	As written to PICC	This object refers to the entire 16 byte PICC Holder Profile Object Extension 3as written to the PICC.
PIOX1AsRead	As read from PICC	This object refers to the entire 16 byte PIO Extension Object 1 as read from the PICC.

Table 2—PICC Objects (continued)

Object	Source	Description
PIOX1AsWritten	As written to PICC	This object refers to the entire 16 byte PIO Extension Object 1 as written to the PICC.
PIOX2AsRead	As read from PICC	This object refers to the entire 16 byte PIO Extension Object 2 as read from the PICC.
PIOX2AsWritten	As written to PICC	This object refers to the entire 16 byte PIO Extension Object 2 as written to the PICC.
PIOX3AsRead	As read from PICC	This object refers to the entire 16 byte PIO Extension Object 3 as read from the PICC.
PIOX3AsWritten	As written to PICC	This object refers to the entire 16 byte PIO Extension Object 3 as written to the PICC.
RegionalPOAsRead	As read from PICC	This object refers to the entire 16 byte Regional Product as read from the PICC.
RegionalPOAsWritten	As written to PICC	This object refers to the entire 16 byte Regional Product Object as written to the PICC.
RegionalPOXAsRead	As read from PICC	This object refers to the entire 16 byte Regional Product Object extension as read from the PICC.
RegionalPOXAsWritten	As written to PICC	This object refers to the entire 16 byte Regional Product Object extension as written to the PICC.
RegionalTPurseObjectAsRead	As read from PICC	This object refers to the entire 16 byte Regional T-Purse as read from the PICC.
RegionalTPurseObjectAsWritten	As written to PICC	This object refers to the entire 16 byte Regional T-Purse Object as written to the PICC.
RegionalTPurseXAsRead	As read from PICC	This object refers to the entire 16 byte Regional T-Purse extension as read from the PICC.
RegionalTPurseXAsWritten	As written to PICC	This object refers to the entire 16 byte Regional T-Purse extension as written to the PICC.
TAPOAsRead	As read from PICC	This object refers to the entire 16 byte Transit App Profile as read from the PICC.
TAPOAsWritten	As written to PICC	This object refers to the entire 16 byte Transit App Profile as written to the PICC.
THOAsRead	As read from PICC	This reference will always refer to the latest (Most recent) transaction in the Transaction History stack.
THOAsWritten	As written to PICC	This reference will always refer to the transaction just written to the Transaction History stack.

Table 2—PICC Objects (continued)

Object	Source	Description
THOXAsRead	As read from PICC	This reference will always refer to the latest (Most recent) transaction in the Transaction History stack.
THOXAsWritten	As written to PICC	This reference will always refer to the transaction just written to the Transaction History stack.

5.2 Non-PICC/CID Objects

This section defines all of the other data objects that are used in building messages, but not defined in *PartII – Contactless Fare Media Data Format and Interface Standard*.

Each object is listed and defined with eight distinct components including:

Seq: Whole number used to identify the rank order of the data element within the message (starting at 1). When the keyword CHOICE or SEQUENCE is specified in Description, elements making up the choice must immediately follow with the same major ordinal number (e.g., 2.1, 2.2, 2.3, etc.).

Description: A text-based description of the message element which may contain the keywords OPTIONAL, OBSOLETE, CHOICE, and SEQUENCE to define or limit the use of the data element.

— Specifying OPTIONAL means that the element can be omitted without causing an XML validation error only if no data is available.

— CHOICE and SEQUENCE are mutually exclusive. They are methods for specifying a sub-object without formally defining another object. CHOICE means that (only) one of the following elements (determined by Seq) should be specified. SEQUENCE is a series (array/list) of elements (determined by Seq).

— Either of the CHOICE or SEQUENCE elements can be omitted if OPTIONAL is specified.

— Fields labeled "OBSOLETE" are out dated and no longer needed. Whenever a data element is superseded by a newer data element the original data element will be marked OBSOLETE.

Name: The name of the data element.

XML Tag: A text string used in XML to uniquely identify a particular data element.

ASN.1.Name: Abstract Syntax Notation number one name. ASN.1 is an ISO standard language for abstractly describing messages to be exchanged over a variety of networks. The ASN.1.Name is used by the National Center for Transportation and Industrial Productivity (NCTIP) to identify a unique message or to identify a permitted sequence or usage of a common data element.

Datatype: A term used to qualify both the content and the structure of a data element

Subtype: Term used to describe one of potentially several subcomponents or variations of a datatype that utilize the same content and structure as is defined for the datatype. Valid sub (base) types and resultant datatypes within the specification are shown in Table 3.

Table 3—Subtype definitions

Subtype	XSD	C++	Java
BYTE	xs:byte	char	Byte
UBYTE	xs:unsignedByte	unsigned char	int (or custom type)
SHORT	xs:short short	short	Short
USHORT	xs:unsignedShort	unsigned short	int (or custom type)
LONG	xs:int	long (INT32)	int
ULONG	xs:unsignedInt	unsigned long (UINT32)	long (or custom type)
UTF8STRING	xs:string	char *	String
OCTET	base64Binary	void *	byte[]
QWORD	xs:unsignedLong	(UINT64)	String
DATE	xs:date	unsigned long (UINT32)	java.sql.Date
DATETIME	xs:dateTime	unsigned long (UINT32)	java.sql.Timestamp
TIME	xs:time	unsigned long (UINT32)	java.sql.Time

Range: The valid values for this data object. Range may be listed as "LowValue - HighValue (e.g., 10 – 32)" and/or as a list of valid values (e.g., 1 – Male, 2 – Female)

NOTE 6—The description after the hyphen must start with an alphabetic character, not a number.

Range may also include or specify a default value (e.g., Default = 0).

Table 4 shows all the distinct integer data types used in defining numerical data elements. These integer data types are defined by NTCIP (TS 3.2-1996, Annex A).

Table 4—Integer Data Types

Element	Valid Data Range
BYTE	-128 .. 127
UBYTE	0 .. 255
SHORT	-32,768 .. 32,767
USHORT	0 .. 65,535
LONG	-2,147,483,648 .. 2,147,483,647
ULONG	0 .. 4,294,967,295
QWORD	0 .. 18446744073709551616 (2^64-1)

Table 5 defines all of the possible date and time data types that can be used in defining the date and time related data elements. The date and time data types are based on Representation Class Terms and Value Domain standards prescribed by the ITS Data Dictionary, (IEEE P1489 V.0.7, Annex C).

Table 5—Date and Time Data Types

Element	Description
TIME	ULONG The digits are masked, in the XML file, as HH:MM:SS. HH refers to hours; MM refers to minutes; SS refers to seconds. The time value is based on ISO 8601. Internally the TIME is converted to seconds since midnight. No time zone is inferred.
DATE	ULONG The digits are masked, in the XML file, as YYYY-MM-DD. Where YYYY refers to year; MM refers to month and may take a value between 1 through 12; DD refers to day and may take a value between 1 and 31. The value domain is based on ISO 8601. Internally the DATE is held as digits YYYYMMDD.
DATETIME	ULONG The digits are masked, in the XML file, as YYYY-MM-DDTHH:MM:SSz. Where T indicated the beginning of the TIME and z refers to Zulu or GMT. See TIME and DATE above for an explanation of the other elements of the mask. The value domain is based on ISO 8601. Internally the value of DATETIME is the number of seconds since January 1, 1970, midnight. DATETIME is based on ANSI/ISO 9899:1990 “C” Programming Language for UTC.

Table 6 defines all of the possible string data types used in defining data elements within objects. These string data types use a subset of Universal Multiple-Octet Coded Character Set [ISO/IEC 10646-1] representative codes. All strings shall be null-terminated (end with the null character, often represented as “\0”). The null character is a character with the value 0, present in ASCII and Unicode character sets. Using the null character gives the implementer of a Standard-compliant system the option of using dynamically sized string data elements.

Table 6—String Data Types

Element	Description
TELEPHONE	NUMERIC STRING (SIZE(0..9)), where the 10-character string is masked as AAANNNNNN. AAA refers to a three-digit area code; NNNNNNN refers to a seven-digit number.
FOOTNOTE	UTF8String (SIZE(1 .. 256)). Footnote is a memo field that is compatible with the number of characters typically allowed in spreadsheet software products (i.e., 256 characters).
NAME	UTF8String (SIZE(1..30)). Name is a field that contains a title or reference to a person, place or thing. The field contains 30 characters.
NAME8	UTF8String (SIZE(1..8)). A short name form that contains up to 8 characters.

NOTE 7—In the following object definitions, where the range value is blank please refer to Part II for the definition of the range.

NOTE 8—Object Version – indicates the current version of the object for use in identifying object versions for backward compatibility.

NOTE 9— Object Group – it is a data object attribute which helps to associate the data object to a category. Currently the data objects are assigned to the category transaction (TRNS).

5.2.1 Location Data Object

Object Name	LocationDataObject
Purpose/Use	This object contains the data elements that describe where the transaction occurred.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	country-ID	<country-ID>		USHORT	USHORT		This data element defines the Country of use or issuance depending on the circumstance of use. Message definition will define whether to interpret this field with use or issuance.
2	region-ID	<region-ID>		UBYTE	UBYTE		Region identifier of the region where the transaction took place.
3	agency-ID	<agency-ID>		UBYTE	UBYTE		ID of the agency where the transaction took place.
4	location-ID	<location-ID>		USHORT	USHORT		ID of the physical location where the AFC transaction occurred.
5	location-ID-destination	<location-ID-destination>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) This is the LocationID of the destination.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
6	location-ID-origin	<location-ID-origin>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) This is the LocationID of the origin.

5.2.2 Vehicle Data Object

Object Name	VehicleDataObject
Purpose/Use	This object contains the data elements that describe where the transaction occurred if it took place onboard a vehicle (Bus/Trolley/Ferry).
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	vehicle-ID	<vehicle-ID>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) This data element defines the identifier for the vehicle where the transaction occurred. (Bus Number)
2	route-ID	<route-ID>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) If performed on a bus, the Route the bus was on.
3	zone-ID	<zone-ID>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) ID of the zone where the transaction took place.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
4	zone-ID-destination	<zone-ID-destination>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) In a zone based fare payment, this data element defines the exit zone if specified on SV/Purse transaction at entry.
5	run-ID	<run-ID>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) If performed on a bus, the Run the bus was on.
6	direction-code	<direction-code>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) A code given to define direction.

5.2.3 Equipment Data Object

Object Name	EquipmentDataObject
Purpose/Use	This object contains the data elements that describe the device that performed the transaction being documented.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	device-ID	<device-ID>		ULONG	ULONG		This is the device identifier of the device that hosts the CID. This attribute is generally assigned to that host device and has meaning within the agency AFC system.
2	device-transaction-seq	<device-transaction-seq>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) This is a unique counter of the transactions performed by the device. Implementers are cautioned to be sure of the use of this data element in the various devices deployed in a region.
3	CIDID	<CIDID>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) The internal identifier of the CID that performed the transaction.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
4	CID-transaction-seq	<CID-transaction-seq>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) The sequential sequence number of the transaction as assigned by the CID at the time of the transaction.

5.2.4 PICC Data Object

Object Name	PICCDataObject
Purpose/Use	This object contains data elements that describe which PICC was used in the transaction and data status of that PICC.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	PICCSerialNumber	<PICCSerialNumber>		QWORD	QWORD		The unique administrative number comprised of chip serial number and manufacturer ID.
2	PICCDataStatusAsRead	<PICCDataStatusAs Read>		UBYTE	UBYTE	0 – No Errors 1 – CRC error on one version of the PIO, may have lost a PICC update	This data element defines the status of the data on the card as read.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
3	PICCDataStatusAs Written	<PICCDataStatusAs Written>		UBYTE	UBYTE	0 – No Errors 1 – Did not complete on initial write, card was re-presented and write completed with no error. 2 – Did not complete PIO read verify, card condition unknown. Card not re-presented. 3 – PICC update not performed because Card not re-presented (Customer Walkaway). The transaction reported will contain the same objects as a successful transaction, but must be treated as what would have been written if PICC had been re-presented.	This data element defines the status of the write to the PICC.
4	KeySetIdentifier (PICC Key Access set)	<KeySetIdentifier>		USHORT	USHORT		A unique identifier assigned to a single set of keys. The KeySetIdentifier number must be unique within the CountryID, RegionID and manufacturer ID.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
5	PICCTransactionSeq	<PICCTransactionSeq>		UBYTE	UBYTE	0-127	The sequential sequence number of the transaction as tracked on the PICC. Each operation on a PICC where data is changed shall result in a transaction and an update to this data element. As noted earlier, implementers may perform more than one operation on a single touch but each will have a transaction record generated and a new [RtsPICCTransSeqNumber].
6	PICCTransitApplication Status	<PICCTransit ApplicationStatus>		UBYTE	UBYTE	0 – PICC Transit Application is unblocked/active 1 – PICC Transit Application is negative-listed, blocked and cannot be unblocked 2 – PICC Transit Application is negative listed, blocked, but can be unblocked 3 – Reserved	OPTIONAL (Optional only if no data is available) The value of this field represents the Negative List status of the Transit Application.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
7	PICCTPurseSVUse	<PICCTPurseSVUse>		UBYTE	UBYTE	0 – An SV Purse or T-Purse was not used 1 – An SV Purse was used/updated 2 – The T-Purse was used/updated 3 – An SV Purse & T-Purse was used/updated	OPTIONAL (Optional only if no data is available) Indicates the use of an Agency specific Stored Value Product and/or the Regional T Purse &/or the Account Linked Product. NOTE When an SV [agency specific] purse was used then the Agency ID is that indicated by the last Transaction History Log entry.
8	PICCALPOUse	<PICCALPOUse>		UBYTE	UBYTE	0 – Account Linked Product was not used/updated 1 – Account Linked Product was used/updated	OPTIONAL (Optional only if no data is available) Indicates that the Account Linked product was used.

5.2.5 Employee Data Object

Object Name	EmployeeDataObject
Purpose/Use	This object contains the data elements that describe an employee who may have been logged on to the device at the time of the transaction. It may be the Vehicle Operator, the Device Attendant or other class of employee.
Notes	Either EmployeeID or Employee PICCID must be included, but inclusion of the other is optional.
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	EmployeeID	<EmployeeID>		ULONG	ULONG		OPTIONAL (Optional only if EmployeePICCID is included) ID of a logged on attendant at the AFC device emitting the message.
2	EmployeeType	<EmployeeType>		NAME	UTF8String[30]		OPTIONAL (Optional only if no data is available) This data element is determined at employee logon time and will identify the employee as a driver, attendant, technician, revenue or other type of employee.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
3	EmployeePICCID	<EmployeePICCID>		QWORD	QWORD		OPTIONAL (Optional only if EmployeeID is included) Where a PICC transaction is performed by a device with an employee logged on, this data element is the PICC serial number of the PICC used to logon by the Employee.

5.2.6 Action Event Data Object

Object Name	ActionEventDataObject
Purpose/Use	This object contains the data elements that are used to document the current state of action event directives as depicted in the PICC. The data conveyed to the Action List Administrator will allow for maintenance of the Action List.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	ActionEventIDAsRead	<ActionEventIDAsRead>		UBYTE	UBYTE	0-63	This data element is the RtsActionEventID as read from the PIO, reflecting the status of the last transaction.
2	ActionEventIDAsWritten	<ActionEventIDAsWritten>		UBYTE	UBYTE	0-63	This data element reflects the RtsActionEventID as stated in the PIO as result of the current transaction.
3	ActionEventMAPAsRead	<ActionEventMAPAsRead>		UBYTE	UBYTE	0-127	This data element reflects the RtsActionMap from the PIO as read, reflecting the status of the last transaction.
4	ActionEventMapAsWritten	<ActionEventMapAsWritten>		UBYTE	UBYTE	0-127	This data element reflects the RtsActionMap from the PIO as written, reflecting the status of the last transaction.

5.2.7 Authentication Data Object

Object Name	AuthenticationDataObject
Purpose/Use	This object contains the data elements that will be required by the receiver to authenticate the message or series of messages.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	MessageAuthCode	<MessageAuthCode>		ULONG	ULONG		The Message Authentication Code generated by the sending CID that allows the receiver to authenticate the Data Object attached to a message.
2	KeySetIdentifier (MAC Key Set)	<KeySetIdentifier>		USHORT	USHORT		A unique identifier assigned to a single set of MAC keys. The KeySetIdentifier number must be unique within the CountryID, RegionID and manufacturer ID.
3	MACAlgorithmID	<MACAlgorithmID>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) A unique number used to identify the formula (algorithm) used to generate the MAC.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
4	MACHashID	<MACHashID>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) Designates the Hash algorithm used in this transaction.
6	ApplicationCertCode	<ApplicationCert Code>		QWORD	QWORD		OPTIONAL (Optional only if no data is available) This data element identifies the test completion certificate issued by the regional certification facility.

5.2.8 Date and Time Data Object

Object Name	DateAndTimeDataObject
Purpose/Use	This object contains all the data elements that identify the date and time elements associated with a message.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	TransactionDateTime	<TransactionDateTime>		DATETIME	ULONG		This is the actual date time that the transaction was performed and is assigned to the transaction by the CID.
2	PostDateTime	<PostDateTime>		DATETIME	ULONG		OPTIONAL (Optional only if no data is available) The Clearing Entities will reconcile the transmission of revenue transaction based upon the date and time the transaction was made ready for transmission. This data element is the date & time contained in the detailed clearing message.

5.2.9 Batch Encoding Data Object

Object Name	BatchEncodingDataObject
Purpose/Use	This data object is used to record additional data elements resulting from a batch encoding transaction.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	BatchNumber	<BatchNumber>		ULONG	ULONG		OPTIONAL (Optional only if no data is available) An organizing number assigned to a group of PICCs being initialized or issued on behalf of a batch job.
2	BatchTotal	<BatchTotal>		ULONG	ULONG		OPTIONAL (Optional only if no data is available) Identifies the total number of PICCs in a batch job.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
3	BatchSeqNumber	<BatchSeqNumber>		ULONG	ULONG		OPTIONAL (Optional only if no data is available) Identifies out of the total number of encoded PICCs which one this is relative to the total in a batch. For example, if the batch job was for 100 PICCs to be issued and this field was equal to 24 then the message containing this field would represent the 24th encoding out of 100 for that batch job.
4	DepositAmount	<DepositAmount>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) Some regions may require that a deposit is required for the PICC. If such a deposit is required and so encoded on the PICC, this data field will represent the value of that deposit.

5.2.10 PICC Holder Information Data Object

Object Name	PICCHolderInfoDataObject
Purpose/Use	This data object is used to record additional PICC holder information outside that defined within the PICC Holder Profile Object
Notes	Implementer should consider encrypting the data elements within this object.
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	PICCHolderNameLast	<PICCHolderName Last>		NAME	UTF8String[30]		OPTIONAL (Optional only if no data is available) Card Holder Last name. Data may be encrypted.
	PICCHolderNameFirst	<PICCHolderName First>		NAME	UTF8String[30]		OPTIONAL (Optional only if no data is available) Card Holder First name. Data may be encrypted.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
3	PICCHolderAddress Line1	<PICCHolderAddress Line1>		NAME	UTF8String[30]		OPTIONAL (Optional only if no data is available) Address line 1 data as provided by Card Holder. Data may be encrypted.
4	PICCHolderAddress Line2	<PICCHolderAddress Line2>		NAME	UTF8String[30]		OPTIONAL (Optional only if no data is available) Address line 2 data as provided by Card Holder Data may be encrypted.
5	PICCHolderCity	<PICCHolderCity>		NAME	UTF8String[30]		OPTIONAL (Optional only if no data is available) City as provided by Card Holder Data may be encrypted.
6	PICCHolderState	<PICCHolderState>		NAME8	UTF8String[8]		OPTIONAL (Optional only if no data is available) State as provided by the Card Holder Data may be encrypted.
7	PICCHolderZip	<PICCHolderZip>		USHORT	USHORT		OPTIONAL (Optional only if no data is available) Zip Code as provided by the Card Holder. Data may be encrypted.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
8	PICCHolderPhoneWork	<PICCHolderPhone Work>		TELEPHONE	Numeric String[10]		OPTIONAL (Optional only if no data is available) Card Holder work telephone number including area code Data may be encrypted.
9	PICCHolderPhoneHome	<PICCHolderPhone Home>		TELEPHONE	Numeric String[10]		OPTIONAL (Optional only if no data is available) Card Holder home telephone number including area code Data may be encrypted.
10	PICCHolderE-mail	<PICCHolderE-mail>		FOOTNOTE	UTF8String[256]		OPTIONAL (Optional only if no data is available) E-mail address, as provided by Card holder Data may be encrypted.

5.2.11 Load Unload Data Object

Object Name	LoadUnloadDataObject
Purpose/Use	This data object is used to record additional data elements resulting from any Sale, Load, or Unload transaction.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	PaymentType	<PaymentType>		UBYTE	UBYTE	1 – No Payment 2 – Cash 3 – Credit 4 – Check 5 – Stored Value 6 – Debit 7 - Threshold Autoload 8 – Directed Autoload 9 – Recurring Autoload 10 – Transit Benefit Coupon	This data element is used to define how the transaction or portion of the transaction was paid for. In the case of an unload transaction no payment should be reported.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
2	AmountPaid	<AmountPaid>		ULONG	ULONG		OPTIONAL (Optional only if no data is available – Data may not be available if the CID does not know the amount paid or in the case of an unload transaction there is no amount paid.) When purchasing a transit pass product or stored value this data attribute will represent the purchase amount prior to any bonus that may be added by the vending equipment. This should be equal to the value tendered by the patron.
3	AmountLoaded	<AmountLoaded>		ULONG	ULONG		OPTIONAL (Optional only if no data is available) This data attribute represents the value loaded or unloaded (depending on the message this object is used in) by the CID to the PICC. This amount may include bonus revenue. If the message using this data element is not an unload directive response message then the difference between this data attribute and AmountPaid will equal any bonus revenue added to AmountPaid.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
4	ProductRefID	<ProductRefID>		ULONG	ULONG		OPTIONAL This element can be used to identify a specific pass product during an action event or in the response to one. This element is useful because it allows for the identification of a pass product within fare tables as opposed to from the specific directive message thereby reducing the size of the directive messages that get sent to the devices.

5.2.12 Use Validation Data Object

Object Name	UseValidationDataObject
Purpose/Use	This data object is used to record usage validation results (passback, hotlist, agency override, etc.) upon use transaction.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	Passback Condition	<Passback Condition>		UBYTE	UBYTE	0 – Passback validation was not applied 1 – Passback validation was applied and affected the result of the transaction. For example, if a ride based product was valid but restricted by passback rules, the validation process may proceed to use a value instrument.	OPTIONAL (Optional only if no data is available.) This defines the devices assessment of passback based on the criteria in use by the device.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
2	Attendant Evaluation	<Attendant Evaluation>		UBYTE	UBYTE	0 – No override was used 1 – override was used	OPTIONAL (Optional only if no data is available.) Attendant may override device evaluation of a PICC; this attribute indicates if an attendant override was used.
3	Negative ListDirective	<NegativeList Directive>		UBYTE	UBYTE		Optional (Optional only if no data is available.) Each Negative List directive implies a specific action to be taken by the AFC device when it encounters the specific PICC serial number in the associated negative list row. (Refer to Table 7 for more details).

5.2.13 Use Deduct Data Object

Object Name	UseDeductDataObject
Purpose/Use	This data object is used to record all the deductions in rides or value during a usage transaction.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	RegionalTPurse ValueDeducted	<RegionalTPurse ValueDeducted>		ULONG	ULONG		OPTIONAL (Optional only if no data is available.) A multiple source value payment requires the distinction of amounts from each potential source. This data element defines the revenue deducted from the Regional T-Purse.
2	AgencyPurse ValueDeducted	<AgencyPurse ValueDeducted>		ULONG	ULONG		OPTIONAL (Optional only if no data is available.) A multiple source value payment requires the distinction of amounts from each potential source. This data element defines the revenue deducted from the Agency Specific SV purse.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
3	ALPOValue Deducted	<ALPOValue Deducted>		ULONG	ULONG		OPTIONAL (Optional only if no data is available.) A multiple source value payment requires the distinction of amounts from each potential source. This data element defines the revenue deducted from the Account Linked Product.
4	RidesDeducted	<RidesDeducted>		UBYTE	UBYTE		OPTIONAL (Optional only if no data is available.) When processing a use transaction for a ride based product, this data element explicitly defines the number of rides deducted.

5.2.14 End of Day Data Object

Object Name	EndOfDayDataObject
Purpose/Use	This data object is used to record all data elements that are needed by the RCS from the agency for end of day processing.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
1	ServiceAgencyID	<ServiceAgencyID>		UBYTE	UBYTE		This is the AgencyID of the service provider where the transaction took place or the product Retailer Agency ID where the sales transaction took place.
2	PostDateTimeFrom	<PostDateTimeFrom>		DATETIME	ULONG		The Clearing Entities will reconcile the transmission of revenue AFC transaction based upon the date and time the transaction was made ready to transmit. This data element stores the starting date & time for a collection of transactions.
3	PostDateTimeTo	<PostDateTimeTo>		DATETIME	ULONG		The Clearing Entities will reconcile the transmission of revenue AFC transaction based upon the date and time the transaction was made ready to transmit. This data element stores the ending date & time for a collection of transactions.
4	MessageIdentifier	<MessageIdentifier>		STRING	STRING		This is the message identifier for the type of message being accounted for in this message instance.

Seq	Name	XML Tag	ASN.1 Name	Datatype	Subtype	Range	Description
5	MessageCount	<MessageCount>		ULONG	ULONG		This data element should be equal to the count of transactions sent bearing a PostDateTime between PostDateTimeFrom and PostDateTimeTo with a message ID equal to that of MessageIdentifier.
6	MessageValue	<MessageValue>		QWORD	QWORD		This data element should be equal to the monetary face value of all the transaction messages received bearing a PostDateTime between PostDateTimeFrom and PostDateTimeTo with a message ID equal to that of MessageIdentifier.

5.2.15 Regional Product Op Params Data Object

Object Name	RegionalProductOpParamsDataObject
Purpose/Use	This object contains all the data elements used to lookup all of the operational parameters governing the usage of a Regional Product.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name/XML Tag	Datatype	Subtype	Description
1	DayConstraints <DayConstraints>	UBYTE	UBYTE	This data element specifies the valid day(s) for the product, e.g.: Any (Mon-Sun) Work (Mon-Fri) Special 1 (Saturday)
2	TimeConstraints <TimeConstraints>	UBYTE	UBYTE	This data element specifies the valid time period for the product, e.g.: Time 1 (all day) Time 2 (00.00 to 06.00)
3	PeriodConstraints <PeriodConstraints>	UBYTE	UBYTE	This data element specifies the valid duration of the product, e.g.: Period 1 (1Day or 24 hrs) Period 2 (7Day) Period 3 (14Day)

Seq	Name/XML Tag	Datatype	Subtype	Description
4	FixedOrFloating <FixedOrFloating>	UBYTE	UBYTE	This data element specifies whether the product is valid for a fixed date: Fixed Date Open Date
5	RideConstraints <RideConstraints>	UBYTE	UBYTE	This data element specifies the number of trips or rides associated with the product, e.g.: Unlimited 1 Trip Round Trip (2 rides) 10 Trip
6	OtherConstraints1 <OherContraints1>	UBYTE	UBYTE	This data element is used to specify any other product constraints.
7	OtherConstraints2 <OherContraints2>	UBYTE	UBYTE	This data element is used to specify any other product constraints.
8	OtherConstraints3 <OherContraints3>	UBYTE	UBYTE	This data element is used to specify any other product constraints.

5.2.16 RegionalProductCostDataObject

Object Name	RegionalProductCostDataObject
Purpose/Use	This object contains a set of price (amount paid by the patron) and cost (amount paid by or allocated to the entity selling the fare product) data element values that can be associated with a particular fare product. Since a single fare product may be offered to different rider classes at different prices, a product definition may have up to 65,535 different price/cost sets assigned to it, one for each unique rider class (RtsProfileCode) associated with the product. For example, a region may define a one week pass. It may be eligible for sale to full fare riders at $25, seniors at $15 and students at $13. This object is distributed as part of the Fare Policy Framework.
Notes	
Object Version	V 1.0
Object Group	TRNS

Seq	Name/XML Tag	Datatype	Subtype	Description
1	RegionalProductCost <RegionalProductCost>	USHORT	USHORT	Index value equal to the RtsProfileCode to which this set of price specifications is associated. For example, a product may be priced differently for a Full Fare profile versus a Senior profile. In this case the product would have a RegionalProductCost set associated with the Full Fare profile and a different one associated with the Senior profile.
1.1	RegionalProductFaceValue <RegionalProductFaceValue>	ULONG	ULONG	This data element specifies the face value of the product. This value shall be used to specify the price of the product when sold to the patron by a Product Owner.

Seq	Name/XML Tag	Datatype	Subtype	Description
1.2	RegionalProductApportionmentValue <RegionalProductApportionmentValue>	ULONG	ULONG	OPTIONAL (Optional only if no data is available.) This data element specifies the portion (in dollar and cents) of the RegionalProductFaceValue that is distributed between Service Operators when the product is sold or used, depending on the business rules established for the region.
1.3	RegionalProductRetailValue <RegionalProductRetailValue>	UBYTE	UBYTE	OPTIONAL (Optional only if no data is available.) The amount charged to a patron for purchase of a fare product by a Retailer who is not the Product owner [e.g., RegionalProductFaceValue + sales commission]

6. Definitions – Data Elements, Objects and Messages

6.1 Data Element and Object Definitions

Table 7 defines the data elements which are used in conjunction with the data objects in the construction of messages. These data elements are listed in alphabetic sequence. This table does not include any data element already defined within a data object, unless that data element is used independent of that object.

It is important to note that these data elements are derived from any one of several sources (e.g., PICC objects, CID transaction records, ACS records, RCS database, etc.). This table provides a definition of the data element but does not identify the source. The source of each data element will depend on its context within the message in which the data element is used. That context is provided in the individual message formats defined in Section 5 of the Standard.

NOTE 10— In the table below, where an element name has below it the element name preceded by the prefix Rts and is enclosed within brackets [] this is a reference denoting that the Part III element is identical to the Part II element.

Table 7—Data Elements and Objects Used In Messages

Data Element	Length	Datatype	Description
ActionEventALPO	16 Bytes	UBYTE[16]	This object will contain the data elements required to build the Account Linked Object on the selected PICC. The data elements that make up this object are defined within the Account Linked Product Object.
ActionEventALPOX	16 Bytes	UBYTE[16]	This object will contain the data elements required to build the Account Linked Object Extension on the selected PICC. The data elements that make up this object are defined within the Account Linked Product Object.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
ActionEventALRO	16 Bytes	UBYTE[16]	This object will contain the data elements required to build the Account Linked Reference Object on the selected PICC. The data elements that make up this object are defined within the Account Linked Reference Object within the Part II specification. Implementers should use caution when downloading the object data due to the sensitive nature of the data contained in this object. If this is implemented, they should become familiar with the current association rules, the local, state and federal government rules/regulations and agency policies regarding the storage and transmission of credit card data. They should then implement security/encryption facilities to meet those rules.
ActionEventALROX	16 Bytes	UBYTE[16]	This object will contain the data elements required to build the Account Linked Reference Object extension on the selected PICC.
ActionEventAmount	2 Bytes	USHORT	If the Action Event message type directs a change to a purse on the PICC, this data element provides the amount of the change to be applied.
ActionEventAutovalueProductObject	16 Bytes	UBYTE[16]	The Action List process supports an AutoValue object update process. This is the Autovalue Product Object that will be used to replace the existing product object on the PICC.
ActionEventAutovalueProductObjectX	16 Bytes	UBYTE[16]	The Action List process supports an AutoValue object extension update process. This is the Autovalue Product Object Extension that will be used to replace the existing product object extension on the PICC.
ActionEventDirectiveExpiry	4 Bytes	ULONG	This data element defines when the Directive expires. It is only used in the list when the directive expires before the list.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
ActionEventID [RtsActionEventID]	2 Byte	USHORT	This data element is the sequential number assigned to the Action Event Item by the Action List Administrator or RCS.
ActionEventListDateTime	4 Bytes	DATETIME	This data element is the date and time that the action event list was authenticated by the Action List Administrator or RCS. All activity on the list will have been processed onto the list prior to that date/time specification.
ActionEventListExpiryDate	4 Bytes	DATETIME	This data element is the date and time that the action event list expires. AFC devices will disregard the list after this specified date & time.
ActionEventLocationValidity [RtsLocationEncoding]	4 Bytes	ULONG	If the Action Event message is to be applied to a specific product, this data element indicates the product's Location Validity. This data element is used to help identify the correct product to apply the action event when all other data elements of one or more other products stored on the PICC are identical to the correct product. (See the RegionalLocationValidity description within this table for more details.)
ActionEventLocationValidityEncodingType [RtsLocationEncodingType]	1 Byte	UBYTE	If the Action Event message is to be applied to a specific agency's product, this data element indicates the product's Location Validity encoding type. This data element is used to help identify the correct product to apply the action event when all other data elements of one or more other products stored on the PICC are identical to the correct product. (See the RegionalLocationValidityEncoding description within this table for more details.)
ActionEventPHPO	16 Bytes	UBYTE[16]	Administrative systems may command updates to PHPO data via the action list. This data object contains the revised PHPO to be placed on the card by AFC device. Object must include a valid DAC or CRC.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
ActionEventPHPOX1	16 Bytes	UBYTE[16]	Administrative systems may command updates to PHPO data via the action list. This data object contains the revised PHPOX1 to be placed on the card by AFC device. This data may be encrypted. Object must include a valid DAC or CRC.
ActionEventPHPOX2	16 Bytes	UBYTE[16]	Administrative systems may command updates to PHPO data via the action list. This data object contains the revised PHPOX2 to be placed on the card by AFC device. This data may be encrypted. Object must include a valid DAC or CRC.
ActionEventPHPOX3	16 Bytes	UBYTE[16]	RCS administrative systems may command updates to PHPO data via the action list. This data object contains the revised PHPOX3 to be placed on the card by AFC device. This data may be encrypted. Object must include a valid DAC or CRC.
ActionEventProductAgencyID [RtsAgencyID]	1 Byte	UBYTE	If the Action Event message is to be applied to a specific product, this data element indicates the AgencyID of that product.
ActionEventProductExpiry [RtsExpDate]	4 Bytes	ULONG	This data element is used for non-open-dated passes where the originator wants a pass delivered with a specific expiry date specified. This data element enables the system to execute an Autoload directive for a pass product that has a future start date. The system can utilize the value in this field to calculate the start date based on the time duration of the product as indicated by its Product ID. If an action event entry is specified without this data element, the device delivering the product will obey the normal vending rules for dating time specific passes.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
ActionEventPassProductRemove	1 Byte	UBYTE	This data element is used to specify the pass product or products to remove as part of an action event withdrawal transaction where both a pass product and a renewed in advance pass product exist on the PICC. NOTE If this element is not specified the current pass product is to be removed. 0 = Not Used 1 = Remove the "renewed in advance" pass product 2 = Remove both the "renewed in advance" pass product & the current product
ActionEventProductRides	1 Byte	UBYTE	This data element may be specified for ride based passes where the originator wants to specify a number of rides that does not agree with the product definition. If an action event entry is specified without this data element, the device will obey the normal ride specification for this product.
ActionEventProductType [RtsProductType]	1 Byte	UBYTE	If the Action Event message is to be applied to a specific product, this data element indicates the specific product type.
ActionEventRecurringType [RtsRecurringAutoloadType]	1Byte	UBYTE	This data element is used to differentiate from SV Recurring Autoload types 0 = Field is not used 1 = Weekly 2 = Monthly 3 = Bi-Annual [every 6 months] 4 = Annual 5-7 Reserved for future use Recurring autoloads are performed as defined by Regional Policy. (E.g., A region's policy could be to perform weekly autoloads on Tuesdays).
ActionEventRejectCode	1 Byte	UBYTE	This data element is used to specify the reason that a CID could not perform the requested Action.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
ActionEventAutoloadSubscribed [RtsAutoloadSubscribed]	1 Byte	UBYTE	This data element is used in a pass autoload subscribe directive to communicate to the PICC a user-defined trigger point (remaining rides, trips or time) for the autoload service.
ActionEventTAPO	16 Bytes	UBYTE[16]	Administrative systems may command updates to TAPO data via the action list. This data object contains the revised TAPO to be placed on the card by AFC device.
ActionEventUnload	1 Byte	UBYTE	This is a data element that indicates whether or not to remove the current product during the unload of an Autoload. Y= Unload product N = Don't unload current product
AgencyDescription	256 Bytes	UTF8STRING [256]	Each Agency will have a description that shall be used when the Agency ID is to be communicated via display or print to the patron or attendant employees. This data element is distributed as part of the Fare Policy Framework.
AgencyID [RtsAgencyID]	1 Byte	UBYTE	This data element is an identifier assigned to a specific Agency within the region. The ID is unique only within the region. The meaning of AgencyID is dependent upon the context of its use in the object containing AgencyID.
AutoloadSpecifier	1 Byte	UBYTE	This data element identifies whether or not the message being sent to the RCS is the result of a Threshold triggered autoload or a Fixed Recurring triggered autoload. 0 = Threshold Triggered Autoload 1 = Fixed Recurring Triggered Autoload
AutoloadThresholdIndex	2 Bytes	USHORT	The value written to the RtsAutoloadThreshold data element on the card. NOTE□The RtsAutoloadThreshold data element is used to establish the trigger point (remaining amount of stored value) when a threshold autoload should occur.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
FarePolicyFrameworkAsOfDate	4 Bytes	DATETIME	This data element defines the date and time of the last update to this version of the Fare Policy Framework.
FarePolicyFrameworkEffectiveDate	4 Bytes	DATETIME	This data element defines the date and time when this version of the Fare Policy Framework is to go into effect.
KeySet	n Bytes	UBYTE[n]	This data element contains the complete set of security and encryption keys used within the system. Each key set is identified by its associated KeySetIdentifier. The size of this data element is equal to n Bytes, where n is equal to the size of a key (in bytes) multiplied by the total number of required keys.
KeySetAsOfDate	4 Bytes	DATETIME	This data element is the date and time the key set was created.
KeySetEffectiveDate	4 Bytes	DATETIME	This data element is the date and time that a key set is to become effective.
KeySetIdentifier	2 Bytes	USHORT	This data element is a unique identifier assigned to each unique set of keys.
KeySetIdentifierA	2 Bytes	USHORT	This data element equals the unique KeySetIdentifier value for a group of keys (Keyset) that are to be considered Keyset A.
KeySetIdentifierB	2 Bytes	USHORT	This data element equals the unique KeySetIdentifier value for a group of keys (Keyset) that are to be considered Keyset B.
KeySetUsePriority	1 Byte	UBYTE	This data element defines the order of key use for the CID: 0 = A only 1 = B only 2 = A before B 3 = B before A
LocationID [RtsLocationID]	2 Bytes	USHORT	This data element is the ID of the physical location where the AFC transaction occurred.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
MessageIdentifier	5 Bytes	QWORD	This data element identifies the specific message. (See Table 1 List of Messages for a complete list of messages and their associated Message Identifier).
MessageRevision	1 Byte	UBYTE	This data element is the minor revision level.
MessageVersion	1 Byte	UBYTE	This data element is the major version level of a message.
NegativeListAsOfDate	4 Bytes	DATE	This data element represents that last date that the accompanying negative list was update by the issuing authority.
NegativeListDirective	1 Byte	UBYTE	This data element is the NegativeList Directive. Each NegativeList Directive implies a specific action to be taken by the AFC device when it encounters the specific PICC serial number in the associated Negative List row: Change PICC Transit Application status to Permanently Blocked. The PICC can no longer be used and this status cannot be reversed. Change PICC Transit Application status to Blocked. The PICC cannot be used until such time that this status is changed to Unblocked. Reject use of the PICC but do not change the PICC Transit Application status. Change Transit Application status to Unblocked. The PICC is now usable if not expired or otherwise disabled. Use of values 1, 2 and 4 will allow the PICC record to be removed from the regional system's negative list. NOTE Implementers should use extreme caution when developing the Negative List process that supports the use of directive "1" above (Permanent Negative List mark). Intentional or accidental use of that directive could have a very disruptive impact on the transit agencies deploying the system and the entity that would be responsible for recovering from the impact of such an event.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
PICCManufacturerID [RtsPICCManufacturerID]	1 Byte	UBYTE	The value of this data element represents the manufacturer chip ID code. The 8 bits represent a possible 255 manufacturer chip codes. Zero (0) is reserved/unknown. The codes are read by the CID in conjunction with the PICC chip serial number [UID] to ensure that vendor-to-vendor serial numbers are not repeated. The value in this field may be the only data element encoded on the PICC that guarantees the unique identity of PICCs when PICCs are procured from different manufacturers.
PICCSerialNumber	8 Bytes	QWORD	This data element is the unique administrative number comprised of chip serial number and manufacturer ID.
PICCTradeSerialNumber	8 Bytes	QWORD	This data element is the PICC serial number of the card that received the value from the traded in PICC.
ProductRefID	4 Bytes	ULONG	This data element is used to identify a specific pass product during an action event or in the response to one. This element is useful because it allows for the identification of a pass product within fare tables as opposed to from the specific directive message, thereby reducing the size of the directive messages that get sent to the devices.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
RegionalLocationEncoding [RtsLocationEncoding]	4 Bytes	ULONG	This data element indicates the location validity of the Pass Product within the Region. Examples: Sector/Route/Sector Encoding: Bits — Denotation 0 – 10 — Valid Sector a 11 – 21 — Valid Sector b 22 – 31 — Valid Route Number connecting Sectors a & b Point to Point Encoding: Bits — Denotation 0 – 15 — Point a = RtsLocationID a [0-65,535] 16 – 31 — Point b = RtsLocationID b [0-65,535]
RegionalLocationEncodingType [RtsLocationEncodingType]	1 Byte	UBYTE	This data element describes the type of location validity encoding depicted by [RtsLocationEncoding] data element. 0 = Agency's encoding Format Type 0 e.g., Sector/Route Coding 1 = Agency's encoding Format Type 1 e.g., Point to Point Coding
RegionalProductApportionmentValue	4 Bytes	ULONG	This data element specifies the apportionment value of the product. This value would be the more likely value used to specify how much a vendor should collect when selling this product.
RegionalProductDescription	256 Bytes	UTF8STRING [256]	This data element describes the Regional Product ID. Each Regional Product ID will have a description that should be used when the product being sold or used is to be communicated via display or print to the patron or attendant employees. This is distributed as part of the Fare Policy Framework.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
RegionalProductFaceValue	4 Bytes	ULONG	This data element specifies the face value of the product. This value would be the more likely value used to specify how much a vendor should collect when selling this product.
RegionalProductType [RtsProductType]	1 Byte	UBYTE	Each region may define a set of product types that are eligible for acceptance by each of the agency systems. This is the type assigned to each of those regional products. Agencies must make acceptance and fare decisions via their own ACS systems. These are communicated to all ACSs via the Fare Policy Framework.
RegionalProductRetailValue	4 Bytes	ULONG	This data element specifies the retail value of the product. This would be applicable if, for example, the product were being sold with a commission fee.
RegionalProductTypeCode [RtsProductTypeCode]	1 Byte	UBYTE	This data element defines the type of product signified by the specified Regional Product Type. This is distributed as part of the Fare Policy Framework.
RegionalProfileCode [RtsProfileCode]	2 Byte	USHORT	This data element describes the RegionalProfileCode. Each region may define a set of Profile Codes that are used in ridership reporting and to indicate the class of the patron. Class of patron is often used to signify a concession fare to be charged to the card holder. Participants in a particular system shall agree on the classes of patrons to be supported in the region. This is distributed as part of the Fare Policy Framework.
RegionalProfileCodeDescription	256 Bytes	UTF8STRING [256]	This data element is the full description to be used when the card holder profile is to be communicated via display or print to the patron or attendant employees. This is distributed as part of the Fare Policy Framework.
RegionID [RtsRegionID]	1 Byte	UBYTE	This data element is the Region identifier of the region where the transaction took place.

Table 7—Data Elements and Objects Used In Messages (continued)

Data Element	Length	Datatype	Description
RejectReason	1 Byte	UBYTE	If a transaction fails validation, the reason for that rejection will be placed in this data element. The valid values are: 1 = Failed MAC/DAC validation 2 = CID not known 3 = Device ID not known 4 = Invalid agency specification 5 = Duplicate Transaction 6 = PICC serial number invalid 7 = PICC serial number negative listed (Blocked) 8 = Product blocked
TransactionDatetime	4 Bytes	DATETIME	This data element is the actual date time that the transaction was performed and is assigned to the transaction by the CID.

6.2 Message Definitions

Following are detailed definitions of each message type included within this Part III of the Standard. The descriptions have been organized in tables to provide information for all messages in a similar format and to assist developers in creating messages that are compliant with the Standard.

6.2.1 PICC Initialized

Message Name	PICC Initialized
Purpose/Use	Documents the first interaction between a Scheme CID and a new PICC. This message documents the first step in placing a PICC into circulation.
Publisher/Creator	Scheme or agency initialization devices and Third Party issuers who may put the transit application on a multiuse PICC.
Subscriber(s)	Regional Central System, or Application Owner, &/or Customer Service provider &/or Product Owners
Notes	This operation changes the PICC keys but does not lay down all of the data objects or any personalization data. The PICC is not usable as a transit instrument with initialization only. PICC Initialization, Issuance and registration may take place as a single action or it may be performed serially at different points in time at the discretion of the implementer. Part III supports the lower level granularity to allow the implementer the choice at implementation time. Some of the objects (The optional objects) called for in this message format may be placed on the card but may be empty after initialization. Some of these objects may be populated at issuance.

Item Number	Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0101
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	

Item Number	Name	XML Tag	Notes
3.1	DIOAsWritten	<DIOAsWritten>	
3.2	DIOXAsWritten	<DIOXAsWritten>	Optional
3.3	TAPOAsWritten	<TAPOAsWritten>	
3.4	CorePIOAsWritten	<CorePIOAsWritten>	
3.5	PIOX1AsWritten	<PIOX1AsWritten>	Optional
3.6	PIOX2AsWritten	<PIOX2AsWritten>	Optional
3.7	PIOX3AsWritten	<PIOX3AsWritten>	Optional
3.8	THOAsWritten	<THOAsWritten>	
3.9	THOXAsWritten	<THOXAsWritten>	Optional
4.1	BatchEncodingDataObject	<BatchEncodingDataObject>	Optional

6.2.2 PICC Issued

Message Name	PICC Issued
Purpose/Use	Documents the second interaction between a CID and a new PICC. This interaction makes the PICC usable as a Transit instrument.
Publisher/Creator	Scheme or agency initialization devices and Third Party issuers who may put the transit application on a multiuse PICC.
Subscriber(s)	Regional Central System, Application owner or Customer Service &/or Product Owners
Notes	In this operation the PICC files are laid down and personalization is performed. After this transaction the PICC is usable in the AFC system. Once complete, loads may be performed. Implementers may create an Issuance process that also puts a product or value on the card at the same time as it performs issuance. It is important to note that those would be reported as 2 distinct transactions.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0102
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject >	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsWritten	<TAPOAsWritten>	
3.2	PHPOAsWritten	<PHPOAsWritten>	
3.3	PHPOX1AsWritten	<PHPOX1AsWritten>	Optional
3.4	PHPOX2AsWritten	<PHPOX2AsWritten>	Optional
3.5	PHPOX3AsWritten	<PHPOX3AsWritten>	Optional
3.6	CorePIOAsWritten	<CorePIOAsWritten>	

Item Number	Data Element Name	XML Tag	Notes
3.7	THOAsWritten	<THOAsWritten>	
3.8	THOXAsWritten	<THOXAsWritten>	Optional
4.1	BatchEncodingDataObject	<BatchEncodingDataObject>	Optional
4.2	PICCSerialNumber	<PICCSerialNumber>	Optional. This is the serial number of a PICC that was being replaced with this issuance.

6.2.3 PICC Registered

Message Name	PICC Registered
Purpose/Use	This is a transaction that is used to convey specific cardholder data to the RCS when a PICC is registered.
Publisher/Creator	Registration may be performed by devices that do not contain a CID and thus will not update any PHPO data.
Subscriber(s)	Regional Central System, Application owner or Customer Service administrator
Notes	PHPO is an optional data object in this message and is only recorded on the PICC where the device performing the transaction has a CID and modifies the PHPO as part of the registration process. If registration is performed with "card not present" or on a device without a CID, some of the below Part II elements may not be available. Also when performed without the card being present, there will be no objects available, thus all objects are optional for this message.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0103
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	PHPOAsWritten	<PHPOAsWritten>	Optional
3.2	PHPOX1AsWritten	<PHPOX1AsWritten>	Optional. Implementer should consider encryption
3.3	PHPOX2AsWritten	<PHPOX2AsWritten>	Optional. Implementer should consider encryption

Item Number	Data Element Name	XML Tag	Notes
3.4	PHPOX3AsWritten	<PHPOX3AsWritten>	Optional. Implementer should consider encryption
4.1	PICCHolderInfoDataObject	<PICCHolderInfoDataObject>	Implementer should consider encryption.

6.2.4 PICC Queried

Message Name	PICC Queried
Purpose/Use	This is a transaction that is used to document a query interaction performed by the cardholder at an AFC device.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Customer Service
Notes	Operators may decide to implement Queries with no electronic documentation. Implementers may use any set of Objects needed. All objects are optional. This optional transaction is also used to document any incomplete, canceled, abandoned, or timed-out transaction. These may be helpful to customer service or security personnel for research.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0104
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	(Selected Objects)		All Part II objects are optional

6.2.5 Special LU PICC Initialized

Message Name	Special LU PICC Initialized
Purpose/Use	Documents the initialization of the Special LU PICC.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	These PICCs may be initialized (Set up the LUSFDO only) and later updated with the variable product or value information.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0105
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	LUSFDOAsWritten	<LUSFDOAsWritten>	"As Written" Fixed object is required if this is the initial load of the fixed object or if the fixed object is updated.

6.2.6 Regional T-Purse Loaded

Message Name	Regional T-Purse Loaded
Purpose/Use	Documents loading of the value into the Regional T-purse. This message is used in response to an A0770 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2770
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
3.7	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.7 Regional Pass Product Loaded

Message Name	Regional Pass Product Loaded
Purpose/Use	Documents the loading or renewal of a Regional Pass product.
Publisher/Creator	AFC Device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2780
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.8 Agency Pass Product Loaded

Message Name	Agency Pass Product Loaded
Purpose/Use	Documents the loading or renewal of an Agency specific pass product.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or product owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2781
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.9 Agency Stored Value Product Loaded

Message Name	Agency Stored Value Product Loaded
Purpose/Use	Documents the loading of value to an Agency Specific Stored Value Product
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2771
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
3.7	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.10 Account Linked Product Loaded

Message Name	Account Linked Product Loaded
Purpose/Use	PICCs may have Account Linked product objects loaded as part of the PICC Initialization/Issuance process or they may be loaded to the PICC after the PICC has been put into circulation. In both cases, the load operation is considered to be a distinct transaction.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0205
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	ALPOAsWritten	<ALPOAsWritten>	
3.4	ALPOXAsWritten	<ALPOXAsWritten>	Optional
3.5	ALROAsWritten	<ALROAsWritten>	Optional
3.6	ALROXAsWritten	<ALROXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<MessageIdentifier>	Optional

6.2.11 Special LU PICC Value Loaded

Message Name	Special LU PICC Value Loaded
Purpose/Use	Documents loading of the value into the purse on a Special LU PICC
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	The load of value to a Special LU PICC may also initially establish or update the LUSFDO (Fixed data object) and as such the LUSFDO object may be required on this transaction. It is important to remember that these PICCs are initialized, issued and possibly loaded in a single step when the LUSFDO is established.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0322
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	LUSVDOAsRead	<LUSVDOAsRead>	
3.2	LUSVDOAsWritten	<LUSVDOAsWritten>	
3.3	LUSFDOAsRead	<LUSFDOAsRead>	Optional. Required if the fixed object is updated.
3.4	LUSFDOAsWritten	<LUSFDOAsWritten>	Optional. Required if this is the initial load of the fixed object or if the fixed object is updated.
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.12 Special LU PICC Product Loaded

Message Name	Special LU PICC Product loaded
Purpose/Use	Documents loading of a product onto a Special LU PICC
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	The load of a product to a Special LU PICC may also initially establish or update the LUSFDO (Fixed data object) and as such the LUSFDO object may be required on this transaction. It is important to remember that these PICCs are initialized, issued and possibly loaded in a single step when the LUSFDO is established.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0323
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	LUSVDOAsRead	<LUSVDOAsRead>	
3.2	LUSVDOAsWritten	<LUSVDOAsWritten>	
3.3	LUSFDOAsRead	<LUSFDOAsRead>	Optional. Required if the fixed object is updated.
3.4	LUSFDOAsWritten	<LUSFDOAsWritten>	Optional. Required if this is the initial load of the fixed object or if the fixed object is updated.
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.13 Special LU PICC Value and Product Loaded

Message Name	Special LU PICC Value and Product Loaded
Purpose/Use	Documents loading of a value and product onto a Special LU PICC
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	The load of a product and value to a Special LU PICC may also initially establish or update the LUSFDO (Fixed data object) and as such the LUSFDO object may be required on this transaction. It is important to remember that these PICCs are initialized, issued and possibly loaded in a single step when the LUSFDO is established.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0324
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	LUSVDOAsRead	<LUSVDOAsRead>	
3.2	LUSVDOAsWritten	<LUSVDOAsWritten>	
3.3	LUSFDOAsRead	<LUSFDOAsRead>	Optional. Required if the fixed object is updated.
3.4	LUSFDOAsWritten	<LUSFDOAsWritten>	Optional. Required if this is the initial load of the fixed object or if the fixed object is updated.
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.14 Out of Region T-Purse Loaded

Message Name	Out of Region T-Purse Loaded
Purpose/Use	Documents the Load of Out of Region T-Purse.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0325
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.15 Stored Value Threshold Autoload Setup and Value Loaded Response

Message Name	Stored Value Threshold Autoload Setup and Value Loaded Response
Purpose/Use	Documents both the Threshold Autoload set-up and the initial load to an Agency specific Stored Value product on the PICC. This message is used in response to an A0710 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2710
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.6	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.7	THOAsWritten	<THOAsWritten>	
3.8	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.9	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Used to report the initial value loaded to the stored value purse.

6.2.16 Regional T-Purse Threshold Autoload Setup and Value Loaded Response

Message Name	Regional T-Purse Threshold Autoload Setup and Value Loaded Response
Purpose/Use	Documents both the Threshold Autoload set-up and the initial load to the Regional T-Purse on the PICC. This message is used in response to an A0710 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2711
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.7	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Used to report the initial value loaded to the stored value purse.

6.2.17 Stored Value Remove Threshold Autoload Setup and Value Unloaded Response

Message Name	Stored Value Remove Threshold Autoload Setup and Value Unloaded Response
Purpose/Use	Documents both the Withdrawal of an Agency's Stored Value Threshold Autoload and Unload of stored value from the Agency's Stored Value product on the PICC. This message is used in response to an A0715 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2715
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.7	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional. Used to report the value removed from the purse.

6.2.18 Regional T-Purse Remove Threshold TP & TP & SV Autoload Setup and Value Unloaded Response

Message Name	Regional T-Purse Remove Threshold TP & TP & SV Autoload Setup and Value Unloaded Response
Purpose/Use	Documents both the Withdrawal of a Regional T-Purse Threshold Autoload and Unload of stored value from the Regional T-Purse on the PICC. This message is used in response to an A0715 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2716
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.7	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional. Used to report the value removed from the purse.

6.2.19 Agency Pass Product Autoload Setup and Initial Load Response

Message Name	Agency Pass Product Autoload Setup and Initial Load Response
Purpose/Use	Documents both the Setup of an Agency Pass Product Autoload Subscription and the initial load of the Agency Pass Product. This message is used in response to an A0730 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2730
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Used to report the product load.

6.2.20 Regional Pass Product Autoload Setup and Initial Load Response

Message Name	Regional Pass Product Autoload Setup and Initial Load Response
Purpose/Use	Documents both the Setup of a Regional Pass Product Autoload Subscription and the initial load of the Regional Pass Product. This message is used in response to an A0730 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2731
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Used to report the product load.

6.2.21 Agency Pass Product Remove Autoload Setup and Product Unloaded Response

Message Name	Agency Pass Product Remove Autoload Setup and Product Unloaded Response
Purpose/Use	Documents both the withdrawal of the Agency Pass Autoload set-up and the product specified. This message is used in response to an A0735 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2735
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
3.7	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional

6.2.22 Regional Pass Product Remove Autoload Setup and Product Unloaded Response

Message Name	Regional Pass Product Remove Autoload Setup and Product Unloaded Response
Purpose/Use	Documents both the withdrawal of the Regional Pass Autoload set-up and the Regional product specified. This message is used in response to an A0735 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2736
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
3.7	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional

6.2.23 Stored Value Threshold Autoload Setup Response

Message Name	Stored Value Threshold Autoload Setup Response
Purpose/Use	Documents the Threshold Autoload set-up of against an Agency specific Stored Value product on the PICC. This message is used in response to an A0710 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2712
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.24 Regional T-Purse Threshold Autoload Setup Response

Message Name	Regional T-Purse Threshold Autoload Setup Response
Purpose/Use	Documents the Threshold Autoload set-up against the Regional T-Purse on the PICC. This message is used in response to an A0710 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2713
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.25 Stored Value Remove Threshold Autoload Setup Response

Message Name	Stored Value Remove Threshold Autoload Setup Response
Purpose/Use	Documents the withdrawal of the Threshold Autoload against a specific Agency Stored Value product on the PICC. This message is used in response to an A0715 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2717
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.26 Regional T-Purse Remove Threshold Autoload Setup Response

Message Name	Regional T-Purse Remove Threshold Autoload Setup Response
Purpose/Use	Documents the withdrawal of the Threshold Autoload against the Regional T-Purse on the PICC. This message is used in response to an A0715 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2718
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.27 Agency Pass Product Autoload Setup Response

Message Name	Agency Pass Product Autoload Setup Response
Purpose/Use	Documents the agency Pass Product autoload setup. This message is used in response to an A0730 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2732
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.28 Regional Pass Product Autoload Setup Response

Message Name	Regional Pass Product Autoload Setup Response
Purpose/Use	Documents the Regional Pass Product autoload setup. This message is used in response to an A0730 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2733
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.29 Agency Pass Product Remove Autoload Setup Response

Message Name	Agency Pass Product Remove Autoload Setup Response
Purpose/Use	Documents the withdrawal of the Autoload set-up against an Agency Pass Product. This message is used in response to an A0735 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2737
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.30 Regional Pass Product Remove Autoload Setup Response

Message Name	Regional Pass Product Remove Autoload Setup Response
Purpose/Use	Documents the withdrawal of the Autoload set-up against the Regional Pass Product. This message is used in response to an A0735 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2738
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.31 Stored Value Fixed Recurring Autoload Setup and Value Loaded Response

Message Name	Stored Value Fixed Recurring Autoload Setup and Value Loaded
Purpose/Use	Documents both the Fixed Recurring Autoload set-up and the load of value to an Agency specific Stored Value product on the PICC. This message is used in response to an A0750 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2750
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.7	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.7	LoadUnloadDataObject	<LoadUnloadDataObject>	Used to report the value loaded to the stored value purse.

6.2.32 Regional T-Purse Fixed Recurring Autoload Setup and Value Loaded Response

Message Name	Regional T-Purse Fixed Recurring Autoload Setup and Value Loaded
Purpose/Use	Documents both the Fixed Recurring Autoload set-up and the load of value to a Regional T-Purse on the PICC. This message is used in response to an A0750 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2751
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.7	THOAsWritten	<THOAsWritten>	
3.8	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.9	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Used to report the value loaded to the stored value purse.

6.2.33 Stored Value Remove Fixed Recurring Autoload Setup and Value Unloaded Response

Message Name	Stored Value Remove Fixed Recurring Autoload Setup and Value Unloaded Response
Purpose/Use	Documents both the withdrawal of the Stored Value Fixed Recurring Autoload and removal of value from the Stored Value product on the PICC. This message is used in response to an A0755 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2755
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.7	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional. Used to report the value removed from the purse.

6.2.34 Regional T-Purse Remove Fixed Recurring Autoload Setup and Value Unloaded Response

Message Name	Regional T-Purse Remove Fixed Recurring Autoload Setup and Value Unloaded Response
Purpose/Use	Documents both the withdrawal of the Regional T-Purse Fixed Recurring Autoload and removal of value from the Regional T-Purse on the PICC. This message is used in response to an A0755 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2756
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.7	THOAsWritten	<THOAsWritten>	
3.8	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.9	A&DVHOAsWritten	<A&DVHOAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional. Used to report the value removed from the purse.

6.2.35 Stored Value Fixed Recurring Autoload Setup Response

Message Name	Stored Value Fixed Recurring Autoload Setup Response
Purpose/Use	Documents the Fixed Recurring Autoload set-up against an Agency specific Stored Value product on the PICC. This message is used in response to an A0750 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2752
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.36 Regional T-Purse Fixed Recurring Autoload Setup Response

Message Name	Regional T-Purse Fixed Recurring Autoload Setup Response
Purpose/Use	Documents the Fixed Recurring Autoload set-up against the Regional T-Purse on the PICC. This message is used in response to an A0750 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2753
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.37 Stored Value Remove Fixed Recurring Autoload Setup Response

Message Name	Stored Value Remove Fixed Recurring Autoload Setup Response
Purpose/Use	Documents the withdrawal of the Fixed Recurring Autoload against a specific Agency Stored Value product on the PICC. This message is used in response to an A0755 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2757
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.38 Regional T-Purse Remove Fixed Recurring Autoload Setup Response

Message Name	Regional T-Purse Remove Fixed Recurring Autoload Setup Response
Purpose/Use	Documents the withdrawal of the Fixed Recurring Autoload against the Regional T-Purse on the PICC. This message is used in response to an A0755 message.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2758
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.11	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.39 Regional T-Purse Unloaded

Message Name	Regional T-Purse Unloaded
Purpose/Use	Documents the unloading of the value from the Regional T-purse.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2775
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional
4.2	PICCTradeSerialNumber	< PICCTradeSerialNumber >	Optional. This is the PICC Serial Number that the value traded off this PICC was traded to if the value was unloaded to load to another PICC.

6.2.40 Regional Pass Product Unloaded

Message Name	Regional Pass Product Unloaded
Purpose/Use	Documents the unloading of an active Regional Pass or unloading of the renewal of a Regional Pass product.
Publisher/Creator	AFC Device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	Implementer should note that if a product is renewed, only the [RtsRenewedInAdvance] data element in the product object is updated.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2785
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	Optional. Only sent if the renewed in advance product was removed.
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional. Only sent if the renewed in advance product was removed.
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.41 Agency Pass Product Unloaded

Message Name	Agency Pass Product Unloaded
Purpose/Use	Documents the unloading of an active Agency specific Pass or the renewal of an Agency specific pass product.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	Implementer should note that if a product is renewed, only the [RtsRenewedInAdvance] data element in the product object is updated.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2786
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	Optional. Only sent if the renewed in advance product was removed.
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional. Only sent if the renewed in advance product was removed.
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.42 Agency Stored Value Product Unloaded

Message Name	Agency Stored Value Product Unloaded
Purpose/Use	Documents the unloading of value to an Agency Specific Stored Value Product
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A2776
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	Optional. Only if the actual stored value product was removed and not just some of the value.
4.3	PICCTradeSerialNumber	<PICCTradeSerialNumber>	Optional. This is the PICC Serial number that the value traded off this PICC was traded to if the value was unloaded to load to another PICC.

6.2.43 Account Linked Product Unloaded

Message Name	Account Linked Product Unloaded
Purpose/Use	PICCs may have Account Linked product objects Unloaded as an Action List directive.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner &/or Action list administrator
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0255
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	ALPOAsRead	<ALPOAsRead>	
3.4	ALPOXAsRead	<ALPOXAsRead>	Optional
3.5	ALROAsRead	<ALROAsRead>	Optional. May require encryption.
3.6	ALROXAsRead	<ALROXAsRead>	Optional
3.7	THOAsWritten	<THOAsWritten>	
3.8	THOXAsWritten	<THOXAsWritten>	Optional

6.2.44 Regional T-Purse Autoloaded (Threshold or Recurring)

Message Name	Regional T-Purse Autoloaded (Threshold or Recurring)
Purpose/Use	Documents the loading of value into the Regional T-Purse as result of either a threshold or recurring Autoload
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System , Action Administrator or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0302
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
1.11	AutoloadSpecifier	<AutoloadSpecifier>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.45 Regional Pass Product Autoloaded

Message Name	Regional Pass Product Autoloaded
Purpose/Use	Documents the loading of a Regional Pass Product as result of an Autoload
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System, Action Administrator or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0303
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	
4.2	ActionEventAutoloadSubscribed	<ActionEventAutoloadSubscribed>	

6.2.46 Agency Specific Pass Product Autoloaded

Message Name	Agency Specific Pass Product Autoloaded
Purpose/Use	Documents the loading of an Agency Specific Pass Product as result of an Autoload
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System, Action Administrator or Product Owner
Notes	Please note that Agency Specific Pass Products and Stored Value products can only be used on that agency's devices.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0304
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	
4.2	ActionEventAutoloadSubscribed	<ActionEventAutoloadSubscribed>	

6.2.47 Agency Specific Stored Value product Autoloaded (Threshold or Recurring)

Message Name	Agency Specific Stored Value product Autoloaded (Threshold or Recurring)
Purpose/Use	Documents the loading of an Agency Specific Stored Value product as result of Either a threshold or recurring Autoload.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System, Action Administrator or Product Owner
Notes	Please note that Agency Specific Pass Products and Stored Value products can only be used on that agency's devices.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0305
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
1.11	AutoloadSpecifier	<AutoloadSpecifier>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	LoadUnloadDataObject	<LoadUnloadDataObject>	

6.2.48 Autovalue Product Loaded

Message Name	Autovalue Product Loaded
Purpose/Use	Autovalue products may be added to PICCs via the action list or an AFC device. This transaction documents the load of the specific autovalue product to the PICC.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0320
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AutovalueProductObjectAsWritten	<AutovalueProductObjectAsWritten>	
3.4	AutovalueProductObjectXAsWritten	<AutovalueProductObjectXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.49 Autovalue Product Unloaded

Message Name	Autovalue Product Unloaded
Purpose/Use	Autovalue products may be removed from PICCs via the action list or an AFC device. This transaction documents the unload of the specific product to the PICC.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0321
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AutovalueProductObjectAsRead	<AutovalueProductObjectAsRead>	Optional
3.4	AutovalueProductObjectXAsRead	<AutovalueProductObjectXAsRead>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional

6.2.50 Use of Regional T-Purse

Message Name	Use of Regional T-Purse
Purpose/Use	Documents the use of the regional T-Purse only to pay for transit service.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0401
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.51 Use of Regional Pass Product with or without a step-up fare

Message Name	Use of Regional Pass Product with or without a step-up fare.
Purpose/Use	Documents the use of a Regional Pass Product as the primary vehicle to pay for transit service. Tariff may require addition value be taken from a stored value purse on the PICC. In this transaction, the stored value purse may be the Regional T-Purse, Agency specific stored value product or the account linked product.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0402
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalPOAsWritten	<RegionalPOAsWritten>	
3.4	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.5	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the Regional T Purse.
3.6	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.7	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the Agency SV product.
3.8	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.9	ALPOAsWritten	<ALPOAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the ALPO product.
3.10	ALROAsRead	<ALROAsRead>	Optional
3.11	ALROXAsRead	<ALROXAsRead>	Optional
3.12	THOAsWritten	<THOAsWritten>	
3.13	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.52 Use of Agency Specific Product with or without a step-up fare

Message Name	Use of Agency Specific Product with or without a step-up fare.
Purpose/Use	Documents the use of an Agency specific Pass Product as the primary vehicle to pay for transit service. Tariff may require addition value be taken from a stored value purse to complete payment for service. In this transaction the stored value purse may be the Regional T-Purse, Agency specific stored value product or the account linked product.
Publisher/Creator	AFC Device
Subscriber(s)	Regional Central System or Product Owner
Notes	Please note that Agency Specific Pass Products and Stored Value products can only be used on that agency's devices.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0403
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the Regional T Purse.

Item Number	Data Element Name	XML Tag	Notes
3.6	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.7	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the Agency SV product.
3.8	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.9	ALPOAsWritten	<ALPOAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the ALPO product.
3.10	THOAsWritten	<THOAsWritten>	
3.11	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.53 Use of Agency Stored Value Product

Message Name	Use of Agency Stored Value Product
Purpose/Use	Documents the use of the Agency's own stored value product to pay for transit service.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	Please note that Agency Specific Pass Products and Stored Value products can only be used on that agency's devices.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0405
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	
3.4	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.54 Use of Special LU Value PICC

Message Name	Use of Special LU Value PICC
Purpose/Use	Documents the use of the stored value component to pay for transit service on a Special LU PICC.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0406
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	LUSVDOAsRead	<LUSVDOAsRead>	
3.2	LUSVDOAsWritten	<LUSVDOAsWritten>	
3.3	LUSFDOAsRead	<LUSFDOAsRead>	
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.55 Use of Special LU Product PICC

Message Name	Use of Special LU Product PICC
Purpose/Use	Documents the use of the product component to pay for transit service on a Special LU PICC.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0407
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	LUSVDOAsRead	<LUSVDOAsRead>	
3.2	LUSVDOAsWritten	<LUSVDOAsWritten>	
3.3	LUSFDOAsRead	<LUSFDOAsRead>	
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.56 Transfer on Special LU Product PICC

Message Name	Transfer on Special LU Product PICC
Purpose/Use	Documents the use of the product component to pay for transit service on a Special LU PICC.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0408
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	LUSVDOAsRead	<LUSVDOAsRead>	
3.2	LUSVDOAsWritten	<LUSVDOAsWritten>	
3.3	LUSFDOAsRead	<LUSFDOAsRead>	
4.1	UseDeductDataObject	<UseDeductDataObject>	May be zero if no additional revenue is required or if not used.
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.57 Transfer with or without a step-up fare

Message Name	Transfer with or without a step-up fare
Purpose/Use	Documents the situation where a PICC was found to be eligible for a transfer. Tariff may still require additional value be taken.
Publisher/Creator	AFC Device
Subscriber(s)	Regional Central System or Product Owner
Notes	This transaction is used when the additional revenue is taken a purse on the PICC.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0409
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsWritten	<AgencyPOAsWritten>	Optional. Required if transfer eligibility was based on an Agency Specific pass.
3.4	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.5	RegionalPOAsWritten	<RegionalPOAsWritten>	Optional. Required if transfer eligibility was based on a Regional pass.

Item Number	Data Element Name	XML Tag	Notes
3.6	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.7	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the Regional T Purse.
3.8	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.9	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the Agency SV product.
3.10	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.11	ALPOAsWritten	<ALPOAsWritten>	Optional. Required if condition of use required additional revenue and it was taken from the ALPO product.
3.12	ALROAsRead	<ALROAsRead>	Optional
3.13	ALROXAsRead	<ALROXAsRead>	Optional
3.14	THOAsWritten	<THOAsWritten>	
3.15	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.58 Attempted Use of a Negative Listed PICC

Message Name	Attempted Use of a Negative Listed PICC
Purpose/Use	Documents the attempted use of a PICC that is on the negative list.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Application Owner
Notes	This transaction is used when a PICC is presented and is rejected because of negative list directives or when the card presented carries a negative list directive that has been applied. This transaction is only required when the PICC is initially marked as negative listed. Reporting subsequent uses is optional. It is also used to document the results of application of any directive including the directive that unblocks the PICC.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0410
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	Optional
3.1	DIOAsRead	<DIOAsRead>	
3.2	TAPOAsRead	<TAPOAsRead>	Optional
3.3	PHPOAsRead	<PHPOAsRead>	Optional
3.4	CorePIOAsWritten	<CorePIOAsWritten>	Optional. This object is rewritten if it is the first use of a PICC that is on the Negative list. This field is only required under those circumstances.

Item Number	Data Element Name	XML Tag	Notes
3.5	CorePIOAsRead	<CorePIOAsRead>	Optional. In all subsequent uses of a negative listed ICC, the as read object will be used.
3.6	THOAsRead	<THOAsRead>	Optional. Required if THO is updated.
3.7	THOAsWritten	<THOAsWritten>	Optional. Required if THO is updated.
3.8	THOXAsWritten	<THOXAsWritten>	Optional
3.9	LUSVDOAsRead	<LUSVDOAsRead>	Optional. Required if PICC is a Special LU PICC.
3.10	LUSVDOAsWritten	<LUSVDOAsWritten>	Optional. Required if PICC is a Special LU PICC.
3.11	LUSFDOAsRead	<LUSFDOAsRead>	Optional. Required if PICC is a Special LU PICC.
4.1	UseValidationDataObject	<UseValidationDataObject>	Optional. Required if the transaction is produced as a result of a negative list directive being applied.

6.2.59 Product Activation (First use of rolling product)

Message Name	Product Activation(First use of rolling product)
Purpose/Use	Documents the first use of an open dated pass or the first use of new instance of a transit product that had been renewed in advance.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	This transaction provides a view of the product object as it is set up for the first use. It does not imply a ride or trip taken, just the setup of the open dated pass with its expiration data. The ride shall be documented on a distinct use transaction.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0411
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsRead	<AgencyPOAsRead>	Optional. Required if Agency Specific product activated.
3.4	AgencyPOXAsRead	<AgencyPOXAsRead>	Optional
3.5	RegionalPOAsRead	<RegionalPOAsRead>	Optional. Required if Regional Product Activated.
3.6	RegionalPOXAsRead	<RegionalPOXAsRead>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.7	AgencyPOAsWritten	<AgencyPOAsWritten>	Optional. The agency specific product if an agency specific product is being activated.
3.8	AgencyPOXAsWritten	<AgencyPOXAsWritten>	Optional
3.9	RegionalPOAsWritten	<RegionalPOAsWritten>	Optional. The regional product if a regional product is being activated.
3.10	RegionalPOXAsWritten	<RegionalPOXAsWritten>	Optional
3.11	THOAsWritten	<THOAsWritten>	
3.12	THOXAsWritten	<THOXAsWritten>	Optional
3.13	LUSVDOAsRead	<LUSVDOAsRead>	Optional. Required if PICC is a Special LU PICC.
3.14	LUSVDOAsWritten	<LUSVDOAsWritten>	Optional. Required if PICC is a Special LU PICC.
3.15	LUSFDOAsRead	<LUSFDOAsRead>	Optional. Required if PICC is a Special LU PICC.

6.2.60 Use of Account Linked Product

Message Name	Use of Account Linked Product
Purpose/Use	A PICC that has an acceptable Account Linked product loaded shall behave as a T-purse or SV product. It shall generate this transaction for each use.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0412
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	ALPOAsWritten	<ALPOAsWritten>	
3.4	ALPOXAsWritten	<ALPOXAsWritten>	Optional
3.5	ALROAsRead	<ALROAsRead>	Optional
3.6	ALROXAsRead	<ALROXAsRead>	Optional
3.7	THOAsWritten	<THOAsWritten>	
3.8	THOXAsWritten	<THOXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
4.1	UseDeductDataObject	<UseDeductDataObject>	In an Account Linked use transaction, this data object has a data element called ALPOValueDeducted in it that is the value that would have been deducted from the PICC had it been used in a value circumstance. Calculation takes place based upon the stated rider class and circumstances of use as determined by the CID where presented.
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.61 Rejected Transaction

Message Name	Rejected Transaction
Purpose/Use	Some transactions may be rejected for content or MAC failure. Those transactions will be returned to the entity submitting them for analysis.
Publisher/Creator	Regional Central System or Product Owner
Subscriber(s)	Agency Central Computers, service providers or product retailers
Notes	This message will contain the entire "As received" message with an indication of the reason for rejecting it from the transaction processing and settlement.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0413
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	DateAndTimeDataObject	<DateAndTimeDataObject>	Date and time that the attached transaction was determined to be invalid.
1.5	RejectReason	<RejectReason>	
2.0	TransactionMessage	<TransactionMessage>	This field will contain the full content of the transaction message as received by the RCS.

6.2.62 Use of Regional T-Purse on an Out of Region PICC

Message Name	Use of Regional T-Purse on an Out of Region PICC
Purpose/Use	Documents the use of Regional T-Purse on an Out of Region PICC to pay for transit service.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0414
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	
3.4	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.5	THOAsWritten	<THOAsWritten>	
3.6	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.63 Use/Travel on an Autovalue Product

Message Name	Use/Travel on an Autovalue Product
Purpose/Use	Documents the use of an Autovalue Product to pay for transit service. This assumes that it is the Autovalue product alone that authorizes travel. When implementers place a distinct product on the card because an Autovalue threshold was reached, this message is used to record the usage of that product.
Publisher/Creator	AFC device
Subscriber(s)	Regional Central System or Product Owner
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0415
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AutovalueProductObjectAsRead	<AutovalueProductObjectAsRead>	
3.4	AutovalueProductObjectAsWritten	<AutovalueProductObjectAsWritten>	Optional
3.5	AutovalueProductObjectXAsRead	<AutovalueProductObjectXAsRead>	Optional
3.6	AutovalueProductObjectXAsWritten	<AutovalueProductObjectXAsWritten>	Optional
3.7	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	Optional. Required if used for step up fare.

Item Number	Data Element Name	XML Tag	Notes
3.8	RegionalTPurseXAsWritten	<RegionalTPurseXAsWritten>	Optional
3.9	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	Optional. Only required if used for step up fare.
3.10	AgencySVXAsWritten	<AgencySVXAsWritten>	Optional
3.11	ALPOAsWritten	<ALPOAsWritten>	Optional
3.12	ALROAsRead	<ALROAsRead>	Optional
3.13	ALROXAsRead	<ALROXAsRead>	Optional
3.14	THOAsWritten	<THOAsWritten>	
3.15	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.64 Product Blocked

Message Name	Product Blocked.
Purpose/Use	When an AFC device finds a PICC on the Action List with a product block directive, this transaction is used to document the successful execution of the command.
Publisher/Creator	AFC Device
Subscriber(s)	Regional Central System or Product Owner
Notes	Please note that when a product is blocked, all subsequent use is prohibited until the product is unblocked.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0416
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsRead	<AgencyPOAsRead>	Optional. Required if the product being blocked is an agency specific product.
3.4	AgencyPOXAsRead	<AgencyPOXAsRead>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.5	RegionalPOAsRead	<RegionalPOAsRead>	Optional. Required if the product being blocked is a Regional product.
3.6	RegionalPOXAsRead	<RegionalPOXAsRead>	Optional
3.7	RegionalTPurseObjectAsRead	<RegionalTPurseObjectAsRead>	Optional. Required if the product being blocked is a Regional T Purse.
3.8	RegionalTPurseObjectXAsRead	<RegionalTPurseObjectXAsRead>	Optional
3.9	AgencySVObjectAsRead	<AgencySVObjectAsRead>	Optional. Required if the product being blocked is an Agency SV product.
3.10	AgencySVObjectXAsRead	<AgencySVObjectXAsRead>	Optional
3.11	ALPOAsRead	<ALPOAsRead>	Optional. Required if the product being blocked is the ALPO product.
3.12	ALPOXAsRead	<ALPOXAsRead>	Optional
3.13	ALROAsRead	<ALROAsRead>	Optional
3.14	ALROXAsRead	<ALROXAsRead>	Optional
3.15	AutovalueProductObjectAsRead	<AutovalueProductObjectAsRead>	Optional. Required if the product being blocked is an Autovalue product.
3.16	AutovalueProductObjectXAsRead	<AutovalueProductObjectXAsRead>	Optional
3.17	THOAsRead	<THOAsRead>	Optional
3.18	THOXAsRead	<THOXAsRead>	Optional. Required if used on the PICC.

6.2.65 Product Unblocked

Message Name	Product Unblocked.
Purpose/Use	When an AFC device finds a PICC on the Action List with a product unblock directive, this transaction is used to document the successful execution of the command.
Publisher/Creator	AFC Device
Subscriber(s)	Regional Central System or Product Owner
Notes	Note that when a product is blocked, all subsequent use is prohibited until the product is unblocked.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0417
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	AgencyPOAsRead	<AgencyPOAsRead>	Optional. Required if the product being unblocked is an agency specific product.
3.4	AgencyPOXAsRead	<AgencyPOXAsRead>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.5	RegionalPOAsRead	<RegionalPOAsRead>	Optional. Only required if the product being unblocked is a Regional product.
3.6	RegionalPOXAsRead	<RegionalPOXAsRead>	Optional
3.7	RegionalTPurseObjectAsRead	<RegionalTPurseObjectAsRead>	Optional. Required if the product being unblocked is a Regional T Purse.
3.8	RegionalTPurseObjectXAsRead	<RegionalTPurseObjectXAsRead>	Optional
3.9	AgencySVObjectAsRead	<AgencySVObjectAsRead>	Optional. Required if the product being unblocked is an Agency SV product.
3.10	AgencySVObjectXAsRead	<AgencySVObjectXAsRead>	Optional
3.11	ALPOAsRead	<ALPOAsRead>	Optional. Required if the product being unblocked is the ALPO product.
3.12	ALPOXAsRead	<ALPOXAsRead>	Optional
3.13	ALROAsRead	<ALROAsRead>	Optional
3.14	ALROXAsRead	<ALROXAsRead>	Optional
3.15	AutovalueProductObjectAsRead	<AutovalueProductObjectAsRead>	Optional. Required if the product being unblocked is an Autovalue product.
3.16	AutovalueProductObjectXAsRead	<AutovalueProductObjectXAsRead>	Optional
3.17	THOAsRead	<THOAsRead>	
3.18	THOXAsRead	<THOXAsRead>	Optional

6.2.66 PICC Profile Data Changed

Message Name	PICC Profile Data Changed
Purpose/Use	Documents the successful execution of an action list command to change the data in either TAPO or the PHPOs.
Publisher/Creator	Scheme or agency initialization devices and Third Party issuers who may put the transit application on a multiuse PICC.
Subscriber(s)	Regional Central System, Application owner or Customer Service
Notes	Implementers are cautioned to carefully plan the use of this transaction since the TAPO and PHPO objects are not tear proof.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0418
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsWritten	<TAPOAsWritten>	Optional. Only sent if changed.
3.2	PHPOAsWritten	<PHPOAsWritten>	Optional. Only sent if changed information.
3.3	PHPOX1AsWritten	<PHPOX1AsWritten>	Optional. Only sent if changed information.
3.4	PHPOX2AsWritten	<PHPOX2AsWritten>	Optional. Only sent if changed.
3.5	PHPOX3AsWritten	<PHPOX3AsWritten>	Optional. Only sent if changed.

Item Number	Data Element Name	XML Tag	Notes
3.6	THOAsWritten	<THOAsWritten>	
3.7	THOXAsWritten	<THOXAsWritten>	Optional

6.2.67 Use of Stored Value from Multiple SV Sources

Message Name	Use of Stored Value from Multiple SV sources
Purpose/Use	This message is used to document the use of more than one source of stored value.
Publisher/Creator	AFC Device
Subscriber(s)	Regional Central System or Product Owner
Notes	Implementers must have a consistent process for deciding which product is determined to be the primary product in this type of transaction. No "actual cash" will be used in this transaction; rather, value from existing Agency SV Purse(s) and/or the Regional T-Purse will be used to cover the fare.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0419
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<<VehicleDataObject>>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	Optional
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	TAPOAsRead	<TAPOAsRead>	Optional
3.2	PHPOAsRead	<PHPOAsRead>	Optional
3.3	RegionalTPurseObjectAsWritten	<RegionalTPurseObjectAsWritten>	Optional. Required if the product being used is a Regional T Purse.
3.4	RegionalTPurseObjectXAsWritten	<RegionalTPurseObjectXAsWritten>	Optional

Item Number	Data Element Name	XML Tag	Notes
3.5	AgencySVObjectAsWritten	<AgencySVObjectAsWritten>	Optional. Required if the product being used is an Agency SV product.
3.6	AgencySVObjectXAsWritten	<AgencySVObjectXAsWritten>	Optional
3.7	ALPOAsWritten	<ALPOAsWritten>	Optional. Required if the product being used is the ALPO product.
3.8	ALPOXAsWritten	<ALPOXAsWritten>	Optional
3.9	ALROAsRead	<ALROAsRead>	Optional
3.10	ALROXAsRead	<ALROXAsRead>	Optional
3.11	AutovalueProductObjectAsWritten	<AutovalueProductObjectAsWritten>	Optional. Required if the product being used is an Autovalue product.
3.12	AutovalueProductObjectXAsWritten	<AutovalueProductObjectXAsWritten>	Optional
3.13	THOAsWritten	<THOAsWritten>	
3.14	THOXAsWritten	<THOXAsWritten>	Optional
4.1	UseDeductDataObject	<UseDeductDataObject>	
4.2	UseValidationDataObject	<UseValidationDataObject>	Optional

6.2.68 Negative List

The negative list is a collection of directives which apply to a list of PICC serial numbers. The PICC serial numbers are organized as single entries or as a pair representing a range of numbers to which the directive should apply. Figure 13 illustrates the negative list layout. The authentication scheme and keys are discussed in Part IV of the Standard.

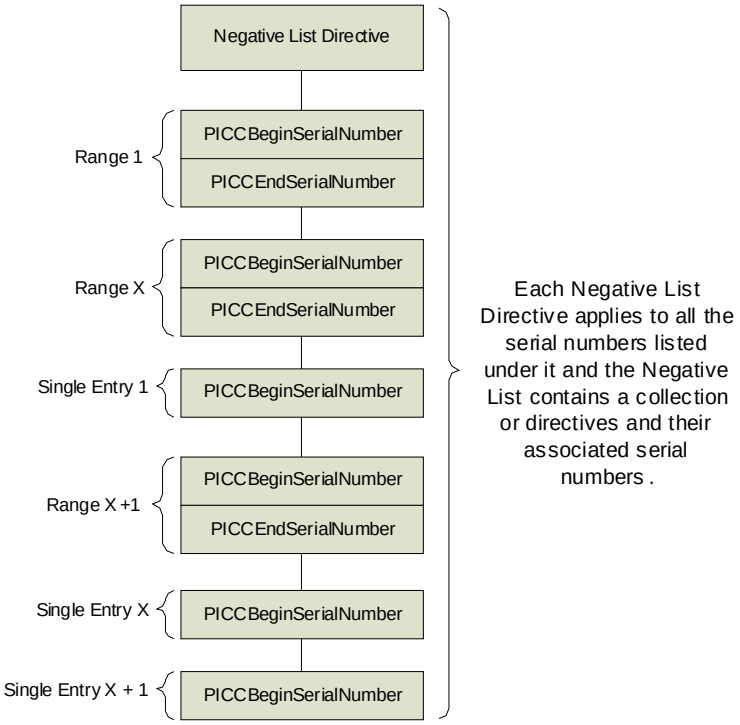

Figure 13—Negative List Layout

Message Name	Negative List
Purpose/Use	Provides a list of PICCs that have a pending Negative list action to be applied by an AFC device.
Publisher/Creator	Regional Central System or Security Administrator
Subscriber(s)	All AFC devices and Agency Central Computers
Notes	The negative list must contain only 1 entry for any PICC serial number referenced. It is the responsibility of the Negative List originator to ensure that this rule is followed.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0110
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
2.1.1..x	NegativeListDirective		For every negative list directive there is a set of negative list entries. Each entry can consist of either a single PICCBeginSerialNumber or a pair consisting of a PICCBeginSerialNumber and a PICCEndSerialNumber.
2.1.x.2n+1	PICCBeginSerialNumber		
2.1.x.2n	PICCEndSerialNumber		Optional
3.1	AuthenticationData	<AuthenticationData>	
3.2	NegativeListAsOfDate	<NegativeListAsOfDate>	

6.2.69 Fare Policy Framework

The Fare Policy Framework table is a collection of various definitions that are commonly accepted and used by the agencies and other entities in the region. This table will define all of the common Rider Profile codes accepted in the region, Regional Products used in the region and the Agency IDs assigned to all of the regional players. The table is organized with a header that identifies the table, a collection of Profile Code definitions, a collection of Product ID definitions, a collection of Agency ID definitions, and an Authentication Entry that allows the receiver to validate the sender. When constructing the Fare Policy Framework Messages there needs to be one B0120 message followed by any number (0 through x) of B0121, B0122, and/or B0123 messages followed by one B0124 message, as illustrated in Figure 14.

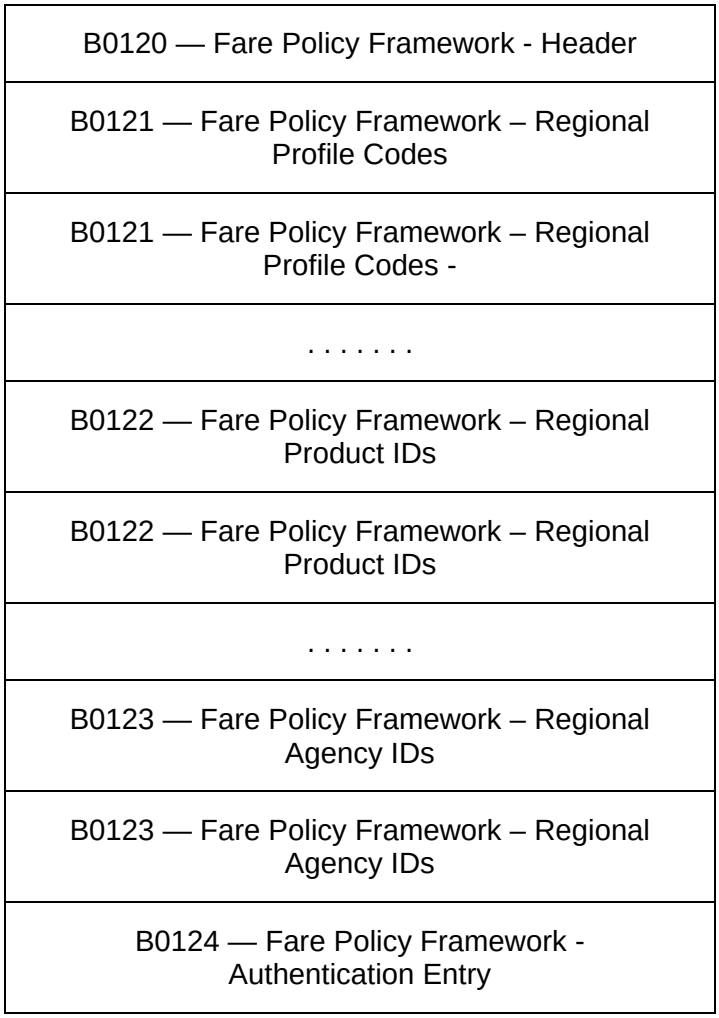

Figure 14—Fare Policy Framework Components

Message Name	Fare Policy Framework
Purpose/Use	Provides those data elements that define the regional fare policy framework.
Publisher/Creator	Regional Central System or Regional Administrator/Operator
Subscriber(s)	Agency Central Computers and on to CIDs
Notes	The fare policy framework defines the variable conventions that should be recognized by the ACS and CID devices deployed by the various agencies. The framework set consists of the following components: Table header Regional profile codes Regional product IDs Regional Agency IDs Authentication Entry to validate the set

6.2.69.1 Fare Policy Framework – Header

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0120
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	

6.2.69.2 Fare Policy Framework – Regional Profile Codes

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0121
2.1	RegionalProfileCode	<RegionalProfileCode>	A profile code is synonymous with card holder class. For example Student, Senior, etc.
2.2	RegionalProfileCodeDescription	<RegionalProfileCodeDescription>	Display/Print Text

6.2.69.3 Fare Policy Framework – Regional Product IDs

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0122
2.1	RegionalProductType	<RegionalProductType>	
2.2	RegionalProductDescription	<RegionalProductDescription>	Display/Print Text
2.3	RegionalProductTypeCode	<RegionalProductTypeCode>	Optional
2.4	RegionalProductOpParams DataObject	<RegionalProductOpParams DataObject>	
	RegionalLocationValidity	<RegionalLocationValidity>	
	RegionalLocationValidity Encoding	<RegionalLocationValidity Encoding>	
2.5	ProductRefID	<ProductRefID>	
2.6	RegionalProductCostDataObject	<RegionalProductCostDataObject>	

6.2.69.4 Fare Policy Framework –Agency IDs

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0123
2.1	AgencyID	<AgencyID>	Need to include the Regional Agency ID of 0 with descriptive text.
2.2	AgencyDescription	<AgencyDescription>	Display/Print Text

6.2.69.5 Fare Policy Framework – Authentication Entry

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0124
1.2	AuthenticationDataObject	<AuthenticationDataObject>	The Message Authentication code is built from a hash element in the Fare Policy Framework. (B0120-B0123 messages).
1.3	FarePolicyFrameworkAsOfDate	<FarePolicyFrameworkAsOfDate>	Applies to the collection of framework transaction.
1.4	FarePolicyFrameworkEffective Date	<FarePolicyFrameworkEffective Date>	Applies to the collection of framework transaction.

6.2.70 Load PICC Key-Set

Message Name	Load PICC Key-Set
Purpose/Use	This message is used when the Security Administrator instructs CIDs to load a new PICC Access key set.
Publisher/Creator	Regional Central System or Regional Security Manager
Subscriber(s)	All AFC devices
Notes	This does not instruct the CID to commence use. For the purpose of this load command, a fleet of cards shall be identified by a unique combination of CountryID, RegionID, and PICCManufacturerID. AgencyID is added to the key set grouping to allow for agency specific access keys to be assigned. The key set does not get loaded to the PICCs via this message.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0130
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	CountryID	<CountryID>	
3.2	RegionID	<RegionID>	
3.3	AgencyID	<AgencyID>	Optional
3.4	PICCManufacturerID	<PICCManufacturerID>	
3.5	KeySetIdentifier	<KeySetIdentifier>	
3.6	KeySet	<KeySet>	Encrypted. A Null set of keys results in the deletion of a key set at the CID having the same name as the KeySetIdentifier.
3.7	KeySetAsOfDate	<KeySetAsOfDate>	

6.2.71 Load MAC Key-Set

Message Name	Load MAC Key-Set
Purpose/Use	This message is used when the Security Administrator instructs all CIDs to load a new MAC key set.
Publisher/Creator	Regional Central System or Regional Security Manager
Subscriber(s)	All AFC devices
Notes	Instruct the CID to commence use on specified effective date. MAC keys are assigned at the CountryID and RegionID, all CIDs in an agency will calculate the MAC using the same set of MAC keys.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0131
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	CountryID	<CountryID>	
3.2	RegionID	<RegionID>	
3.3	KeySetIdentifier	<KeySetIdentifier>	
3.4	KeySet	<KeySet>	Encrypted. A Null set of keys results in the deletion of a key set at the CID having the same name as the KeySetIdentifier.
3.5	KeySetAsOfDate	<KeySetAsOfDate>	
3.6	KeySetEffectiveDate	<KeySetEffectiveDate>	

6.2.72 Load DAC Key-Set

Message Name	Load DAC Key-Set
Purpose/Use	This message is used when the Security Administrator instructs all CIDs to load a new DAC key set.
Publisher/Creator	Regional Central System or Regional Security Manager
Subscriber(s)	All AFC devices
Notes	May instruct the CID to commence use depending on card manufacturer.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0132
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	CountryID	<CountryID>	
3.2	RegionID	<RegionID>	
3.3	AgencyID	<AgencyID>	
3.4	KeySetIdentifier	<KeySetIdentifier>	
3.5	KeySet	<KeySet>	Encrypted. A Null set of keys results in the deletion of a key set at the CID having the same name as the KeySetIdentifier.
3.6	KeySetAsOfDate	<KeySetAsOfDate>	
3.7	KeySetEffectiveDate	<KeySetEffectiveDate>	

6.2.73 Control PICC Key-Set

Message Name	Control PICC Key-Set
Purpose/Use	This message is used when the administrator instructs all CIDs to enable a new PICC key set and prioritize that key set's use. This prioritization of the key sets allows the system to have two active keysets based on the value of the KeySetUsePriority. The need for two active keysets allows for the migration of one key set to another. This would not be normal practice and would only need to be done if, for example, the current key set was compromised.
Publisher/Creator	Regional Central System or Regional Security Manager
Subscriber(s)	All AFC devices
Notes	The key set does not get loaded to the PICCs via this message.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	B0133
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
2.0	Authentication	<Authentication>	
3.1	CountryID	<CountryID>	
3.2	RegionID	<RegionID>	
3.3	AgencyID	<AgencyID>	
3.4	PICCManufacturerID	<PICCManufacturerID>	
3.5	KeySetIdentifierA	<KeySetIdentifierA>	
3.6	KeySetIdentifierB	<KeySetIdentifierB>	
3.7	KeySetUsePriority	<KeySetUsePriority>	0=Use A only 1=Use B only 2=Use A before B 3=Use B before A
3.8	KeySetEffectiveDate	<KeySetEffectiveDate>	

6.2.74 Action Event List

The Action Event List is a set of directives prepared by an Action List Administration facility that organizes all directives into a list that is sequenced on the PICCSerialNumber. The list consists of an Action List header (A0700), followed by a series of directive messages (A0701-A0855) and concluding with an Action List Authentication Enter (A0850), as shown in Figure 15. This section of the document provides a definition of the various messages that combine to make up the Action Event List.

The Action List Authentication entry contains the standard Authentication Data Group which will allow the receiving entity to validate the contents of the list. The MAC algorithm, hashing algorithm, and MAC key used by this process are discussed in Part IV of the Standard.

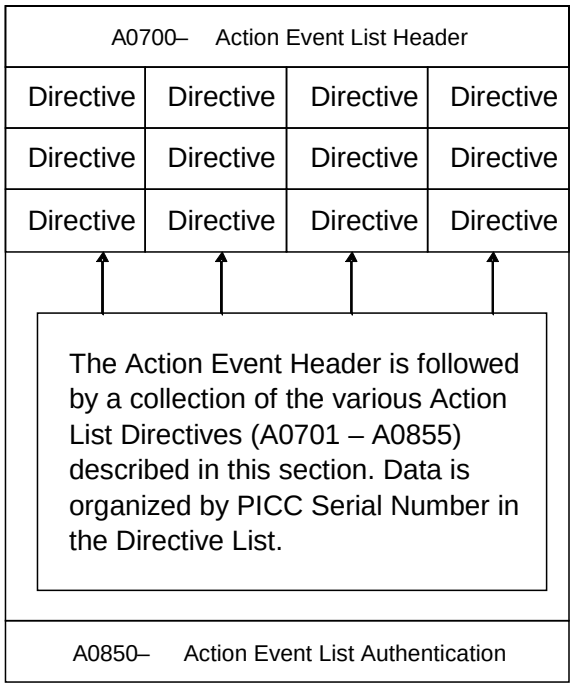

Figure 15—Action List Components

6.2.74.1 Action Event List Header

Message Name	Action Event List Header
Purpose/Use	Identifies the beginning of the list of Action Event List directives
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0700
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	

6.2.74.2 Set up Stored Value or Regional T-Purse Threshold Autoload

Message Name	Set up Stored Value or Regional T-Purse Threshold Autoload
Purpose/Use	Specific directive to add autoload set-up data for a stored value or regional T-purse product autoload to a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to dictate a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0710
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventAmount	<ActionEventAmount>	
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.5	AutoloadThresholdIndex	<AutoloadThresholdIndex>	
2.6	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.3 Withdraw Stored Value or Regional T-Purse Threshold Autoload

Message Name	Withdraw Stored Value or Regional T-Purse Threshold Autoload
Purpose/Use	Provides specific directive to withdraw the Autoload for a stored value or Regional T-purse product from a specific PICC. May also cause unload of value.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0715
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventAmount	<ActionEventAmount>	Optional. If specified, it represents the amount to unload from the specific purse.
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.5	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.4 Set-up Regional/Agency Specific Pass Product Setup Autoload

Message Name	Set-up Regional/Agency Specific pass product Setup Autoload
Purpose/Use	Provides a specific autoload set-up directive for a regional or agency specific pass product for a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number. The trigger value is specific to each product and is not part of the Autoload setup, but instead is defined by one or more system parameters.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0730
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.3	ActionEventProductType	<ActionEventProductType>	
2.4	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	
2.5	ActionEventLocationValidity	<ActionEventLocationValidity>	Optional
2.6	ActionEventLocationValidity EncodingType	<ActionEventLocationValidity EncodingType>	Optional
2.7	ActionEventProductExpiry	<ActionEventProductExpiry	Optional
2.8	ActionEventAutoloadSubscribed	<ActionEventAutoloadSubscribed>	Optional
2.9	ProductRefID	<ProductRefID>	Optional

6.2.74.5 Withdraw Regional/Agency Specific Pass Product Setup Autoload

Message Name	Withdraw Regional/Agency specific Product Setup Autoload
Purpose/Use	Provides a specific directive to withdraw a regional or agency specific pass product autoload from a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0735
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.3	ActionEventProductType	<ActionEventProductType>	
2.4	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	
2.5	ActionEventLocationValidity	<ActionEventLocationValidity>	Optional
2.6	ActionEventLocationValidity EncodingType	<ActionEventLocationValidity EncodingType>	Optional
2.7	ActionEventUnload	<ActionEventUnload>	
2.8	ActionEventAutoloadSubscribed	<ActionEventAutoloadSubscribed>	Optional
2.9	ProductRefID	<ProductRefID>	Optional

6.2.74.6 Set-up Stored Value or Regional T-Purse Fixed Recurring Autoload

Message Name	Set-up Stored Value Fixed Recurring Autoload
Purpose/Use	Provides a specific directive to set up a fixed period autoload to a Stored Value product or the Regional T-Purse for a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0750
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventAmount	<ActionEventAmount>	
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.5	ActionEventRecurringType	<ActionEventRecurringType>	
2.6	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.7 Withdraw Stored Value or Regional T-Purse Fixed Recurring Autoload

Message Name	Withdraw Stored Value or Regional T-Purse Fixed Recurring Autoload
Purpose/Use	Provides a specific directive to withdraw a fixed period autoload from a specific PICC. May also cause unload of value.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0755
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventAmount	<ActionEventAmount>	Optional. If specified, it represents the amount to unload from the specific purse.
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.5	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.8 Direct a Load of Stored Value

Message Name	Direct a load of Stored Value
Purpose/Use	Provides a specific directive to add a specific amount of funds to a Stored Value product or Regional T-Purse on a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0770
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventAmount	<ActionEventAmount>	
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.5	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.9 Direct an Unload of Stored Value

Message Name	Direct an unload of Stored Value
Purpose/Use	Provides a specific directive to withdraw a specific amount of money from a specific PICC
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier		A0775
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventAmount	<ActionEventAmount>	
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.6	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.10 Direct a Load of Regional/Agency Specific Pass Product

Message Name	Direct a Load of Regional/Agency Specific pass product
Purpose/Use	Provides a specific directive to add a regional or agency specific pass product via a directed autoload to a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0780
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.3	ActionEventProductType	<ActionEventProductType>	
2.4	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	
2.5	ActionEventLocationValidity	<ActionEventLocationValidity>	Optional
2.8	ActionEventLocationValidity EncodingType	<ActionEventLocationValidity EncodingType>	Optional
2.9	ActionEventProductExpiry	<ActionEventProductExpiry>	Optional
2.10	ActionEventProductRides	<ActionEventProductRides>	Optional
2.11	ProductRefID	<ProductRefID>	Optional

6.2.74.11 Direct an Unload of Regional/Agency Specific Pass Product

Message Name	Direct an Unload of regional/agency specific pass product
Purpose/Use	Provides a specific directive to remove a regional or agency specific pass product from a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0785
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.3	ActionEventProductType	<ActionEventProductType>	
2.4	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	
2.7	ActionEventLocationValidity	<ActionEventLocationValidity>	Optional
2.8	ActionEventLocation ValidityEncodingType	<ActionEventLocationValidity EncodingType>	Optional
2.9	ActionEventProductExpiry	<ActionEventProductExpiry>	Optional
2.10	ActionEventPassProductRemove	<ActionEventPassProductRemove>	Optional
2.11	ProductRefID	<ProductRefID	Optional

6.2.74.12 Block a Product

Message Name	Block a Product
Purpose/Use	Provides a specific directive to block the use a regional or agency specific product from a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is used to temporarily disable a product on the PICC. All instances of the product are disabled when this blocked.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0816
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.3	ActionEventProductType	<ActionEventProductType>	
2.4	ActionEventLocationValidity	<ActionEventLocationValidity>	
2.5	ActionEventLocationValidity EncodingType	<ActionEventLocationValidity EncodingType>	

6.2.74.13 Unblock a Product

Message Name	Unblock a Product
Purpose/Use	Provides a specific directive to remove a regional or agency specific product from a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is used to re-enable a product on the PICC. All instances of the product are disabled when this blocked.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0817
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.3	ActionEventProductType	<ActionEventProductType>	
2.4	ActionEventLocationValidity	<ActionEventLocationValidity>	
2.5	ActionEventLocationValidity EncodingType	<ActionEventLocationValidity EncodingType>	

6.2.74.14 Direct a PICC Data Change

Message Name	Direct a PICC data change
Purpose/Use	This message allows an administrative process to command a change to either the Transit Application Profile object (TAPO) contents or the PICC Holder Profile Object (PHPO & PHPOX) contents.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	Implementers should use caution when designing applications to use this message. The target objects are not tear protected and the data contained in these objects can impact revenues collected by the agencies. The PHPO contains the PICC Holder profile which is the controlling element for fare calculation and product purchase processing.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0818
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventTAPO	<ActionEventTAPO>	Optional. To change PICC profile data via the action list, the administrative systems must provide one of the data elements from 2.2 – 2.6.
2.3	ActionEventPHPO	<ActionEventPHPO>	Optional
2.4	ActionEventPHPOX1	<ActionEventPHPOX1>	Optional. Implementers should give consideration to encryption of the PHPO Extensions as they may carry sensitive information.
2.5	ActionEventPHPOX2	<ActionEventPHPOX2>	Optional
2.6	ActionEventPHPOX3	<ActionEventPHPOX3>	Optional
2.7	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.15 Setup/Update an Autovalue Product

Message Name	Setup/Update an Autovalue product
Purpose/Use	Provides a specific directive to setup or update an Autovalue product on a specific PICC. Autovalue product is set up for the ActionEventAgencyID specified in the message. All counters are set to zero.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0820
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.6	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	
2.7	ActionEventAutovalueProductObject	<ActionEventAutovalueProductObject>	
2.8	ActionEventAutovalueProductObjectX	<ActionEventAutovalueProductObjectX>	Optional

6.2.74.16 Withdraw an Autovalue Product

Message Name	Withdraw an Autovalue product
Purpose/Use	Provides a specific directive to withdraw an Autovalue product on a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0821
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.3	ActionEventProductAgencyID	<ActionEventProductAgencyID>	
2.4	ActionEventProductType	<ActionEventProductType>	
2.6	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.17 Setup/Update an Account Linked Product

Message Name	Setup/Update an Account Linked product
Purpose/Use	Provides a specific directive to setup an Account Linked product on a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0805
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.5	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	
2.6	ActionEventALPO	<ActionEventALPO>	
2.7	ActionEventALPOX	<ActionEventALPOX>	Optional
2.8	ActionEventALRO	<ActionEventALRO>	Optional
2.9	ActionEventALROX	<ActionEventALROX>	Optional

6.2.74.18 Withdraw an Account Linked Product

Message Name	Withdraw an Account Linked product
Purpose/Use	Provides a specific directive to withdraw an Account Linked product on a specific PICC.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action List Administrator. The list contains action directives to take a specific action on a specified PICC serial number.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0855
1.2	PICCSerialNumber	<PICCSerialNumber>	
2.1	ActionEventID	<ActionEventID>	
2.2	ActionEventAmount	<ActionEventAmount>	
2.6	ActionEventDirectiveExpiry	<ActionEventDirectiveExpiry>	

6.2.74.19 Action List Authentication Message

Message Name	Action List Authentication Message
Purpose/Use	This message is produced by the RCS or the action list administrator to allow the CID to validate and authenticate the Action list.
Publisher/Creator	Regional Central System or Action List Administrator
Subscriber(s)	All AFC devices
Notes	This transaction is part of the Action Event list that is built and maintained by the RCS or Action list administrator. This entry will allow the CID to validate that the action list acquired by the CID is complete and unmodified.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0850
2.1	ActionEventListDateTime	<ActionEventListDateTime>	
2.2	ActionEventListExpiryDate	<ActionEventListExpiryDate>	
3.0	AuthenticationDataObject	<AuthenticationDataObject>	

6.2.75 CID Action Event List Failure Response

Message Name	CID action event list failure response
Purpose/Use	Provides a specific response to an Action list directive when a device attempts to apply a directive but fails.
Publisher/Creator	All AFC devices
Subscriber(s)	Regional Central System or Action List Administrator and Product Owner & Customer Service or Transit Benefits Processor
Notes	When a CID finds a PICC that has a directive on the action list and the directive has not been applied, this message documents the CID's response if it is unable to apply that directive. When a device applies the directive successfully, the action list response is contained in the AFC transaction that documents the action.

Item Number	Data Element Name	XML Tag	Notes
1.1	MessageIdentifier	<MessageIdentifier>	A0860
1.2	MessageVersion	<MessageVersion>	
1.3	MessageRevision	<MessageRevision>	
1.4	LocationDataObject	<LocationDataObject>	
1.5	VehicleDataObject	<VehicleDataObject>	Optional
1.6	EquipmentDataObject	<EquipmentDataObject>	
1.7	PICCDataObject	<PICCDataObject>	
1.8	DateAndTimeDataObject	<DateAndTimeDataObject>	
1.9	EmployeeDataObject	<EmployeeDataObject>	Optional
1.10	ActionEventDataObject	<ActionEventDataObject>	
2.1	AuthenticationDataObject	<AuthenticationDataObject>	
3.1	ActionEventID	<ActionEventID>	
3.2	ActionEventRejectCode	<ActionEventRejectCode>	