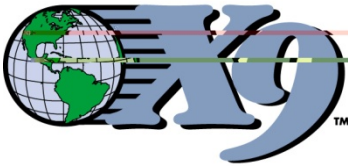


ASC X9 TR 40–2011

Bridging ANSI X9.100-187 to ANSI X9.100-182-2-1:

Transferring Data from an Image Cash Letter File to an XML Check Delivery Document



A Technical Report prepared by:
Accredited Standards Committee X9, Incorporated
Financial Industry Standards

Registered with American National Standards Institute

Date Registered: February 7, 2011

American National Standards, Technical Reports and Guides developed through the Accredited Standards Committee X9, Inc., are copyrighted. Copying these documents for personal or commercial use outside X9 membership agreements is prohibited without express written permission of the Accredited Standards Committee X9, Inc. For additional information please contact ASC X9, Inc., 1212 West Street, Suite 200, Annapolis, Maryland 21401.

This is a preview of "ASC X9 TR 40-2011". [Click here to purchase the full version from the ANSI store.](#)

Contents	Page
Foreword	v
Introduction.....	vii
1 Introduction.....	1
1.1 Scope.....	1
1.2 Consideration.....	2
2 Normative References.....	2
3 Terms and Definitions.....	2
3.1 Image Cash Letter (ICL) (ASC X9 TR 40).....	2
3.2 XML (ASC X9 TR 40).....	2
4 Background on ANSI X9.100-182 Part 2-1.....	3
5 Synopsys of ANSI X9.100-182 Part 2-1 for Cash Letter File Mapping.....	3
5.1 Unmatched Data Elements	3
5.2 Single Image Pair.....	3
5.3 No Direct Record Map (Record Type Number) to XML Element.....	4
5.4 Multiple Record Maps to Shared XML Path	4
6 How the Mapping Analysis is Approached.....	4
6.1 Unused Records	4
6.2 Non-Transferable Information	5
6.3 Transferable Information	5
7 The Approach for the Mapping	5
7.1 Data From Unused Records	5
7.2 Non-Transferable Information	6
7.3 Transferable Information	6
7.4 Image Binary Data	6
8 High Level Composite View.....	7
9 Detailed Schematic Views of ANSI X9.100-182 Part 2-1 Structure	8
9.1 View: Primary ANSI X9.100-182 Part 2-1 XML Document Path for ANSI X9.100-187 File	8
9.1.1 Summary	8
9.2 View : ANSI X9.100-182 XML Part 2-1 File Envelope from ANSI X9.100-187 File	9
9.2.1 Summary	9
9.3 View: ANSI X9.100-182 Part 2-1 XML Cash Letter Envelope from ANSI X9.100-187 File	10
9.3.1 Summary	10
9.4 View: ANSI X9.100-182 Part 2-1 XML Bundle Envelope from ANSI X9.100-187 File	11
9.4.1 Summary	11
9.5 View: ANSI X9.100-182 Part 2-1 XML ‘Check’ or ‘Return’ Information Set from ANSI X9.100-187 File.....	12
9.5.1 Summary	13
9.6 View: ANSI X9.100-182 Part 2-1 XML ‘Check’ or ‘Return’ Addenda Information Set from ANSI X9.100-187 File.....	14
9.6.1 Summary	14
9.7 View: ANSI X9.100-182 Part 2-1 XML Path for ANSI X9.100-187 Return Addendum B Record (Type 33).....	15
9.7.1 Summary	16
9.8 View: ANSI X9.100-182 Part 2-1 XML Image Data from ANSI X9.100-187 File	17

ASC X9 TR 40–2011

9.8.1	Summary.....	18
10	Detailed Data Content of ANSI X9.100-182 XML Structure.....	19
10.1	Data Mapping: ANSI X9.100-187 File Header Record (Type 01).....	19
10.2	Data Mapping: ANSI X9.100-187 File Cash Letter Header Record (Type 10).....	22
10.3	Data Mapping: ANSI X9.100-187 File Bundle Header Record (Type 20).....	25
10.4	Data Mapping: ANSI X9.100-187 Check Detail Record (Type 25).....	27
10.5	Data Mapping: ANSI X9.100-187 Check Detail Addendum A Record (Type 26).....	30
10.6	Data Mapping: ANSI X9.100-187 File Check detail Addendum C Record (Type 28).....	33
10.7	Data Mapping: ANSI X9.100-187 Return Record (Type 31).....	35
10.8	Data Mapping: ANSI X9.100-187 Return Addendum A Record (Type 32).....	38
10.9	Data Mapping: ANSI X9.100-187 Return Addendum B Record (Type 33).....	41
10.10	Data Mapping: ANSI X9.100-187 Return Addendum D Record (Type 35).....	43
10.11	Data Mapping: ANSI X9.100-187 Image View Detail Record (Type 50).....	45
10.12	Data Mapping: ANSI X9.100-187 Image View Data Record (Type 52).....	48
10.13	Data Mapping: ANSI X9.100-187 File Bundle Control Record (Type 70).....	51
10.14	Data Mapping: ANSI X9.100-187 File Cash Letter Control Record (Type 90).....	53
10.15	Data Mapping: ANSI X9.100-187 File File Control Record (Type 99).....	55
Annex A (informative) Transforming and Carrying Item Data – ANSI X9.100-187 File to ANSI X9.100-182 Part 2-1 XML Document		
		57
A.1	Transforming and Carrying Data within an Organization.....	57
A.2	Transfer Models for Item Data.....	58
A.2.1	Model #1: Multi-Item XML Document.....	58
A.2.2	Model #2: Independent Single-Item XML Documents.....	59
A.2.3	Model #3: Dependent Single-Item XML Documents.....	59
A.3	Data Transfer Models – Diagrams.....	60
Annex B (normative) Preservation of ANSI X9.100-187 Record Fields Not Represented in ANSI X9.100-182 Part 2-1 XML Structure		
		62
B.1	Preservation of ‘Transferable’ Addendum Record Information.....	62
B.2	ANSI X9.100-187 Addendum Structure.....	62
B.3	ANSI X9.100-182 Part 2-1 Addendum Structure	63
B.4	ANSI X9.100-182 Part 2-1 Data Structure for Unrepresented ANSI X9.100-187 Record Data Fields.....	64
B.4.1	Basic <userText> XML Path Mapping.....	64
B.4.2	XML Element <userText> Sub-Field Structure	64
B.4.3	<userText> “field-identifier” Keyword Structure.....	64
B.4.4	<userText> “[content]” Value Structure.....	64
B.5	Examples of Addendum Data Preservation	66
Annex C (normative) Unparsed MICR Codeline Representation from Parsed MICR Fields		
		68
C.1	Including Unparsed MICR Codeline Field Content in an EML Element	68
C.2	Constructing the XML Element <unparsedMICR>.....	68

Figures

Figure 1. Item Structure Including Surrounding Envelope7
Figure V1. XML path for ANSI X9.100-187 Version Number8
Figure V2. XML envelope for ANSI X9.100-187 File Header and Control9
Figure V3. XML envelope for ANSI X9.100-187 Cash Letter Header and Control10
Figure V4. XML envelope for ANSI X9.100-187 Bundle Header and Control11
Figure V5. XML Path for ANSI X9.100-187 Check Detail Record (Type 25) or Return Record (Type 31).12
Figure V6. XML envelope for ANSI X9.100-187 Check Detail Record (Type 25) or Return Record (Type 31) Addenda14
Figure V7. XML Path for ANSI X9.100-187 Return Addendum B Record (Type 33)16
Figure V8. XML Path Image Information set for ANSI X9.100-187 File17
Figure A1. Intra-Organizational Use of ANSI X9.100-182 XML Formatted Items58
Figure A2. Transfer Model: Multi-Item XML Document60
Figure A3. Transfer Model: Independent Single-Item XML Documents60
Figure A4. Transfer Model: Dependent Single-Item XML Documents61

Tables

Table R01. ANSI X9.100-187 File Header Record (Type 01) to ANSI X9.100-182 Part 2-119
Table R10. ANSI X9.100-187 Cash Letter Header Record (Type 10) to ANSI X9.100-182 Part 2-122
Table R20. ANSI X9.100-187 Bundle Header Record (Type 20) to ANSI X9.100-182 Part 2-125
Table R25. ANSI X9.100-187 Check Detail Record (Type 25) to ANSI X9.100-182 Part 2-127
Table R26. ANSI X9.100-187 Check Detail Addendum A Record (Type 26) to ANSI X9.100-182 Part 2-130
Table R28. ANSI X9.100-187 Check Detail Addendum C Record (Type 28) to ANSI X9.100-182 Part 2-133
Table R31. ANSI X9.100-187 Return Record (Type 31) to ANSI X9.100-182 Part 2-135
Table R32. ANSI X9.100-187 Return Addendum A Record (Type 32) to ANSI X9.100-182 Part 2-138
Table R33. ANSI X9.100-187 Return Addendum B Record (Type 33) to ANSI X9.100-182 Part 2-141
Table R35. ANSI X9.100-187 Return Addendum D Record (Type 35) to ANSI X9.100-182 Part 2-143
Table R50. ANSI X9.100-187 Image View Detail Record (Type 50) to ANSI X9.100-182 Part 2-145
Table R52. ANSI X9.100-187 Image View Data Record (Type 52) to ANSI X9.100-182 Part 2-148
Table R70. ANSI X9.100-187 Bundle Control Record (Type 70) to ANSI X9.100-182 Part 2-151
Table R90. ANSI X9.100-187 Cash Letter Control Record (Type 90) to ANSI X9.100-182 Part 2-153
Table R99. ANSI X9.100-187 File Control Record (Type 99) to ANSI X9.100-182 Part 2-155
Table B1. Examples of ANSI X9.100-187 Record Data in ANSI X9.100-182 <userText> Element66
Table C1. Standard MICR Line Format (left-to-right: visual appearance on the printed check)69
Table C2. Generic Unparsed MICR Codeline Data Character Content (right-to-left: transport capture).70

ASC X9 TR 40-2011

Table C3. Transfer Rules (right-to-left: Check Detail Record (Type 25) to XML Element <unparsedMICR>)
..... 71

Foreword

The ANSI X9.100-182 Bulk Data and Image Delivery Schema addresses the formatting of check image payment items in a comprehensive XML structure. The ANSI X9.100-182 standard is not intended to compete with or to replace the more traditional standard for image payment exchange, the ANSI X9.100-187-2008 and its predecessor the withdrawn DSTU X9.37-2003. Rather, ANSI X9.100-182 is intended to complement the cash letter image delivery standard by extending a supported data structure to the transfer and storage of image cash letter originated payments. For example, image payments data can be formatted in a standardized structure on a delivery medium such as DVD, or a storage medium such as an archive. Image payments information can also be transferred in a standardized structure from one application to another within an organization's internal upstream or downstream service.

The XML format that is embodied in the ANSI X9.100-182 Bulk Data and Image Delivery Schema actually reflects a structure that is similar in context to the ANSI X9.100-187-2008 cash letter file. However, the data is in a format that is more readily accessible to modern XML-sensitive applications. Furthermore, the XML structure actually lends itself to storing payments, with or without embedded images, as individual independent entities, while still retaining the envelopment concept of a traditional cash letter file format (i.e. a transaction within bundle, a bundle within cash letter, and a cash letter within file).

When an organization receives payments data originating from standard image cash letter files, the payments data is likely to be retained for some period of time as individual transactions within a receiver's applications. Furthermore, transaction level data originating from the image cash letter file is likely to be transferred from one application to another for payments processing enrichment.

Many organizations, including payments processors, exchange channels, banks and check truncation product vendors, are very familiar with the industry-wide standard content of the image cash letter format. However, few such organizations are likely to be familiar with the format of the XML equivalent as embodied in the ANSI X9.100-182 Bulk Data and Image Delivery Schema. The challenge is that, without a simple guideline to assist an organization to relate the image cash letter data structure to the XML-based standard equivalent, it can be relatively difficult to see how the XML standard can be of benefit to the organization. Without an awareness of the potential benefit of the XML standard as applied to internal systems, the organization may embark on developing a separate proprietary application interface standard or a separate data storage structure, whereas an industry supported standard could more readily have provided a consistent solution.

The effective use of the XML standard emphasizes commonality and predictability for data transfer and storage. The standard can be a common point of agreement among adopting parties, whether these are intra-organizational systems or inter-organizational arrangements. This in turn can help reduce the time to market for new application services, help contain the risk associated with proprietary one-off implementations, and can promote greater longevity of developed solutions that are more broadly supportable.

This Technical Report provides a guideline to co-relate the two data structures, the image cash letter file and the XML document. The content of this document originated from a technical reference guideline that was authored by Brian Salway, Symcor Inc., for internal company use to assist with early adoption of the ANSI X9.100-182 standard. The content was then further developed to comply with standards conventions and general industry use. It was then offered by Symcor Inc. to Accredited Standards Committee X9 as a prospective ANS Technical Report.

Publication of this Technical Report that has been registered with ANSI has been approved by the Accredited Standards Committee X9, Incorporated, 1212 West Street, Suite 200, Annapolis, MD 21401. This document is registered as a Technical Report according to the "Procedures for the Registration of Technical Reports with

ASC X9 TR 40–2011

ANSI." This document is not an American National Standard and the material contained herein is not normative in nature. Comments on the content of this document should be sent to: Attn: Executive Director, Accredited Standards Committee X9, Inc., 1212 West Street, Suite 200, Annapolis, MD 21401,

Published by

Accredited Standards Committee X9, Incorporated
Financial Industry Standards
1212 West Street, Suite 200
Annapolis, MD 21401 USA
X9 Online <http://www.x9.org>

Copyright © 2011 ASC X9, Inc.
All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior written permission of the publisher. Published in the United States of America.

Introduction

This Technical Report contains no requirements for the specific use of patented materials.

Suggestions for the improvement or revision of this Technical Report are welcome. They should be sent to the X9 Committee Secretariat, Accredited Standards Committee X9, Inc., Financial Industry Standards, 1212 West Street, Suite 200, Annapolis, MD 21401 USA.

This Technical Report was processed and registered for submittal to ANSI by the Accredited Standards Committee on Financial Services, X9. Committee approval of the Technical Report does not necessarily imply that all the committee members voted for its approval.

At the time this Technical Report was published, the X9 committee had the following members:

Roy C. DeCicco, X9 Chairman
 Claudia Swendseid, X9 Vice Chairman
 Cynthia L. Fuller, Executive Director
 Janet Busch, Managing Director

<i>Organization Represented</i>	<i>Representative</i>
ACI Worldwide	Mr. Doug Grote
American Bankers Association	Ms. C. Diane Poole
American Express Company	Mr. Ted Peirce
Apriva	Len Sutton
Bank of America	Daniel Welch
Certicom Corporation	Daniel Brown
Citigroup, Inc.	Karla McKenna
CUSIP Service Bureau	James Taylor
Deluxe Corporation	Ralph Stolp
Diebold, Inc.	Bruce Chapa
Discover Financial Services	Michelle Zhang
Federal Reserve Bank	Claudia Swendseid
First Data Corporation	Rick Van Luvender
Fiserv	Skip Smith
FIX Protocol Ltd	Mr. Jim Northey
Harland Clarke	John McCleary
Hewlett Packard	Larry Hines
IBM Corporation	Todd Arnold
Independent Community Bankers of America	Viveca Ware
Ingenico	John Spence
ISITC	Tara Gonzales
J.P. Morgan Chase & Co	Roy DeCicco
Key Innovations	Scott Spiker
KPMG LLP	Mark Lundin
MasterCard International	Mr. Mark Kamers
Metavante Image Solutions	Stephen Gibson-Saxty
National Association of Convenience Stores	Michael Davis
NCR Corporation	Steve Stevens
RouteOne	Mark Leonard

ASC X9 TR 40–2011

SWIFT/Pan Americas	Mrs. Juliette Kennel
Symantec Corportation	Alex Deacon
Symcor Inc.	Brian Salway
TECSEC Incorporated	Ed Scheidt
The Clearing House	Sharon Jablon
U.S. Bank	Brian Fickling
University Bank	Stephen Ranzini
USDA Food and Nutrition Service	Kathy Ottobre
VeriFone, Inc.	Brad McGuinness
VISA	Kim Wagner
Wells Fargo Bank	Mark Tiggas
Wincor Nixdorf Inc.	Ramesh Arunashalam
XBRL US, Inc.	Mark Bolgiano

At the time this standard was approved, the X9AB subcommittee on Payments had the following members:

Daniel Welch, Chairman
 John McCleary, Vice Chairman
 Jackie Pagán, Vice Chairman
 Alan Thiemann, Vice Chairman
 Susan Colles, Vice Chairman

<i>Organization Represented</i>	<i>Representative</i>
ACI Worldwide	Cindy Rink
ACS, Government Solutions.....	Mr. Pat Solitro
All My Papers.....	Ray Higgins
All My Papers.....	Larry Krummel
American Bankers Association.....	Tom Judd
American Bankers Association.....	Steve Kenneally
American Bankers Association.....	Ms. C. Diane Poole
American Express Company	Vicky Sammons
BancTec, Inc.....	Mr. Russ Andrews
BancTec, Inc.....	Peter Caporal
BancTec, Inc.....	Mr. David Hunt
Bank of America	Andi Coleman
Bank of America	Daniel Welch
Bank of America	Daniel Whipple
Burroughs Payments Systems, Inc.	David J. Concannon
Burroughs Payments Systems, Inc.	Navnit Shah
Certicom Corporation	Daniel Brown
Citigroup, Inc.....	Michael Knorr
Citigroup, Inc.....	Karla McKenna
Citigroup, Inc.....	Susan Rhodes
Citigroup, Inc.....	Rene Schuurman
Citigroup, Inc.....	Dr. Chii-Ren Tsai
Compass Bank	Jan Cole
Compass Bank	Mark Pynes
Davis & Henderson.....	Yves Denomme
Deluxe Corporation.....	Angela Hendershott
Deluxe Corporation.....	Ms. Deb Lynch
Deluxe Corporation.....	Ralph Stolp
Deluxe Corporation.....	Andy Vo
Diebold, Inc.....	Bruce Chapa
Diebold, Inc.....	Kelly Patenaude
Discover Financial Services	Jeffery Moran
Discover Financial Services	Michelle Zhang
ECCHO.....	Ellen Heffner
ECCHO.....	Phyllis Meyerson
Etegrity L.L.C.	Penny Tisdale
Federal Reserve Bank.....	Deb Hjortland
Federal Reserve Bank.....	Mark Kielman
First Data Corporation	Mr. Todd Nuzum
First Data Corporation	Rodney Schwaner
Fiserv	Mary Bland
Fiserv	Keay Edwards
Fiserv	Don Harman
Fiserv	Allen Heimerdinger
Fiserv	Lori Hood
Fiserv	Dan Otten
Fiserv	Skip Smith

ASC X9 TR 40–2011

Fiserv	Senthil Thiagarajan
Food Marketing Institute	Mike Brown
Food Marketing Institute	Liz Garner
Food Marketing Institute	Elizabeth Tansing
Harland Clarke	John McCleary
Harland Clarke	Valerie Meddleton
HSBC Bank	Kevin O'Neil
Huntington Bank	Jim Posani
IBM Corporation	Rod Moon
IBM Corporation	Andrew Sutton
Independent Community Bankers of America	Viveca Ware
Ingenico	John Spence
iStream Imaging/Bank of Kenney	Mike McGuire
J.P. Morgan Chase & Co	Robert Blair
J.P. Morgan Chase & Co	Edward Koslow
J.P. Morgan Chase & Co	Jackie Pagan
Jack Henry and Associates	Mr. Jerry Garrett
Jack Henry and Associates	Mr. Chuck Hendrickson
Key Bank	James Sokal
Key Innovations	Scott Spiker
MagTek, Inc.	Jeff Duncan
Metavante Image Solutions	Stephen Gibson-Saxty
Micro Solutions Enterprises - MSE	Scott Harland
NACHA The Electronic Payments Association	Nancy Grant
NACHA The Electronic Payments Association	Priscilla Holland
National Association of Convenience Stores	Michael Davis
National Association of Convenience Stores	Alan Thiemann
National Security Agency	Paul Timmel
Navy Federal Credit Union	Kim Engman
Navy Federal Credit Union	Jimmy Jones
Navy Federal Credit Union	Mr. Dana Majors
Navy Federal Credit Union	Tynika Wilson
NCR Corporation	Mr. Rick Lugg
NCR Corporation	David Norris
NCR Corporation	Ron Rogers
NCR Corporation	Steve Stevens
NetDeposit, Inc.	Danne Buchanan
NetDeposit, Inc.	Chris Walden
NetDeposit, Inc.	William Wong
Oce North America, Inc.	Tony Ribeiro
Paychex Inc	Carl Tinch
Piracle	Mr. Lynn Shimada
Piracle	Chris Whitaker
PNC Bank	Kevin deBrucky
PNC Bank	Lynn Nettleton
Procter & Gamble	Bill Lundeen
RDM Corporation	Dr. Dmitri Eidenzon
RDM Corporation	Bill Faulkner
RDM Corporation	Karin McNabb
Relyco Sales Inc	Rick Gagnon
Relyco Sales Inc	Michael Steinberg
Rosetta Technologies	Jim Maher
Rosetta Technologies	Mr. Steven Shapiro
S1 Corporation	Ms. Jennifer Delmerico
Silver Bullet Technology, Inc.	Bryan Clark
Silver Bullet Technology, Inc.	Matthew Dunne

Source Technologies.....	Wally Burlingham
Source Technologies.....	Roger Owens
Standard Register Company.....	Melissa Barnes
Sterling National Bank.....	Mr. Eliot Robinson
SWIFT/Pan Americas.....	Jean-Marie Eloy
SWIFT/Pan Americas.....	Mr. James Wills
Symcor Inc.....	Brian Salway
TECSEC Incorporated.....	Ed Scheidt
The Clearing House.....	Henry Farrar
The Clearing House.....	Susan Long
Troy Group, Inc.....	Michael Riley
U.S. Bank.....	Tim Dawe
U.S. Bank.....	Gina Hebner
U.S. Bank.....	Mr. Scott LaPlante
U.S. Bank.....	Timothy Schmidt
U.S. Bank.....	Christopher Stickney
University Bank.....	Stephen Ranzini
University Bank.....	Mr. Michael Talley
USDA Food and Nutrition Service.....	Erin McBride
VeriFone, Inc.....	Dan Kannady
VeriFone, Inc.....	Brad McGuinness
Viewpointe.....	Richard Luchak
Viewpointe.....	Karroll Searcy
VISA.....	John Aafedt
VISA.....	Justin Chace
VISA.....	Philippe De Smedt
VISA.....	Brian Hamilton
VISA.....	Glenn Powell
Wells Fargo Bank.....	Ann Kirk
Wells Fargo Bank.....	Mark Tiggas
Wincor Nixdorf Inc.....	Ramesh Arunashalam
Wincor Nixdorf Inc.....	Mr. Scott Waldrop
WorkflowOne.....	Kurt Schnabel
WorkflowOne.....	Larry Willman
World Pay.....	Gus Penedo
Xerox Corporation.....	Frank Bov
Xerox Corporation.....	Susan Siani

Under ASC X9, Inc. procedures, a working group may be established to address specific segments of work under the ASC X9 Committee or one of its subcommittees. A working group exists only to develop standard(s) or technical report(s) in a specific area and is then disbanded. The individual experts are listed with their affiliated organizations. However, this does not imply that the organization has approved the content of the standard or technical report. (Note: Per X9 policy, company names of non-member participants are listed only if, at the time of publication, the X9 Secretariat received an original signed release permitting such company names to appear in print.)

At the time this Technical Report was published, the X9AB5 Bulk Data and Image Delivery group which developed this technical report had the following active members:

<i>Organization Represented</i>	<i>Representative</i>
All My Papers.....	Larry Krummel
All My Papers.....	Brett Nelson
American Bankers Association.....	Tom Judd
American Bankers Association.....	C. Diane Poole

ASC X9 TR 40–2011

BancTec, Inc.	Peter Caporal
Bank of America	Tony England
Bank of America	Daniel Welch
Data Strategies International Inc.	Dr. Giancarlo Gaggero
Deluxe Corporation	John FitzPatrick
Diebold, Inc.	Bruce Chapa
ECCHO	Phyllis Meyerson
Federal Reserve Bank	Darin Contini
Federal Reserve Bank	Jeannine M. DeLano
Federal Reserve Bank	Deb Hjortland
Federal Reserve Bank	Mark Kielman
Fiserv	Keay Edwards
Fiserv	Don Harman
Fiserv	Lori Hood
Harland Clarke	John McCleary
Huntington Bank	Jim Posani
iStream Imaging/Bank of Kenney	Mike McGuire
J.P. Morgan Chase & Co	Jackie Pagan
Metavante Image Solutions	Stephen Gibson-Saxty
NACHA The Electronic Payments Association	Nancy Grant
NCR Corporation	Rick Lugg
NCR Corporation	David Norris
NetDeposit, Inc.	William Wong
Oce North America, Inc.	Tony Ribeiro
Parascript, LLC	Kaz Jaszczak
Paychex Inc	Carl Tinch
RDM Corporation	Bill Faulkner
Rosetta Technologies	Steven Shapiro
Silver Bullet Technology, Inc.	Bryan Clark
Silver Bullet Technology, Inc.	Matthew Dunne
Source Technologies	Wally Burlingham
Standard Register Company	Melissa Barnes
Symcor Inc.	Brian Salway
U.S. Bank	Christopher Stickney
Unisys Corporation	David J. Concannon
Viewpointe	Richard Luchak
Wells Fargo Bank	Kevin Crockett
Wells Fargo Bank	Andrew Garner
Wells Fargo Bank	Ann Kirk
Wincor Nixdorf Inc.	Ramesh Arunashalam

This document does not cancel or replace any other ANSI published standards or Technical Reports, in whole or in part.

This Technical Report provides information related to the bridging of data between the ANSI X9.100-187 and the ANSI X9.100-182 standards. To understand the concepts discussed in this document, the reader must be knowledgeable of the purpose and the content of these two standards.

Bridging the ANSI X9.100-187 to the ANSI X9.100-182-2-1: Transferring Data from an Image Cash Letter File to an XML Check Delivery Document

1 Introduction

This Technical Report contains considerations for the transfer of data from an ANSI X9.100-187 Electronic Exchange of Check and Image Data – Domestic cash letter file to an ANSI X9.100-182 Part 2-1 Bulk Data and Image Delivery – General Check Delivery XML document. It describes a technique for the mapping of data elements contained within these source image cash letter (ICL) files ¹ to a programmatically addressable storage structure, embodied in an XML document.

The ICL files arrive into the payments process from a variety of sources. These include inclearings image exchange, upstream truncated deposits in a depository bank process (for example, branch capture), regional distributed proof-of-deposit truncated capture within a bank network, third party depository sources (for example, merchant capture), and post-presentment payments processing services (for example, outbound and inbound image returns).

1.1 Scope

The Technical Report provides some background material and a relevant synopsis of the ANSI X9.100-182 standard. It explains the structure principle behind the mapping approach. And finally, it provides field-by-field data content mapping from the image cash letter file records to the respective XML element layers.

The Technical Report focuses on, and restricts itself to, those ANSI X9.100-182 Part 2-1 defined elements and element layers in the XML structure that have equivalence in the ANSI X9.100-187 file record fields. The Technical Report does not provide content detail on ANSI X9.100-182 Part 2-1 XML elements that do not have a direct equivalence in ANSI X9.100-187 file record fields.

The guidelines and suggestions in the Technical Report apply to the technical specifications as documented in the ANSI X9.100.187 image cash letter standard, and the technical functionality implemented in the XML schema files that are a component of the ANSI X9.100-182 Part 2-1 standard. A proprietary adoption of the ANSI X9.100-187 standard, or the use of a proprietary rendering of the ANSI X9.100-182 schema files, may render some or all of the guidelines in this Technical Report to be incompatible with the programming processes of the adopter.

Although it is possible and even desirable in certain situations to transfer data from the ANSI X9.100-182 XML element structure to equivalent data placement in an ANSI X9.100-187 cash letter file, this Technical Report does not provide specific information to assist with that directional transition. The Technical Report focuses on the transfer from ANSI X9.100-187 to ANSI X9.100-182 Part 2-1 only. However, the information provided in this Technical Report is sufficient for the reader to conclude how to affect a transfer of data from ANSI X9.100-182 Part 2-1 to ANSI X9.100-187.

¹ The term ICL is used throughout this document to refer generically to any ANSI X9.100-187 formatted check and image data file. These can include, but are not necessarily restricted to, clearings exchange files, depository source files and proprietary internal application-to-application files.