

ASC X9 TR 100–2006

**Organization of Standards for Paper-based
and Image-based Payments**

Part 1: Organization of Standards

Part 2: Definitions used in Standards



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

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Foreword

This foreword is informative and not part of X9 TR 100-2006.

Since the advent of magnetic ink character printing in the late 1950s, standards have been developed as they were required or as perceived as being required. As such, many standards overlap. ASC X9 subcommittee B, Check Related Transactions, decided it was the right time to do something about untangling the duplication and overlap in all X9B standards. This technical report is a result of those efforts.

In Part 1, all standards, with the exception of technical reports/guidelines, have been separated into two classifications: core standards and application standards. Core standards cover such items as paper requirements, MICR requirements, optical requirements, and image requirements. Application standards cover such items as check documents, deposit tickets, internal documents, image replacement documents, other documents, MICR, security, and electronic. Also included in this part are recommended formats to use in standards and technical reports having references and terms and definitions.

Part 2 of this technical report contains the definition for all terms as defined in X9B standards and technical reports/guidelines, along with the standard that defines them and the documents that use them. X9B hopes this approach to the X9B standards helps in the understanding and adherence of standards in the financial industry today and into the future.

This publication is a revision of ASC X9 TR 100-2005, *Organization of Standards for Paper-based and Image-based Payments*. In order to insure this technical report is up to date, it will be revised annually.

Publication of this Technical Report that has been registered with ANSI has been approved by the Accredited Standards Committee X9, Incorporated, P.O. Box 4035, Annapolis, MD 21403. This document is registered as a Technical Report according to the "Procedures for the Registration of Technical Reports with 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., P.O. Box 4035, Annapolis, MD 21403,

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Introduction

NOTE: The user's attention is called to the possibility that compliance with this technical report may require use of an invention covered by patent rights.

By publication of this technical report, no position is taken with respect to the validity of this claim or of any patent rights in connection therewith. The patent holder has, however, filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license. Details may be obtained from the standards developer.

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, P.O. Box 4035, Annapolis, MD 21403 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.

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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.)

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Organization of Standards for Paper-based and Image-based Payments

Part 1: Organization of Standards (As of 7/24/06)

1 Scope & Purpose

1.1 Scope

Part 1 of this technical report recommends the numbering scheme for all standards associated with paper-based and image-based payments. The basic numbering scheme is divided into two sections; core standards and application standards. Core standards cover such items as paper requirements, MICR requirements, optical requirements, and image requirements. Application standards cover such items as check documents, deposit tickets, internal documents, image replacement documents, other documents, MICR, security, and electronic. Also included in this part are recommended formats to use in standards and technical reports having references and terms and definitions.

Part 2 of this technical report lists the definitions of industry specific words and phrases required for the understanding of paper-based and image-based payment standards.

This technical report is expected to be available in electronic form free of charge to aid the user in identifying the standards for purchase.

1.2 Purpose

The recommendations covered in this technical report were developed to define and explain the requirements for automated handling of paper-based and image-based payments.

2 Organization

The basic numbering scheme for standards uses two sections: one for core standards and the other for application standards. Technical reports/guidelines are not included in this new numbering scheme.

Standard(s)	Description
X9.100-10 to X9.100-99	Core Standards
X9.100-110 to X9.100-xxx	Application Standards

Table 1 - Numbering Scheme for Standards

2.1 Core Standards

Core standards are those with basic components needed for the applications of paper-based and image-based payment standards.

Standard(s)	Description
X9.100-10 to X9.100-19	Paper Requirements
X9.100-20 to X9.100-29	MICR Requirements
X9.100-30 to X9.100-39	Optical Requirements
X9.100-40 to X9.100-49	Image Requirements
X9.100-50 to X9.100-99	Future Requirements

Table 2 - Core Standards Numbering

2.2 Application Standards

Application standards are those with requirements for specific actions to be accomplished for paper-based and image-based payment standards.

Standard(s)	Description
X9.100-110 to X9.100-119	Check Document Applications
X9.100-120 to X9.100-129	Deposit Ticket Applications
X9.100-130 to X9.100-139	Internal Document Applications
X9.100-140 to X9.100-149	Image Replacement Applications
X9.100-150 to X9.100-159	Other Document Applications
X9.100-160 to X9.100-169	MICR Applications
X9.100-170 to X9.100-179	Security Applications
X9.100-180 to X9.100-189	Electronic and Image Applications
X9.100-190 to X9.100-xxx	Future Applications

Table 3 - Application Standards Numbering

2.3 Standards Renumbered

Application standards are those with requirements for specific actions to be accomplished for paper-based and image-based payment standards.

2.3.1 Under Review Standards

The following under review standards should be renumbered and updated at the time they go out for ballot.

Standard Number	Title	Future Standard Number
X9.7-1999	Bank Check Background & Convenience Amount Field Specification	X9.100-110 & X9.100-30
X9.81-1995	Specifications for Bulk Data and Image Delivery	X9.100-182

Table 4 - Under Review Standards Renumbering Scheme

2.3.2 Converted Standards

The following converted standards were renumbered and updated at the time they went out for ballot.

Converted Standard Number	Title	Old Standard Number
X9.100-10-2006	Paper Specifications for MICR Documents	X9.18-1998
X9.100-20-2006	Print & Test Specifications for Magnetic Ink Printing (MICR)	X9.27-2000
X9.100-111-2004	Specifications for Check Endorsements	X9.53-1996
X9.100-120-2004	Specifications for Bank Deposit Tickets	X9.33-1998
X9.100-130-2006	Universal Interbank Batch/Bundle Tickets	X9.64-2001
X9.100-140-2004	Specifications for an Image Replacement Document – IRD	DSTU X9.90-2003
X9.100-151-2004	Check Correction Strip Specification	X9.40-1998
X9.100-160-1-2004	Part 1: Placement and Location of Magnetic Ink Printing (MICR)	X9.13-1999
X9.100-160-2-2004	Placement and Location of Magnetic Ink Printing (MICR) Part 2: EPC Field Use	X9.13-1999
X9.100-161-2004	Creating MICR Document Specification Forms	X9.47-1998
X9.100-170-2004	Specifications for the Padlock Icon	X9.51-1999
X9.100-171-2005	Specifications for Automated Identification of Security Features	X9.85-2002
X9.100-180-2006	Specifications for Electronic Exchange of Check and Image Data	X9.37-2000
X9.100-183-2005	Specifications for Electronic Check Adjustments	X9.83-2003

Table 5 - Converted Standards

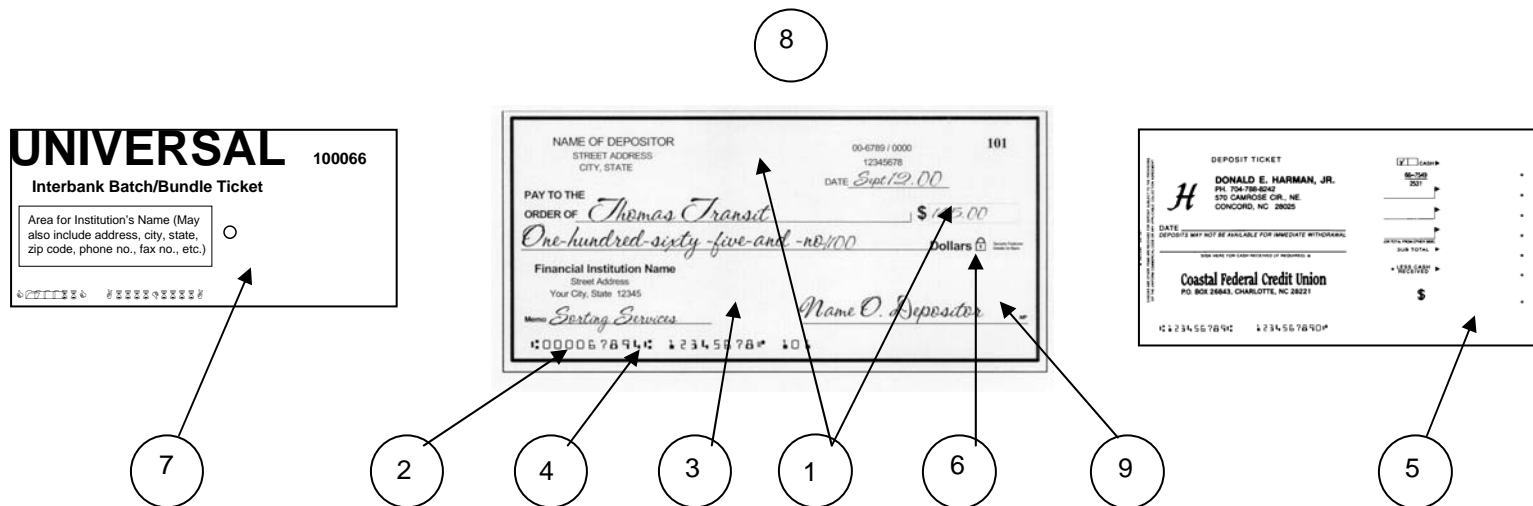
2.3.3 Renumbered Standards

The table below shows the breakdown and interaction of the new standards structure.

Table 6 - Renumbered Standards

Core Standards								
Requirements								
Paper	MICR	Optical	Image	Subject				
X9.100-10				Paper Specifications for MICR Documents				
	X9.100-20			Print and Test Specifications for Magnetic Ink Printing (MICR)				
		X9.100-30		(Optical part of) Bank Check Background and Convenience Amount Field				
			X9.100-40	Specifications for Check Image Tests				
Application Standards								
Applications								
Check Document	Deposit Ticket	Internal Document	Image Replacement Document	Other Document	MICR	Security	Elect. & Image	Subject
X9.100-110								Bank Check Background and Convenience Amount Field
X9.100-111								Check Endorsements
	X9.100-120							Bank Deposit Tickets
		X9.100-130						Universal Interbank
			X9.100-140					Image Replacement Document - IRD
				X9.100-150				
				X9.100-151				Check Correction Strip
					X9.100-160			Placement and Location of Magnetic Ink Printing (MICR)
					X9.100-161			Creating MICR Document Specification Forms
						X9.100-170		Padlock Icon
						X9.100-171		Automated Identification of Security Features
						X9.100-172		Verification of Interoperable Image-Survivable Check Security Features
							X9.100-180	Electronic Exchange of Check and Image Data
							X9.100-181	
							X9.100-182	Bulk Data and Image Delivery
							X9.100-183	Electronic Check Adjustments

See Figure 1 for an illustration showing the individual standards and how they pertain to different parts of actual checks, deposit tickets, and/or other financial documents.



Key	ANS Number	ANS Title	Key	ANS Number	ANS Title
1	X9.7 (X9.100-110)	Bank Check Background and Convenience Amount Field Specification	NI	X9.100-161 (X9.47)	Creating MICR Document Specification Forms
2	X9.100-160-1 (X9.13)	Placement and Location of Magnetic Ink Printing (MICR)	6	X9.100-170 (X9.51)	Specifications for the Padlock Icon
3	X9.100-10 (X9.18)	Paper Specifications for MICR Documents	NI	X9.100-111 (X9.53)	Specifications for Check Endorsements
4	X9.100-20 (X9.27)	Print and Test Specifications for Magnetic Ink Printing (MICR)	7	X9.100-130 (X9.64)	Universal Interbank Batch/Bundle Tickets
5	X9.100-120 (X9.33)	Specifications for Bank Deposit Tickets	NI	TG-6 (TR 6)	Quality Control of MICR Documents
NI	X9.100-180 (X9.37)	Specifications for Electronic Exchange of Check and Image Data	8	TR 2 (TG-2)	Understanding, Designing and Producing Checks
NI	X9.100-151 (X9.40)	Check Correction Strip Specification	9	TG-8 (TR 8)	Check Security Guideline
NI	=	Not Illustrated	NI	=	Not Illustrated

Figure 1 - X9B Check Processing Standards

3 Recommended Formats

This clause recommends formats to use in standards and technical reports having references and terms and definitions.

3.1 References

Verbiage is necessary to illustrate differences between normative references and informative references. Also in some cases, such as the TAPPI references in the *Paper Specifications for MICR Documents*, an explanation helps in the understanding of where they can be obtained. The decision to use any verbiage rests with the working group chairs, their editorial committees, and the X9/X9B voting members.

Type style, point size, and general layout are specified by X9 document templates. Generally the reference document number is in normal Arial type while the document title is in Arial italics.

The following illustrates a sample normative reference listing. Standards are listed first in numerical order (the first number denotes the current version), followed by Technical Reports (the first number denotes the current version).

X Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ANS X9.7-1999 (X9.100-110), *Bank Check Background and Convenience Amount Field Specification*

ANS X9.100-111-2004 (X9.53), *Specifications for Check Endorsements*

ANS X9.100-160-1 (X9.13), *Part 1: Placement and Location of Magnetic Ink Printing (MICR)*

ANS X9.100-160-2 (X9.13), *Placement and Location of Magnetic Ink Printing (MICR)
Part 2: EPC Field Use*

DSTU X9.100-183-2005 (X9.83), *Specifications for Electronic Check Adjustments*

ASC X9 TR 2 (X9/TG-2), *Understanding, Designing and Producing Checks*

ASC X9 TR 100-2005 (X9/TG-100), *Organization of Standards for Paper-based and Image-based Payments*

3.2 Terms and Definitions

Verbiage is necessary to explain how the defining standards are listed and it is recommended that technical reports have a terms and definitions statement that reads, "For the purposes of this report, all terms and definitions are found in ASC X9 TR 100." However in some cases, such as in technical report TR 33, *Check Image Quality*, there are many new definitions being presented for the first time. In that case, the terms and definitions listing is justified.

The decision on using sub-definition headings rests with the working group chairs, their editorial committees, and the X9/X9B voting members

Type style, point size, and general layout are specified by X9 document templates. Generally the term and defining standard is in Arial bold type while the definition is in Arial normal.

The following illustrates a sample terms and definitions listing.

X Terms and Definitions

The defining standard is listed in parentheses after each term. The first listing is the current defining standard and the second listing, if present, is the past or future defining standard.

X.1 average edge (ANS X9.100-20/X9.27)

An imaginary line that divides edge irregularities of MICR characters such that the summation of the non-inked areas on the inked side of the line equals the summation of the inked areas on the non-inked side. Used for defining both vertical and horizontal edges of printed MICR characters.

X.2 background (ANS X9.7/X9.100-110)

The basic colors and patterns that appear on a document, apart from lines and information printed on it.

X.3 capture (ASC X9/TG-6/X9 TR 6)

The gathering of data from the check MICR line during machine processing or manual methods to enable funds represented by the check to move between financial entities.

X.4 character space (MICR) (ANS X9.100-160-1/X9.13)

A 0.125 inch space in the MICR print band within which one MICR character may appear.

X.5 clear band (MICR) (ANS X9.100-20/X9.27)

A horizontal band, 0.625 inch high, on the front and back of the document, measured from the aligning edge, that must be free of any magnetic ink other than the E-13B font.

X.6 concatenated (ASC X9 TR 33)

To link together in a series.

Organization of Standards for Paper-based and Image-based Payments

Part 2: Definitions used in Standards (As of 7/24/06)

1 Scope and purpose

1.1 Scope

Part 2 of this technical report contains the definition for all terms as defined in X9B standards and technical reports/guidelines, along with the standard that defines them and the documents that use them.

1.2 Purpose

To provide a single place where definitions as used in paper-based and image-based standards and technical reports/guidelines may be found.

2 Definitions

The definitions in this section are controlled by the defining standard. The user of the definitions in this technical report/guideline is cautioned that as the defining standard is revised it is possible that the definition may be superseded by a revision therefore the revised definition will apply.

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
1	account number: The number used by a bank to identify a customer's account. It is usually contained in the On-Us field of the MICR line.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
2	Accredited Standards Committee X9: The group accredited by ANSI to be responsible for the creation of financial standards used throughout the financial community.	NA	NA	NA
3	adjustment: An accounting entry to correct errors on cash letters or checks.	X9.100-180 (X9.37)	7/11/06	None
4	adjustment message: Any group of records as specified in this standard, constituting an Electronic Check Adjustment (ECA), exchanged between two parties.	X9.100-183 (X9.83)	4/18/05	None
5	adjustment notice: A message, which alerts the receiver that the sender has taken action to modify a previously completed transaction. The message describes the action taken and includes information pertinent to the original transaction and the modification.	X9.100-183 (X9.83)	4/18/05	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
6	adjustment request: A message, which requests that the receiver take a specific action. The message describes the action requested and includes information pertinent to the original transaction.	X9.100-183 (X9.83)	4/18/05	None
7	administrative return: Distinguishes to the presenting bank an item returned for reasons other than a dishonored item. These items are usually handled internally by the presenting bank rather than being charged to a customer. These types of items can also be handled through the adjustment process. Examples include poor quality image, ineligible items, etc.	X9.100-180 (X9.37)	7/11/06	None
8	aligning edge: The bottom edge of a document when its face is viewed.	X9.100-160-1 (X9.13)	10/15/04	X9.7, X9.100-20 (X9.27), X9.100-111 (X9.53), X9.100-120 (X9.33), X9.100-140 (X9.90), X9.100-151 (X9.40), X9.100-161 (X9.47), X9.100-170 (X9.51), X9.100-171 (X9.85), & TG-6
9	alteration: Changing an original document to a different amount or payee for fraudulent purposes.	X9.100-170 (X9.51)	8/17/04	None
10	amount field: Positions 1-12 of the MICR line on a document, within which the dollar amount is encoded.	X9.100-160-1 (X9.13)	10/15/04	X9.100-180 (X9.37), X9.100-183 (X9.83) & TG-6
11	amount symbol: The symbol in the E-13B font which identifies the field that bears the dollar amount of a check or other MICR encoded transaction document.	X9.100-160-1 (X9.13)	10/15/04	None
12	ANS: American National Standard	NA	NA	NA
13	ANSI: American National Standards Institute	NA	NA	NA
14	AOI: Area of interest	NA	NA	NA
15	area of interest (AOI): Refers to a rectangular area 0.250 inch (6.35 mm) high having the length of each particular field for the four essential data elements: date, signature, amount in words and payee.	X9.7	5/6/99	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
16	arrow points: Special symbols to be used before and after the nine-digit routing number in endorsements by the Bank of First Deposit; for example, > 111122223 <.	X9.100-111 (X9.53)	3/8/04	None
17	ASC: Accredited Standards Committee	NA	6/10/98	NA
18	aspect ratio: The value obtained by dividing the horizontal pixel count by the vertical pixel count of an image. The intent is to hold this value constant when scaling (zooming) an image so that the new image will not be distorted relative to the original image.	X9.100-140 (X9.90)	10/1/04	None
19	authenticate: Examining a document in an attempt to conclude if it is genuine.	X9.100-170 (X9.51)	8/17/04	None
20	auxiliary On-Us field: A variable format, optional field in the MICR line, located to the left of the routing field, used at the discretion of the issuing financial institution.	X9.100-160-1 (X9.13)	10/15/04	X9.100-180 (X9.37), X9.100-183 (X9.83) & TG-6
21	average area reflectance: A calculation of reflectance applicable to the four areas of interest.	X9.7	5/6/99	None
22	average edge: An imaginary line that divides edge irregularities of MICR characters such that the summation of the non-inked areas on the inked side of the line equals the summation of the inked areas on the non-inked side. Used for defining both vertical and horizontal edges of printed MICR characters.	X9.100-20 (X9.27)	7/13/06	TG-6
23	background: The basic colors and patterns that appear on a document, apart from lines and information printed on it.	X9.100-120 (X9.33)	1/16/04	X9.100-161 (X9.47) & TG-6
24	background clutter: The remnants of background in a binary image that interferes with legibility of written or printed data.	X9.7	5/6/99	None
25	background reflectance: A calculation of the reflectance of the check background in the convenience amount and optical MICR clear band.	X9.7	5/6/99	X9.100-171 (X9.85)
26	Bank of First Deposit (BOFD): Same as "Depository Bank"	X9.100-111 (X9.53)	3/8/04	X9.100-180 (X9.37), X9.100-183 (X9.83)
27	bar half-bar print zone: A horizontal band, 0.50 inch high, on the front of the document, measured from the top of the MICR clear band, that stretches from the leading edge to the trailing edge of the document.	X9.100-171 (X9.85)	3/31/05	None
28	barcode clear band: See clear band (barcode)	X9.100-171 (X9.85)	3/31/05	None
29	basis weight: The weight in pounds of a ream (500 sheets) of paper cut to a given standard size for the grade (if 500 sheets of 17" x 22" (43.18 cm x 55.88 cm) bond paper weighs 24 pounds, it is considered 24 pound bond paper).	X9.100-10 (X9.18)	1/11/06	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
30	batch header: A batch header is a serially numbered process control document that conforms to the size and MICR printing requirements for checks and usually precedes a batch of items to be entered for machine processing. Generally, the batch header contains a predetermined MICR printed total which is frequently the dollar total of items in the batch.	X9.100-40-1	3/22/06	X9.100-40-2
31	binary image: A black and white image where each pixel can be stored in memory by one bit of information since it is either black or white.	X9.7	5/6/99	None
32	block form of endorsement: A format of endorsement in which the contents are arranged in successive lines, such that the minimum width is consumed by the endorsement	X9.100-111 (X9.53)	3/8/04	None
33	BOFD: Bank of First Deposit	NA	NA	NA
34	box: A physical package used for storing and transporting checks. A typical box holds about 3,000 checks. The box total also may serve as an additional control total on the cash letter listing.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
35	bundle: A subset of a cash letter usually containing about 200-400 checks. The dollar amount of the bundle serves as a control total and is listed on the cash letter.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
36	calibrated eye loop: An optical magnifier with a calibrated reticle for MICR character positional and dimensional measurements.	TG-6	5/7/97	None
37	capture: The gathering of data from the check MICR line during machine processing or manual methods to enable funds represented by the check to move between financial entities.	TG-6	2/3/98	None
38	CAR: Convenience amount recognition	X9.100-160-1 (X9.13)	10/15/04	None
39	carbonized band: A band of carbonized material on the back of the check to facilitate a carbon impression of critical information. The most common form of this band will extend from leading edge to trailing edge on the reverse of the check.	X9.100-111 (X9.53)	3/8/04	None
40	cash letter: A group of checks sent by a bank or its agent to another bank, a clearinghouse, or a Federal Reserve office. A cash letter contains a number of negotiable items, usually checks, accompanied by a transmittal letter that lists the dollar totals of the check bundles.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
41	cash ticket: A document that is used by tellers to record the amount of cash received, or paid out, for a deposit.	X9.100-40-1	3/22/06	X9.100-40-2
42	cash/currency count boxes: Dedicated entry areas on the deposit ticket where itemized entries of denominations of currency and coins are totalled.	X9.100-120 (X9.33)	1/16/04	None
43	character (MICR): Any of the ten numerals or four special symbols comprising the MICR type font known as E-13B.	X9.100-160-1 (X9.13)	10/15/04	X9.100-160-2 (X9.13)

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44	character space (MICR): A 0.125 inch space in the MICR print band within which one MICR character may appear.	X9.100-160-1 (X9.13)	10/15/04	X9.100-160-2 (X9.13), & TG-6
45	check processing system (check payment system): The series of processing steps performed on a check from initial deposit through return to the maker of the check. These steps include: deposit into a financial institution; capture; forwarding through intermediary collection points; capture and posting at the drawee institution; and any additional sorting required prior to rendering a statement to the maker of the check.	TG-6	2/3/98	None
46	check-related data: Check-related data can be processing data, MICR code line data (including amount), the check image data (digital representation of the check) and user-defined data.	X9.100-180 (X9.37)	7/11/06	None
47	clear band (barcode): A zone surrounding the bar half-bar barcode that is 0.100 inches wide.	X9.100-171 (X9.85)	3/31/05	None
48	clear band (MICR): A horizontal band, 0.625 inch high, on the front side and back side of the document, measured from the aligning edge, that must be free of any magnetic ink other than that of the E-13B font.	X9.100-20 (X9.27)	7/13/06	X9.7, X9.100-111 (X9.53), X9.100-120 (X9.33), X9.100-140 (X9.90), X9.100-151 (X9.40), X9.100-160-1 (X9.13), X9.100-161 (X9.47), X9.100-171 (X9.85) & TG-6
49	clear band (optical): A 0.300-inch high band that has included within it the MICR print band. This band is located 0.150 inch above the aligning edge and extends the length of the document.	X9.100-20 (X9.27)	7/13/06	X9.7, X9.100-120 (X9.33), X9.100-160-1 (X9.13), X9.100-161 (X9.47), & TG-6
50	clipping: Clipping is the process whereby a specific sub-area of a fully digitized image is extracted. The sub-area is defined by the actual pixel count of the x and y coordinates of the clipped area of the full image.	X9.100-140 (X9.90)	10/1/04	None
51	collecting bank: The bank through which a check is captured and/or processed for funds movement.	X9.100-180 (X9.37)	7/11/06	None

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52	color separation: A photographic technique used to separate the colors of a scene or picture into three or four basic colors that can be screened to produce printed reproductions that look like the original picture.	X9.7	5/6/99	None
53	common field: Use fixed format	NA	NA	NA
54	consecutive number: The document's serial number, printed in MICR characters. On checks of sufficient length it generally appears in the auxiliary On-U's field. On shorter, personal-sized checks, it generally appears to the left or to the right of the account number in the On-U's field.	X9.100-160-1 (X9.13)	10/15/04	None
55	continuous form check: A check manufactured by a method that results in many checks joined together for automatic feeding and printing in data processing printers.	X9.7	5/6/99	None
56	convenience amount: The value of the check expressed in numbers.	X9.7	5/6/99	X9.100-161 (X9.47) & TG-6
57	convenience amount clear area: The area surrounding the convenience amount rectangle that is clear of any printing that would interfere with the convenience amount.	X9.7	5/6/99	X9.100-170 (X9.51)
58	convenience amount recognition (CAR): The application of Intelligent Character Recognition to the function of locating and recognizing the characters in the convenience amount area.	X9.7	5/6/99	None
59	convenience amount rectangle: An area within the convenience amount scan area that restricts the location of the convenience amount.	X9.7	5/6/99	None
60	convenience amount scan area: The rectangular area on the right side of a check that contains the convenience amount rectangle and its associated clear area.	X9.7	5/6/99	X9.100-161 (X9.47) & X9.100-170 (X9.51)
61	Copying: The duplication of an original document by using copying equipment or scanners/printers.	X9.100-170 (X9.51)	8/17/04	None
62	correction label: A small label with an adhesive backing that is placed over MICR information to give a new MICR encoding surface.	X9.100-151 (X9.40)	12/1/04	None
63	counterfeiting: The creation of a new document that is apparently identical or similar to another item in an attempt to perpetrate a fraud.	X9.100-170 (X9.51)	8/17/04	None
64	covert feature: Security feature(s) not visibly detectable or described on the document.	X9.100-170 (X9.51)	8/17/04	None
65	creation institution: The institution that creates an IRD. The IRD can be an Original IRD or a Subsequent IRD.	X9.100-140 (X9.90)	10/1/04	None
66	cycle: A number or letter that can be translated to a processing day of the week.	X9.100-180 (X9.37)	7/11/06	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
67	data elements: Information that is contained on a check that is legally necessary or desired by the payor to convey funds. A signature, payee name, and amount are each examples of data elements which are legally necessary. A memo line and invoice number are each examples of data elements not legally necessary but often desired by the payor for payment tracking.	X9.7	5/6/99	None
68	data print boundary line: A defining line on the front and back of an IRD and extending its full length, below which no data is printed other than the E-13B character font specified in Regions 5F and 6F.	X9.100-140 (X9.90)	10/1/04	None
69	DC image/dynamic contrast image: A generic binary image, i.e. a black and white image generated from a greyscale image by comparing the reflectance value of each pixel to the average of all pixels (including itself) in the 0.125 inch x 0.125 inch immediately surrounding area thereby allowing conversion of the pixel to a black or white value.	X9.7	5/7/97	None
70	debossment: A physical impression of the typeface into the paper surface causing the printed characters to be below the surrounding paper surface.	X9.100-20 (X9.27)	7/13/06	TG-6
71	deposit ticket: A document that conforms to the size and MICR printing requirements for checks, and which is used at a depository institution to list each item of deposit and total the net amount to be credited to the account holder.	X9.100-120 (X9.33)	1/16/04	X9.100-40-1&2
72	depository bank: The first bank to which a check is transferred, even if such bank is also the paying bank or the payee; or a bank to which a check is transferred for deposit in an account at such bank, even if the check is physically received and indorsed first by another bank.	X9.100-111 (X9.53)	3/8/04	X9.100-180 (X9.37) X9.100-183 (X9.83)
73	designated peak(s): The peak or peaks of a waveform, which is (are) used for the purpose of determining signal level of a character.	X9.100-20 (X9.27)	7/13/06	None
74	digital certificate: A data structure that is digitally signed by a trusted third party (i.e., Certificate Authority) to securely convey a public key or other data elements needed to verify that digitally signed images have been generated by the proper owner and have not been altered or replaced. The specific data structure format used is X.509 Version 3 Digital Certificates.	X9.100-180 (X9.37)	7/11/06	None
75	digital certificate issuer distinguished name: Information used to uniquely identify the issuer of a digital certificate. The Issuer Distinguished Name is used in conjunction with the Digital Certificate Serial Number to uniquely reference the Digital Certificate for a given image. Information is conveyed as a set of characters of "attribute = data" pairs. Typical attributes include organization (o=), country (c=), common name (cn=), and organization unit (ou=).	X9.100-180 (X9.37)	7/11/06	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
76	digital certificate serial number: The Digital Certificate Serial Number within a Digital Certificate is unique and is used in conjunction with the Issuer Distinguished Name to uniquely reference the Digital Certificate for a given image.	X9.100-180 (X9.37)	7/11/06	None
77	digital signature: A number created from a variable length image (or other data set) to produce a fixed length hash value that is encrypted using a private key. The process of creating a digital signature from the image (or other data) is called "digitally signing" the image. Images are verified by decrypting their digital signature using the public key that corresponds to the private key used to produce the digital signature.	X9.100-180 (X9.37)	7/11/06	None
78	disparity of peaks: The difference between the amplitude of any given peak in an actual MICR character's/symbol's normalized waveform and the amplitude of the same peak in its respective reference waveform.	X9.100-20 (X9.27)	7/13/06	None
79	document (MICR): Any printed item, including but not limited to checks, which conforms to all applicable MICR standards.	X9.100-160-1 (X9.13)	10/15/04	None
80	dropout element: An element which is human readable but not intended to be captured by automated recognition systems.	X9.100-120 (X9.33)	1/16/04	None
81	dry ink: Toner used in non-impact printing technologies.	TG-6	2/3/98	None
82	dynamic contrast image (DC Image): A generic binary (i.e. black and white) image generated from a greyscale image by comparing the reflectance value of each pixel to the average of all pixels (including itself) in the 0.125 inch x 0.125 inch (3.18 mm x 3.18 mm) immediate surrounding area. Each pixel is thereby converted to a black or white value.	X9.7	5/6/99	None
83	dynamic contrast ratio (DCR): The mathematical formula for creating a dynamic contrast image. It is the same as the formula for PCS, but the calculation is performed at a pixel level.	X9.7	5/6/99	X9.100-120 (X9.33)
84	E-13B: A special type font consisting of ten numerals and four special symbols, developed for magnetic ink character recognition.	X9.100-20 (X9.27)	7/13/06	X9.100-160-1&2 (X9.13) & TG-6
85	ECE: Electronic check exchange	NA	NA	NA
86	ECE institution: The institution that creates and sends the electronic cash letter information.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
87	electronic check: A generic term designating an end-to-end negotiable instrument that has only existed in an electronic form.	X9.100-180 (X9.37)	7/11/06	None
88	electronic check adjustment (ECA): The exchange of check and check-related adjustment information electronically, in lieu of the exchange of paper requests and documentation.	X9.100-183 (X9.83)	4/18/05	None
89	electronic check exchange (ECE): The electronic exchange of check-related data, in lieu of, or in addition to, the exchange of paper checks. For forward presentment, usually referred to as electronic check presentment (ECP).	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)

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90	embossment: A physical build-up of dry ink on paper causing the characters to sit above the surrounding paper surface.	X9.100-20 (X9.27)	7/13/06	None
91	encoding strip: See MICR encoding strip	TG-6	2/3/98	None
92	endorsement or indorsement: Information used to transfer a negotiable instrument from one holder to another. Endorsements are placed on a document by payee(s), by the Bank of First Deposit, and by institutions subsequently handling the document.	X9.100-111 (X9.53)	3/8/04	X9.7
93	endorsement areas: Regions on the reverse of a check reserved for endorsements according to a functional role in the collection of cash items.	X9.100-111 (X9.53)	3/8/04	None
94	EPC: External processing code	NA	NA	NA
95	extension strip: A paper strip affixed to the bottom of a check to permit correct encoding of a MICR line. It is typically utilized for repairing rejected checks.	X9.100-151 (X9.40)	12/1/04	X9.100-160-1 (X9.13)
96	external processing code (EPC): A MICR digit that conveys special information regarding the correct handling or routing of a check or check data to financial institutions and other processors.	X9.100-160-1 (X9.13)	10/15/04	X9.100-160-2 (X9.13) & X9.100-171 (X9.85)
97	external processing code field (EPC field): An optional, single digit field located to the left of the routing field on a check. The EPC field is used for special purposes as authorized by ASC X9.	X9.100-160-1 (X9.13)	10/15/04	X9.100-160-2 (X9.13), X9.100-161 (X9.47), X9.100-171 (X9.85), X9.100-180 (X9.37), X9.100-183 (X9.83) & TG-6
98	extraneous ink: Magnetic ink or other ink not intentionally printed.	X9.100-20 (X9.27)	7/13/06	TG-6
99	face: The surface of the check that bears the amount, payee, payor, bank name, signature, etc. The surface of a strip that is intended to be MICR encoded.	X9.100-151 (X9.40)	12/1/04	None
100	field guide: A visual indicator for entering numeric amount data on deposit tickets printed with graphics having a PCS < 0.30 but which, because of its color, is easily seen by humans.	X9.100-120 (X9.33)	1/16/04	None
101	fixed format: A term applied to the required and optional fields for which the location, digit sequence and structure are completely specified.	X9.100-160-1 (X9.13)	10/15/04	X9.100-20 (X9.27), X9.100-140 (X9.90), X9.100-160-2 (X9.13) & X9.100-180 (X9.37)

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
102	fixed format field: A predetermined description or specification of information content, for example, the routing number field.	X9.100-20 (X9.27)	7/13/06	None
103	forgery: Fraudulent signatures or endorsements	X9.100-170 (X9.51)	8/17/04	None
104	full endorsement: The endorsement placed on a document by the Bank of First Deposit. This endorsement includes the nine-digit routing number, date, institution's name/location, trace/sequence number and branch. The full endorsement will also include the "arrow points" at each end of the nine-digit routing number.	X9.100-111 (X9.53)	3/8/04	None
105	GMT Greenwich Mean Time: The Greenwich Meridian (Prime Meridian or Longitude Zero degrees) marks the starting point of every time zone in the world. GMT, Greenwich Mean (or Meridian) Time, is the mean (average) time that the earth takes to rotate from noon-to-noon.	X9.100-180 (X9.37)	7/11/06	None
106	grayscale image: An image where each pixel can have a full range of grey tonal values usually more than 2 up to 256 levels.	X9.7	5/6/99	None
107	group adjustment: An adjustment that involves more than one bundle within a cash letter or more than one item within a bundle.	X9.100-183 (X9.83)	4/18/05	None
108	height: The vertical dimension of the check, or strip, when its face is viewed.	X9.100-151 (X9.40)	12/1/04	None
109	human-visible spectrum: The wavelengths of light that can be observed by the human eye, ranging between 400 and 700 nanometers, with the peak human response at 555 nanometers. These wavelengths span the full range of pure colors; 400 nanometers is perceived as deep blue, 550 nanometers is yellow-green, and 700 nanometers is deep red.	X9.7	5/6/99	X9.100-120 (X9.33)
110	icon area: The location on the face of a check where the padlock icon must be printed.	X9.100-170 (X9.51)	8/17/04	None
111	icon clear area: Open space surrounding the padlock icon to be clear of other information.	X9.100-170 (X9.51)	8/17/04	None
112	ICR: intelligent character recognition	NA	NA	NA
113	image (digital image): A digital representation of all or part of a physical item, including any associated parameters required to interpret the digital representation. The digital representation is created by sensing light reflected from the item.	X9.100-161 (X9.47)	3/8/04	None
114	image anchor point: Represents the starting X and Y point of origin for printing a digital image.	X9.100-140 (X9.90)	10/1/04	None
115	image area: Specific region(s) on the front and back of an IRD that is reserved for the printing of the image of the original check or the areas clipped from the image of an IRD.	X9.100-140 (X9.90)	10/1/04	None
116	image compatible: Generally speaking, an imaging system will pick up and transfer this feature.	X9.100-170 (X9.51)	8/17/04	None

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117	image friendly: The feature or presence of the feature and location does not negatively impact the legibility of the data elements and does not add significant storage to the compressed image.	X9.100-170 (X9.51)	8/17/04	None
118	image processing system (imaging): A system based on monochrome scanning of MICR documents, processing discrete picture elements to remove data redundancy, followed by compression and storage of the image data. Images can be retrieved, decompressed and displayed on image workstations or printed on a printer either locally or remote to the storage site.	X9.7	5/6/99	X9.100-120 (X9.33), & X9.100-161 (X9.47)
119	image quality: The characteristic defined as a faithful digital representation of the source document.	X9.100-140 (X9.90)	10/1/04	None
120	image replacement document (IRD): An IRD is a substitute image copy of a check or a replacement for a previous IRD that includes a machine readable MICR line. An IRD may under certain legal arrangements be the practical and legal equivalent of the original paper check or a previous IRD. An IRD conforming to X9.100-140-2004 may be used as a Substitute Check in conformance with the Check Clearing for the 21 st Century Act (Check 21 Act or Act).	X9.100-140 (X9.90)	10/1/04	X9.100-180 (X9.37)
121	image test parameter: Data used to generate an image test result. Threshold values used to compute a pass/fail image test result, and constant values used in a formula or algorithm to compute an image test result, are examples of image test parameters.	X9.100-40-1	3/22/06	X9.100-40-2
122	image test result: An outcome realized from executing an image test. The outcome will typically be the observed or measured value of some attribute pertaining to the image being tested. Example attributes are image height, image width, compressed image size, skew angle, and field presence. The outcome could also be secondary data related to the observed or measured value of the attribute such as a confidence level for the result.	X9.100-40-1	3/22/06	X9.100-40-2
123	image usability: The characteristic defined by the degree of legibility and readability necessary to perform a specific function.	X9.100-140 (X9.90)	10/1/04	None
124	imaging: A system based on monochrome scanning of checks, processing discrete picture elements to remove data redundancy, followed by compression and storage of the image data. Images can be retrieved, decompressed, and displayed on image work stations or printed on a printer either locally or remote to the storage site.	X9.7	5/6/99	None
125	immediate withdrawal disclaimer: A notice printed on transaction account deposit tickets that informs depositors that the deposits may not be available for immediate withdrawal.	X9.100-120 (X9.33)	1/16/04	None
126	intelligent character recognition (ICR): In an image system, algorithms may be used to provide character or symbol recognition from the captured or stored image data.	X9.7	5/6/99	X9.100-120 (X9.33)

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127	investigation type: Categories of errors or problem situations used to classify adjustment notices and adjustment requests. The type attached to an adjustment message determines the format and field requirements for the electronic file.	X9.100-183 (X9.83)	4/18/05	None
128	item: An item is the physical representation of a financial transaction. Examples include checks, IRDs and related paper objects such as deposit slips and cash in or cash out tickets. Items are generally referred to by their type, as for instance, cash items, transit items, on-us items, clearing items, general ledger items, etc.	X9.100-180 (X9.37)	7/11/06	None
129	item entry area: The designated space where amounts of cash and individual checks being deposited are written onto the deposit ticket.	X9.100-120 (X9.33)	1/16/04	None
130	leading edge: The right edge of a document when its face is viewed.	X9.100-160-1 (X9.13)	10/15/04	X9.7, X9.100-20 (X9.27), X9.100-111 (X9.53), X9.100-120 (X9.33), X9.100-140 (X9.90), X9.100-151 (X9.40), X9.100-161 (X9.47), X9.100-170 (X9.51), X9.100-171 (X9.85), & TG-6
131	legend: Printed text that is defined by this standard and applicable law.	X9.100-140 (X9.90)	10/1/04	None
132	legibility: Legibility is defined as the quality of a letter or numeral that enables a reasonable observer to identify it positively and quickly to the exclusion of all other letters or numerals.	X9.100-111 (X9.53)	3/8/04	X9.100-140 (X9.90)
133	length: The dimension across the face of the check, or strip, parallel to the aligning edge.	X9.100-151 (X9.40)	12/1/04	None
134	linear form of endorsement: As used in this standard the linear form of endorsement is that in which the contents of the endorsement are laid out next to each other in a straight line extending horizontally across the check, so as to consume the least vertical space.	X9.100-111 (X9.53)	3/8/04	None
135	listing: The printing or writing of the amount of each item in a bank deposit on the front or back of a deposit ticket, usually in a sequential order representing the physical order of paper items.	X9.100-120 (X9.33)	1/16/04	None

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136	magnetic ink: The ink used to print the E-13B characters for all MICR documents. It is formulated by introducing iron oxide particles into the ink materials allowing the characters printed to be read by magnetic readers designed for this purpose.	X9.100-20 (X9.27)	7/13/06	X9.100-160-1 (X9.13) & TG-6
137	magnetic ink character recognition (MICR): The common machine language specification for the paper-based payment transfer system. It consists of magnetic ink printed characters of a special design, called the E-13B font that can be recognized by high-speed magnetic recognition equipment.	X9.100-20 (X9.27)	7/13/06	X9.7, X9.100-10 (X9.18), X9.100-111 (X9.47), X9.100-120 (X9.33), X9.100-130 (X9.64), X9.100-151 (X9.40), X9.100-160-1 (X9.13), X9.100-171 (X9.85), X9.100-180 (X9.37), X9.100-183 (X9.83) & TG-6
138	matrix reader: A MICR reading technology that divides characters into horizontal and vertical cells. The cells are then applied to a "pattern" recognition system to identify the characters. The magnetic cell detectors are very sensitive to any air gap between the MICR ink and the detecting heads during the reading process.	TG-6	2/3/98	None
139	MICR: Magnetic ink character recognition	NA	NA	NA
140	MICR clear band: See clear band (MICR)	NA	NA	NA
141	MICR encoder: Any equipment that applies MICR E-13B font characters to a check after the check has been written by the maker.	X9.100-111 (X9.53)	3/8/04	None
142	MICR encoding strip: See print band (MICR)	NA	NA	NA
143	MICR gauge: A precision plastic overlay showing the required positions and positional tolerances for MICR printing relative to the edges of the document.	TG-6	5/7/97	None
144	MICR print band: See print band (MICR)	NA	NA	NA
145	MICR quality: A document's degree of conformance to MICR industry standards.	TG-6	5/7/97	None
146	MICR tester: A device that is used in its simplest form to measure the magnetic signal strength of the printed MICR characters. More advanced MICR testers use a waveform reader to recognize and display waveforms for comparison to theoretical waveforms.	TG-6	2/3/98	None

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147	non-impact printing: A term used to refer to the print technologies of xerography, electron beam imaging, magnetography, thermal encoding and the like. In these technologies, toner or ink is transferred to the paper and fused to the paper. The result is an image that is raised above the surface of the paper (embossed).	TG-6	2/3/98	None
148	non-read ink: A graphic treatment used to print elements on a document that are visible to humans but intended to be invisible to an image processing system.	X9.100-120 (X9.33)	1/16/04	X9.100-161 (X9.47)
149	normalization: The mathematical amplitude scaling process performed on an actual waveform in order to compare the waveform to a theoretical waveform. Normalization is also used for disparity of peaks calculations.	X9.100-20 (X9.27)	7/13/06	None
150	normalization factor: The ratio of the sum of peaks of an actual waveform with respect to the sum of peaks of its respective reference waveform for a given character.	X9.100-20 (X9.27)	7/13/06	None
151	nominal waveform: A waveform that is equal in signal level to its respective nominal signal level. It is also called 100% of nominal.	X9.100-20 (X9.27)	7/13/06	None
152	OCR: Optical character recognition	NA	NA	NA
153	On-Us field: The MICR print band area between the closing amount symbol and the opening transit symbol. Arrangement of the On-Us field is variable, specified by the financial institution on which the check is written. It may include such information as the user's account number, a consecutive number, and a transaction or processing code.	X9.100-160-1 (X9.13)	10/15/04	X9.100-180 (X9.37), X9.100-183 (X9.83) & TG-6
154	On-Us symbol: The symbol in the E-13B font that identifies the field(s) containing information unique to the issuing financial institution.	X9.100-160-1 (X9.13)	10/15/04	None
155	opacity: The extent to which a document obstructs light transmission. A high opacity minimizes the show-through from the back. Opacity is expressed as 100 times the ratio of reflectance measured using a black backing to the reflectance measured using a white backing.	X9.100-10 (X9.18)	1/11/06	X9.100-120 (X9.33)
156	optical character recognition (OCR): OCR is defined as the high speed process of converting machine (i.e. printed or hand-printed) numerals, letters, and symbols into computer processable information by an optical scanning system.	X9.7	5/6/99	X9.100-10 (X9.18), X9.100-120 (X9.33) & TG-6
157	optical clear band: See clear band (optical)	NA	NA	NA
158	original check truncation institution: The institution that has truncated the original check document and is the holder of the original document or is responsible for knowing the location of the original document.	X9.100-140 (X9.90)	10/1/04	X9.100-180 (X9.37)
159	over-sig: "Over signature line" is pre-printed information like the check writer's name, it is found in an area above the line used for a signature.	X9.100-170 (X9.51)	8/17/04	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
160	overt feature: Security feature(s) that are intended to be easily discernible and visually detectable by the public.	X9.100-170 (X9.51)	8/17/04	None
161	padlock icon: The registered fraud deterrent icon of the CPSA that indicates the presence of security features.	X9.100-170 (X9.51)	8/17/04	None
162	paper: Refers to a physical document.	X9.100-180 (X9.37)	7/11/06	None
163	paper check: A payment document normally printed on 24 lb. MICR bond. (Refer to ANS X9.18)	X9.100-160-1 (X9.13)	10/15/04	None
164	paxel: A group of black pixels (equal to or more than 6 of 9) in a binary image, measuring 0.010 inch x 0.010 inch (0.25 mm x 0.25 mm) square, that is the smallest dark area of background clutter that has been determined to affect the legibility of handwritten data on checks.	X9.7	5/6/99	None
165	paxel count: The number of contiguous paxels that, when joined in any shape, line or combination can create a background clutter problem that can affect the legibility of handwritten data on checks.	X9.7	5/6/99	None
166	payee area: The line on a check that provides for the entry of the name of the party to whom the check is paid.	X9.100-161 (X9.47)	3/8/04	None
167	payee line restraint: A vertical mark at the right end of the payee line showing the point where writing should end.	X9.7	5/6/99	None
168	payor: The party issuing the check as an account holder of a payor institution. The payor is also known as the maker or writer of the check.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
169	payor bank: The institution by or through which a check is payable. The payor bank is also referred to as paying bank.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
170	PCS: Print contrast signal	NA	NA	NA
171	permanence: The ability of a MICR image to retain its human and machine readability over the normal life cycle of the check.	X9.100-20 (X9.27)	7/13/06	TG-6
172	piggyback: A condition whereby a check adheres during processing to an adjacent document.	X9.100-151 (X9.40)	12/1/04	None
173	pile height: The thickness of the ink layer forming an image frequently used with inks that create embossed images. See embossment. Note: Pile height is not equal to the embossment height unless the ink lies completely above the surface of the paper.	TG-6	2/3/98	None
174	pixel: A contraction of "picture element", the smallest area of a document considered in capturing an electronic image. Common pixel densities in imaging are 200 and 240 pixels per inch.	X9.7	5/6/99	None
175	pointer: A bar half-bar barcode for identifying security features present on a check.	X9.100-171 (X9.85)	3/31/05	None
176	post-printed MICR data: Information encoded on a check after presentment for processing through the payment system, normally consisting of the amount field.	X9.100-160-1 (X9.13)	10/15/04	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
177	posting data: All data required by the payor bank to post the item from the exchanged file.	X9.100-180 (X9.37)	7/11/06	None
178	pre-printed MICR data: Information encoded on a check before delivery to the purchaser, normally consisting of the routing and On-Us fields.	X9.100-160-1 (X9.13)	10/15/04	None
179	presentment: The operational process of moving checks and check related data from a collecting bank to a paying bank.	X9.100-180 (X9.37)	7/11/06	None
180	print band (MICR): A 0.250 inch high band, subdivided into a series of character spaces, within the MICR clear band, within which E-13B characters are located.	X9.100-20 (X9.27)	7/13/06	X9.100-140 (X9.90) & X9.100-160-1 (X9.13)
181	print contrast: The difference between the reflectance of a printed point and the reflectance of the background on which it is printed.	X9.7	5/6/99	X9.64, X9.100-20 (X9.27) & X9.100-120 (X9.33)
182	print contrast signal (PCS): The ratio of the print contrast of a particular printed point with respect to the reflectance of a reference or background region.	X9.7	5/6/99	X9.64, X9.100-20 (X9.27), X9.100-111 (X9.53), X9.100-120 (X9.33), X9.100-161 (X9.47), X9.100-170 (X9.51) & X9.100-171 (X9.85)
183	printed features: Features printed on paper in the check manufacture, such as decorative patterns, security patterns, convenience amount rectangle outlines, hand print constraint boxes, dollar signs, field designators, etc. Printed areas may be either in the background or foreground.	X9.7	5/6/99	None
184	printed information: Lines, dollar signs, decimal points, or other information printed on a payment document or deposit ticket to convey the information content of the document and not considered to be part of the background color, pattern, or scene.	X9.100-120 (X9.33)	1/16/04	None
185	process control code: See transaction code	X9.100-160-1 (X9.13)	10/15/04	None
186	QRC: Qualified return check	NA	NA	NA
187	qualified MICR print band: The MICR line, printed with E-13B characters, that is contained in the removable tear-off strip of an IRD used for qualified return processing. It contains a MICR 5 in the EPC field, the routing number of the BOFD, or returns processor, and the check amount.	X9.100-140 (X9.90)	10/1/04	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
188	qualified return check (QRC): A return check prepared for automated processing. It contains a qualified strip or is placed in a carrier envelope and encoded with the routing number of the depository bank, the dollar amount of the check, and the value '2' in position 44 of the MICR line of the original and the value '5' in position 44 of the qualified MICR line of an IRD.	X9.100-180 (X9.37)	7/11/06	X9.100-140 (X9.90) & X9.100-183 (X9.83)
189	read ink: A graphic treatment used to print elements on a document that are visible to humans and are also visible to an image processing system.	X9.100-120 (X9.33)	1/16/04	X9.100-161 (X9.47)
190	reader/sorter: An automated MICR document-processing machine that reads E-13B printed characters magnetically in order to sort the documents.	X9.100-10 (X9.18)	1/11/06	X9.100-111 (X9.53), X9.100-160-1 (X9.13), & TG-6
191	reference waveforms: The nominal valued theoretical waveforms that are calculated and generated for each MICR character based upon design centered character shapes, uniform magnetization, and utilizing the mathematical equivalent of the read head and amplifier as specified in this specification. Reference waveforms are also known as theoretical waveforms.	X9.100-20 (X9.27)	7/13/06	None
192	reflectance: The relative brightness of an illuminated paper surface as seen by the human eye as indicated by values between 0 and 100%. The eye modifies the apparent brightness at different wavelengths according to its response to the human-visible spectrum. Equipment that measures reflectance requires a filter that matches its response to that of the human eye.	X9.7	5/6/99	X9.64, X9.100-111 (X9.53), X9.100-120 (X9.33) & X9.100-161 (X9.47)
193	registered security feature (RSF): A security feature or group of security features on a check which is registered with X9 and assigned a unique binary identifier.	X9.100-171 (X9.85)	3/31/05	None
194	Regulation CC (12 CFR part 229): The regulation adopted by the Board of Governors of the Federal Reserve System to implement the Expedited Funds Availability Act (12 U.S.C. 4001-4010) and Check Clearing for the 21 st Century Act (Check 21) (12 U.S.C. 5001-5018). The regulation specifies, among other things, minimum availability standards for deposited funds and rules designed to expedite check collection and returns.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
195	reject(s): A term used for a rejected check(s) or other MICR encoded documents. The document may be rejected visually as not meeting ANS X9.27 criteria, or by not being readable on a reader/sorter. Most commonly this term applies to reader/sorter performance.	TG-6	2/3/98	None
196	resolution enhancement: A feature of laser printers where the duration of the laser exposure is adjusted to fill in additional detail in the printed image.	TG-6	5/7/97	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
197	return item: A check returned unpaid by the payor bank. The check may have been dishonoured or returned for administrative reasons. It may be returned to the BOFD directly or through an intermediary.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
198	return reason code: For return items, the particular reason that the paying bank refuses payment.	X9.100-140 (X9.90)	10/1/04	None
199	routing field: Positions 33 through 43 of the MICR line that contain the routing number.	X9.100-160-1 (X9.13)	10/15/04	X9.100-130 (X9.64), X9.100-180 (X9.37), X9.100-183 (X9.83) & TG-6
200	routing number: The numeric identifier of a financial institution as assigned by the American Bankers Association or its agent. Routing numbers are used for routing purposes on checks, and virtually all other MICR documents, such as deposit tickets and batch tickets. A specific numeric series is reserved for internal bank usage.	X9.100-160-1 (X9.13)	10/15/04	X9.7, X9.100-111 (X9.53), X9.100-120 (X9.33), X9.100-130 (X9.64), X9.100-180 (X9.37) & X9.100-183 (X9.83)
201	same day settlement (SDS): A set of amendments to Regulation CC (12 CFR part 229) which specifies conditions under which a payor bank must settle for a check with a presenting bank in same-day funds.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
202	saturation (magnetic): The condition in which the flux density of the printing can no longer be increased by increasing the applied magnetization in a plane parallel to the paper.	X9.100-20 (X9.27)	7/13/06	None
203	screen printing (halftone): A printing process that prints one or more basic colors in discrete patterns of dots that vary in size. The human eye perceives a combination of basic colors in the dots as a mixture or hue. In the case of a single color the human eye perceives a shade of the basic printed color that is dependent on dot size and spatial density.	X9.100-120 (X9.33)	1/16/04	X9.7
204	secondary reference documents: Paper documents specially printed in magnetic ink with the characters of the E-13B font. These documents are of known relative signal level and are for use in calibration of equipment used to measure relative signal level.	X9.100-20 (X9.27)	7/13/06	None
205	security feature/technique: An addition to a document that will add complexity in its ability to be reproduced or changed.	X9.100-170 (X9.51)	8/17/04	None
206	settlement: Settlement of check activity occurs at the time the sending financial institution gains possession of funds from the receiving bank.	X9.100-183 (X9.83)	4/18/05	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
207	short name: The abbreviated name assigned to a bank, typically by the Federal Reserve Bank.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
208	signal level: Signal level is the amplitude of the voltage waveform which results when a d-c magnetized and fully saturated MICR printed character is moved at a specified speed past a specifically defined magnetic read head whose output is amplified with a defined transfer function.	X9.100-20 (X9.27)	7/13/06	TG-6
209	signal units (SU): The common practice of scaling the output voltage of a waveform such that 100 units of measure is equal to the value of the average of peaks three and five of an ideal reference On-Us symbol. For convenience, we call the units of signal measure when appropriately scaled, Signal Units (SU).	X9.100-20 (X9.27)	7/13/06	None
210	skew: The tilt or angle of a MICR character relative to the aligning edge of the document. The skew of the entire MICR line refers to the average tilt or angle of the line relative to the aligning edge of the document.	X9.100-20 (X9.27)	7/13/06	TG-6
211	slot reader or single slot reader: See waveform reader	TG-6	2/3/98	None
212	solid printing: A printing process that applies a single solid color to a piece of paper. The color seen by the eye will be the ink color.	X9.100-120 (X9.33)	1/16/04	X9.7
213	strip: A paper or composite appendage to provide an alternate MICR clear band to the check.	X9.100-151 (X9.40)	12/1/04	None
214	stroke: The vertical or horizontal lines of a printed MICR character.	TG-6	2/3/98	None
215	stroke width: The measurable width of a printed stroke or line. The edges of the stroke can be irregular depending on printing methods, paper surface or both; therefore, the stroke width is measured as the average distance between the average edges of a stroke.	X9.100-20 (X9.27)	7/13/06	X9.7, X9.100-120 (X9.33) & TG-6
216	SU: Signal units	NA	NA	NA
217	substitute check: A paper reproduction of an original check as defined by the Check 21 Act and Regulation CC.	X9.100-140 (X9.90)	10/1/04	X9.100-40-1&2 & X9.100-180 (X9.37)
218	sum of peaks: A method used to perform normalization of signal level of a MICR character using all peaks, and for analyzing disparity of peaks.	X9.100-20 (X9.27)	7/13/06	None
219	surrogate characters: Standard keyboard characters used to indicate the presence of non-numeric or variable data, such as special MICR symbols, blanks, account numbers, or serial numbers.	X9.100-161 (X9.47)	3/8/04	None
220	symbol: Any of the four special characters in the E-13B font used to identify fields of information, or to create a separation between groups of digits.	X9.100-160-1 (X9.13)	10/15/04	X9.100-20 (X9.27)
221	TAPPI: Technical Association of the Pulp and Paper Industry	NA	NA	NA

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
222	Technical Association of the Pulp and Paper Industry (TAPPI): The organization that develops standardized test procedures for various properties of paper.	X9.100-10 (X9.18)	1/11/06	None
223	text overlay: Text placed over image regions on an IRD.	X9.100-140 (X9.90)	10/1/04	None
224	toner: See dry ink	TG-6	6/10/98	None
225	toner density: The amount of dry ink or toner deposited in an image; this is adjustable on some printing equipment.	TG-6	5/7/97	None
226	total deposit amount entry rectangle: An item entry area rectangle that contains the total dollar amount of all items listed for deposit.	X9.100-120 (X9.33)	1/16/04	None
227	trailing edge: The left edge of the document when its face is viewed.	X9.100-160-1 (X9.13)	10/15/04	X9.7, X9.100-20 (X9.27), X9.100-111 (X9.53), X9.100-120 (X9.33), X9.100-140 (X9.90), X9.100-151 (X9.40), X9.100-161 (X9.47), X9.100-171 (X9.85) & TG-6
228	transaction code: An optional code usually located in the On-Us field that can identify document type or handling. Usage is specified by the financial institution on which the check is written.	X9.100-160-1 (X9.13)	10/15/04	X9.100-180 (X9.37) & X9.100-183 (X9.83)
229	transaction ID area: An area adjacent to the left side of the item entry area that is intended to be used to designate the presence of cash (either currency, currency and coins, or just coins) and to provide an identification listing for any checks that may be included with the deposit.	X9.100-120 (X9.33)	1/16/04	None
230	transit endorsement: The transit endorsement is an endorsement placed on the document by an institution handling the document after the Bank of First Deposit. This endorsement is limited to nine-digit routing number and date, with trace/sequence numbering optional. "Arrow points" are not allowed.	X9.100-111 (X9.53)	3/8/04	None
231	transit field: See routing field	NA	NA	NA
232	transit symbol: The symbol in the E-13B font that identifies the routing number field.	X9.100-160-1 (X9.13)	10/15/04	None

No.	Definition As Of 7/24/06	Defining Standard	Date Revised	Other Publication Usage
233	trigger: A designated MICR character in the EPC field used for alerting processing equipment that a registered security feature(s) is present.	X9.100-171 (X9.85)	3/31/05	None
234	truncation: The conversion of the original item into electronic form.	X9.100-180 (X9.37)	7/11/06	X9.100-183 (X9.83)
235	twenty pound paper (20# paper): Bond paper with a nominal basis weight of 20 pounds $\pm 5\%$ (75.0 g/m ² $\pm 5\%$), thereby encompassing bond paper with actual basis weights from 19 pounds to 21 pounds (71.25 g/m ² to 78.75 g/m ²).	X9.100-10 (X9.18)	1/11/06	None
236	twenty-four pound paper (24# paper): Bond paper with a nominal basis weight of 24 pounds $\pm 5\%$ (90.0 g/m ² $\pm 5\%$), thereby encompassing bond paper with actual basis weights from 22.8 pounds to 25.2 pounds (85.5 g/m ² to 94.5 g/m ²).	X9.100-10 (X9.18)	1/11/06	None
237	US Payments System: The general term referring to the total process through which a check passes from origination to settlement within the United States banking system.	X9.100-10 (X9.18)	1/11/06	None
238	variable format field: A term applied to the On-Us and auxiliary On-Us fields in which the data content and structure will vary.	X9.100-160-1 (X9.13)	10/15/04	X9.100-20 (X9.27) & X9.100-140 (X9.90)
239	void(s): The absence of ink within the specified outline of the printed MICR character.	X9.100-20 (X9.27)	7/13/06	TG-6
240	voltage waveform or waveform: The voltage-distance pattern generated when a properly magnetized MICR character is scanned at constant speed by an appropriate electromagnetic read head and amplifier. Such signals are typically provided by calibrated MICR testers (see waveform reader).	TG-6	2/3/98	None
241	warning box: An informative summary found on a check that identifies security features and contains the required padlock icon information.	X9.100-170 (X9.51)	8/17/04	None
242	watermark: A genuine watermark is a localized modification of the formation and opacity of a sheet so that a pattern, design, or word group can be seen when held up to the light.	X9.100-10 (X9.18)	1/11/06	None
243	waveform: A voltage representation of signals with respect to time that corresponds to a particular character.	X9.100-20 (X9.27)	7/13/06	None
244	waveform reader (single slot reader): A MICR reader that uses a permanent magnet write head and a single slot magnetic read head, usually 0.625 inch high in order to pass over the entire MICR clear band. Each MICR character in the clear band generates a unique voltage waveform consisting of accurately spaced positive and negative peaks. From the peak amplitude and position data, individual MICR characters are identified.	TG-6	2/3/98	None

Annex A **(informative)**

References to Technical Reports/Guidelines

A.1 General

Technical reports/guidelines are published to provide information on how to implement standards and include information that cannot be or should not be standardized. The following technical reports/guidelines are related to paper-based and image-based payments and are listed along with a brief summary of their scope and purpose.

A.2 ASC X9 TR 2-2005, Understanding, Designing and Producing Checks

This book presents guidelines for the design of a check and describes the proper location of the data elements on the check. Certain elements of check design are recommended by American National Standards Institute (ANSI) standards and are required of all U.S. checks. This book gives references, where appropriate, to such standards. Other elements of check design are optional, and the appropriate choice depends on a user's specific needs. It is, however, hoped that the use of the guidelines in this book will result in greater uniformity in the design of checks, which will improve processing and handling throughout the check processing system.

All guidelines described in this book are compatible with the existing check standards, and should be used to supplement the standards, not to replace them. Certain guidelines may make recommendations that are outside the scope of current standards. Check designers should always, therefore, refer to the details contained in the standards to ensure proper design and control of the format of the check.

A.3 ASC X9/TG-6-2000, Quality Control of MICR Documents

This technical guideline covers all MICR printing and is intended to improve MICR quality via understanding and uniform interpretation of existing standards and specifications of MICR. The basic elements of MICR are defined in existing American National Standards, which are referenced where appropriate.

The purpose of the guideline is to aid existing MICR printers as well as a new and ever expanding producer group in the production and evaluation of MICR documents, and to attain broader MICR print specification conformance. Widespread distribution of these guidelines is encouraged in order to include a wide variety of industry groups.

These guidelines are intended to complement existing standards, not replace them. Those responsible for the quality control process of printing and evaluation of MICR documents should always refer to the details contained in the reference standards as listed in Chapter 2.

A.4 ASC X9/TG-8-2001, Check Security Guideline

Since the late 1980's, increases in losses due to the fraudulent use of checks have grown dramatically. The guidelines in this document are the first effort by the industry to identify the elements of fraud and fraud prevention tools. The purpose of this guideline is to provide to those who participate in the paper document processing system, namely banks, check vendors and merchants, the information they need to educate their employees and customers about fraud, and to identify and implement the fraud prevention programs appropriate for their business.