BTRS Delivers on AFP Feedback on BAI2 Deficiencies
Learn How to Implement it

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Webinar Objectives

The new BTRS standard replaces the old BAI2 Cash Management Reporting Specification – get ready to upgrade!

This session will:

1. Review the history and key elements of the Balance and Transaction Reporting Standard (BTRS)
2. Help you understand how BTRS addresses AFP Survey Responses
3. Teach you how to obtain the new BTRS materials
4. Help you to understand the process required by banks and providers to upgrade to BTRS
5. Review the various tools and assistance that X9 provides to help you implement the standard

Learning Objectives

- Understand the deficiencies of BAI2

- Understand the implications of the latest BTRS innovations

- Recommend actions to take

History of BTRS

The Balance and Transaction Reporting Standard (BTRS)

1. BAI2 Copyright Transferred to Accredited Standards Committee X9, Inc. in 2008

2. AFP Survey Administered in April 2011 by David Bellinger

3. Responses from 1,116 Corporates concluded:

   a) Payments industry has evolved to the point where BAI2 is no longer effective

   b) Customization has resulted in large disparities between banks
      - Inconsistent formats, syntax and transaction codes
      - Too many similar BAI codes
      - Too many unused codes

   c) Difficult and costly to automate data importation into financial systems

4. BTRS Formulated (2012 – 2015) by Banks, Corporates & Treasury Workstation Providers

5. BTRS Version 3 (Feb 2016)

Desired Changes to BAI Codes and Format
(Percent of Respondents)

Standardize the format and implementation guide across all banks	84
Standardize the tags and descriptions like XML—make the information machine and human readable	44
Provide structure/specifications to field 88	37
Minimize the customization in 900-series codes	25

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The New BTRS
A Foundational Release

BTRS will Increase Standardization Across all Banks and Modernize Statement Reporting

Improvements Include:

1. User Guide modernized to include developments in banking and technology over the past 25 years

2. Rationalized and Reduced the number of Status, Summary and Detail codes

3. Globalization:

   – SWIFT and ISO 20022 XML interoperability – Code Mapping and Balance Inclusions

   – Double-byte character set support through the incorporation of UTF-8

   – Added SEPA transaction codes to support new European payment types

   – Modified currency rules to make them mandatory and allow for multi-currency

4. Standardized Extended Wire Remittance in CTP FED/CHIPs Payments Reporting Format (Record 88)

Simplifying the Implementation Process
Moving to the BTRS Standard is a coordinated effort

The Roadmap to Implementing BTRS

1. Corporate Users should:
   - Get a FREE COPY of BTRS Format Guide and Codes List from the X9 website
   - Determine the impact to you back-office systems for the new BTRS Format
   - Ask your banks for their BAI2 to BTRS upgrade plans

2. Banks should:
   - Review the BTRS Implementation Guide
   - Follow the strict syntax format standards for correctly formulated BTRS files and records
   - Provide only codes on the BTRS list (Request New codes via X9)

3. Treasury Workstation Providers should:
   - Review the BTRS Implementation Guide
   - Allow for processing of both BAI2 and BTRS files

Do This Now!

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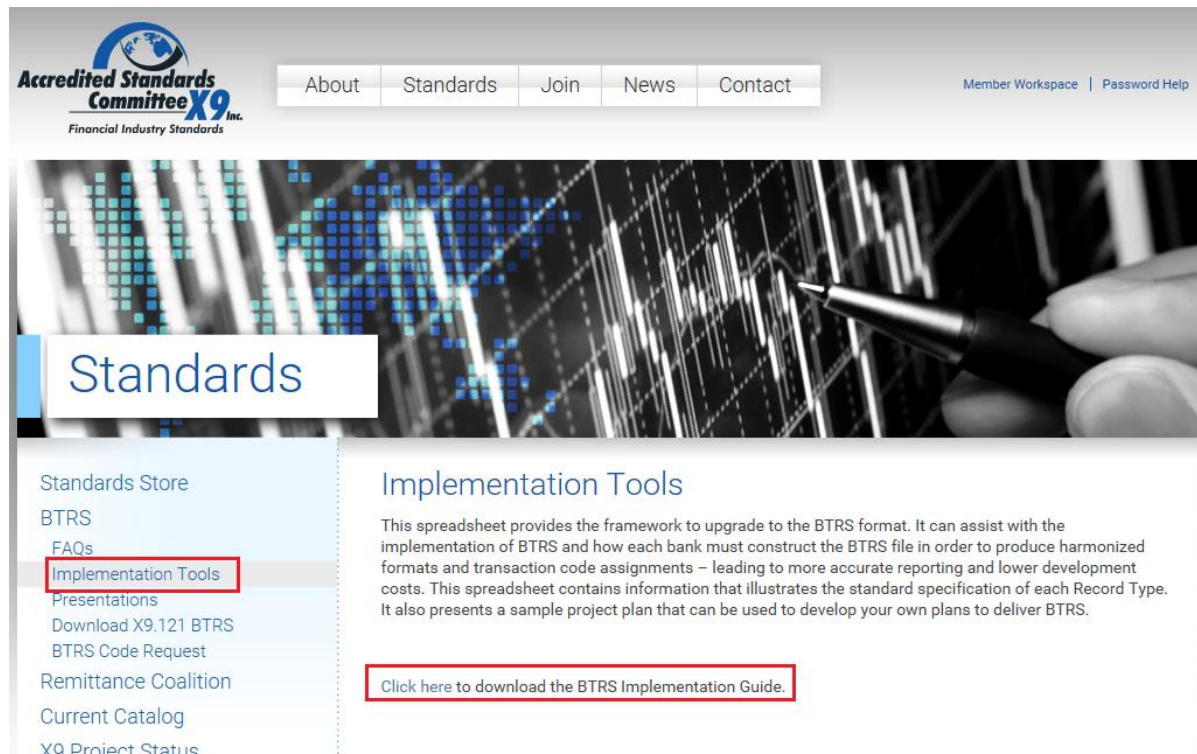
The New BTRS
A Foundational Release

The Roadmap to Implementing BTRS

Visit: http://www.x9.org

Download your Copy of the BTRS Implementation Guide

This Spreadsheet contains several worksheets full of information to assist your BAI2 to BTRS upgrade project.

TAB	DESCRIPTION
Sample Project Plan	A guide that may help provide project governance around a technical project to upgrade from BAI2 to BTRS. It includes some considerations and elements that may not be applicable to every implementation.
Comparison Overview	A summary of all differences between BAI2 and BTRS
01 File Hdr	Details differences on the Record Level
02 Bank Hdr	Details differences on the Record Level
03 Bank Hdr	Details differences on the Record Level
16 Transaction Detail	Details differences on the Record Level
88 Continuation	Details differences on the Record Level
49 Account Trailer	Details differences on the Record Level
98 Bank Trailer	Details differences on the Record Level
99 File Trailer	Details differences on the Record Level
File Layout	A consolidated definition of all Record Types - provided in a spreadsheet format to easily copy into program code.
File Diagram	A Record Type definition in a visual format to better illustrate the components of the BTRS File Structure

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The New BTRS

Getting Started

The Roadmap to Implementing BTRS

Project Planning Phase

- File Inventory and Analysis

- BAI2 Applications Impact

- Code Analysis

- Sales Materials Evaluation

- Client Onboarding Procedures

- Client Support Materials

- Technical Support Training

1	**Analysis Phase**
1.1	BTRS Type Codes
1.1.1	Identify all Applications that use BAI2 Codes
1.1.2	Review the Retired Status, Summary and Detail Codes to determine mapping rules
1.1.3	Review the New Status, Summary and Detail Codes to determine mapping rules
1.2	BTRS User Guide
1.2.1	Review the "Version Control" to learn the Changes/Differences from BAI2
1.2.2	Study the format of every Record Type to learn about the Standards, Placement, Rules and Best Practices.
1.3	BTRS Comparison Overview
1.3.1	Study the "Comparison Overview" tab within this Implementation Spreadsheet
1.3.2	Study the differences and understand what has not changed within each Record Type.
1.4	File Construction
1.4.1	Study the "File Layout" & "File Diagram" tabs within this Implementation Spreadsheet
1.4.2	Document the differences between code list for BAI2 and BTRS
1.4.3	Document the differences between the records/layout for BAI2 and BTRS
1.5	BTRS Delivery Design
1.5.1	Determine how clients will receive a BTRS File (e.g., Online, Transmission, etc.) and if current BAI2 clients will remain or be offered to upgrade to BTRS.
1.5.2	Determine impact to Implementation Procedures (onboarding)
1.5	Filtering Preparation
1.5.1	Understand the applications that will support BAI2
1.5.2	Confirm the applications that will supports BTRS
2	**Requirements and Responsibilities**
2.1	Write User Agile Stories or Business Requirements
2.1.1	Continue to support BAI2
2.1.2	Add ability to support BTRS
2.2	Changes with the codes
2.2.1	Determine the requirements, based on "BTRS Type Codes" Section 1.1
2.2.2	Determine requirements for supporting both BAI2 and BTRS
2.3	Changes with the records
2.3.1	Determine the requirements, based on "BTRS User Guide" Section 1.2
2.3.2	Determine the requirements, based on "BTRS Comparison Overview" Section 1.3
2.3.3	Determine the requirements, based on "BTRS Comparison Overview" Section 1.3
2.4	Client Communication
2.4.1	Create client notification materials
2.4.2	Prepare User Guides and Test File samples
2.5	Change Readiness
2.5.1	Determine changes to Sales Marketing Materials

Introduction **Sample Project Plan** Comparison Overview 01 File Hdr 02 Bank Hdr 03

The New BTRS
Getting Started

The Roadmap to Implementing BTRS

File Construction Analysis

− Field-by-Field

− Most fields N/C

BTRS File Comparison to BAI2 - Overview

01 File Header		Begins the File
02 Group Header		Begins a Group
03 Account Identifier		Begins an Account
88 Continuation (Optional)		Reports additional information related to a specific Account
16 Transaction Detail (Optional)		Reports one specific Transaction
88 Continuation (Optional)		Reports additional information related to the specific Transaction
49 Account Trailer		Ends an Account
98 Group Trailer		Ends a Group
99 File Trailer		Ends the File

| RECORD	FIELD	NOTES
01 and 02	Military Time	For the purpose of Information Reporting, the general guideline is that 0000 indicates the beginning of the day and 2400 indicates the end of the day for the date indicated. However 0000 and 2400 both represent "midnight" in military format, the usage varying by organizations and applications. To avoid confusion and minimize conflicts with downstream applications, the best practice is to avoid
01	Version Number	Version Numbers 1 and 2 are reserved for BAI; Version Number 3 indicates BTRS.
02	As-of Date Modifier	In BAI this field was Optional and used for reference only; in BTRS the field is Mandatory. The BAI field designator of 1 for "Interim Previous Day Data" has been retired and should not be used.
02	Currency Code	In BAI this field was Optional and defaulted to USD. In BTRS the field is not used in Record 02. The Currency Code is only required at the account level in Record 03 since a single bank may report accounts with different currencies. In Record 02, no value is reported but the
03	Currency Code	In BAI this field was Optional and defaulted to USD. In BTRS the field is Mandatory and based on international standard ISO 4217. The Currency Codes are the same as those used by SWIFT.
03 and 16	Type Code	Many BAI2 Type Codes have been retired and are no longer used in BTRS; refer to the" X9.121 BTRS Version 3 Codes List" available on the X9.org site for a detailed list of viable BTRS Type Codes. Detail Type Codes are mapped to specific Summary Type Codes. If Summary Codes are included, they must correspond to the correct
03	Amount	In BAI this field was Optional, depending on the specific Type Code reported. Similarly in BTRS, this field is Conditional and dependent on the preceding Type Code. Including a Status or Summary Type Code with no Amount indicates that no amount is being reported (a
03 and 16	Funds Type	Funds Type "D" (Distributed Availability) is not used in BTRS. In BAI the Funds Type is Optional in Record 16. In BTRS the field is only optional for Detail Type Code 890, which is used for non-
16 and 88	Language	Characters must apply the UTF-8/Multi-byte format to allow for single byte and double byte character sets.
88	(Next Field)	Refer to complete ANSI X9.121 documentation for detailed instructions on reporting Fedwire/CHIPS Wire Remittance Information and Batch Detail Invoice information in the BTRS 88 Record.

Introduction | Sample Project Plan | Comparison Overview | 01 File Hdr | 02 Bank Hdr | 03 Account Hdr | 16 Transaction Detail | 88 Continuation | 49 Account Trailer | 9

The New BTRS
A Foundational Release

The Roadmap to Implementing BTRS

Download your Copy of the <u>BTRS Format Guide</u>
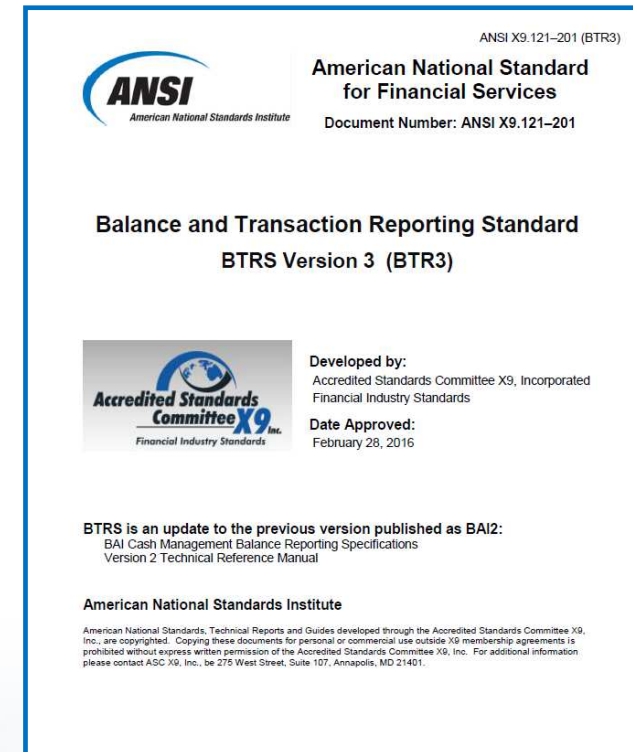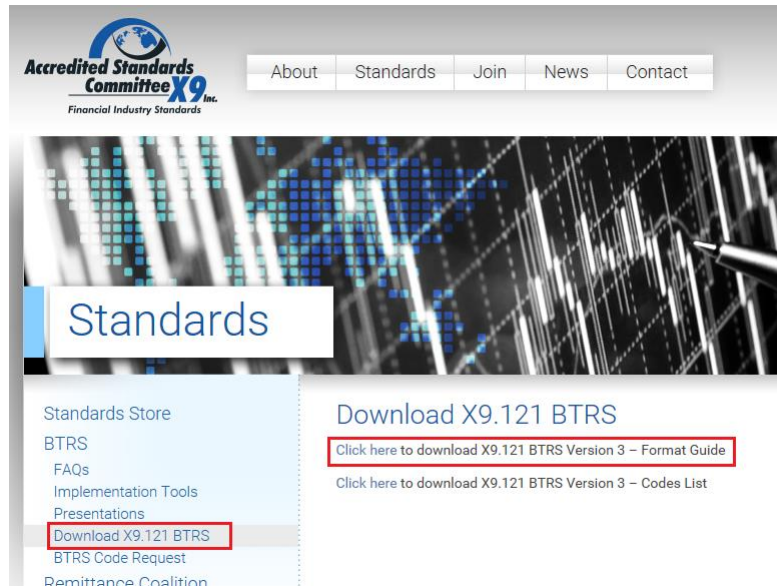
The Roadmap to Implementing BTRS

1. Download the User Guide
   - Totally rewritten as a technical guide for Programmers
   - Record definitions are placed in a table providing attributes
   - Definition of rules, placement, and best practices

2. Read the "Version Control" section

3. What does NOT change:
   - Syntax
   - No new positional fields
   - 88, 49, 98, 99 Records

3.4 TRANSACTION DETAIL – Record 16

The Transaction Detail Record reports each credit and/or debit with accompanying text and reference numbers. The Record 88 can be used to continue a Record 16.

#	Field Name	Field Description	Status	Length	Type	Value or Format
1	Record Code	The 2 digit code that signifies the Transaction Detail. Placement 1: Follows a '03, '16', or '88' Record Placement 2: If a "message only" file, the Record 16 with a code 890 (information text) can follow the Record 01. Rule: One '16' Record Code per credit or debit transaction within an Account in the same Bank Group. Unlimited transactions per Account.	M	2	Numeric (Integer)	16
2	Detail Type Code	Identifies the type of Detail information reported Rule 1: Must be a valid BTRS Detail Code Rule 2: If a custom Detail Code is used, it must be within the valid range defined in the X9 BTRS Code List Rule3: The value cannot be a Status or Summary Code Source: X9 BTRS Code List - Detail	M	3	Numeric (Integer)	
3	Amount	The amount stated in the reported Currency Code (Record 03 Field 3) Note: Only optional for Detail Type 890 , see "Type Code for Non-monetary Information" Rule 1: The Currency Code will determine the implied decimal place. Rule 2: The sign of this Amount field is always positive Defaults: Default for the sign is positive "+". Best Practice: Positive numbers do not include "+" Note: See the definition of "Amount" in Section 6 for format examples.	M	1-23 If not signed 1-24 if signed (including sign)	Numeric (Integer)	Expressed without a decimal Does not include periods or commas Can only be signed positive "+"

The New BTRS

A Foundational Release

The Roadmap to Implementing BTRS

1. Download the <u>BTRS Codes List</u>
   - Visit: http://www.x9.org

2. Read "Read Me" worksheet that explains how to use the code list

3. Review the Codes
   - Status, Summary & Detail
   - Complete Code List and Disposition (see chart to the right) that contains all codes, including those retired and the BTRS code they now map to.
   - File Layout for Programmers (BTRS Layout tab)

Type	Code	Description	Maps to BTR2 Code	Disposition from BAI2
Summary	100	Total Credits	100	Retained
Summary	101	MTD TOTAL CREDIT AMOUNT	390	Retired
Summary	105	CREDITS NOT DETAILED	390	Retired
Summary	106	DEPOSITS SUBJECT TO FLOAT	390	Retired
Summary	107	TOTAL ADJUSTMENT CREDITS YTD	390	Retired
CR	108	CREDIT (ANY TYPE)	399	Retired
Summary	109	CURRENT DAY TOTAL LOCKBOX DEP.	110	Retired
Summary	110	Total Lockbox Deposits	110	Retained
CR	115	Lockbox Deposit	115	Retained
CR	116	ITEM IN LOCKBOX DEPOSIT	115	Retired
CR	118	LOCKBOX ADJUSTMENT CREDIT	357	Retired
Summary	120	EDI TRANSACTION CREDITS	390	Retired
CR	121	EDI TRANSACTION CREDIT	165	Retired
CR	122	EDIBANX CREDIT RECEIVED	165	Retired
CR	123	EDIBANX CREDIT RETURNED	257	Retired
Summary	130	TOTAL CONCENTRATION CREDITS	140	Retired
Summary	131	TOTAL DTC CREDITS	140	Retired
CR	135	DTC CONCENTRATION CREDIT	399	Retired
CR	136	ITEM IN DTC DEPOSIT	174	Retired
Summary	138	Total SEPA Credits	138	New
CR	139	SEPA Return Credit	139	New
Summary	140	Total ACH Credits	140	Retained
CR	141	SEPA Credit Transfer	141	New
CR	142	ACH CREDIT RECEIVED	165	Retired
CR	143	ITEM IN ACH DEPOSIT	165	Retired
CR	144	SEPA Adjustment Credit	144	New
CR	145	ACH CONCENTRATION CREDIT	165	Retired
Summary	146	TOTAL BANK CARD DEPOSITS	390	Retired
CR	147	INDIVIDUAL BANK CARD DEPOSIT	174	Retired
Summary	150	TOTAL PREAUTH PAYMENT DEPOSIT	140	Retired
CR	155	INDIV PREAUTH DRAFT CREDIT	165	Retired
CR	156	ITEM IN PAC DEPOSIT	174	Retired
Summary	160	TOTAL ACH DISB FUNDING CREDITS	167	Retired
Summary	162	CTP SETTLEMENT	390	Retired
Summary	163	CTP CREDITS	390	Retired
CR	164	CTP CREDIT	165	Retired
CR	165	ACH Received	165	Retained
CR	166	ACH Originated Settlement	166	Retained
Summary	167	Total ACH Settlement Credits	167	Retained
CR	168	ACH Originated Settlement - Return	168	Retained
CR	169	ACH Miscellaneous	169	Retained

Key Elements of the new BTRS Standard
Status & Summary Codes

The Roadmap to Implementing BTRS

Status Codes

1. 28 Codes Deleted

2. NEW - Opening Available (035) = Balance on the date reported

3. ISO & SWIFT Interoperability

Summary Codes

1. 92 Codes Deleted

2. 1 Summary Code asigned to 1 Detail Code

3. Always include Codes 100 (Total CR) & 400 (Total DR)

4. Globalization - Rename "Float" to "Available"

Type Code	Status Code Descriptions	ISO Family	ISO Sub-Family	SWIFT	Current Day	Prior Day
010	Opening Ledger	OPBD	OpeningBooked	:60F:		YES
015	Closing Ledger	CLBD	ClosingBooked	:62F:		YES
020	Average Closing Ledger MTD					
025	Average Closing Ledger YTD					
030	Current Ledger	ITBD	InterimBooked	:62M:	Yes	
035	Opening Available	OPAV	OpeningAvailable	:65:		
040	Opening Available Next Business Day	FWAV	ForwardAvailable	:65:		
045	Closing Available	CLAV	ClosingAvailable	:64:		YES
050	Average Closing Available MTD					
055	Average Closing Available YTD					
057	Investment Sweep Position					
060	Current Available	ITAV	InterimAvailable	:65:	YES	

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Key Elements of the new BTRS Standard
Example: Standardizing ACH Detail Codes

The Roadmap to Implementing BTRS

Detail Code Normalization
- 110 Obsolete or Redundant Codes Deleted
- Established a Complete and Clear set of Codes
- Each Detail code mapped to only 1 Summary Code
- Interoperability between BTRS, ISO & SWIFT

Globalization
- Added SEPA Codes
- Mandates ISO 4217 (currency codes)
- Local Language (UTF8 e.g., Chinese)

Type	Detail Code	Summary Code	Description	ISO Domain	ISO Family	ISO Sub-Family	SWIFT
CR	169	140	ACH Miscellaneous	PMNT	RCDT	ATXN	DDT
DB	469	450	ACH Miscellaneous	PMNT	ICDT	ATXN	DDT
CR	166	167	ACH Originated Settlement	PMNT	RCDT	ASET	STO
DB	466	450	ACH Originated Settlement	PMNT	ICDT	ASET	STO
CR	168	167	ACH Originated Settlement - Return	PMNT	ICDT	ARET	RTI
DB	468	467	ACH Originated Settlement - Return	PMNT	RCDT	ARET	RTI
CR	165	140	ACH Received	PMNT	RCDT	ACDT	DDT
DB	455	450	ACH Received	PMNT	ICDT	ADBT	DDT
CR	257	256	ACH Received - Return	PMNT	ICDT	ARET	RTI
DB	557	450	ACH Received - Return	PMNT	RCDT	ARET	RTI
CR	141	140	ACH SEPA Transfer	PMNT	ICDT	ESCT	STO
DR	441	450	ACH SEPA Transfer	PMNT	ICDT	ESDD	STO

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The Roadmap to Implementing BTRS

1. <u>X9</u> will:
    - Provide a "BTRS Evaluator" – upload your file and conduct a file/record validation (coming 3Q2016)
    - Drive the Industry to adopt BTRS Quickly, to gain Maximum Benefits
    - Keep BTRS 'Fresh'
    - Conduct Webinars on how banks, vendors, and users should Implement BTRS
    - Provide Technical Assistance

2. You should:
    - Tell your banks YOUR requirements for upgrading

3. Banks should:
    - Begin to offer the BTRS format within 12 - 18 months

4. Treasury Workstation providers should:
    - Begin to accommodate the BTRS format within 12 - 18 months

Remember, YOU asked for BTRS!

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Simplifying the Implementation Process
The BTRS Standard is Dynamic

Desired Changes to BAI Codes and Format
(Percent of Respondents)

Standardize the format and implementation guide across all banks	84
Standardize the tags and descriptions like XML—make the information machine and human readable	44
Provide structure/specifications to field 88	37
Minimize the customization in 900-series codes	25

What's Next for BTRS Version 4?

1. <u>Evaluate New Codes</u>

   – Ongoing, based on Need

2. <u>Batch/Item Reporting</u>

   – Provide "hierarchical" Reporting

3. <u>Standardize Narrative Text</u>

   – Normalize Sender and Receiver Payment information

   16,195,240000000,0,BBBBB,CCCCC/
   88,FUNDS TRANSFER=
   88,RCVD FROM=
   88,ORG=
   88,RFB=

16,115,80000,s,30000,0,50000,2222222222,8888888888/
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Resources
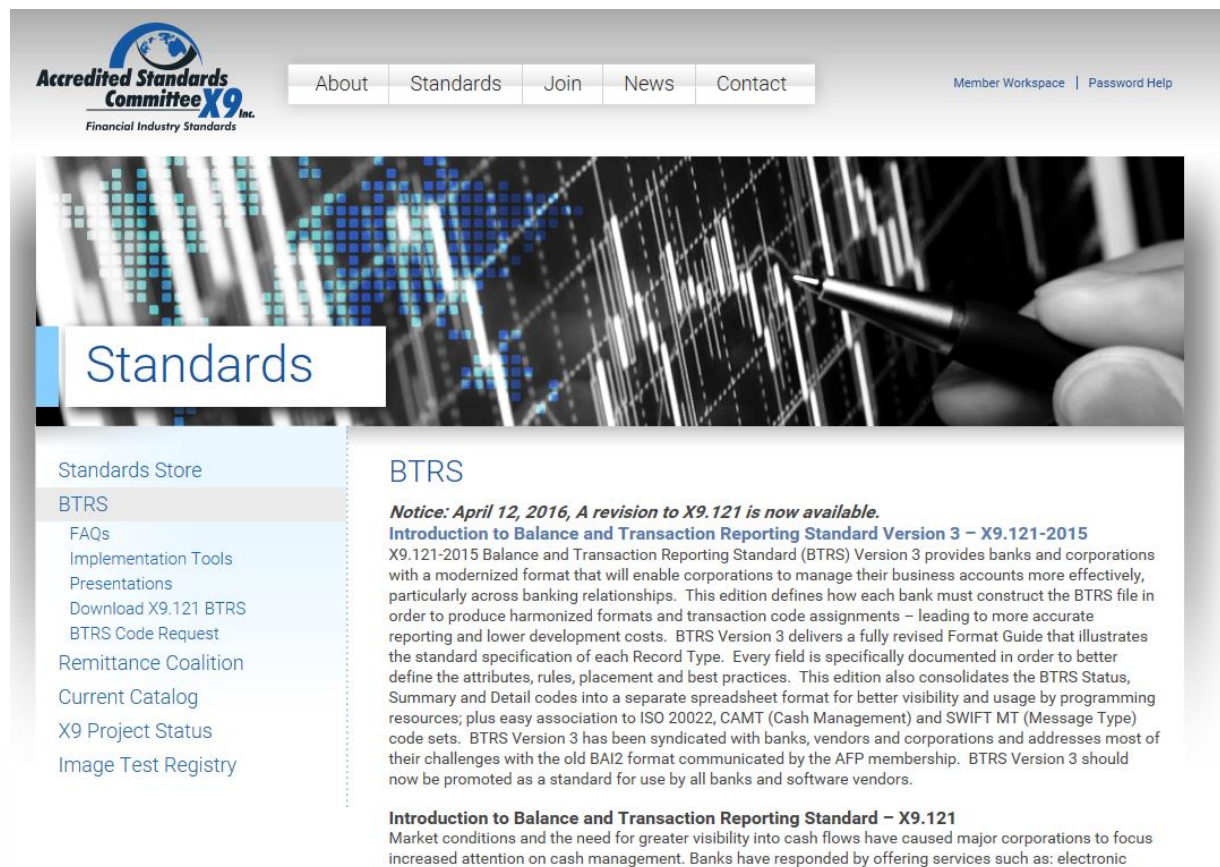
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Industry Perspective
Other Industry Solutions – X9 BTRS

The Balance and Transaction Reporting Standard (BTRS)

Visit: http://www.x9.org

The New BTRS
What if I need a new Code?

The Roadmap to Implementing BTRS

By instituting BTRS under "Continuous Maintenance", changes are readily adopted.

<u>Step 1</u>:
Request the new code via X9 Website.

CLASSIFY THE PROPOSED TRANSACTION
Please classify the proposed new transaction code.

*Proposed Transaction Name:

*Proposed Transaction Description

*Code Type

Name Related Code

Code Another Format? (If the proposed code(s) exist in another format (e.g., SWIFT, ISO), what is code?):

JUSTIFICATION FOR NEW CODE

Please justify the need for the proposed new transaction code.

Why is This Code Needed?:

<u>Step 2</u>:
If urgently required, use 900 series codes until X9 assigns a new code

Type Codes	Description
001-099	Account status type codes
100	Total credits summary type code
101-399	Credit summary and detail type codes
400	Total debits summary type codes
401-699	Debit summary and detail type codes
700-799	Loan summary and detail type codes
900–919	Custom account status codes
NEW 920–959	Custom credit summary and detail
NEW 960–999	Custom debit summary and detail

Table 1 Type Code Ranges

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Industry Perspective
Other Industry Solutions – X9 BTRS

Contact Us

Visit: http://www.x9.org

Resources

AFP Member Website   http://www.afponline.org/

Questions

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Biography

David Repking

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David Repking is an Information Reporting Product Manager within J.P. Morgan Treasury Services worldwide. Current responsibilities include Host-to-Host Reporting Channel, Receivables and Advise Reporting, ACH Reconcilement Services, and Data Quality. He has been a leader in Cash Management Treasury applications for more than 25 years.

David is Chairman of the ANSI X9C1 Workgroup that recently published the new BTRS standard for Balance and Transaction Reporting, revising and modernizing the BAI2 Specification. (Visit X9.org) He is also a member of the X9 Remittance Coalition.

J.P. Morgan is a leader in financial services, offering solutions to clients in more than 100 countries with one of the most comprehensive global product platforms available. We have been helping our clients to do business and manage their wealth for more than 200 years. Our business has been built upon our core principle of putting our clients' interests first.

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