

Remittance Coalition

B2B Directory Concept Paper

September 2014

These materials have been created by the Remittance Coalition and are intended to be used as resources. Views expressed here are not necessarily those of, and should not be attributed to, any particular Remittance Coalition participant or organization. They are not intended to provide business or legal advice, nor are they intended to promote or advocate a specific action, payment strategy, or product. Readers should consult with their own business and legal advisors.

B2B Directory

Illustrative Business requirements and solution options

Contents

What is the B2B Directory?.....	2
History of the B2B Directory Project.....	2
Purpose of Document and Cautions	2
What problem does the B2B Directory seek to address?	2
Barriers to electronic payment adoption.....	3
Electronic payments need specialized information.....	3
The purpose and characteristics of the B2B Directory	4
Requirements of the Directory	4
1. Requirement: Payee Identification	4
2. Requirement: Trust and Validation of a Payment Identity	5
3. Requirement: Directory entry updates.....	5
4. Requirement: Administrative Functions	6
What is an Electronic Payment Identity?.....	6
Example of a Corporate Payment Network	7
Example of multiple payment methods.....	7
How are payments initiated?.....	8
Trust and validation of a Payment Identity	8
Payee onboarding and Directory ID (DID).....	9
DID operations and management.....	9
Remittance Specification	10
Payment Identity.....	11
Directory entry updates	12
Security and Privacy	13
Security and Privacy: Host Controlled.....	13
Security and Privacy: Payee Controlled	13
Privacy Policy: examples	14
Querying and using the directory	15
Directory Use Cases	15
Administrative Functions	17
Business model and driving adoption.....	17
Directory delivery: centralized and distributed	18
B2B Directory: centralized access, distributed management.....	18

B2B Directory

Illustrative Business Requirements and Solution Options

What is the B2B Directory?

The Business-to-Business (B2B) Directory is envisioned as a database of payees. It will allow payers to find the information needed to make payments to their payees electronically.

The B2B Directory will serve as a utility. It will store, manage, and look-up the electronic information (i.e., “the identity”) of a payee, including account and payment information. The main goal of the B2B Directory is to help U.S. corporations increase their use of domestic electronic payments and related business information to their business payees. [The terms “business,” “corporation,” and “B2B” when used in this document include for-profit businesses, not-for-profit organizations, and government entities.]

The Directory will be accessed from a central point, but will be architected as a “directory” of directories. Accordingly, it will connect numerous hosting directories that list their own payees (“Host Directories”). Each Host Directory will provide trusted, validated information about their payees.

History of the B2B Directory Project

The B2B Directory described in this document is a specific initiative of the Remittance Coalition (RC). The RC is a voluntary coalition of nearly 400 individuals and organizations representing financial institutions, corporations, B2B payments solution providers, standards developers, government entities, and others. All RC members share an interest in improving the efficiency of B2B transactions by making B2B payments and related information more electronic and automated from end-to-end.

Purpose of Document and Cautions

This document is the work product of a small group of corporates, payment operators, and payment service providers documenting the discussions for the purpose of framing an industry challenge, potential solutions and potential requirements. Its goal is to facilitate discussion with the broader industry. Given limited space and time, it will invariably not be detailed enough on every topic. Furthermore, many topics in this document have many flavors to them which makes documenting them a difficult task. **As a result, this document is intended to facilitate discussion and not intended to be used as a definitive model or approach.** The contributors to this document look forward to discussions to refine ideas and help gain buy-in for potential paths forward.

What problem does the B2B Directory seek to address?

Business-to-business payments are made largely by paper check. The Association for Financial Professionals (AFP) 2013 study of B2B payment practices¹ found that companies with \$1 billion and more in annual revenues (large business) still make over 50% of their payments by paper check. Other industry studies show that small, medium, and middle market companies – companies with up to \$1

¹ 2013. JP Morgan. “2013 AFP Electronic Payments Survey.” <http://www.afponline.org/epayments/>

B2B Directory

Illustrative Business Requirements and Solution Options

billion in annual revenue – make 60% to 90% of their payments by paper check. Generally, the smallest companies use the most paper checks.

Despite the high current use of paper checks, businesses report that they are not a preferred form for making or receiving B2B payments. Compared to electronic methods, checks are expensive to issue, slow to reach payees, inefficient to handle, and vulnerable to fraud and other risks. Businesses annually make 10 to 15 billion payments by paper check – costing an estimated \$20 to \$50 billion to issue, deposit, and apply. Thus, it is highly desirable to provide alternatives.²

Barriers to electronic payment adoption

Businesses face many barriers that limit their ability to convert paper check payments to electronic payments. Primary barriers include, but are not limited to:

1. Difficulty of accessing electronic payments products: small, medium, and middle market companies do not have easy access to Automated Clearinghouse (ACH)³ payments.
2. Inability of electronic payment solutions to effectively convey associated remittance information from payer to payee in a simple, ubiquitous, automated manner.
3. Inability for payers to find easily, manage, and use the electronic payment identity of their payees and vendors.

Electronic payments need specialized information

One significant reason for the sustained popularity of checks is their ubiquity and ease of use. Payers are able to make a check payment while knowing very little about the payee (minimally, they need to know the payee's name). In contrast, electronic B2B payments require a lot more information about the payee. This information is often difficult to access, given its sensitivity, security requirements, and transience.

For example, to make a payment by ACH, the payee needs to disclose, and the payer needs to manage, the following information that represents the payee's **Electronic Payment Identity (EPI)**.

- Bank Routing Number
- Bank Account Number
- Type of Payee
- Payment Methods Accepted
- Format and Content of Remittance Detail

² The project team acknowledges other efforts, past and present, that share our goal of moving business payments to electronic payment mechanisms. These efforts, by industry groups as well as individual companies over the past decade and longer, illustrated the difficulties to be encountered when trying to solve these problems. The Remittance Coalition, nonetheless, brought together a group of interested parties to leverage more recent findings and technologies in an effort to create a usable solution.

³ The ACH is a batch processing, electronic payment system that clears & settles most payments it handles in one day.

B2B Directory

Illustrative Business Requirements and Solution Options

The purpose and characteristics of the B2B Directory

The electronic payment identity of a payee is more complex than what is needed by a payer to issue a paper check. This complexity can impede the adoption of electronic business payments. The B2B Directory is designed to address this complexity. Accordingly, the Directory has certain key features.

1. **The B2B Directory is a directory of payees.** It will serve as a utility that is used to store, manage, and look-up the EPI (Electronic Payment Identity), making it easier for U.S. corporations to pay their business payees electronically.
2. **The B2B Directory is NOT a payment system: it does not deliver payments.** Rather, it delivers information about payees and information about their payment methods. In particular:
 - It is open.
 - It is trusted.
 - It is secure.
 - It enables the storage, management, and look-up of Electronic Payment Identities, including accepted payment methods and requested remittance information.

Requirements of the Directory

The directory must fulfill the following business requirements.

1. Requirement: Payee Identification

First and foremost, the payer must be able to identify the correct payee to pay. There must be sufficient information to assure the payer that a correct choice can be made between similar payee names.

Payees must specify “Doing Business As” (DBA) and/or other entities that can receive payments using their EPI. Alternatively, one EPI may be specified for each different DBA or entity that can receive payments for the payee. The directory must have query capabilities that will return this information to payers.

Payees may also designate payment methods they can and will accept, along with required or preferred remittance information to be sent with each payment.

Payees will have choices about the privacy of their account and other information. For example, some payees may want to keep their bank account information private and only publish aliases or other “tokens”⁴ in the directory.

The directory specifies that an **Electronic Payment Identity** will fulfill the following requirements:

⁴ A payment “token” can be defined as a randomly generated number that replaces non-public personal information.

B2B Directory

Illustrative Business Requirements and Solution Options

- Include data elements sufficient to support the intended uses, such as address, contact information, payment account details, and requested or required remittance specifications
- Provide a unique identifier for payee
- Allow the payee to determine the privacy of EPI information
- Ensure that the payee owns the information in the directory
- Ensure that the correct payee identification is clear between similar names.

The EPI may also provide for the following:

- Identify payment methods accepted by a payee
 - The Directory is payment method agnostic and will support all major payment platforms, such as ACH, Corporate Payment Networks⁵, card networks, etc.
- Allow listing of related payees, such as subsidiaries and DBAs.
- Allow listing of other EPIs for related payees with different payment information.

2. Requirement: Trust and Validation of a Payment Identity

An Electronic Payment Identity must be **trusted** in order to assure that the payment made will be correct—i.e., received by the intended payee to the correct payee bank account. Thus, the Directory must have a standard, enforced certification process for payee directory information. Contributing Host Directories, such as financial institutions as well as Corporate Payment Networks and credit card companies, must certify any payee information they publish to the Directory consistent with the standard process. In summary, the Directory will:

- Provide a standard mechanism (process) to validate data within the Directory.
- Require new directory participants to go through the standard certification process to protect the integrity of the Directory system overall.
- Interoperate with contributing directories (i.e., Host Directories) to enable broad payee participation, including those using established, proprietary services.

3. Requirement: Directory entry updates

Payee's information needs to be up to date (including the ability to make key intra-day changes in near real-time), which includes adding, modifying and deleting payees, as well as account and related information. As payee information is updated, the changes will be made available to interested payers.⁶ Accordingly, the Directory will:

- Enable easy, near-real time entry updates by contributing Host Directories and payees Hosts.
- Provide a mechanism to ensure payers have timely access to current information

⁵ Corporate payment networks facilitate the procure-to-pay process between buyers and sellers, generally using closed systems. They usually include directories and may offer payment execution. Examples include Ariba, Bottomline's Paymode-X, and VendorIn.

⁶ The group has discussed the potential for allowing directory users to "subscribe" to a service that would "push" directory updates to them for payees that they regularly deal with. This will be explored further in the next phase of the project.

B2B Directory

Illustrative Business Requirements and Solution Options

- Support manual (i.e., by email) and automated updates for payers (i.e., uploadable and downloadable)

4. Requirement: Administrative Functions

The Directory must support various administrative functions. It must be able to:

- Upload and download directory entries, including single and multiple entries, both manual and automated, in near-real time.
- Provide functionality to bill users (hosts/payers/payees) as determined by the business model.
- Use commercially-acceptable protection (e.g., encryption, tokens) for data “at rest” (i.e., stored) and “in flight” (i.e., moving across communications platforms).
- Provide commercially acceptable user controls for host providers, payees and payers. This includes access management and entitlements and appropriate methods of user authentication (e.g., User ID, password, tokens, and additional credentials). This also includes user maintenance.
- Provide commercially acceptable backup and recovery.
- Maintain historical data as needed.

5. Business Model Principles

Development of a business model for the B2B Directory will be guided by the following principles.

- The Directory is an industry utility that seeks to be broadly accessible and not a profit maximizing service.
- Any costs or revenues associated with the Directory will be consistent with the nature of an industry utility.
- The cost to payees to participate in the Directory will seek to incent adoption and reflect the value they derive.
- The cost to payers to use the Directory will seek to incent adoption and reflect the value they derive.
- The cost to Directory Hosts to connect to the Directory will seek to incent adoption and reflect the value they derive.
- The Directory will seek to complement existing business models of payees, payers, or Directory Hosts.

What is an Electronic Payment Identity?

Requirement: Payee Identification

The B2B Directory contains a list of **Electronic Payment Identities (EPIs)**.

An EPI is the information needed by the Payer to successfully fulfill a payment to the Payee’s satisfaction. An EPI can include the payment methods accepted by the payee and requested or required remittance information.

The B2B Directory enables secure storage, management, and look-up of EPIs.

B2B Directory

Illustrative Business Requirements and Solution Options

Following is an example of an EPI that includes required remittance information:

The State of California Franchise Tax Board (the payee) requires payers to send tax payments by ACH Credit in the CCD+TXP format, with remittance information formatted to conform to the specification in FTB3842A. The B2B Directory EPI for the State of California Franchise Tax Board may contain the following information

DID: XBG122
Name: State of California Franchise Tax Board
Address: FRANCHISE TAX BOARD, PO BOX 1468, SACRAMENTO, CA, 95812-1468
Payment Type: ACH Credit, CCD+TXP
RTN: 10242221
DDA: 111222333
Remittance Spec: <https://www.ftb.ca.gov/businesses/eft/3842A.pdf>

This payee requires specific remittance information that must be supplied along with the payment. In the example, the payee's remittance specification is contained within the document identified by the URL link.

Example of a Corporate Payment Network

The payee is a large enterprise that uses a Corporate Payment Network (e.g., PayMode-X from BottomLine Technologies) to receive payments. The B2B Directory EPI for each payee in this Corporate Payment Network may contain the following information

DID: GYH332
Name: Robert Quarter International, Inc.
Address: 2884 Sand Hill Road, Menlo Park, CA 94025
Payment Type: PayMode-X
Paymode-ID: 0453341
Remittance Spec: PayMode Standard

The remittance specification for payments initiated through the PayMode-X network is assumed to be well understood by network participants ("PayMode Standard") and so is specified elsewhere.

Example of multiple payment methods

Example: UniFirst Corporation accepts multiple payment methods.

Corporate Card Services (CCS is a fictitious company) is a merchant aggregator that provides a debit card based "push" payment service to business payers. Payers use their business debit cards to pay vendors in the CCS network; vendors in the CCS network receive notification of guaranteed funds and remittance in real-time. UniFirst Corporation also accepts PayPal payments. Thus, the EPI for UniFirst Corporation may contain the following information:

DID: TYC667
Name: UniFirst Corporation.
Address: 68 Anywhere Road, Nowhere MA, 01887

Payment Type: CCS
CCS-ID: AR@unifirst.com
Remittance Spec: Standard 1

B2B Directory

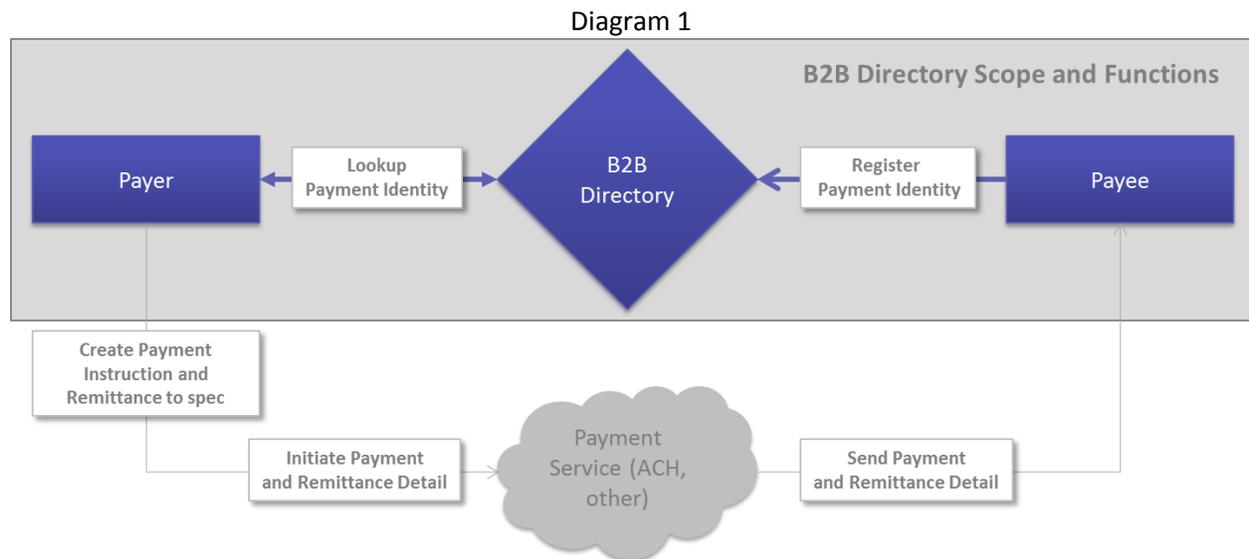
Illustrative Business Requirements and Solution Options

Payment Type: PayPal
PayPal-ID: AR@unifirst.com
Remittance Spec: Standard 2

The remittance specification could be different for each payment method. The payee can provide detail under each listing.

How are payments initiated?

The B2B Directory is not a Payments System or Payments Network. Payers obtain the EPI of the Payee from the directory to construct the payment request, and then use a traditional payment channel to process the payment, as shown in Diagram 1.



Trust and validation of a Payment Identity

Requirement: Trust and validation of a payment identity

Implementing the B2B Directory contemplates the creation of an organization responsible for governing the B2B Directory – i.e., the Directory Association (DA). The DA authorizes trusted Directory Hosts that provide individual payee information. Thus, the B2B Directory will be supported by a centralized/distributed model: the central DA consolidates look-up among the distributed Directory Hosts.

- Examples of potential Directory Hosts: banks, Payment Service Providers, or Payment Networks. The EPI of a payee in the Directory is expected to be managed by their corresponding Directory Host. A Directory Host must vouch for the validity/correctness of payee information it controls at the time the EPI Directory entry is created.
- Example: Bank A vouches for the RTN/DDA information entered into the Directory for its business client receiving payments into a Bank A DDA as of mm/dd/yy

B2B Directory

Illustrative Business Requirements and Solution Options

- Example: Service Provider B vouches for the ID entered into the Directory for a payee in its Network as of mm/dd/yy

Payee onboarding and Directory ID (DID)

Requirement: Payee Identification

Payees will be on-boarded initially into the Directory by an authorized Directory Host. A payee must use a Directory Host so that their payment information can be validated by the Host, who certifies the information at the time entered. When a payee is on-boarded into the Directory, they are assigned a Directory ID (DID). The format for the DID is still under development. For example, a DID might be a randomly assigned alphanumeric string (BGH54D32). Another option might allow payees to reserve a descriptive DID (for a commensurate fee).

The DID is unique, and uniquely identifies the payee. It is the responsibility of the payee to provide sufficient detail, such as payee name(s) and remittance address(es) to enable payers to positively and uniquely identify them. The payee may be an enterprise or the subsidiary of an enterprise. The DID is intended to be public information and to be openly shared by the payee with its payers and trading partners.

An enterprise can have more than one DID, and may support DBAs sharing a DID. For example:

- Each subsidiary or DBA of an enterprise may be designated to receive payments to a parent DID, in which case, individual DBAs or payee names would be directed to the parent DID.
- An enterprise may choose to maintain different DIDs for each payment method it accepts (e.g., ACH payments are identified by DID1 and Corporate Payment Network payments are identified by DID2)
- An enterprise may choose to have separate DIDs for individual subsidiaries, DBAs, or operating units.

Once assigned, the DID “belongs” to the payee to which it is assigned, as long as the account is in good standing. This means that the DID is portable and can move with the payee, even if the payee changes their Directory Host provider.

DID operations and management

Requirement: Trust and validation of a payment identity

A DID is initially assigned to a payee by a Directory Host. A DID can be updated and deleted. Payees can manage their DIDs for changing circumstances. Following are examples of how a DID may be managed:

1. Two DIDs managed by a Directory Host can be merged into one surviving DID.
 - Example: A payee (Organization A) was assigned the DID “FG45YT56” by their Directory Host, Bank A. Another payee (Organization B) was assigned the DID “GH34YU67” by their Bank. Organization A acquires Organization B. Organization A requests Bank A to merge the information from the original two DIDs into the DID “FG45YT46.”

B2B Directory

Illustrative Business Requirements and Solution Options

2. A payee can request a Directory Host to merge a DID managed by another Directory Host
 - Example: A payee (Organization A) was assigned DID “FG45YT56” by their Directory Host, Bank A. Another payee (Organization B) was assigned DID “GH34YU67” by their Directory Host, PayMode. Organization A acquires Organization B. Organization A requests PayMode to replace the DID for Organization B with DID “FG45YT56”.

Remittance Specification

The Remittance Specification is text that is interpreted by the payer to ensure that, when a payment is made, the remittance instructions are formatted and delivered to the payee in a satisfactory manner so that the payment can be properly applied by the payee. The Directory seeks to **encourage the use of well-formed, standards-based structured remittance instructions** accompanying each payment such as EDI 820 and ISO 20022 stand-alone remittance messages. Doing so has several benefits:

- Broader adoption of B2B electronic payments
- Automated creation (by payers) and usage (by payees) of remittance instructions
- More efficient end-to-end processing of B2B transactions
- Faster application of funds

The Directory does not endorse or require specific remittance standards, nor does it impose any semantics on the text of the payee’s remittance specification. Thus the remittance specification may:

- Conform to emerging standards
- Conform to proprietary formats agreed to by trading partners
- Be specific to the payment method or payment network used to initiate the payment

For each accepted payment method, payees can include multiple accepted remittance specifications. Payees can also indicate whether a particular remittance specification is preferred or required. Because the Directory is not a payment system, it does not require that payment instructions and remittance instructions “travel” together to the payee.

Remittance specifications may include both the format of the remittance instructions as well as the method used to deliver the remittance instruction. Examples follow:

- A small or medium sized business payee requires remittance instructions in STP 820 format, but accepts it both as CTX and E-mail. In this case, the payee should include both of the following for the ACH payment method.
 - CTX, STP 820, Preferred
 - Email (ar@payee.com), STP 820
- “Please send remittance detail to ar@supplier.com”
- “Please ensure that remittance detail is posted to the partner portal”
- “Requested remittance details and format can be found at <http://payments.payeecompany.com/ACH-remittance.pdf>”
- <https://webservices.payeecompany.com/remittance-formatting> (an API -- web service that can be used by the payer to format and send remittance to the payee)

B2B Directory
Illustrative Business Requirements and Solution Options

Payment Identity

Requirement: Payee Identification

An electronic payment identity can contain the following information for an organization listed in the directory as shown in Table 1. Table 2 provides an example of an EPI.

Table 1

Directory Section		Comments
DID		Unique ID
Contact Information		Name, Address, Phone Number, email
Search String		Any data that the organization wishes to include that facilitates the unique identification of the payee; for example subsidiaries or DBAs. Can include remit address for payees to quickly find payee entries.
Payment Type (1 or more)	Preferred?	Accepted payment method, and whether preferred
Payment Type Data [1]	String	Public/Private
Payment Type (additional)	Preferred?	Accepted payment method, and whether preferred
Payment Type Data [n]	String	Public/Private
Minimum		Optional: The smallest amount accepted using this payment method
Maximum		Optional: The largest amount accepted using this payment method
Remittance Spec		Indicates how remittance should be formatted and sent for this payment method

Table 2: EPI Example

Directory Section		
DID		GHT45555
Contact Information	Search string is a free-form string that can be used to positively identify payees. The search string is essentially "keywords". For example, a Verizon Wireless DID could put their Verizon Landline DID in the search string to a different DID.	Parent Company name, address. Contact: Person name, phone number, AR@company.com
Search String		Accepts payments for DBA1 and subsidiary 2. For payments to DBA2, remit to DID ABCDE1223. Remit addresses include address1 and address2. Information here identifies unique payee
Payment Type	Preferred	ACH
RTN	232323123	Private
DDA	122342342342	Private
Minimum	\$0.00	Public

Privacy is determined by the payee. For a UPIC, would probably be public. If private, payer would contact payee for detail.

B2B Directory Illustrative Business Requirements and Solution Options

Maximum	No Limit	Public
Remittance String	payments.company.com/ACH-Remittance Company prefers CTX with STP820 format, including at least the invoice number	Public <div style="border: 1px solid black; background-color: yellow; padding: 5px; margin-top: 5px;">Remittance string could be a link to a web site, contact information, or any other (unlimited) free form text</div>
Payment Type		Corporate Payment Network
Payment Network ID	234242342	Public
Minimum	\$0.00	Public
Maximum	\$10,000.00	Public
Remittance Spec	Payments.company.com/ Network-Remittance	Public

Directory entry updates

Requirement: Directory entry updates

Payee information must be able to be updated and deleted in near-real time. Updates must conform to the **trusted** model. Payers may be able to receive notice of updates for their payees. Consequently, the Directory includes a Directory Management User Interface to enable the Directory Host to update directory entries.

- In keeping with the trusted model, the Directory Host will be responsible to vouch for the authenticity, accuracy, and validity of all information updated in the directory

The Directory Host may selectively delegate the authority to make changes to Directory entries to a Directory participant (payee).

- The implementation of this policy is up to the Directory Host
- Regardless of delegation, the Directory Host must vouch for the information in the Directory

Payers may have the capability to “subscribe” to changes to Payment Identities for specific payees. This is especially important for changes and deletions. When a change occurs, Payers can receive change notifications through one or more methods:

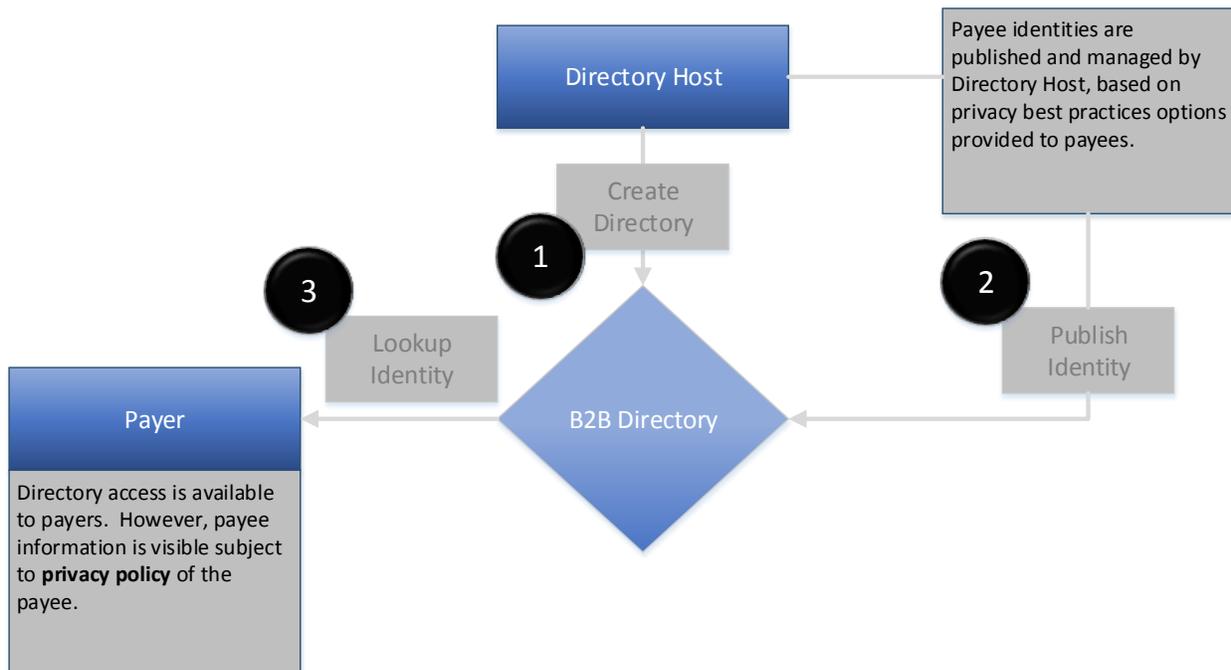
- An e-mail containing the changed information
- A file containing the changes delivered to an agreed upon destination
- API calls that deliver the changed information

Security and Privacy⁷

Security and Privacy: Host Controlled

Diagram 1 illustrates a Directory Host that publishes their payee into the Directory. The Host creates their directory and publishes information for their payees.

Diagram 1



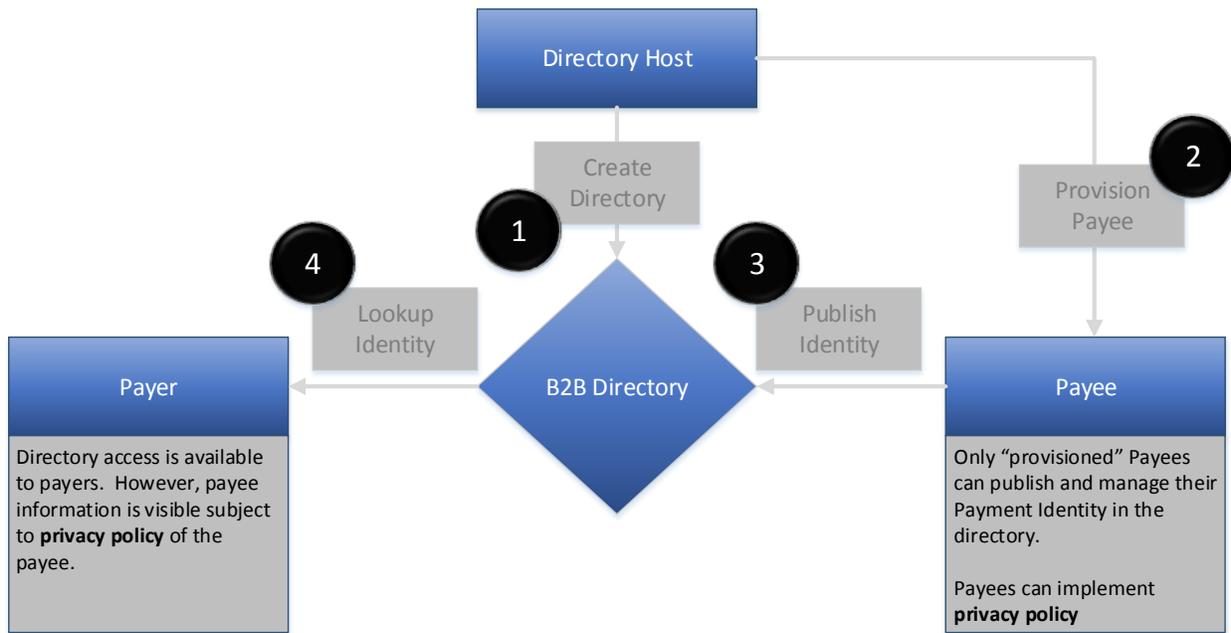
Security and Privacy: Payee Controlled

Diagram 2 illustrates Directory Host that allows a payee to publish their information into the Directory. The Host creates their Directory. The payee publishes their information to the Directory.

⁷ A thorough review of all aspects of security for a fully enabled directory service is beyond the scope of this phase of the project. This will, however, be explored further in the next phase of work.

B2B Directory Illustrative Business Requirements and Solution Options

Diagram 2



Privacy Policy: examples

Table 3 illustrates how the Directory enables the payee to determine what information is private and what information may be published publicly, that is, made easily available to members of the Directory Network.

Table 3

Payment Identity		
Identity Section		Privacy Policy
Directory ID		Always Public
Name		Always Public
Address and Contact		Always Public
Payment Type	ACH	Public
RTN	Xxx	If private, provide means for payer to request information from payee. Typically, a UPIC or a fraud-controlled account would be public.
DDA	Xxx	
Remittance	Remittance Specification	
Payment Type	PayPal	Public
PayPal ID	foo@bar.com	Public
Payment Type	PayMode-X	Public

B2B Directory

Illustrative Business Requirements and Solution Options

Paymode-X-ID

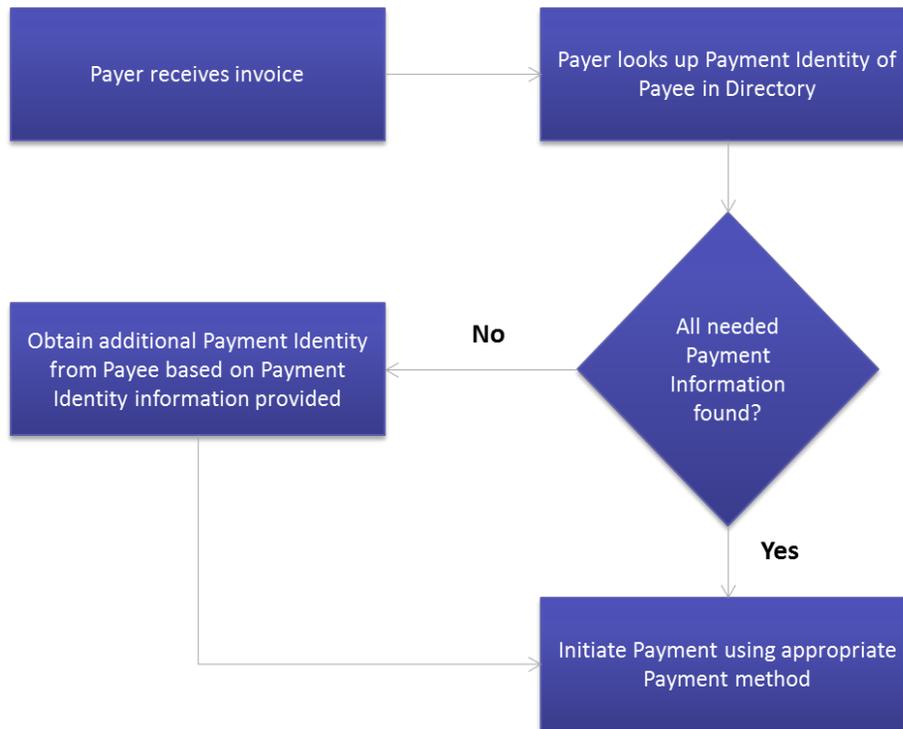
GHD-12212

Public

Querying and using the directory

The Directory will be successful if it makes it easier for a payer to find payees. Thus, the payer needs to be able to query the directory to find a payee. Payees must include sufficient information for payers to uniquely identify them. The querying process is shown in diagram 4.

Diagram 4



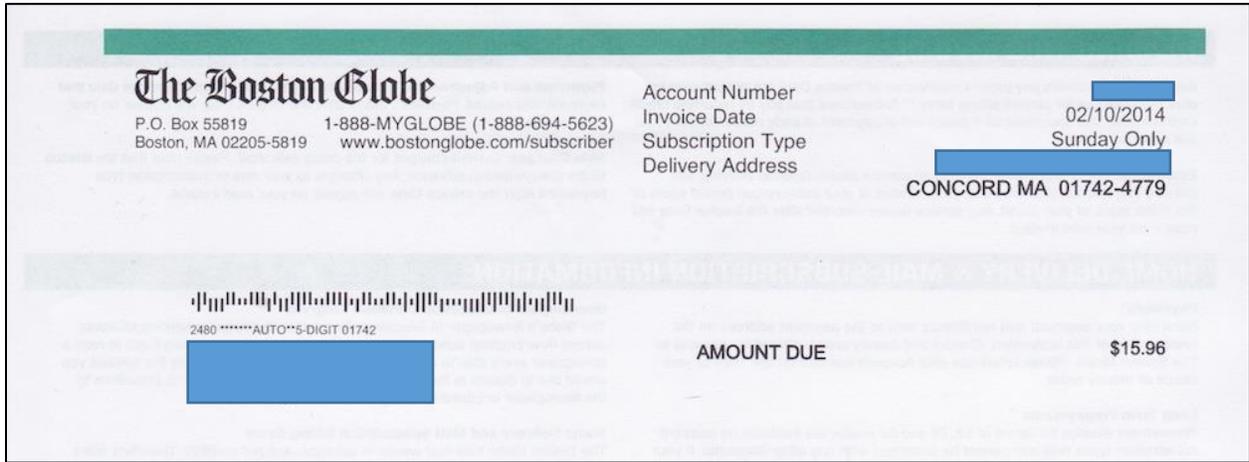
Directory Use Cases

To further explain how the Directory will work, two use cases are presented.

Use Case 1

Payee sends an invoice without electronic payment information, but payer wishes to pay electronically and is aware of the directory.

**B2B Directory
Illustrative Business Requirements and Solution Options**





B2BDirectory: find something

What are you looking for? 

12 matches found (displaying by relevance)

The Boston Globe PO Box 55819 Boston MA 02205	<div style="background-color: #f0f0f0; padding: 5px; border: 1px solid #ccc;"> The Boston Globe DID: GHT56663 Daily newspaper based in Boston, MA. </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr style="background-color: #e0e0e0;"> <th colspan="2">We accept the following payment methods</th> </tr> </thead> <tbody> <tr> <td style="width: 30%; padding: 2px;">Checks</td> <td style="padding: 2px;"> PO Box 55819 Boston, MA 02205 Please include your account number on the check </td> </tr> <tr> <td style="padding: 2px;">ACH</td> <td style="padding: 2px;">Please call 800 345 6789 for payment information and remittance detail.</td> </tr> <tr> <td style="padding: 2px;">Credit Card</td> <td style="padding: 2px;">Accepted online at https://bostonglobe.com/payments</td> </tr> </tbody> </table>	We accept the following payment methods		Checks	PO Box 55819 Boston, MA 02205 Please include your account number on the check	ACH	Please call 800 345 6789 for payment information and remittance detail.	Credit Card	Accepted online at https://bostonglobe.com/payments
We accept the following payment methods									
Checks	PO Box 55819 Boston, MA 02205 Please include your account number on the check								
ACH	Please call 800 345 6789 for payment information and remittance detail.								
Credit Card	Accepted online at https://bostonglobe.com/payments								
The Boston Globe Store 135 Morrissey Boulevard Boston MA 02205									
The Boston Globe Advertising Company 1 Main Street Cambridge MA 02140									
The Boston Globe and Map Company 39 Freedom Lane Somerville, MA 02332									

Use Case 2

The payee can include directory information on their invoice and remittance document.

B2B Directory

Illustrative Business Requirements and Solution Options

The Boston Globe
P.O. Box 55819 1-888-MYGLOBE (1-888-694-5623)
Boston, MA 02205-5819 www.bostonglobe.com/subscriber

Account Number [Redacted]
Invoice Date 02/10/2014
Subscription Type Sunday Only
Delivery Address [Redacted]

We accept other forms of payment. Please look us up at b2bdirectory.com using payee ID ABCDFGH

2480 *****AUTO**S-DIGIT 01742

AMOUNT DUE \$15.96

Administrative Functions

Requirement: Administrative Functions

The directory must include administrative functions to provide for security that ensures the trusted model. It also must allow Directory Hosts to automate processes for directory updates. Administrative functions of the Directory will include the ability to:

- Upload and download directory entries, including single and multiple entries, both manual and automated, in near-real time.
- Provide functionality to bill users (hosts/payers/payees) as determined by the business model adopted.
- Use commercially acceptable protection (e.g., encryption, tokens) for data “at rest” (i.e., stored) and “in flight” (i.e., moving across communications platforms).
- Provide commercially acceptable user controls for host providers, payees and payers. This includes access management and entitlements and appropriate methods of user authentication (e.g., User ID, password, tokens, and additional credentials). User maintenance is also included.
- Provide commercially acceptable backup and recovery.
- Maintain historical data as needed.
- Ensure that APIs that access the Directory for updates are appropriately vetted with commercially acceptable controls, considering the sensitivity of the information contained in the Directory.

Business model and driving adoption

Requirement: Business Model

The business model for the B2B Directory is still being developed. It should consider:

- Premium services for both payer and payee
- Costs of use for host directory sponsors, payers and payees
 - Example, will payers get free access to promote adoption?
 - Cost of usage should not be a deterrent; this should enable adoption

B2B Directory

Illustrative Business Requirements and Solution Options

- Value proposition for hosts, payer and payee
 - Need to make sure that payees are incented to join based on value added
- Assure security/privacy/trust so that payees and host providers will adopt
- Drive adoption by payees, hosts, and payers. Factors to consider:
 - Increased revenue
 - Reduced cost
 - Competition
 - Disintermediation
 - Regulation

Directory delivery: centralized and distributed

A central Directory Association (DA) is expected to govern the directory and a number of distributed Directory Hosts that individually host payees.

- The Directory Network is governed by a Directory Association (DA), which will set operating rules and certify Directory Hosts. The DA will also implement and manage the Directory Architecture. The Directory Architecture consists of several distributed “trusted” nodes, each managed by a Directory Host, and a Centralized “routing” node that is managed by the DA.
- Distributed “trusted” nodes:
 - Each node is managed by a trusted Directory Host that validates and vouches for the information that it provides.
 - Each node “publishes” information that can be collected by a trusted centralized access node.
 - Information in each Distributed node is only visible to the Centralized access node.
- Centralized “routing” node
 - The routing node periodically indexes information from each Distributed node.
 - Routing to the correct B2B Directory to obtain payment information is available only through the Centralized routing node.

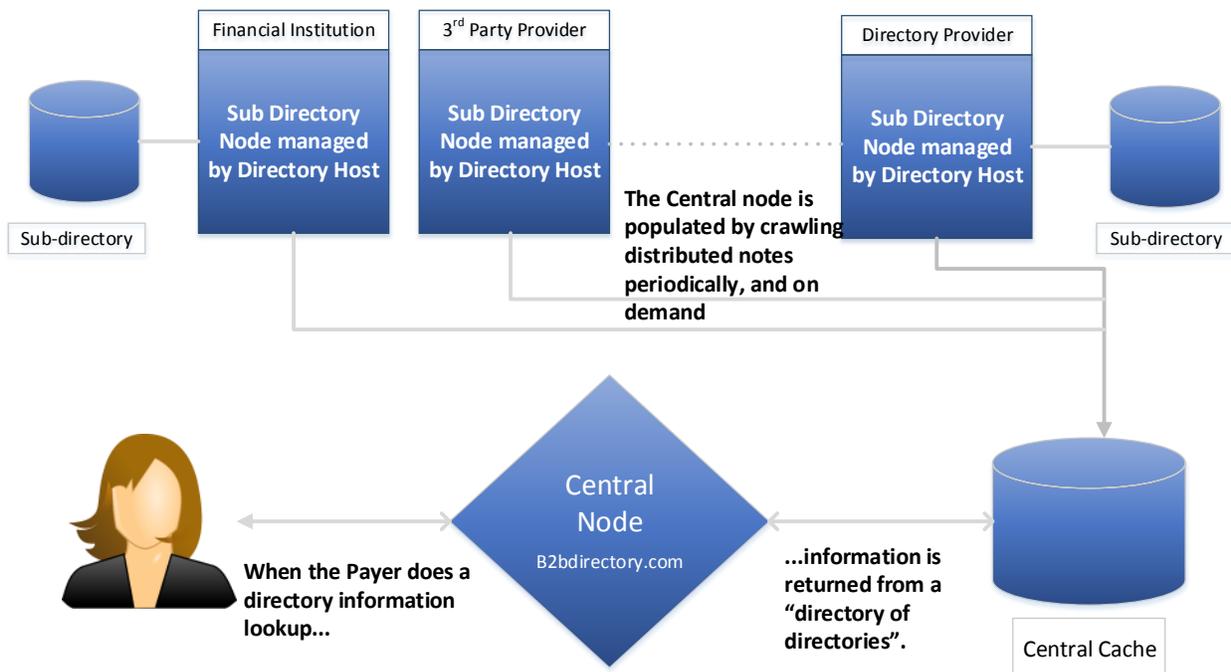
B2B Directory: centralized access, distributed management

Diagram 5 illustrates how the centralized and distributed model works.

B2B Directory

Illustrative Business Requirements and Solution Options

Diagram 5



Next Steps

The next steps envisioned for the B2B Directory described in this document will be facilitated by members of the Remittance Coalition and the B2B Directory Project Working Group. These are:

1. Discuss the B2B Directory document with interested Remittance Coalition members through email, conference calls and other effective methods. Incorporate suggestions to clarify and improve the preliminary Directory design. [3rd and 4th quarters 2014.]
2. Develop a proposal for a B2B Directory Proof of Concept. Recruit a small number of participants representing payees, payers, and Directory Hosts. [4th quarter 2014 and 1st quarter 2015.]
3. Based on interest, conduct a B2B Directory Proof of Concept. [1st and 2nd quarters 2015.]
4. Draft a proposal for a Directory Association body that will govern the Directory. [1st and 2nd quarters 2015.]

For further information about this project, please contact:

Ron Gafron
Sr Project Manager
Federal Reserve Bank of Chicago
230 S. LaSalle Street
Chicago, IL
Email – ron.gafron@chi.frb.org
(o) – 312-322-4382

B2B Directory
Illustrative Business Requirements and Solution Options

B2B Directory Project Phase 1 Co-sponsors

Claudia Swendseid – Federal Reserve Bank of Minneapolis

BC Krishna* – Mineral Tree

The project sponsors would like to express their gratitude to the following individuals, from a variety of financial institutions, service providers, and other businesses, for their efforts during Phase 1 of the B2B Directory Project:

Magnus Carlson

Ron Gafron

Jacob Heugley

Chris Huppert

Sharon Jablon*

Katy Jacob

Brian Mantel

Greg Rettinger

Patti Ritter*

Jeff Sesar *

Rob Unger

“*” – We would like to recognize these individuals for taking on the additional task of writing this document, which summarizes the discussions held during Phase 1.