Introduction to Faster Payments in the U.S.

April 2017
The industry is taking bold steps to create faster, secure solutions for a variety of payments needs. New capabilities have been added to existing payment networks, fintech companies are introducing customer-facing interfaces that leverage these networks in new ways, and new networks are being created to meet the needs of today and the future.

Same Day ACH and other current and emerging solutions offer substantial benefits in terms of faster availability, more efficient and transparent information exchange and more payments options for consumers, businesses, government entities and financial institutions. To propel these developments forward, private sector players are collaborating in new ways to find areas of commonality to deliver on desired ubiquity, consistency and transparency where it best serves the market and customers. The wide variety of approaches to faster payments are emerging in the marketplace and/or have been raised up through the Federal Reserve’s Faster Payments Task Force.

NACHA and the Regional Payments Associations have created this initial educational piece to impart some foundational understanding of faster payments to their collective memberships. This document is not intended to be exhaustive nor does it represent an endorsement of a particular solution. Organizations will make decisions based on their own business needs and use cases. In addition, there are fintech providers and processors that support specific functionalities described in this document that are not represented by a company or solution at this time. We will build on this initial educational piece in the months and years ahead as faster payments evolve because education is one of the many things we do that our members and the market highly value.
<table>
<thead>
<tr>
<th>Transaction Flow</th>
<th>Considerations</th>
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</thead>
<tbody>
<tr>
<td>Consumer/Business End-User Support Layer (mobile, online, app)</td>
<td>What end-user portal or channel is supported?</td>
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<tr>
<td></td>
<td>How can APIs help to bridge between layers and interface points?</td>
</tr>
<tr>
<td>Authentication/Addressing</td>
<td>Can you reach all parties and is the sender of the payment always known?</td>
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<td></td>
<td>How is the initiator of the payment securely authenticated?</td>
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<td></td>
<td>How and on what channel is authorization/authentication recognized?</td>
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<tr>
<td>Messaging and/or Information with Payment</td>
<td>Do messages require real-time acceptance and response?</td>
</tr>
<tr>
<td></td>
<td>How much information is included directly with the payment?</td>
</tr>
<tr>
<td>Faster Payments Mechanism</td>
<td>What is the solution that moves the payment? What gateway processors support it?</td>
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<tr>
<td></td>
<td>• Same Day ACH</td>
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<tr>
<td></td>
<td>• Real-Time Payments System</td>
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<tr>
<td></td>
<td>• Card-Based Messaging</td>
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<td></td>
<td>• Digital Currency</td>
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<td></td>
<td>• Distributed Ledger</td>
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<tr>
<td></td>
<td>• Future Solutions</td>
</tr>
<tr>
<td>Settlement (ACH, distributed ledger, Fed account)</td>
<td>When and how are funds actually settled between parties?</td>
</tr>
<tr>
<td>Funds Posting</td>
<td>How soon are funds available and when are they posted to the receiver’s account?</td>
</tr>
</tbody>
</table>

Other Considerations or Processes to Examine
- Dispute Resolution/Funds Recovery
- AR/AP Flows and Reporting
- Customer Information Reporting
- Credit Limits
- Risk Management
- Staffing/Training
- Legal
- Partner/Processor Contracts
- Customer Service

Financial Institution
- Risk & Fraud Analysis
- Customer Service & Reporting
- AML/KYC Requirements
- Regulatory & Compliance
- Data Management & Archives
- Frontline & Sales Employees
- DDA/Core System

Corporate
- AR/AP Reporting & Remittance Management
- Forecasting/Investing
- Payroll
- Billing
- ERP

How do the various steps in the transaction flow interface with other systems?
# Comparing Attributes of U.S. Faster Payments Solutions

This represents a sample of the faster payments solutions in the marketplace as of April 2017.

<table>
<thead>
<tr>
<th></th>
<th>Payment Type (Includes only monetary transactions)</th>
<th>Use Cases</th>
<th>Clearing Mechanism</th>
<th>Payment Messaging</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Same Day ACH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ZelleSM</strong></td>
<td>Credit</td>
<td>P2P, B2C</td>
<td>ACH, Debit card networks</td>
<td>Real Time</td>
</tr>
<tr>
<td><strong>Mastercard Send</strong></td>
<td>Credit, Debit</td>
<td>P2P, B2C, G2C, A2A, B2B</td>
<td>Card</td>
<td>Real Time</td>
</tr>
<tr>
<td><strong>SHAZAM Network</strong></td>
<td>Credit, Debit</td>
<td>P2P, B2C, C2B</td>
<td>Card</td>
<td>Real Time</td>
</tr>
</tbody>
</table>

Legend:
- **A2A** - Account-to-Account
- **B2B** - Business-to-Business
- **B2C** - Business-to-Consumer
- **C2B** - Consumer-to-Business
- **P2P** - Person-to-Person
<table>
<thead>
<tr>
<th>Amount of Information with Payment</th>
<th>Settlement Timing</th>
<th>Funds Posting</th>
<th>Good Funds</th>
<th>Ubiquity</th>
<th>Operational Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 799,920 Characters</td>
<td>Same Day</td>
<td>Same Day</td>
<td>Credit: Yes</td>
<td>Connects to all U.S. DDAs</td>
<td>Credits Live Debits Launch 9/15/17</td>
</tr>
<tr>
<td>140 Characters + extended remittance</td>
<td>Prefunded Continuous Real Time</td>
<td>Real Time</td>
<td>Yes</td>
<td>Target ~60% of U.S. DDAs by year-end 2018</td>
<td>Launch in 2017</td>
</tr>
<tr>
<td>200 Characters</td>
<td>Same day for debit, 1-2 days for ACH</td>
<td>Real Time</td>
<td>Yes</td>
<td>76 million mobile users</td>
<td>Live</td>
</tr>
<tr>
<td>450 characters</td>
<td>May be same day or next day</td>
<td>Real Time</td>
<td>Yes</td>
<td>Connects to all U.S. DDAs</td>
<td>Live</td>
</tr>
<tr>
<td>Varies by use case</td>
<td>Next Day</td>
<td>Real Time</td>
<td>Yes</td>
<td>Connects to virtually all U.S. debit cards</td>
<td>Live</td>
</tr>
<tr>
<td>170 Characters</td>
<td>Next Day</td>
<td>Real Time</td>
<td>Yes</td>
<td>Connects to all debit card DDAs</td>
<td>Live</td>
</tr>
</tbody>
</table>

Legend

- **A2A**: Account-to-Account
- **B2B**: Business-to-Business
- **B2C**: Business-to-Consumer
- **C2B**: Consumer-to-Business
- **P2P**: Person-to-Person

This represents a sample of the faster payments solutions in the marketplace as of April 2017.
• **Addressing**
  Automated means to route/direct a transaction using a set of data that may employ directory service

• **APIs**
  Application Program Interface (API) is a set of specifications, standards or conventions that enable programs to exchange information

• **Authentication***
  The process that verifies the identity or veracity of a participant, device, payment or message connected to a payment system

• **Authorization***
  The explicit instructions including timing, amount, payee, source of funds and other conditions—given by the payer to the payee to transfer funds on a one-time or recurring basis

• **Distributed Ledger**
  Technology that uses a consensus of replicated, shared and synchronized digital data geographically spread across multiple sites, countries or institutions with no central administrator or centralized data storage

• **Error Resolution***
  Process of an investigation to determine whether or not an erroneous, unauthorized or fraudulent transaction has occurred and if so, the corrective measures to be taken by the end user and/or provider

• **Faster Payments Mechanism**
  A means or instrument for payments clearing and/or settlement to occur between parties and for funds to be made available to the payee either same day or real time

• **Funds Posting**
  Funds are made available for use by the end user

• **Gateway Processor**
  A solutions provider that enables greater reach to services or to payment participants

• **Good Funds**
  Funds that are unconditionally available to the owner of the receiving account and usable immediately by the owner of the account

• **Interface Points**
  Points when entities or processes interact with a transaction flow

• **Interoperability**
  Ability to process payment instructions across payment systems or platforms, and requires the use of common standards and/or technical compatibility between systems

• **Payment Messaging**
  Exchange of data between entities to support a request for a payment or to respond to a question about a payment or its status (could include authorization)

• **Payment-Related Information**
  Information that flows directly with a payment to describe its purpose and/or instruct the receiving party how to apply the funds

• **Real Time***
  Immediate/without delay

• **Same Day**
  Origination, receipt and settlement of a payment on the same day

• **Settlement***
  An act that discharges obligations in respect of funds between two or more entities

• **Ubiquitous***
  A payment system that can reach all receiving accounts to ensure that a payer has the ability to pay any entity

* Source: Federal Reserve Banks’ Faster Payments Task Force Glossary of Terms.

For additional terms, visit
https://fedpaymentsimprovement.org/resources/glossary/