ISO 20022 in Plain English

An introduction to ISO 20022
Business Payments Coalition
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Business Payments Coalition 2017 Webinar Series
Overview of ISO 20022: A Business Framework
Discussion
Presentation Topics

1. What is ISO 20022?
2. What is ISO used for?
3. What are ISO 20022 messages?
4. How do messages flow?
5. ISO process and governance
6. Adoption
7. Questions
When people talk about ISO 20022, they are generally referring to one or more messages that ISO delivers.

Technically, ISO 20022 is the standard that provides the rules for how to develop the messages and the documentation of the messages.

The output of ISO 20022 work is the message definitions and formats, which is what we are here to talk about today.
ISO 20022 Standard Messages

ISO 20022 is a Repository of Standard Financial Messages

Each message set has a Message Definition Report (MDR)

The ISO Registration Authority Administers the Official Repository

- Data Dictionary
- Business Process Model
- Usage Guides
The XML syntax allows structure to identify specific message detail.

- **One Benefit:** This enables business application logic to key on specific data elements to facilitate *straight-through-processing*

The Fedwire® Funds Service message format contains 3 free-text address lines for each of the various party fields in the message.

The ISO 20022 format contains discrete fields designed to contain specific address information.

<table>
<thead>
<tr>
<th>Current Fedwire Funds Service format</th>
<th>ISO 20022 Format Implementation for Fedwire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address Line 1 (up to 35 characters)</td>
<td>Postal Address &lt;PstlAddr&gt;</td>
</tr>
<tr>
<td>Address Line 2 (up to 35 characters)</td>
<td>&lt;AdrTp&gt; (4 characters)</td>
</tr>
<tr>
<td>Address Line 3 (up to 35 characters)</td>
<td>&lt;Dept&gt; (up to 70 characters)</td>
</tr>
<tr>
<td></td>
<td>&lt;SubDept&gt; (up to 70 characters)</td>
</tr>
<tr>
<td></td>
<td>&lt;StrtNm&gt; (up to 70 characters)</td>
</tr>
<tr>
<td></td>
<td>&lt;BldgNb&gt; (up to 16 characters)</td>
</tr>
<tr>
<td></td>
<td>&lt;PstCd&gt; (up to 16 characters)</td>
</tr>
<tr>
<td></td>
<td>&lt;TwnNm&gt; (up to 35 characters)</td>
</tr>
<tr>
<td></td>
<td>&lt;CtrySubDvsn&gt; (up to 35 characters)</td>
</tr>
<tr>
<td></td>
<td>&lt;Ctry&gt; (2 characters)</td>
</tr>
</tbody>
</table>

- Easier to parse
- Easier to locate detailed information
What is ISO 20022 used for?

ISO 20022 is used for a variety of financial transactions:

- Card
- Foreign Exchange
- Securities
- Trade

Payment:
- Payment Initiation
- Clearing & Settlement
- Remittance Detail
- Cash Management Reporting
- Bank Account Management

Payment messages

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What are ISO payment messages?

Most Common Payment Message Types

- Customer Payment Initiation
  - Like an ACH payment with a full addenda (CTX)
  - Has the payment instruction
  - Can have remittance information included in the message
  - Can be used for multiple payment types

- Bank-to-Bank Settlement

- Cash Management Reporting
  - Like a BAI file
  - Has information about transactions and balances
  - Supports bank fee billing

Stand-alone remittance messages are available to support separate delivery of remittance detail, similar to the EDI remittance detail files shared between suppliers and buyers today.
Participants & Message Flow

ISO 20022 is Point-to-Point Messaging
At a high level, the payment flow involves 4 participants:

Customer-to-Bank  InterBank  Bank-to-Customer

Initiation  Clearing & Settlement  Reporting

Ultimate Debtor  Debtor (Account Owner)  Initiating Party  Forwarding Agent  Debtor Agent  Intermed. Agent 1  Intermed. Agent 2  Intermed. Agent 3  Creditor Agent  Creditor (Account Owner)  Ultimate Creditor

The ISO 20022 model recognizes that there can be many parties involved
What an ISO 20022 Message Name Looks Like

- ISO 20022 messages belong to a Business Domain
- Formal ISO 20022 message names are English phrases
- Allowance is made for regional variations
- ISO 20022 messages evolve to meet new requirements

<table>
<thead>
<tr>
<th>Domain</th>
<th>4 alpha</th>
<th>pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message ID</td>
<td>3 digits</td>
<td>001</td>
</tr>
<tr>
<td>Variant</td>
<td>3 digits</td>
<td>001</td>
</tr>
<tr>
<td>Version</td>
<td>2 digits</td>
<td>01</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example Messages</th>
<th>Business Domain</th>
<th>Example Formal Message Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>pain.001.001.03</td>
<td>Payment Initiation</td>
<td>CustomerCreditTransferInitiationV03</td>
</tr>
<tr>
<td>pain.001.001.06</td>
<td>Payment Initiation</td>
<td>CustomerCreditTransferInitiationV06</td>
</tr>
<tr>
<td>camt.056.001.06</td>
<td>Cash Management</td>
<td>FIToFIPaymentCancelationRequesV06</td>
</tr>
<tr>
<td>pacs.008.001.06</td>
<td>Payment Clearing and Settling</td>
<td>FIToFICustomerCreditTransferV06</td>
</tr>
<tr>
<td>remt.001.001.03</td>
<td>Remittance</td>
<td>RemittanceAdviceV03</td>
</tr>
</tbody>
</table>
Payment Message Types Vary By the Role of the Participant

Multiple message types support different needs in the end-to-end process

Financial Services
- Cards
- FX
- Payment
- Securities
- Trade

<table>
<thead>
<tr>
<th>Payment Message (Examples*)</th>
<th>[ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Account Management</strong></td>
<td>[23 messages]</td>
</tr>
<tr>
<td>• Change/Verify Account Identification</td>
<td>[acmt.022]</td>
</tr>
<tr>
<td>• Bank Account Opening</td>
<td>[acmt.007]</td>
</tr>
<tr>
<td><strong>Payments Initiation – Customer to Bank</strong></td>
<td>[12 messages]</td>
</tr>
<tr>
<td>• Payment Initiation</td>
<td>[pain.001]</td>
</tr>
<tr>
<td>• Mandate Initiation</td>
<td>[pain.009]</td>
</tr>
<tr>
<td>• Creditor Payment Activation Request</td>
<td>[pain.013]</td>
</tr>
<tr>
<td><strong>Payments Clearing and Settlement</strong></td>
<td>[8 messages]</td>
</tr>
<tr>
<td>(both customer initiated as well as interbank related)</td>
<td></td>
</tr>
<tr>
<td>• Credit Transfers</td>
<td>[pacs.008]</td>
</tr>
<tr>
<td>• Direct Debit</td>
<td>[pacs.010]</td>
</tr>
<tr>
<td><strong>Cash Management</strong></td>
<td>[34 messages]</td>
</tr>
<tr>
<td>• Bank-to-Customer Cash Management</td>
<td>[camt.052]</td>
</tr>
<tr>
<td>• Notification to Receive and Account Reporting Request</td>
<td>[camt.057]</td>
</tr>
<tr>
<td><strong>Remittances</strong></td>
<td>[2 messages]</td>
</tr>
<tr>
<td>• Remittance Advice</td>
<td>[remt.001]</td>
</tr>
<tr>
<td>• Remittance Location Advice</td>
<td>[remt.002]</td>
</tr>
</tbody>
</table>

* Not all messages listed

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Message Data Through the Flow Remains the Same

- **Message content** is retained as it moves to each participant and through different message types in the process flow.
- Each message type is designed for the participant’s **specific needs**.

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**Initiation**

- **pain.001.001.03**
  - `<InitgPty>`: Initiating Party
  - `<Debtor>`: Debtor
  - `<PmtId>`: Payment ID
  - `<Creditor>`: Creditor
  - `<Amt>`: Amount

**Clearing & Settlement**

- **pacs.008.001.03**
  - `<InitgPty>`
  - `<Debtor>`
  - `<PmtId>`
  - `<Creditor>`
  - `<Amt>`
  - `<SttlmMtd>`: Settlement Method

**Reporting**

- **camt.054.001.06**
  - `<Debtor>`
  - `<PmtID>`
  - `<Payee>`
  - `<AcctSvcrRef>`: AccountServicerReference

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**Acknowledgement**

- **pain.002.001.03**
  - `<OrgnlPmtInfAndSts>`
  - `<OrgnlPmt>`

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The ISO 20022 Governance Process
ISO 20022 Governance

- ISO 20022 is managed by the ISO Technical Committee 68 (TC68)
- The standard is managed by the Registration Management Group (RMG)
- There is a formal process for updates to the standard
Various organizations submit content proposals to the Registration Authority

Proposals are evaluated Monthly by Standards Evaluation Groups (SEG) before being approved for inclusion in the repository
Usage and Adoption
Interoperability does not require everybody to do things the same way…

…but it *does* require that we *understand* what everybody does

- What we commonly do
- What we need to do in-common
- What isn’t in common

Standards reflect this understanding…

…Adoption generates interoperability
CGI – Market Practices

- CGI-MP – Common Global Implementation – Market Practices refers to published documents that help ensure consistent understanding and implementation of the standard.

- The breadth of content available for each message is designed to support a wide array of scenarios. But this leads to the possibility of inconsistent implementations.
  - Example: Regional or industry-specific scenarios may dictate that some fields marked as “optional” are required in certain situations.
  - Example: some CGI-MP documents include data mappings from legacy formats (FedWire, SWIFT MT-, ACH) to ISO 20022

- CGI documents are not part of the standard and they are not available for every message, but they provide significant and important guidance for successful implementation where they are present.
ISO 20022 is a well-established standard in many parts of the world and is in use by U.S. companies for cross-border payments.


NACHA adoption for ACH payments:
- Opt-in program to support ISO 20022 in CTX addenda
- Mappings of ISO 20022 data to-and-from U.S. ACH formats in response to demand from banks and corporates

Large ERP systems (e.g. Oracle, SAP) support ISO 20022.
So here’s your elevator pitch

The most important attributes of the standard is that it clearly defines:
- Who handles a message
- The role of everyone
- What data each message must have to fulfill the needs of each role

ISO 20022 is a standard methodology whose practical application results in a wide array of standard messages for exchanging financial data.

It goes the extra mile by structuring the messages in a manner that is consistent and easily understood.
Questions and Answers
Where can I get more information?

Send Questions and Requests to: business.payments.smb@mpls.frb.org

Visit the Business Payments Coalition Website:
https://fedpaymentsimprovement.org/payments-efficiency/business-payments-coalition/
Additional details of the ISO organization and governance
Various organizations submit content proposals which are evaluated before being approved for the include in the repository. IFX Forum is a regular contributor to ISO 20022 including payments content. Note that SWIFT is both a submitter of content and the RA.

Message XSDs and MDRs are derived from the content in the repository (data dictionary, BPMs).
ISO TC68, ISO 20022

ISO 20022 is managed by the ISO Technical Committee 68
The standard is managed by Registration Management Group (RMG)

Typical hierarchy
TCs
Technical Committees
Specific Standards
Specific Standard
RMG or similar steering group may not exist
SEGs or similar steering group may not exist

ISO 20022 Specifically
TC68 - Banking, Securities, Financial Services
ISO20022.org
RMG (Registration Management Group)
Standards Evaluation Groups (SEG)
Pmt SEG
Etc. SEGs
RA (Registration Authority)
The evolution of ISO 20022 messages is governed by a change process that is driven by a strict adherence to a calendar for submission, evaluation and development.