Internet Financial EXchange (IFEX)

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Implementation Considerations

Financial Transaction ID (FTID) Storage

Financial Transaction Identifiers (FTID) MAY be stored as follows:

1. Resolving the Account of Interest (AOI) portion with the local system's ledger identity (eg: IIBAN, legacy or custom identifier)

2. Using standard mechanisms for efficient datetime storage of the UTC Second of Origination (UTCSO) and generating this portion of the FTID on demand.

Under such a scheme, only the five character Intrasecond Financial Transaction ID (IS-FTID) need be stored against individual transaction records.

Transaction Status Flow

The IFEX transaction status vocabulary and transition flow is believed to represent a reasonable basis for the common description of transaction state transition across disparate financial systems, removing the historic need for system integrators to negotiate financial or settlement system specific state and state transition minutiae.

However, implementors new to IFEX may feel the model overly constraining, in particular a need may be perceived by some to transition from SUCCESS to FAILURE states post-facto; under IFEX transaction state flow rules this is necessarily illegal for such final (donestate) transactions. Instead, completed transactions in a SUCCESS state that need to be cancelled or reversed (due to processing error, regulatory action, etc.) should remain unchanged and a new transaction (or set of transactions) should be created to effect the inverse of the outcome of the original transaction's net settlement. Such a transaction (or set of transactions) SHOULD reference the original transaction in order to provide a means for the remote party or parties to associate the initial and related transactions.

Systemic Limitations

Implementers should be aware of the following systemic limitations.

Maximum Transaction Throughput
Each Financial Transaction ID (FTID) contains an Intrasecond Financial Transaction Identifier (IS-FTID) component whose 5 character length limits the available namespace to 60,466,176 transactions per second, per Area of Interest (AOI).

High volume systems requiring a greater number of intrasecond

transactions MUST select an Area of Interest (AOI) population strategy that recognizes and avoids this limitation.

Internationalization

String Representation
The decision was made to utilize JSON, a necessarily UTF-8 driven standard despite its wire-level inefficiencies, in order to guarantee a reasonable, guaranteed inheritable degree of internationalization in string specification.

Extensibility
Rather than taking the flawed approach of attempting to second-guess the common sum of every present and future global financial messaging requirement in a centralized, technocratic bid at world domination, IFEX instead recognizes that local requirements will always exceed perceived requirements when specifying global protocols: particularly those in long term use. Thus, a minimalist and proven approach is taken. This philosophy is in line with the accepted mantra of "do one thing, and do it well". The results are visible in the protocol's approach to the notion of currency and commodity, settlement system, and almost any other aspect of an IFEX message.

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