SUMMARY

An aspect of the present disclosure provides an interface for controlling the transfer of electronic messages between a financial institution and a transaction processing system for processing the messages, wherein the financial institution is connected to the transaction processing system via a data communications network, the interface comprising communication circuitry operable to receive an electronic message issued by the financial institution; and processing circuitry operable to determine whether the format of the electronic message conforms to a predetermined standard necessary for processing of the electronic message; and in the event that the format of the electronic message does conform to the predetermined standard, the communication circuitry is further operable to transmit the electronic message over the network for storage in a message queue unit associated with the transaction processing system for subsequent processing of the electronic message in the predetermined standard format by a switch of the transaction processing system; and in the event that the format of the electronic message does not conform to the predetermined standard, the communication circuitry is operable to return the electronic message to the financial institution.

Advantageously, this arrangement means that only electronic messages which conform to a predetermined standard necessary for processing the messages are received by the transaction processing system. The transaction processing system therefore only has to be configured to deal with messages with this predetermined standard format (rather than a plurality of different message formats generated from different banks), thus resulting in improved efficiency. Furthermore, network bandwidth is not wasted by sending messages which do not have the correct standard format (and which would therefore be rejected) to the transaction processing system.

In an embodiment, the processing circuitry is operable to apply a digital signature to the electronic message when the format of the electronic message conforms to the predetermined standard, and the communication circuitry is operable to transmit the signed electronic message to the message queue.

In an embodiment, the processing circuitry is operable to add routing information to the electronic message, the routing information identifying a switch site comprising one or more electronic switches within the transaction processing system to which the electronic message should be directed.

In an embodiment, the electronic message is a transaction request.

An aspect of the present disclosure provides electronic system comprising the above-mentioned interface of the present invention in communication with a transaction processing system.

An aspect of the present disclosure provides a method of controlling the transfer of electronic messages between a financial institution and a transaction processing system for processing the messages, wherein the financial institution is connected to the transaction processing system via a data communications network, the method comprising receiving an electronic message issued by the financial institution; determining whether the format of the electronic message conforms to a predetermined standard necessary for processing of the electronic message; and in the event that the format of the electronic message does

conform to the predetermined standard, the method comprises transmitting the electronic message over the network for storage in a message queue unit associated with the transaction processing system for subsequent processing of the electronic message in the predetermined standard format by a switch of the transaction processing system and in the event that the format of the electronic message does not conform to the predetermined standard, the method comprises returning the electronic message to the financial institution.

In an embodiment, the method comprises applying a digital signature to the electronic message when the format of the electronic message conforms to the predetermined standard, and transmitting the signed electronic message to the message queue.

In an embodiment, the method comprises adding routing information to the electronic message, the routing information identifying a switch site comprising one or more electronic switches within the transaction processing system to which the electronic message should be directed.

In an embodiment, the electronic message is a transaction request.

An aspect of the present disclosure provides a computer program product comprising a storage medium upon which computer readable code is stored, the computer readable code, when loaded onto a computer, configuring the computer to perform the above-mentioned method of the present disclosure.

The foregoing paragraphs have been provided by way of general introduction, and are not intended to limit the scope of the following claims. The described embodiments, together with further advantages, will be best understood by reference to the following detailed description taken in conjunction with the accompanying Figures.

the electronic message does not conform to the predetermined standard, the method comprises returning the electronic message to the financial institution.

7. A method according to claim 6, comprising applying a digital signature to the electronic message when the format of the electronic message conforms to the predetermined standard, and transmitting the signed electronic message to the message queue.

8. A method according to either claim 6 or 7, comprising adding routing information to the electronic message, the routing information identifying a switch site comprising one or more electronic switches within the transaction processing system to which the electronic message should be directed.

9. A method according to any one of claims 6, 7 or 8, wherein the electronic message is a transaction request.

10. A computer program product comprising a storage medium upon which computer readable code is stored, the computer readable code, when loaded onto a computer, configuring the computer to perform a method according to any one of claims 6 to 9.