

CLAIMS

1. A transaction processing system for processing payments between prepaid payment card accounts, the system comprising: a processor, and a data storage device, data storage device storing computer program instructions operable to cause the processor to:

receive a settlement guarantee certificate message from a payment ledger system, the settlement guarantee certificate message comprising an indication of a payment card issuer associated with a payer prepaid payment card, an indication of a payment card issuer associated with a user prepaid payment card, and an indication of a payment amount, wherein the settlement guarantee certificate message guarantees a settlement of the payment between the payer prepaid payment card and the user prepaid payment card;

receive a settlement guarantee certificate indication from a user device of a user, the settlement guarantee certificate indication comprising an indication of a prepaid payment card account of the user;

match the settlement guarantee certificate message and the settlement guarantee certificate indication; and

increase a balance associated with the prepaid payment card account of the user by the payment amount prior to the settlement of the payment.

2. A transaction processing system according to claim 1, wherein the data storage device stores instructions operable to cause the processor to: match the settlement guarantee certificate message and the settlement guarantee certificate indication by identifying that a unique identifier of the settlement guarantee certificate matches a unique identifier of the settlement guarantee certificate indication.

3. A transaction processing system according to claim 1 or claim 2, wherein the settlement guarantee certificate comprises a digital signature of the payment ledger system and the data storage device stores instructions operable to cause the processor to: authenticate the digital signature of the ledger system using a public key of the ledger system.

4. A transaction processing system according to claim any one of claims 1 to 3, wherein the data storage device stores instructions operable to cause the processor to:

receive a payment request message from the user device of the user, the payment request message comprising an indication of the prepaid payment card of the user, an indication of the payment amount, and an indication of a payment card issuer associated with a payee prepaid payment card;

generate payment message, the payment message comprising an indication of the payment card issuer associated with the user prepaid payment card, an indication of the payment card issuer associated with the payee prepaid payment card, an indication of the prepaid payment card account of the user and an indication of the payment amount;

send the payment message to a payment ledger system;

receive the settlement guarantee certificate indication from the payment ledger system, the settlement guarantee certificate indication comprising an indication of the payment card issuer associated with the user prepaid payment card, an indication of the payment card issuer associated with the payee prepaid payment card and an indication of the payment amount;

decrease the balance associated with the prepaid payment card account of the user by the payment amount; and

send the settlement guarantee certificate indication to the user device of the user.

5. A transaction processing system according to claim 4, wherein the data storage device stores instructions operable to cause the processor to: digitally sign the payment message using a private key of the payment card issuer associated with the user prepaid payment card.

6. A payment transaction processing method of processing an incoming payment transaction from a payer prepaid payment card account to a user prepaid payment card account, at a system associated with an issuer of the user prepaid payment card, the method comprising:

receiving a settlement guarantee certificate message from a payment ledger system, the settlement guarantee certificate message comprising an indication of a payment card issuer associated with the payer prepaid payment card, an indication of a payment card issuer associated with the user prepaid payment card, and an indication of a payment amount, wherein the settlement guarantee certificate message guarantees a settlement of the payment between the payer prepaid payment card and the user prepaid payment card;

receiving a settlement guarantee certificate indication from a user device of a user, the settlement guarantee certificate indication comprising an indication of a prepaid payment card account of the user;

matching the settlement guarantee certificate message and the settlement guarantee certificate indication; and

increasing a balance associated with the prepaid payment card account of the user by the payment amount prior to the settlement of the payment.

7. A method according to claim 6, wherein matching the settlement guarantee certificate message and the settlement guarantee certificate indication comprises identifying that a unique identifier of the settlement guarantee certificate matches a unique identifier of the settlement guarantee certificate indication.
8. A method according to claim 6 or claim 7, wherein the settlement guarantee certificate comprises a digital signature of the payment ledger system and the method further comprises authenticating the digital signature of the ledger system using a public key of the ledger system.
9. A non-transitory computer readable medium carrying computer executable instructions which when executed on at least one processor cause the at least one processor to carry out a method according to any one of claims 6 to 8.