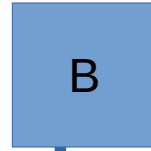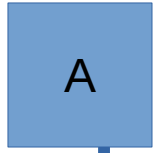# Promises approach

Sender

Offline

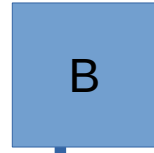Receiver

A

B

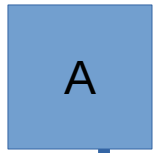Sender

Offline

Receiver

A

B

show request: {Pb_B}

Sender

Offline

Receiver

A

B

show request: {Pb_B}

scan request: {Pb_B}

Sender

Offline

Receiver

A

B

show request: {Pb_B} [QR code]

scan request: {Pb_B}

prepare Promise:
{
Sender: Pb_A
Request: {Pb_B}
Amount: <Long>
Nonce: <Long>
Timestamp: <Long>
Signature: Sign(Pv_A, Hash{
        Sender: Pb_A
        Request: {Pb_B}
        Amount: <Long>
        Nonce: <Long>
        Timestamp: <Long>
        })
}

Sender

Offline

Receiver

A

B

show request: {Pb_B} ▨

scan request: {Pb_B}

prepare Promise:
{
Sender: Pb_A
Request: {Pb_B}
Amount: <Long>
Nonce: <Long>
Timestamp: <Long>
Signature: Sign(Pv_A, Hash{
        Sender: Pb_A
        Request: {Pb_B}
        Amount: <Long>
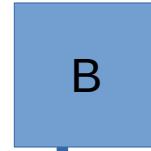   Nonce: <Long>
        Timestamp: <Long>
        })
} ▨

Sender
Offline
Receiver

A

B

show request: {Pb_B} ▣

scan request: {Pb_B}

prepare Promise:
{
Sender: Pb_A
Request: {Pb_B}
Amount: <Long>
Nonce: <Long>
Timestamp: <Long>
Signature: Sign(Pv_A, Hash{
        Sender: Pb_A
        Request: {Pb_B}
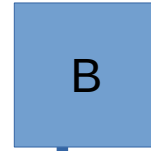   Amount: <Long>
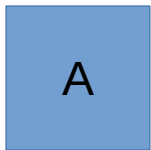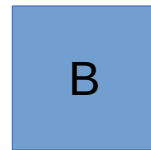   Nonce: <Long>
        Timestamp: <Long>
        })
} ▣

scan Promise

Sender

Back Online

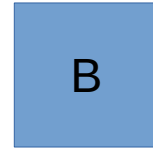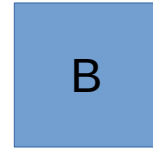Receiver

A

B

Sender

A

Back Online

Receiver

B

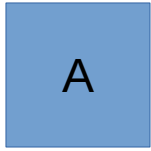Unfulfilled promises:
- T1

Sender

Back Online

Receiver
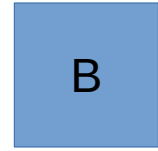
A

B

Unfulfilled promises:
- T1

- announce unfulfilled promises

Sender

Back Online

Receiver

A

B

Unfulfilled promises:
- T1

- announce unfulfilled
promises

Unconfirmed balance:
- T1 since <Date>

(idea: option to report old
unfulfilled promises to a central
authority so A goes into debt?)