Fig 1

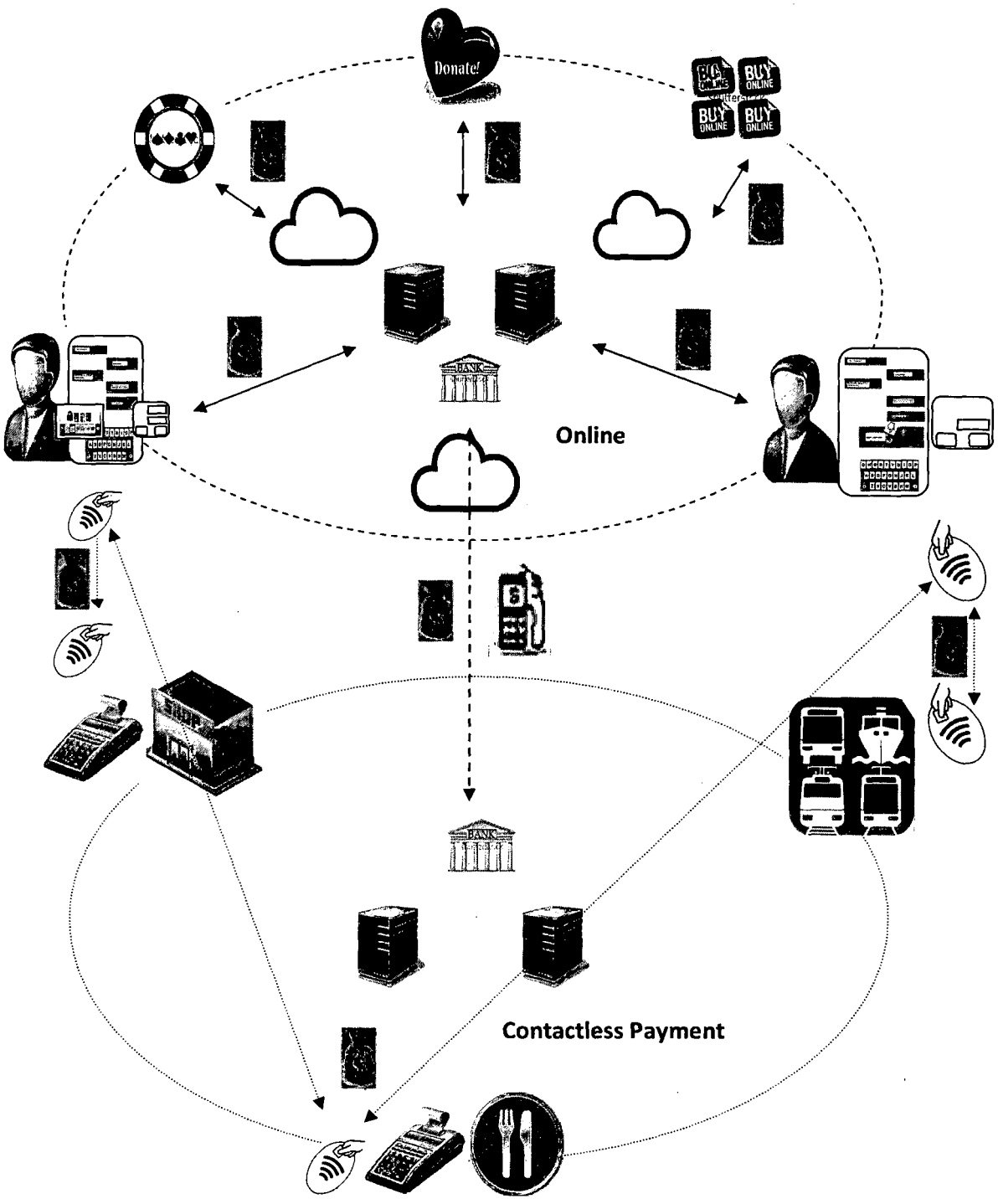

Donate!
BUY ONLINE
BUY ONLINE
BUY ONLINE
BUY ONLINE
BANK
Online
BANK
Contactless Payment

Fig 2

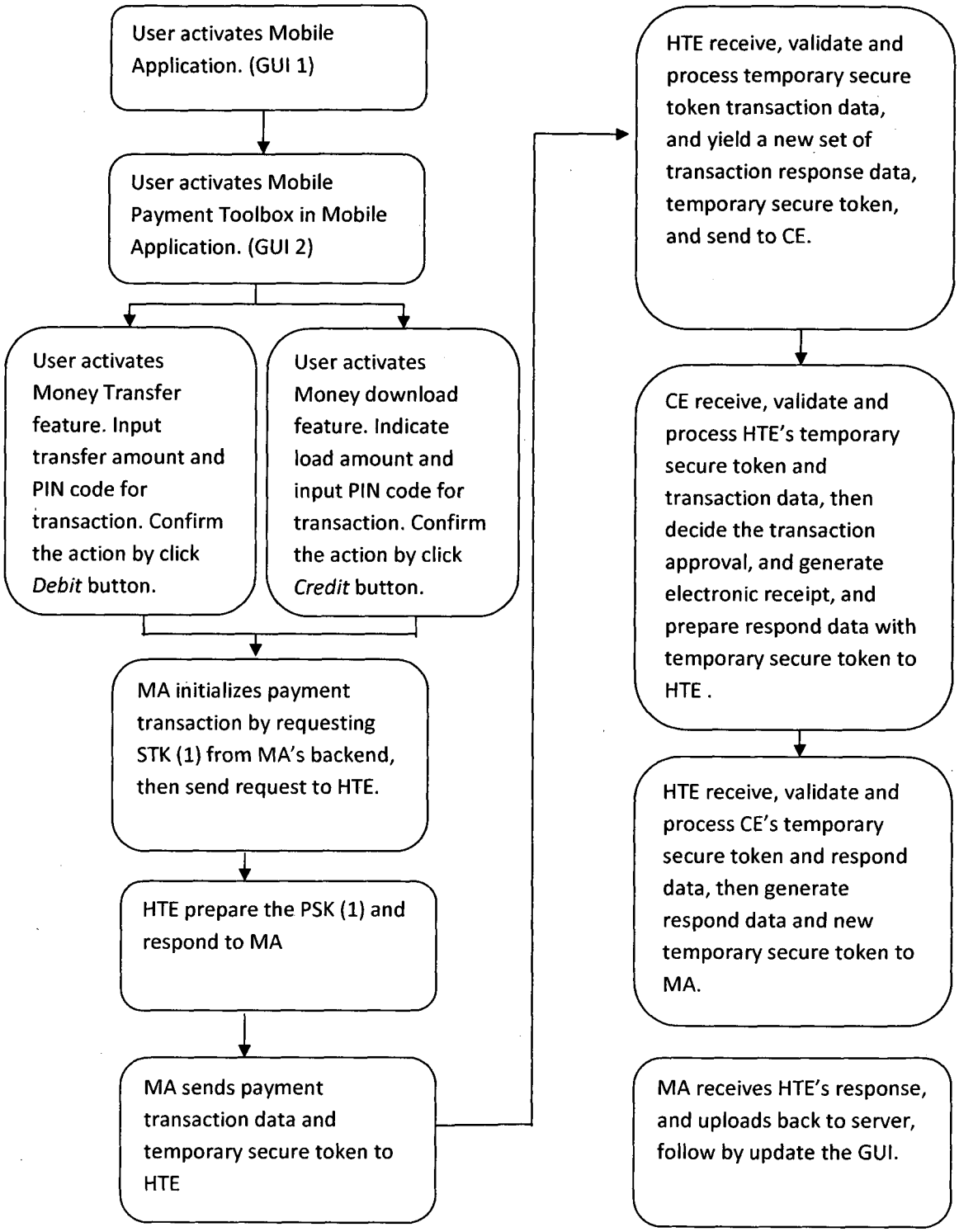

User activates Mobile Application. (GUI 1)
User activates Mobile Payment Toolbox in Mobile Application. (GUI 2)
User activates Money Transfer feature. Input transfer amount and PIN code for transaction. Confirm the action by click *Debit* button.
User activates Money download feature. Indicate load amount and input PIN code for transaction. Confirm the action by click *Credit* button.
MA initializes payment transaction by requesting STK (1) from MA's backend, then send request to HTE.
HTE prepare the PSK (1) and respond to MA
MA sends payment transaction data and temporary secure token to HTE
HTE receive, validate and process temporary secure token transaction data, and yield a new set of transaction response data, temporary secure token, and send to CE.
CE receive, validate and process HTE's temporary secure token and transaction data, then decide the transaction approval, and generate electronic receipt, and prepare respond data with temporary secure token to HTE .
HTE receive, validate and process CE's temporary secure token and respond data, then generate respond data and new temporary secure token to MA.
MA receives HTE's response, and uploads back to server, follow by update the GUI.

Fig 3

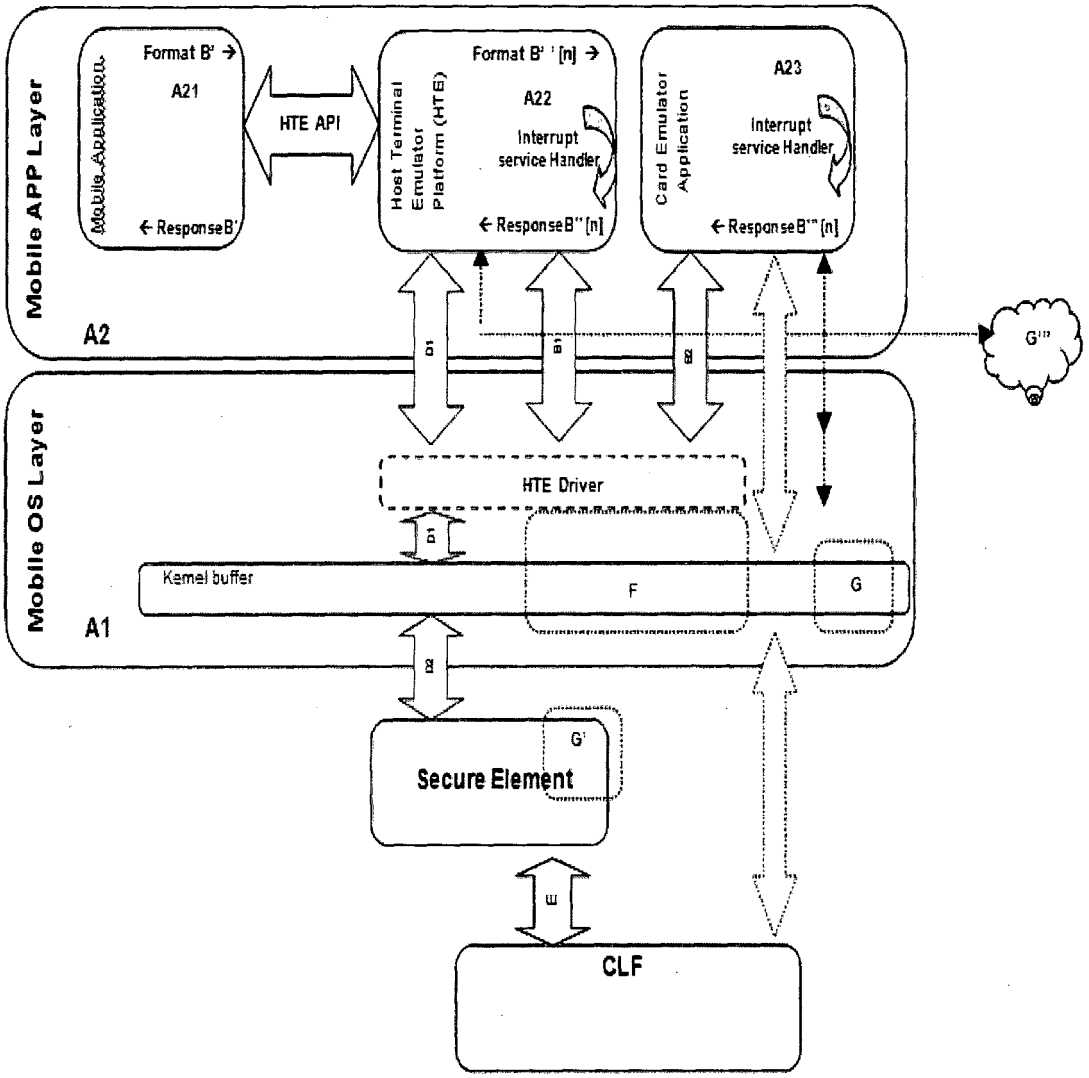

Mobile APP Layer
Mobile Application
Format B' →
A21
← ResponseB'
HTE API
Host Terminal Emulator Platform (HTE)
Format B'' [n] →
A22
Interrupt service Handler
← ResponseB'' [n]
Card Emulator Application
A23
Interrupt service Handler
← ResponseB''' [n]
A2
G'''
Mobile OS Layer
HTE Driver
Kernel buffer
F
G
A1
Secure Element
G'
CLF

Fig 4A

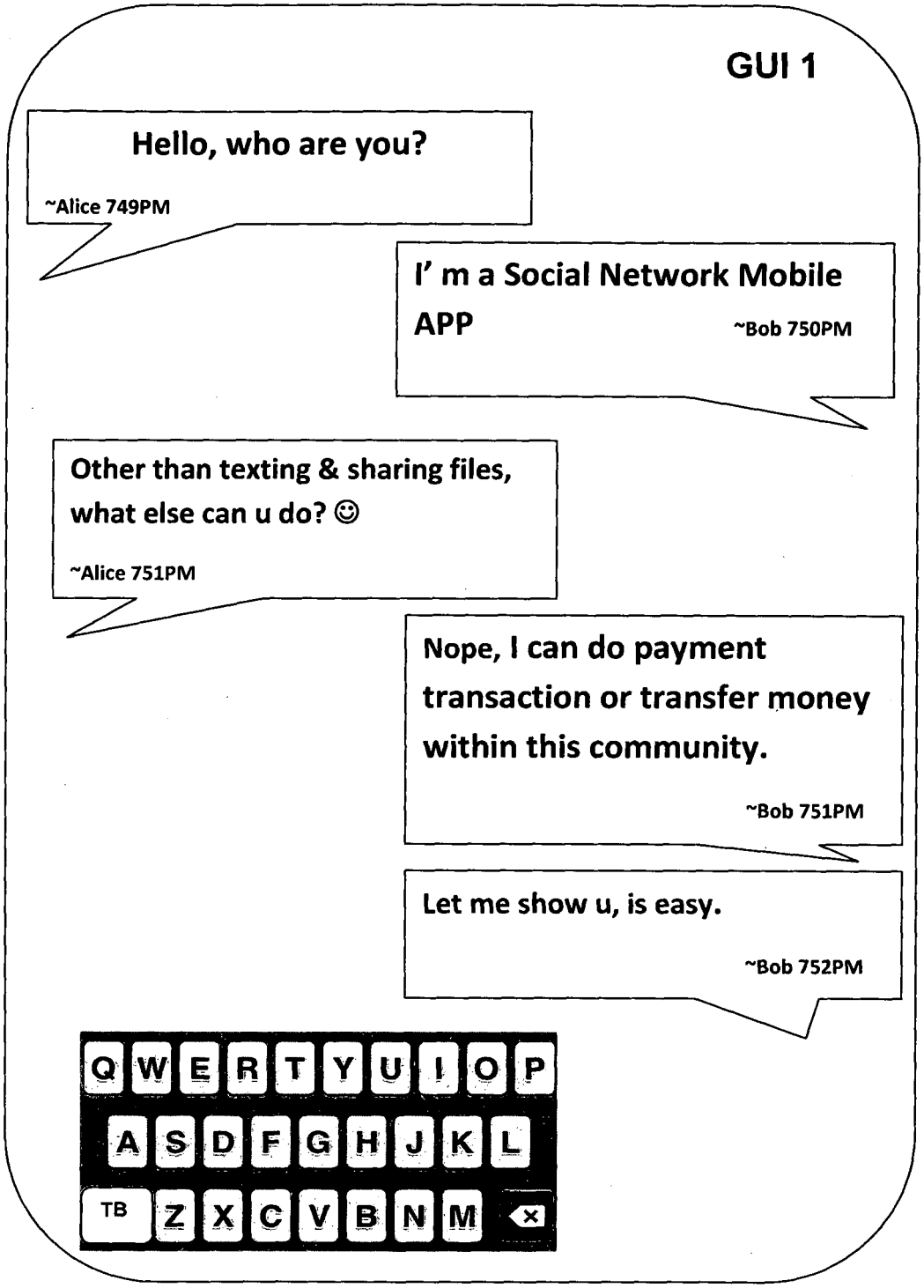

GUI 1
Hello, who are you?
~Alice 749PM
I' m a Social Network Mobile APP
~Bob 750PM
Other than texting & sharing files, what else can u do? ☺
~Alice 751PM
Nope, I can do payment transaction or transfer money within this community.
~Bob 751PM
Let me show u, is easy.
~Bob 752PM
Q W E R T Y U I O P
A S D F G H J K L
TB Z X C V B N M

Fig 4B

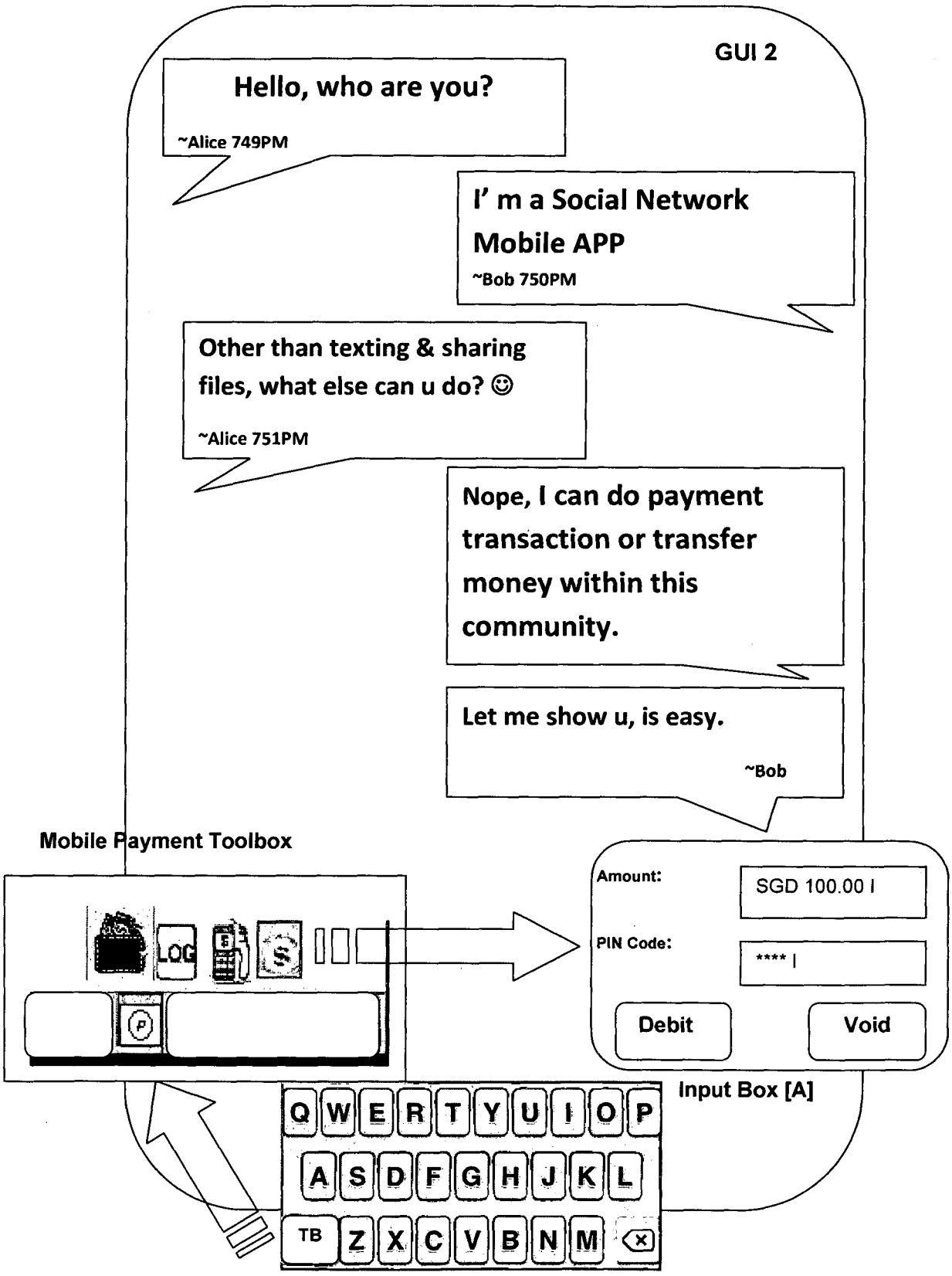

GUI 2
Hello, who are you?
~Alice 749PM
I' m a Social Network Mobile APP
~Bob 750PM
Other than texting & sharing files, what else can u do? ☺
~Alice 751PM
Nope, I can do payment transaction or transfer money within this community.
Let me show u, is easy.
~Bob
Mobile Payment Toolbox
Amount:
SGD 100.00 I
PIN Code:
**** I
Debit
Void
Input Box [A]
Q W E R T Y U I O P
A S D F G H J K L
TB Z X C V B N M

Fig 4C

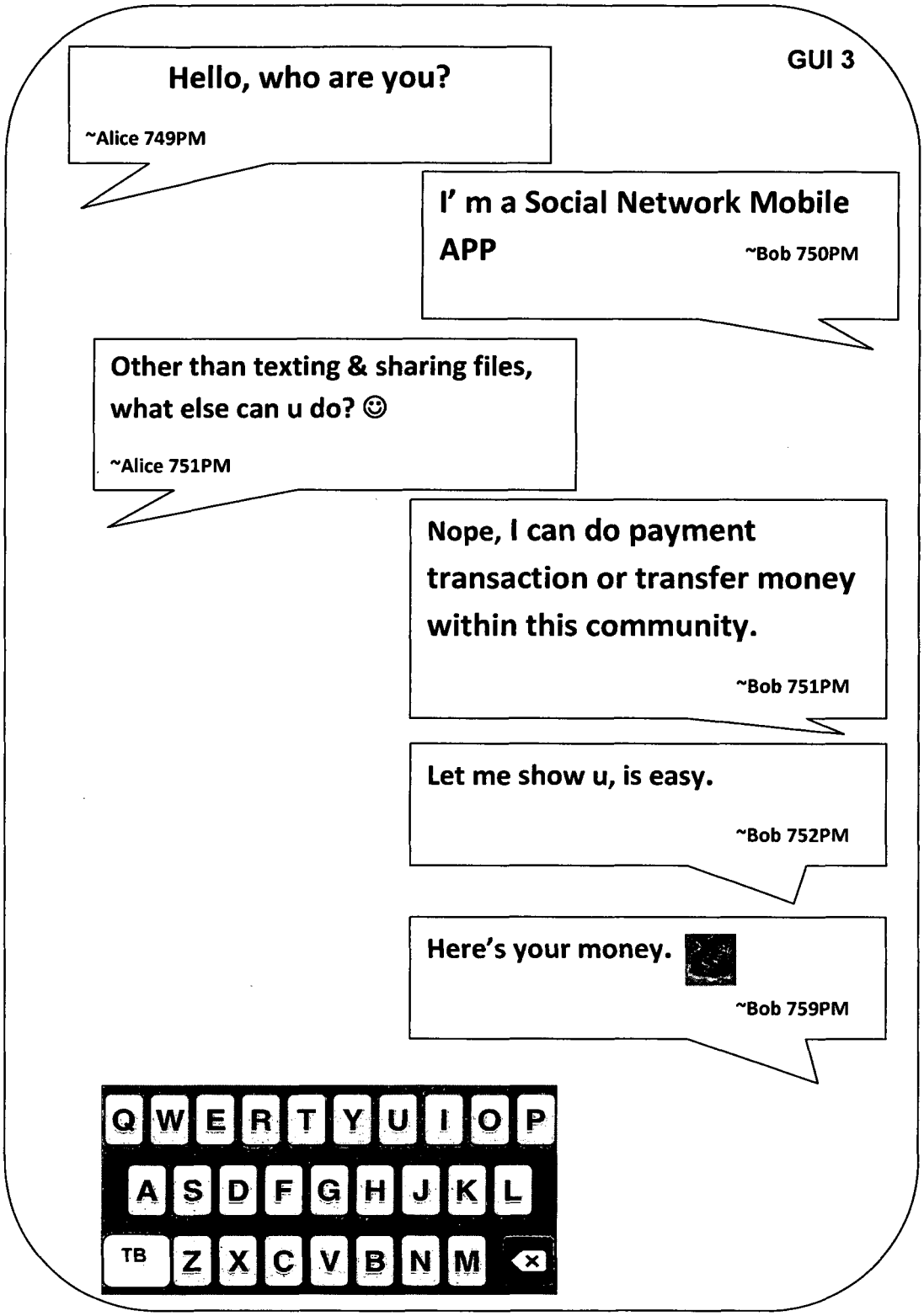
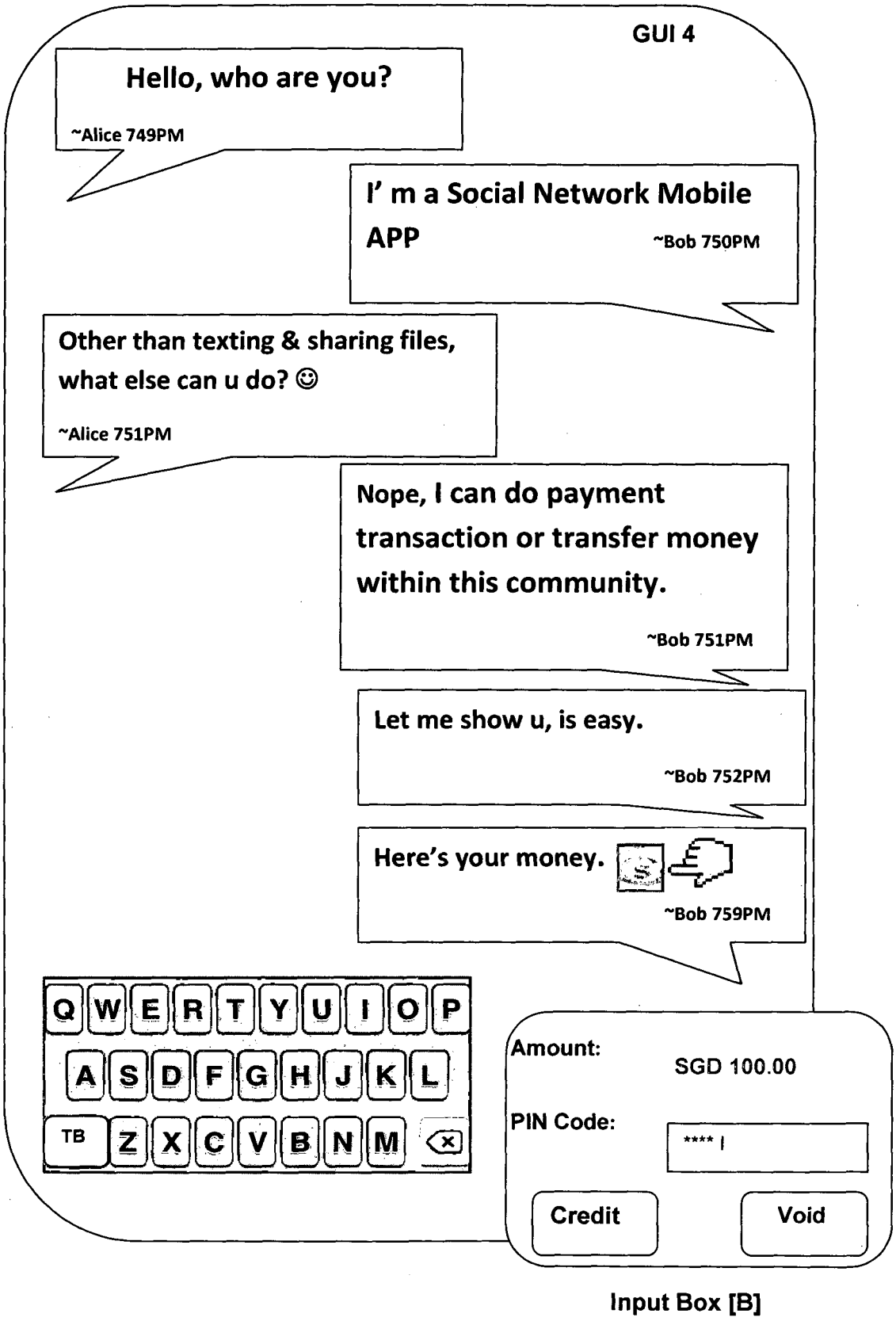
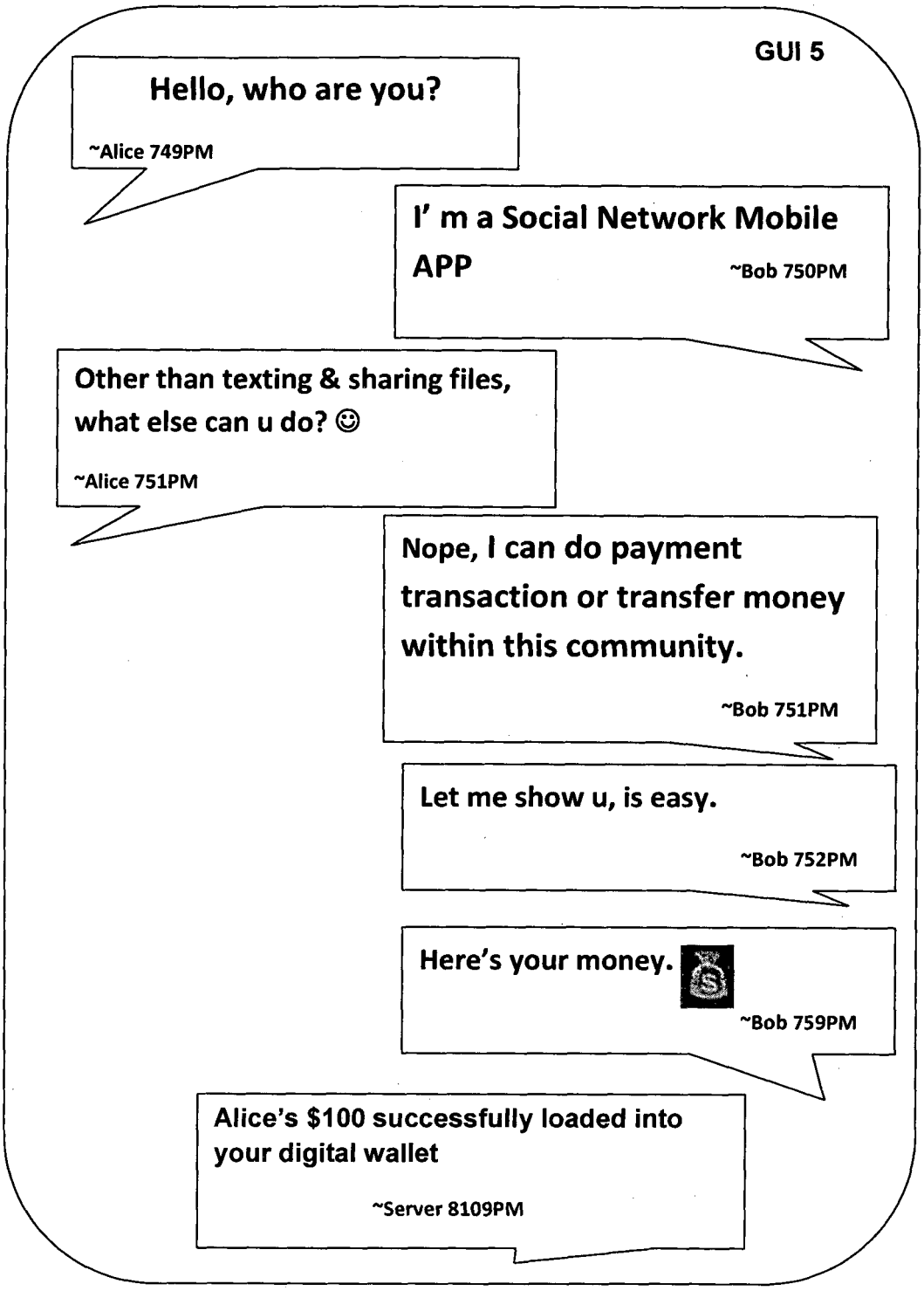

GUI 3
Hello, who are you?
~Alice 749PM
I' m a Social Network Mobile APP
~Bob 750PM
Other than texting & sharing files, what else can u do? ☺
~Alice 751PM
Nope, I can do payment transaction or transfer money within this community.
~Bob 751PM
Let me show u, is easy.
~Bob 752PM
Here's your money.
~Bob 759PM
Q W E R T Y U I O P
A S D F G H J K L
TB Z X C V B N M

Fig 4D



Input Box [B]

Fig 4E


GUI 5
Hello, who are you?
~Alice 749PM
I' m a Social Network Mobile APP
~Bob 750PM
Other than texting & sharing files, what else can u do? ☺
~Alice 751PM
Nope, I can do payment transaction or transfer money within this community.
~Bob 751PM
Let me show u, is easy.
~Bob 752PM
Here's your money.
~Bob 759PM
Alice's $100 successfully loaded into your digital wallet
~Server 8109PM