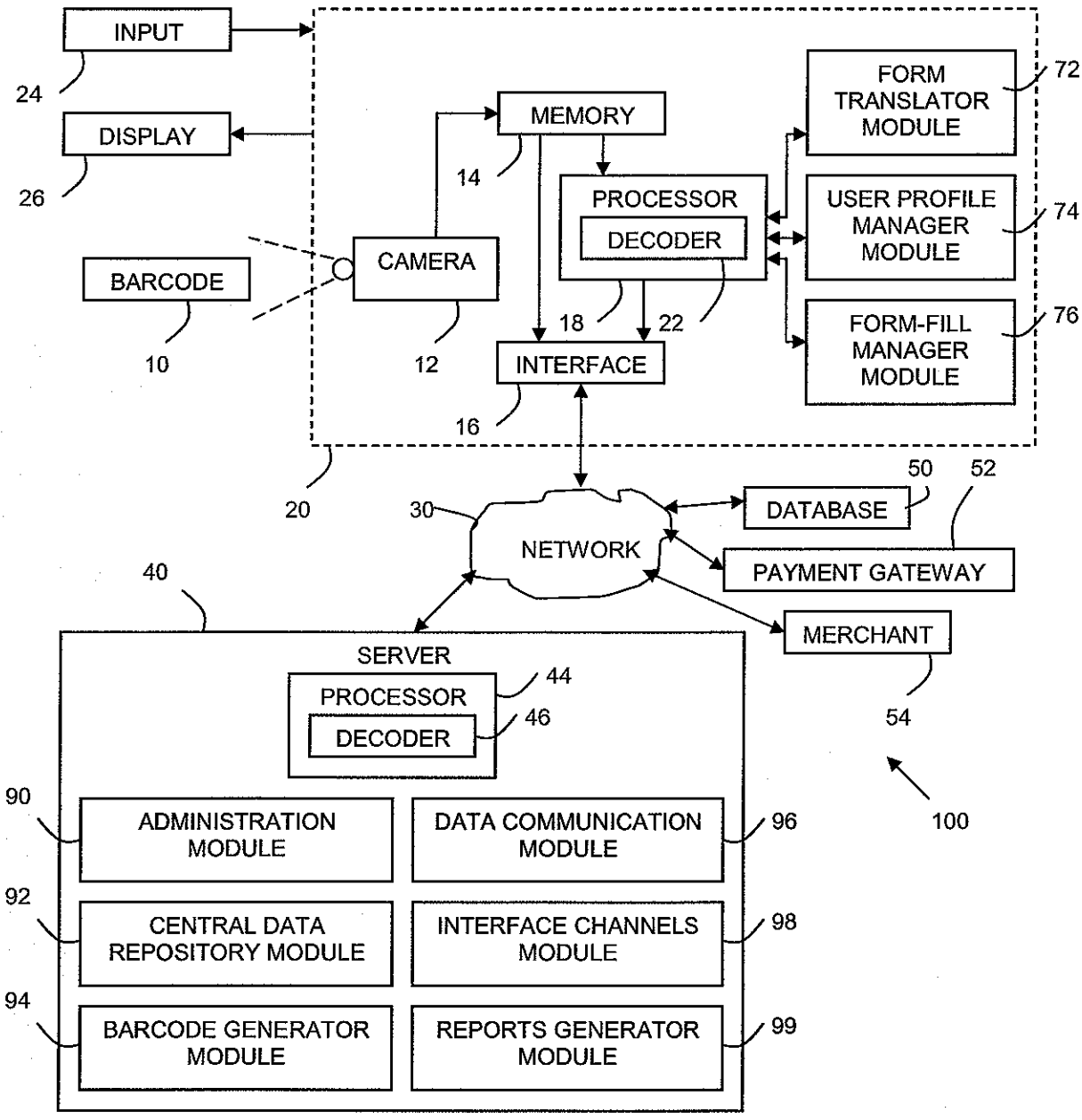

INPUT
24
DISPLAY
26
BARCODE
10
CAMERA
12
MEMORY
14
PROCESSOR
DECODER
18
22
INTERFACE
16
20
FORM TRANSLATOR MODULE
72
USER PROFILE MANAGER MODULE
74
FORM-FILL MANAGER MODULE
76
30
NETWORK
50
DATABASE
52
PAYMENT GATEWAY
MERCHANT
54
40
SERVER
PROCESSOR
44
DECODER
46
90
ADMINISTRATION MODULE
DATA COMMUNICATION MODULE
96
92
CENTRAL DATA REPOSITORY MODULE
INTERFACE CHANNELS MODULE
98
94
BARCODE GENERATOR MODULE
REPORTS GENERATOR MODULE
99
100

FIG. 1

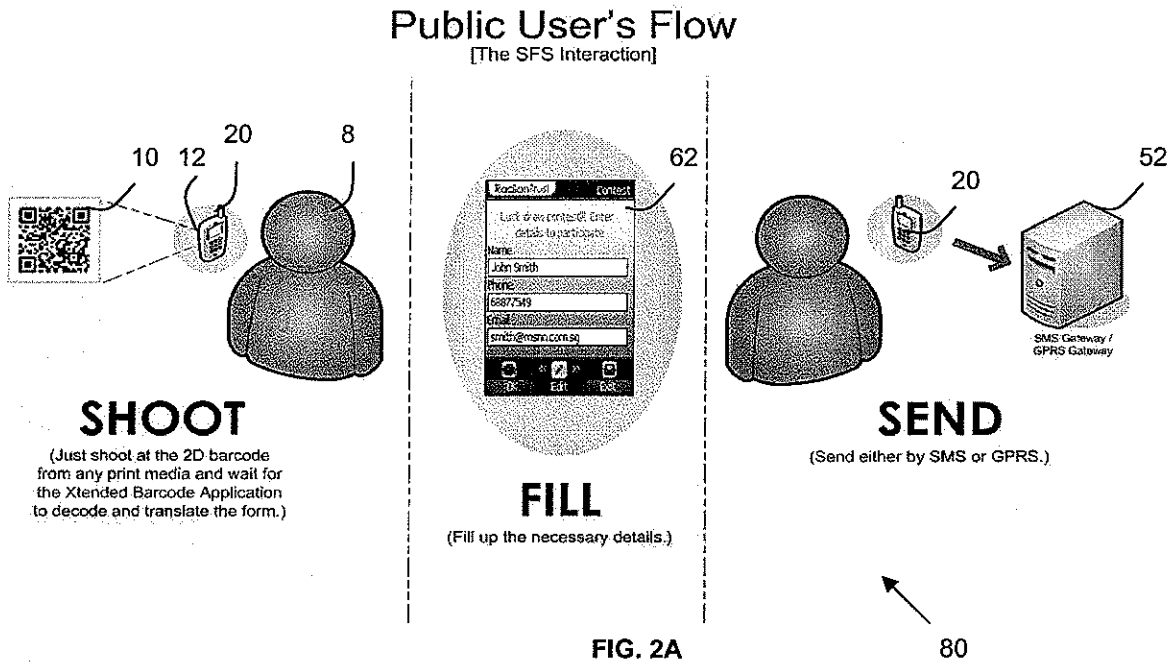

Public User's Flow
[The SFS Interaction]
10
12
20
8
62
20
52
SHOOT
(Just shoot at the 2D barcode from any print media and wait for the Xtended Barcode Application to decode and translate the form.)
FILL
(Fill up the necessary details.)
SEND
(Send either by SMS or GPRS.)
SMS Gateway / GPRS Gateway
80

FIG. 2A

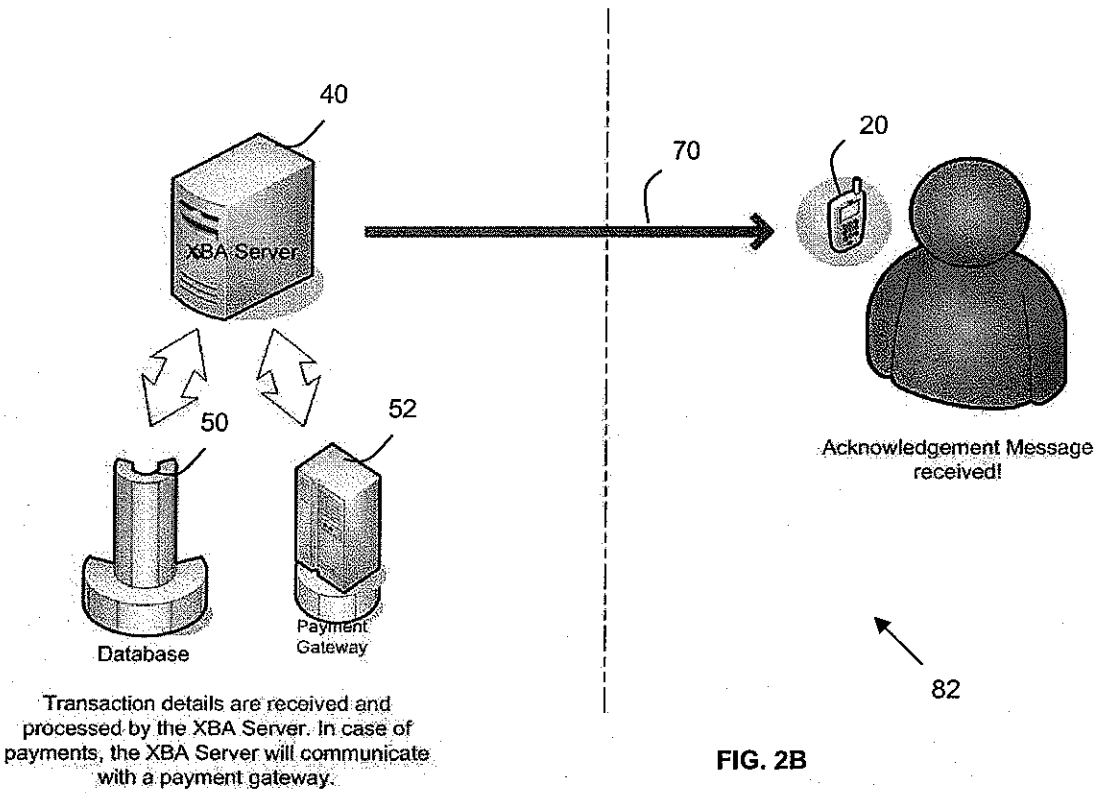

40
XBA Server
70
20
50
52
Database
Payment Gateway
Acknowledgement Message received!
Transaction details are received and processed by the XBA Server. In case of payments, the XBA Server will communicate with a payment gateway.
82

FIG. 2B

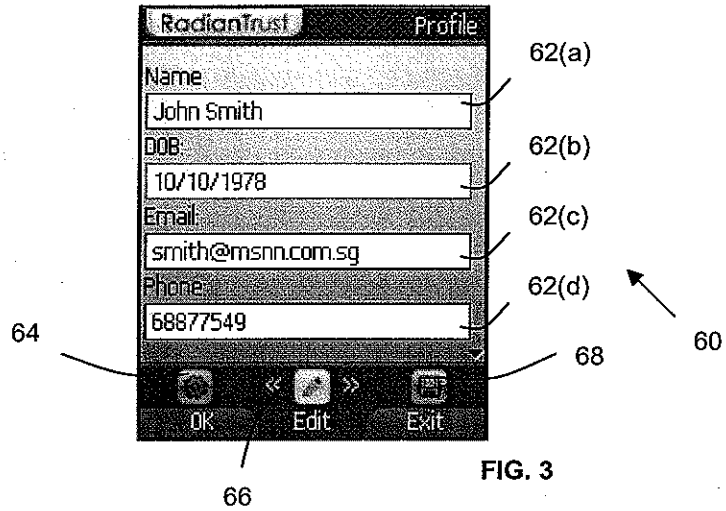

RadianTrust
Profile
Name
John Smith
DOB:
10/10/1978
Email:
smith@msnn.com.sg
Phone:
68877549
OK
Edit
Exit
62(a)
62(b)
62(c)
62(d)
60
64
68
66

FIG. 3

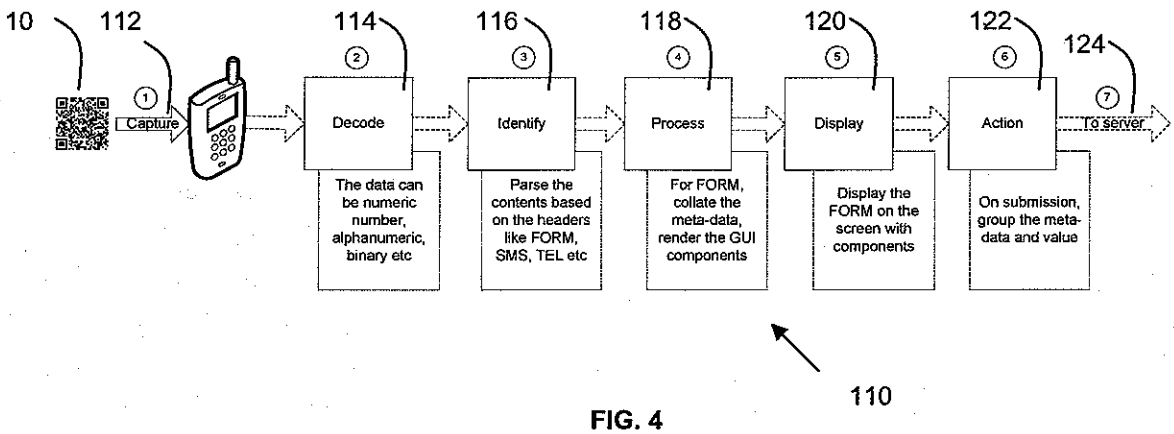

10
112
114
116
118
120
122
124
Capture
Decode
Identify
Process
Display
Action
To server
The data can be numeric number, alphanumeric, binary etc
Parse the contents based on the headers like FORM, SMS, TEL etc
For FORM, collate the meta-data, render the GUI components
Display the FORM on the screen with components
On submission, group the meta-data and value
110

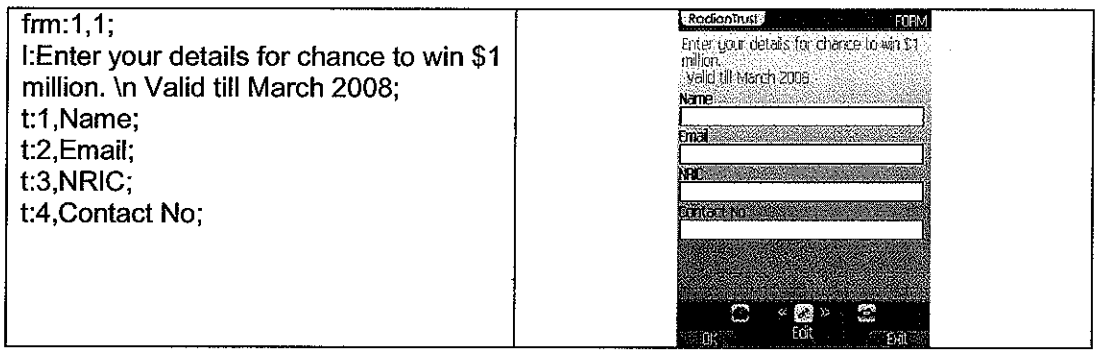
FIG. 4

Sl. No.	Headers	Description
1	SMS	Used to identify the data as SMS
2	TEL, TLK	Used to identify the data as a telephone number to which a call can be made or an SMS can be created
3	CRD, VCARD	Used to identify a VCard information
4	www, http, https, rtsp	Used to access websites or media streaming
5	EMAIL	Used to identify the Email address to which the mail can be sent
6	FRM	Used to identify the form and display the graphical user interface



130

FIG. 5





150

FIG. 7

Sl. No.	Identifier	Meta-data	Description
1	FRM	<form-id>, <merchant-id>	Used to identify which form to display. XBA uses the following meta-data information in the form header: [frm:100012,SH20997;] -> The first id is a unique identifier to the form and the latter is to identify the merchant to whom the form belongs.
2	L – Labels	Null	No meta-data is used by the label controls as it is merely used for providing appropriate name to the control beneath.
3	Components like T-Textbox, TA – Text area etc.	<attribute-id>	Attribute ids are mapped to a component, for example: [T:S109,Name;] -> In the case where a form contains a textbox requiring the user to fill-up the 'Name' field, the S109 id will automatically save the data encoded by the user to that particular database field.
4	P – Mode of payment	<mode={cc, ...}>	This represents the mode of payment to be used, e.g. cheque or credit card. If the mode is set to 'cc', the translator will show the additional components such as: type of card, cardholder's name and expiry date. If the is set to 'cq', the translator will show the cheque number textfield.

FIG. 6

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