

# EXHIBIT 55



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# United States Patent [19] Gatto

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- [54] **ELECTRONIC FUND TRANSFER OR TRANSACTION SYSTEM**
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- [\*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).
- [21] Appl. No.: **08/670,599**
- [22] Filed: **Jun. 26, 1996**

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Primary Examiner—Harold I. Pitts

### [57] ABSTRACT

An electronic fund transfer (EFT) system capable of displaying a menu including one or more user-defined custom transactions associated with an identification card so that the user can select a desired transaction by a single selection or with limited inputs. The transactions may be defined by a user during a set-up/authorization operation and/or may be stored based on transactions performed by the user. Additionally, the transactions may be stored on the identification card, in a local memory of a transaction terminal and/or in a system memory of the EFT system. A single identification card may be used to enable the user to select from a plurality of financial accounts with different institutions. Another asset of an ATM system and method comprises a graphical user interface that enables a user to select a transaction type and the transaction parameters necessary to define that transaction from a single display. By use of a pointing device (and possibly other input devices), the user can select or change selections for the transaction type and/or transaction parameters. Preferably, the display is created using object-oriented programming and has a plurality of objects corresponding to the transaction type and transaction parameters. Using the pointing device, the user selects the transaction type. Once the transaction type is selected, the transaction parameters necessary to define the selected transaction type are selected. The ATM system may preselect transaction types and/or transaction parameters based on stored information relating to the user (such as a previous transaction or other information.). If the selections are as the user desires them to be for the desired transaction, then the user can simply click on a command button (e.g. a button labeled "OK") to cause the transaction to be executed. This potentially reduces the number of inputs or selections that a user must make to execute a desire transaction.

### Related U.S. Application Data

- [63] Continuation-in-part of application No. 08/421,486, Apr. 13, 1995, Pat. No. 5,546,523.
- [51] Int. Cl.<sup>7</sup> ..... **G06F 17/60**
- [52] U.S. Cl. .... **235/379; 235/379; 235/380**
- [58] Field of Search ..... **235/379, 380; 395/156**

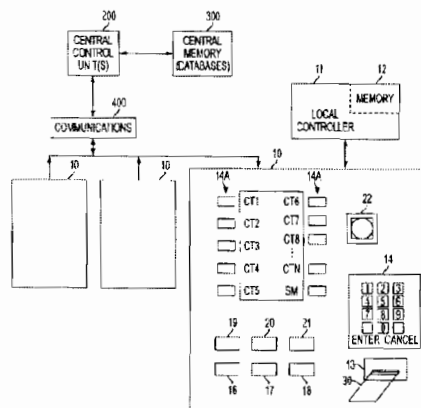
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(List continued on next page.)

32 Claims, 6 Drawing Sheets



criteria to assign a score to each transaction to predict the one the user will likely want to execute. Various types of artificial intelligence (e.g., neural network type techniques) may be used to refine the predictive ability of the ATM over time.

Similarly, for a selected transaction type, the various transaction parameters that the user may desire may be predicted based on stored information. For example, a user may routinely make withdrawals in a certain amount and from a particular account. Thus, if the ATM predicts that the user may want to withdraw funds, stored historical data regarding the Account and Amount may be preselected. Alternatively, if the user selects Withdrawal as the transaction type, the ATM may, in response to this selection, predict and preselect these transaction parameters. Thus, the ATM may initially predict an entire transaction (including transaction type and transaction parameters) or only part of the transaction (e.g., the transaction type or one or more transaction parameters).

According to another aspect of the present invention, the ATM system may predict one or more of the transaction parameters globally for all transaction types. For example, based on stored information, the ATM may determine that a user always or usually selects that a receipt should or should not be printed. If this is the case, the ATM may always predict and preselect that the user will want a receipt to be printed. Other global selections and methodology may also be used.

An example of a flow chart according to one embodiment of this aspect of the invention is provided in FIG. 5. As shown in FIG. 5, when a user desires to execute a transaction, standard preliminary steps are performed (not shown) and then the stored information is read (Step 501). For example, if transaction information is stored on a magnetic card, the user inserts the card into a card reader associated with the ATM and the stored information is read. Next, the ATM predicts and displays the transaction type that the user may want to execute (Step 502). The prediction may be made according to one of the techniques described above or in some other manner. The predicted transaction type is also displayed (e.g., in Transaction Type object 31). In Step 503, the user is prompted to indicate whether this is the desired transaction type. If predicted transaction type is the transaction type desired by the user, the user indicates OK. If not, the user selects the desired transaction type (Step 504) and selects OK. From Step 503, control passes to Step 505. In Step 505, the ATM predicts the transaction parameters for the selected transaction type. If the predicted transaction parameters are as the user desires, the user selects OK (Step 506). If one or more of the predicted transaction parameters is not as the user desires, the user may select the parameter (s) (Step 507) and then select OK (Step 506). From Step 506, control passes to Step 508 and the transaction is executed. Other steps (not shown in FIG. 5) may be performed prior to or after execution of the transaction.

According to another embodiment of the invention, as shown in FIG. 6, stored information may be read (e.g., from the user's magnetic card) (Step 601). Then, the ATM predicts and displays a transaction type and transaction parameters, (Step 602). At this point the user may be prompted to select OK if all selections are as desired or the user may select a different transaction type (Step 605) or transaction parameter(s) (Step 606) and then select OK (Step 609). If the predicted transaction type and the transaction parameters displayed in Step 602 are as the user desires, the user selects OK (Step 603) and control passes to Step 604. If the user selects a different transaction type (Step 605), the

ATM may make a new prediction of the transaction parameters for the selected transaction type (Step 607). If the predicted transaction type is as the user desires (i.e. the user does not select a different transaction type in Step 605), the user may change one or one or more transaction parameters (Step 606) and then select OK (Step 609). Returning to Step 607, if the ATM predicts and displays transaction parameters for the newly selected transaction type, and the parameters are as the user desires, then the user may then select OK (Step 608) and control passes to Step 604. If not, control passes to Step 606. In Step 604, the selected transaction is executed. Other steps (not shown in FIG. 6) may be performed prior to or after execution of the transaction.

While many of the foregoing examples illustrate the operation of various aspects of the invention in connection with a withdrawal, other transaction types can also be performed in accordance with the present invention.

The foregoing is a description of various aspects of the preferred embodiments and features of the present invention. However, the invention is not so limited. Various other alternatives consistent with the invention will be apparent to one of ordinary skill in the art. The scope of the invention is only limited by the claims appended hereto.

What is claimed is:

1. An electronic financial transaction system for executing financial transactions, the transactions being characterized by a transaction type and a plurality of transaction parameters, the system comprising:

a central controller;

a communications network;

a terminal device selectively connectable to the central controller through the communications network, the terminal device comprising:

a processor;

a display connected to the processor;

an input mechanism for providing input to the processor; the system further comprising means for storing user defined transaction information, the transaction information comprising at least one of user defined transactions and user defined transaction parameters;

the processor causing the display to display on a single screen stored transaction information; the input mechanism enabling a user to use the displayed transaction information to execute a financial transaction or to enter selections to specify one or more transaction parameters.

2. The system of claim 1 wherein the system predicts transaction information that a user of the terminal will desire based on stored data for that user.

3. The system of claim 2 wherein the prediction is based on the user's most commonly requested transaction.

4. The system of claim 2 wherein the prediction is based on the user's last transaction.

5. The system of claim 2 wherein the prediction is based on when the user is executing a transaction.

6. The system of claim 2 wherein the prediction is based on where the user is executing the transaction.

7. The system of claim 2 wherein the prediction is based on a plurality of criteria, where the criteria are assigned a relative weight.

8. The system of claim 3 further comprising a counter to count the number of times a user performs a particular transaction to assist in determining the user's most commonly requested transaction.

9. The system of claim 1 further comprising means for identifying a user prior to enabling the user to execute a transaction.

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10. The system of claim 9 wherein the means for identifying comprises an eye scanner.

11. The system of claim 1 wherein the terminal further comprises a card means, the card means being capable of at least one of reading from and writing to a card.

12. The system of claim 11, wherein the card comprises a smart card.

13. The system of claim 12 wherein the terminal comprises a computer.

14. The system of claim 13 wherein the system comprises a financial transaction system for transferring funds and the card means comprises writing transaction information to the smart card, the transaction information comprising a fund transfer amount.

15. The system of claim 9 wherein the system predicts transaction information that a user of the terminal will desire based on stored data for that user.

16. The system of claim 15 wherein the prediction is based on the user's most commonly requested transaction.

17. The system of claim 15 wherein the prediction is based on the user's last transaction.

18. The system of claim 15 wherein the prediction is based on when the user is executing a transaction.

19. The system of claim 15 wherein the prediction is based on where the user is executing the transaction.

20. The system of claim 15 wherein the prediction is based on a plurality of criteria, where the criteria are assigned a relative weight.

21. The system of claim 15 wherein the terminal further comprises a card means, the card means being capable of at least one of reading from and writing to a card.

22. The system of claim 24, wherein the card comprises a smart card.

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23. The system of claim 22 wherein the terminal comprises a computer.

24. The system of claim 23 wherein the system comprises a financial transaction system for transferring funds and the card means comprises writing transaction information to the smart card, the transaction information comprising a fund transfer amount.

25. The system of claim 2 wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and the user uses the input means to either change the predicted transaction information or accept the displayed transaction type and transaction parameters.

26. The system of claim 25 wherein the predicted transaction type and transaction parameters are displayed simultaneously on a single screen of the display.

27. The system of claim 25 wherein the prediction is based on the user's most commonly requested transaction.

28. The system of claim 25 wherein the prediction is based on the user's last transaction.

29. The system of claim 25 wherein the prediction is based on when the user is executing a transaction.

30. The system of claim 25 wherein the prediction is based on where the user is executing the transaction.

31. The system of claim 25 wherein the prediction is based on a plurality of criteria, where the criteria are assigned a relative weight.

32. The system of claim 27 further comprising a counter to count the number of times a user performs a particular transaction to assist in determining the user's most commonly requested transaction.

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