

[0074] For example, in Fig. 2 screen which is for the "sales entry," the following words can be sorted out:

OPGD  
 Sales No.  
 Sales Classification  
 Sales Date  
 Customer  
 Payment Due Date  
 Billing Destination  
 Consumption Tax  
 Staff in Charge  
 Slip-base Order No.  
 Delivery Location  
 Phone Number  
 Remarks  
 Product Codes  
 Quantity  
 Unit Price  
 Discount  
 Amount  
 Product Name  
 Type of Machines/Media  
 Article Number  
 Sales Total  
 Consumption Tax Total  
 Discount Total  
 Sum Total  
 Execution  
 F1  
 F3  
 F4  
 F8,

and these are the determined words.

[0075] Also, in the above "customer code reference" screen of Fig. 3, although not illustrated, there are such words as follows:

No.  
 Customer  
 Customer (abbreviation)  
 Customer Name  
 Address  
 Staff in Charge  
 Selection No.  
 Customer Name in katakana  
 Old Code  
 Execution  
 F12

The determined words are what were sorted out from these words.

[0076] Also, in the above "arrival confirmation entry" screen of Fig. 4, although not illustrated, there are such words as follows:

OPGD  
 Warehouse Codes  
 H/S Classification  
 Usher Classification  
 Execution

F1  
F3  
F4

5 The determined words are what were sorted out from these words.

[0077] Also, in the above "arrival confirmation entry" screen of Fig. 5, the following words can be sorted out:

10 No.  
Warehouse Codes  
Warehouse Name  
Selection No.  
Execution  
F12

15 and these are the determined words.

[0078] Also, in the above "delivery request list" screen of Fig. 6, the following can be sorted out:

20 Delivery Request Date, Execution  
F2  
F3

and these are the determined words.

[0079] Also, with the vouchers of the above "delivery request list" of Fig. 7 and Fig. 8, the following can be sorted out:

25 Department  
Delivery Destination  
Billing Destination  
Address 1  
Address 2  
30 Phone Number  
Dept. 1  
Staff in Charge  
Staff in Charge of Store  
Delivery Request Date  
35 Delivery No.  
Product Code  
Product Name  
Quantity  
Update  
40 Order Receive Date  
Order Receive No.  
Line  
Staff in Charge of Order Receiving  
Article Number  
45 Date  
Your Company's Order No.  
Inst.  
City  
Delivery  
50 Sales

These are the determined words.

#### Making of the homogeneity map

55 [0080] The homogeneity map is made based on the determined definitive (screens or vouchers) identifier. The homogeneity map may be made by a worker or be automated mechanically. On the homogeneity map, pallets (indicated with a box) corresponding to each screen and each voucher are connected each other with lines, and the connection

accords with the regulation of the pallet chain function. The line means the pallet chain function. If screens and vouchers have already been determined, the connections between pallets are to be necessarily determined.

[0081] The Fig. 9 is a homogeneity map for the above "sales entry."

[0082] 91 is a menu screen. One can select "sales entry" from the menu screen.

[0083] 92 is the W04 pallet for the screen (Fig. 2) on which to enter sales data, whereas 93 is its W02 pallet.

[0084] 94 is the W03 pallet at the time when "execution" has been selected in the screen on which to enter sales data.

[0085] 95 is the W03 pallet at the time when "registration" has been selected in the screen on which to enter sales data. The WFL (Work File Area) 96 means to write data onto a file.

[0086] 97 is the W04 pallet for the screen (Fig. 3) at the time when "reference" of "the customer code" has been selected in the screen on which to enter sales data, whereas 98 is its W02 pallet.

[0087] When "end" is selected in the screen on which to enter sales data, it returns to the menu screen.

[0088] In each pallet, the following are described: the kind of pallet (in the upper part outside the box); the name of screen (in the upper part inside the box); the screen identifier (in the lower part inside the box); and the determined file name (discussed later) (in the dot-line box in the lower part outside the box).

[0089] Above the line connecting pallets, the name of buttons (such as "execution" and "registration") are described, and below the line is described, the absolute classification of the process (F0 - F6)(discussed later).

[0090] Fig. 10 is a homogeneity map for the above "arrival confirmation entry."

[0091] 101 means a menu screen, on which "arrival confirmation entry" can be selected.

[0092] 102 is the W04 pallet for the screen (Fig. 4) on which to enter arrivals confirmation, whereas 103 is its W02 pallet.

[0093] 104 is the W04 pallet for the warehouse codes reference screen (Fig. 5) at the time when "reference" of the "warehouse codes" has been selected in the screen on which to enter arrivals confirmation, whereas 105 is its W02 pallet.

[0094] When "execution" is selected in the screen on which to enter arrivals confirmation, it returns to the screen on which to enter arrivals confirmation.

[0095] When "registration" is selected in the screen on which to enter arrivals confirmation, the data is written onto a file via the WFL (Work File Area) 106.

[0096] When the "end" is selected in the screen on which to enter arrivals confirmation, it returns to the menu screen.

[0097] Fig. 11 is a homogeneity map for the above "delivery request list."

[0098] 111 is a menu screen on which "delivery request list" can be selected.

[0099] 112 is the W04 pallet for the screen (Fig. 6) on which to output the delivery request list, whereas 113 is its W02 pallet.

[0100] When "print" is selected in the screen on which to output the delivery request list, the vouchers are output (printed) via the WFL (Work File Area) 114.

[0101] When "execution" is selected in the screen on which to output the delivery request list, it returns to the screen on which to output the delivery request list.

[0102] When "end" is selected in the screen on which to output the delivery request list, it returns to the menu screen.

[0103] In the homogeneity map, as explained above, for example, if a certain screen has been determined, the process to be followed (such as display of screen, output of voucher, writing onto file, reading from file, operation) will be inevitably determined based on the contents of process of the screen (control words such as execution and registration), so that definitions such as screens are connected with lines in accordance with the above-mentioned contents of the process.

#### Determination of the file

[0104] Necessary files are determined based on the homogeneity map made and the words determined. That is, a necessary file can be inevitably determined from the homogeneity map and the word. A determined file is described in the appropriate tape such as the dot-line box in the lower part outside the box of the homogeneity map.

[0105] For example, in the W02 pallet indicated by the code 93 of Fig. 9, it is consequently known from the homogeneity map and the words, that the following files are necessary:

Employee M (master file)

Name M

Customer Information F (file)

Department M

W03-8/F

Product List F.

Creation of the Tense Control Vector A tense control vector (program) for each word is to be made. That is, a tense control vector for each word is to be created.

[0105] In the tense control vector, there are the following six kinds:

- W04 duplicate vector
- W04 homogeneity vector
- W02 duplicate vector
- W02 homogeneity vector
- W03 duplicate vector
- W03 homogeneity vector

These six kinds of the tense control vector (program) are to be created for every word. In some case, however, the W02 duplicate vector is not necessary.

[0106] For example, a sample for making the tense control vector is explained herein, focusing on the word "sales."

[0107] The W04 duplicate vector is to be made as shown in Fig. 12.

[0108] First, the vector should have the logic to make judgment whether a sales value exists or not in the address having the item "sales data" in the corresponding W02 of file (step 1201). If it exists, the vector should have the logic to set the sales value to the address having the item of "sales data" in the W04 (step 1202), thereby ending a process.

[0109] If the sales value does not exist there, the vector should have the logic to judge whether the sales value exists or not in the address having the item of "sales data" in the W03 (step 1203). If it exists, the vector should have the logic to set the sales value to the address having the item of "sales data" in the W04 (step 1204), thereby ending a process. If the sales value does not exist there, the vector should have the logic to end the process without doing anything.

[0110] Furthermore, the vector should have a step, after the step 1204, to confirm if an aimed process is accomplished or not, and if the aimed process is not accomplished, to set a flag to reactivate the pallet.

[0111] What is important is that for any words, programs are to be made with always the same structure as the one stated above, which also applies to the following programs.

[0112] The W04 homogeneity vector is to be made as shown in Fig. 13.

[0113] First, the vector should have the logic to make judgment whether the sales value has already been input into the address having the item of "sales data" in the W04 (step 1301). If it has already been input, the vector should put an end to the process.

[0114] If the sales value has not been entered yet, the vector should have the logic to judge whether a "sales value" for the address having the item of "sales data" of the W04 can be computed or not by the internal data of the W04 (step 1302). That is, for example, assuming that the sales value is "the price"  $\times$  "the number of pieces", the vector should judge whether values already exist or not in address having the item of "price" in the W04 and in the address having the item of "number of pieces" in the W04. If those values exist, the vector should, deciding that it is computable, compute a "sales value" (for example, the vector is to compute a sales data from the existing "price" data and "number of pieces" data) (step 1303), and set the computed result (for example, the obtained "sales value") into the address having the item of "sales data" in the W04 (step 1304).

[0115] When the "sales data" is not computable, the vector should have the logic, if necessary (step 1305), set a flag for reactivating the pallet (step 1306). That is, the determination of the sales value is once reserved; for the above-mentioned example, the determination of the sales value is reserved until the "price" data and the "number of pieces" data are input. This means nothing but, that the program stated in the present invention continuously determines the sign of logic.

[0116] The W02 homogeneity vector is to be made as shown in Fig. 14.

[0117] First, the vector should have the logic to make judgment whether a sales value is already input or not (that is, whether it is already set into the address having the item of the W04 "sales data" in the W04) (step 1401). If it is not input, the vector should put an end to the process.

[0118] If the sales value already input, the vector should have the logic to set the input sales value into the address having the item of "sales data" in the W02 (step 1402), and to put an end to the process.

[0119] For some words, if necessary, the vector should have, before step 1401, a step for confirming whether the execution is necessary or not. Also, the vector should have, after step 1402, a step for confirming whether the aimed process is accomplished or not, and, if the aimed process has not been accomplished to set a flag for reactivating the pallet.

[0120] Further, for example in the case of the control words such as the "execute key," the above-mentioned step 1402 will become a process for setting a homogeneity map flag. The homogeneity map flag ( $H = 0 - 6$ , however,  $H = 0$  is exceptional) is determined by the homogeneity map. By this homogeneity map flag it becomes possible to process distributing the homogeneity routes in the pallet chain function, as will be discussed later.

[0121] The W03 homogeneity vector is to be made as shown in Fig. 15.

[0122] First, the vector should have the logic to make judgment whether a sales value is already input or not into the address having the item of "sales data" in the W02 (step 1601). If it is already input, the vector should set the sales value into the address having the item of the "sales data" in the W03 (step 1602), and to put an end to the process.

[0123] If the sales value does not exist, the vector should put an end to the process without doing anything.

[0124] For words, if necessary, the vector should have, before step 1601, a step for confirming whether the execution is necessary or not. Also, the vector should have, after step 1602, a step for confirming whether the aimed process is accomplished or not, and if the aimed process is not accomplished, to set a flag for reactivating the pallet.

[0125] The W03 homogeneity vector is to be made as shown in Fig. 17.

[0126] First, the vector should have the logic to make judgment whether a sales value is already input or not into the address having the item of "sales data" in the W03 (step 1701). If it is already input, the vector should put an end to the process.

[0127] If the sales value is not input, the vector should have the logic to make judgment whether the sales value for the address having the item of "sales data" in the W03 can be induced or not (step 1702). If it is not inducible, the vector should put an end to the process. If the sales value is inducible, the vector should have the logic to make judgment whether the calculation is possible or not (step 1703). That is, for example, assuming that the "sales value" is the "price"  $\times$  the "number of pieces" as is the same as the step 1302 above, the vector should judge whether values already exist or not in the address having the item of the "price" in the W06 and the "number of pieces" in the W08. Then, if it is inducible, the vector should calculate (for example, the vector should obtain the sales data from the existing "price" data and the "number of pieces" data) (step 1704), and to set the calculated result (for example, the obtained sales value) into the address having the item of the "sales data" in the W03 (step 1705).

[0128] When the calculation cannot be executed, if necessary (step 1706), the vector should set a flag for reactivating the pallet (step 1707). That is, also in this case, as the same as above, the determination of the sales value is once reserved; for the above-mentioned example, the determination of the sales value will be reserved until the "price" data and the "number of pieces" data are input. This means nothing but that the program stated in the present invention autonomously determines the significance.

#### Making of the pallet function

[0129] The pallet function for W04, W02 and W03 should be made. Fig. 18 shows the structure paradigm of the pallet function. The pallet function (program) having such structure may as well be made for each of W04, W02 and W03, as will be set forth in the followings.

[0130] First, the pallet function should have a logic to open a file (step 1801). That is, for example, the pallet function concerned with the W04 should have a logic to open a file of one predetermined W04 out of a plurality of W04 pallets, and then to execute each duplicate vector and homogeneity vector in the consecutive order (step 1802, step 1808).

[0131] Thereafter, in the case that the pallet activating flag has been set (step 1804), the function should reset the flag (step 1805), as well as execute each duplicate vector and homogeneity vector in the consecutive order (step 1802, step 1803). That is, the pallet function in co-operation with the pallet activating flag of each pallet, enables the determination of the autonomous significance of the program.

[0132] On the other hand, when the pallet activating flag has not been set, the function should close the file (step 1806) and put an end to the process.

#### Assembling into the Pallet Chain Function

[0133] The structure of the pallet chain function is identical in any software. Accordingly, the tense control vector and the pallet function made as explained above simply needs to be assembled into the pre-made pallet chain function.

[0134] The structure paradigm of the pallet chain function is shown in Fig. 19.

[0135] That is, the pallet chain function should have a logic to determine information to be transmitted (step 1901). The information to be transmitted is meant to be a screen to display. In the case of the homogeneity map shown in Fig. 9, for example, when the "reference" of the "customer code" in the sales data entry screen (ref. Fig. 2) is selected (which means that a homogeneity map flag of R = 3 has been valid in the W02 pallet of "customer code"), the pallet chain function should determine the customer code reference screen (Fig. 2) as the information to be transmitted.

[0136] When the information to be transmitted contains the information for closing the system (step 1902), the function should have the logic to close the system (step 1903). The information for closing the system is that, explaining by referring to the homogeneity map shown in Fig. 9, for example, the "F3" has been selected in the sales data entry screen (Fig. 2) (which means that a homogeneity map flag of R=0 has been valid in the F3's W02 pallet). To close the system is, speaking of the above example, to return to the menu screen.

[0137] Next, the function should make judgment whether to continue or not inside the W (Walk-Through) unit (step 1904). This step is concerned with exceptional process. That is, the WT unit is, as shown in Fig. 20, for example, one

unit made up by binding the entry screen used for data entry and the reference screen used for the reference to data upon entering the data. For example, by explaining in reference to the homogeneity map shown in Fig. 8, the WT unit is one unit made up by binding the sales data entry screen (ref. Fig. 2) and the customer code reference screen (ref. Fig. 3). However, when screens of other homogeneity maps, for example the arrival confirmation entry screen (ref. Fig. 10 and Fig. 4.), are needed, the confirmation entry screen must be unit-formed with these screens stated above. Thereupon, as shown in Fig. 26, if necessary, the pallet chain should perform the scenario chain, or the chain with the other WT (step 1905, 1906). This will become particularly effective, when coping with a huge program.

[0138] In the case of the continuation inside the WT unit, the pallet chain function should set all pallets of the WT unit (step 1907). For example, in the case of the homogeneity map shown in Fig. 8, the function should set all the pallets concerned with this whole homogeneity map (W02 - W09) in the working memory, respectively.

[0139] Then, the function should execute the corresponding W04 pallet at first (step 1908). That is, the function should execute the W04 pallet in whose pallet function as shown in Fig. 18 all W04 duplicate vectors and W04 homogeneity vectors have been set. By this step, data concerned with the screen to display will be determined.

[0140] Then, the pallet chain function should execute the transmission function (step 1909). That is, the function should transmit a screen in which all the data have been set to a display means, for example, a CRT.

[0141] Thereafter, the function should have the logic to execute the receiving function (step 1910). That is, the function should receive the screen, in which all the data have been input from display means, for example, a CRT.

[0142] Then, the pallet chain function should make judgment whether the received data is normal or not (step 1911). If abnormal, the function should resume the procedure from the beginning. That is, the function should make judgment if the data violating the regulation exists or not.

[0143] Next, the function should execute the corresponding W02 pallet (step 1912). That is, the function should execute the W02 pallet in whose pallet function as shown in Fig. 15 all W02 homogeneity vectors have been set. By this step, the input data will be determined.

[0144] Next, a homogeneity map will be determined (step 1913, step 1914). As explained above, the homogeneity map is judged by the homogeneity map flag (R = 1 to 5) contained in the W02 homogeneity vector.

[0145] When the homogeneity map flag R = 1, the function should execute the corresponding W03 pallet (the W03 pallet which is not accompanied by a recording onto a file) (step 1915). For example, the line of the W03 pallet 94 shown in Fig. 9 is executed. Then, the function should have a logic to return to the first step (step 1901). That is, the homogeneity map in the case of R = 1 only performs data processing (ref. Fig. 9).

[0146] When the homogeneity map flag R = 2, the function should execute the corresponding W03 pallet (the pallet W03 accompanied by the recording onto a file) (step 1916). For example, the line of the W03 pallet 95 and the line of the WFL 86 are executed. Then the function should have a logic to return to the first process (step 1901). That is the homogeneity map in the case of R = 2 executes data processing as well as a recording data onto a file (ref. Fig. 9).

[0147] When the homogeneity map flag R = 3 to 5, the function should return to the first process (step 1901) as it is.

[0148] In this connection, the homogeneity map as shown by R = 3 performs processing to return to the W04 pallet (both homogeneous and heterogeneous) without doing anything farther (ref. Fig. 9).

[0149] The homogeneity map as shown by R = 4 performs recording data in a file as it is (ref. Fig. 10).

[0150] The homogeneity map as shown by R = 5 performs taking out data from a file as it is (ref. Fig. 11).

[0151] To be noted, the pallet chain function shown in Fig. 19 is for on-line use. The pallet chain function for off-line use is as shown in Fig. 15.

In summary,

[0152] At first, the pallet chain function should have the logic to determine a screen to display (step 2101) and to activate the W04 pallet (step 2102). By this, screen data is edited and the edited screen is displayed (step 2103).

[0153] When the user's operation is done to this displayed screen, the function should have the logic to receive the screen (step 2104) and to activate the W02 pallet (step 2105). By this a homogeneity map route and the next screen to be displayed is judged.

[0154] Then, the function should have the logic to judge the homogeneity map (step 2106), and in the case of the homogeneity map 1 or 2 (step 2107), the function should activate the W03 pallet. By this, the data operation processing is done.

[0155] When the data operation processing is finished or in the case of other than the homogeneity map 1 or 2 above, the function returns to step 2101.

[0156] Fig. 22 shows the structure inside the pallet.

[0157] As shown by the Fig. 22, for the terms A - J on the screen 2201, duplicate vector A - J and homogeneity vector A - J exist as a pallet function inside the W04 pallet, as well as homogeneity vector A - J of the homogeneity vector PF1 and the homogeneity vector A - J of the homogeneity vector PFn exist as a pallet function inside the W02 pallet. Inside the W03 pallet, duplicate vector A - X and homogeneity vector A - X exist as a pallet function (A - X: all items).

[0160] A logic paradigm of the lance control vector is shown in Fig. 23. As shown in the Fig. 23, in the pallet chain function (accessrio) 2301, when data is input and a screen/message is received, W02 pallet, W03 pallet and W04 pallet are activated in their order. When the W02 pallet is activated, the process shown by the code 2303 is executed. When the W03 pallet is activated, the process shown by the code 2303 is executed. When the W04 pallet is activated, the process shown by the code 2304 is executed.

[0161] Fig. 24 is a diagram showing characteristics of the logic in Lyee.

[0162] Suppose the program logic is  $L_c$ , and the logic being a base for causing actions in accordance with the information sent out by the program, which humans cannot be aware of but can instantly conduct is  $L_m$ , in the traditional way of making software, the logic  $L_m$  (impossible to be realized) being a base for causing human actions has been forced to be fabricated, a process (procedure) and a function both binding human actions have been fixed as specializations (fabricated by SE with his or her experience or knowledge), thereby a program based thereupon has been made. That is,  $L_c = L_m$  was its provision.

[0163] Lyee's software, contrary to the traditional method of making software, does not contain  $L_m$ , and the program to be made works in accordance with human's capricious conducts.

[0164] Fig. 25 and Fig. 26 show the structure of the traditional-type programs, and Fig. 27 shows the module configuration of the traditional-type programs.

[0165] As understood from these figures, the traditional-type programs can be referred to as process transaction of functional division type. For this reason, the structural condition is complicated, as well as the arrangement of the module configuration is also extremely difficult.

[0166] Fig. 28 shows the structure of the Lyee-type program.

[0167] As understood from this figure, the Lyee-type program features the followings: the configuration is simple; the element unit is processed by the unit of word; the element content is simple and independent; the program logic does not contain composition conditions (handling procedure) like traditional-type programs.

[0168] In the following, how to grasp business expertise and function as well as the resulting effects from the stand point of Lyee will be explained.

(1) There is no need for business expertise

[0169] Fig. 29 shows the W03 homogeneity vector.

[0170] In step 2901, the vector should have the logic to confirm whether the field's value is "space" or "zero". (Judging from the item definition document). The judgment of this logic does not require business expertise; knowing the rule of Lyee is only needed.

[0171] In step 2902, the vector should have the logic to confirm whether the item in the right side (Starting point) of the corresponding item's expression (judging from the item definition document) exist or not in the W03 area. The judgment of this logic does not require business expertise; knowing the rule of Lyee is only required.

[0172] In step 2903, the vector should have the logic to confirm whether the value of the item of the right side (Starting point) of the corresponding item's expression (judging from the item definition document) is calculable ("space" or "zero") or not. The judgment of this logic does not require business expertise; knowing the rule of Lyee is only requested.

[0173] The step 2904 is a scheme which guarantees the operational order of the lance control vector. The judgment of this logic does not require business expertise; knowing the rule of Lyee is only necessary.

[0174] In step 2905, the vector shall calculate the items from the item definition document (such as expressions, etc.) users have confirmed.

[0175] Accordingly, in order to assemble Lyee's logic, the "item definition document such as expressions" is necessary, but the sequence of the process (which is called "business expertise") is not required.

(2) Lyee deals with only synchronous data and denies a process (handling of asynchronous data).

[0176] In Lyee, by introducing the "duplicate vector," it is possible to handle only the synchronous data. That is in Lyee, as shown in Fig. 30, there is no need of considering the examination of the logic for the operational procedure conditions, by handling only the synchronous data, whereas in the traditional methodology, much time was spent on examining the operational procedure, which results in worsening the productivity and the maintainability.

(3) The only one W03 pallet will do.

[0177] When realizing the logicalization of humans (i.e., to think communicable sentences, to take actions,....), it can be said from a biological point of view that all one's will and muscles (as represented by all brain cells) is intertwined

each other. And, the right-side brain or the left-side brain primarily works in accordance with an object area to be logicalized. The logic of software (the logicalization), by nature, must be the same as this (because the software logic is nothing but the logic made by humans).

[0176] As shown in Fig. 31, the W03 pallet of Lyee is an area assuming the role of "logicalization," so that the W03 pallet installs all the words in a system, which is equivalent to all one's will and muscles, in one area as synchronous data. In the case of Lyee, tense control vectors corresponding to all words are all intertwined each other (All tense control vectors work once, and as a result only the tense control vectors with significance execute their aimed processes).

[0177] That is, traditionally, words (data) necessary for the function aimed at have to be examined and analyzed in advance before the data definition part is to be designed. On the contrary, in the case of Lyee, all needs to be done is that all words be defined as they are and that the individual tense control vectors be assembled into the logic as explained above.

(4) There are two kinds of the logic.

[0178] In the traditional software, the automatic logic was composed of the combination of an operational logic and an automatically self-run logic. On the other part, in the case of software made by Lyee method, as shown in Fig. 32, the automatically self-run logic and the operational logic are separated. That is, the automatically self-run logic exists in the W03 pallet, and the operational logic exists in the logic in a human brain.

(5) Checking

[0179] The traditional software, as shown in Fig. 33 (a), has been structured to be of a flow of checking against the input, performing a normal process in case of "OK", or performing an error transaction in case of "NG." Accordingly, all error conditions of multiple items must be examined beforehand.

[0180] On the other hand, in Lyee software, as shown in Fig. 33 (b), the only homogeneity map is determined without executing the input check in the W02 pallet. In the W03 pallet, the selection is done concerning whether the process to be directed can be accomplished or not, and if the process to be directed cannot be executed, an error transaction is performed in the W04 pallet.

[0181] Explained next is the application range of Lyee in the system development step.

[0182] Fig. 34 (a) shows the traditional software development method. Traditionally, software has been developed through the following steps: scheme planning, job analysis and basic design, detail design, programming design, coding, and tests. Traditionally, development from the "job analysis and basic design" step to the "programming design" step has been performed depending upon SE's experience and expertise and human's abilities in coordinating meetings with users.

[0183] Fig. 34 (b) shows the Lyee's software development methodology. In Lyee, software is developed through the following steps: scheme planning, development into a homogeneity map, making of tense control vector specifications, coding of tense control vectors, and confirmation of movements. In Lyee, during the development process from the "development into a homogeneity map" step to the "confirmation of movements" step, the work is implemented plainly in accordance with the rule induced from the theory of Lyee, and the requirement which has been traditionally determined by human's abilities such as experience and expertise of SEs is elicited to enter in the process of making users confirm the result, thereby bringing about the result that the system, by the users' responding to the soliciting, is to be made reality. So to speak, in the traditional method, the upper-stream requirement and the lower-stream source have been linked up each other by the SE's ability. On the other hand, in Lyee, the upper-stream requirement and the lower-stream source are linked by the theory of Lyee.

[0184] In the following, the working steps for the development of the Lyee-applied software is more specifically explained.

[0185] Fig. 35 (a) shows a hand-over document given by users to the development side. What are to be handed over to the development side includes screens, files, vouchers, and code tables. In this regard, as shown in Fig. 35 (b), the development side makes screen definition document, file definition document, voucher definition document, table of words, homogeneity maps, and tense control vectors specifications based on the discussion with users. Then, as shown in Fig. 36 (c), the source program is made based on these documents.

[0186] Fig. 36 shows an example of the screen definition document. Fig. 37 shows an example of the voucher definition document. Fig. 38 shows an example of the file definition document. Fig. 39 shows an example of the homogeneity map.

[0187] Fig. 40 shows the method of making the homogeneity map.

(1) One shall confirm a screen for the menu to shift to at first, and make a framed space for the screen in the left-upper corner on the homogeneity map sheet.



(2) One shall make unconditionally a frame for W04 and W02 into this frame.

(3) One shall confirm the function key (button) on the screen, as well as distinguish between the screen to shift to upon pressing the key (button) and the function to be kept until the shift to the screen ("1: simple data hand-over/

"2: file making & updating/"3: operation & confirmation without file making or updating has been completed).

"1: Simple data hand-over → Specifying the functional key, Homogeneity map (R) = 3, the frame of next screen's frame

"2: File making & updating → Specifying the functional key, Homogeneity map (R) = 2, the frame of W03

However, when a file to be made is other than the basic terms, homogeneity map (R) = 4, the frame of WFL

"3: Simple operation & confirmation → Specifying the functional key, Homogeneity map (R) = 1, the frame of W02 (5) Hereafter, one shall repeat the above (2) to (4) for all screens inside the unit of the homogeneity map.

In the following, the method of making the tense control vector specifications is explained based on Fig. 41. Fig. 41 indicates the homogeneity vector.

The condition for determining the "input done" of step 4101 can be judged with the attribute and the initial value (known from the definitions definition document), and the others are all regulations in the course of realization by Lyee. Thus, no documents are required.

The condition for determining the "inducibility" of step 4102 is whether the operational expression/editing expression is clear or not. Thus, no documents are required.

The condition for determining the "Operability" of step 4103 is whether the value of the right side of the operational expression/editing expression may be used for the calculation or not, which is a condition that can be determined from the operational expression. Thus, no documents are required.

In step 4104, for example the following:

an expression like " $Y = aX + bZ + cW$ " and,

The range of possible values and particular conditions taken by a, b, c, X, Z, W

and, The conditions to executing this computational formula (Multiple computational formulas are possible for one word), are to be questioned to users for each word and the answers are to be taken as a memo.

Fig. 42 and Fig. 43 show examples of the tense control vector specifications.

Fig. 44 shows an example of the programming based on the tense control vector specifications.

In this program, (1) to (4) are made from the rule of Lyee. That is, these are the particular conditions of Lyee, so interacting with users are not necessary.

(5) is to be made from the operational significant conditions of the tense control vector and the code table.

(6) is to be made from the operational expression of the tense control vector. (5) and (6) are to be determined and made into the documentation through interaction with the users, a handover document, "code table".

[0188] Hereinafter, the sample the program made by Lyee is illustrated.

### 1. Drawing Specifications (Order Entry (Distribution))

[illegible]

2-1. HDR

FW1 Y283M0 931105

SEL Origin List

File CTR010/Q0003300

Bar K0528F01

R0...+... 1...+... 2...+... 3...+... 4...+... 5...+... 6...+... 7...+...

A\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*

A# System Name = Getona New Sales/Distribution Management System

A# File Name = Receive Transaction File HDR

A# DDB Type = PF

A#

A# Entry Date = 85/ 8/24

A# Change Date = 85/ 9/05

A\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*+\*\*\*\*\*

A#

R K0528C

TEXT( Receive Transaction File HDR R )

A#	K01520	18A	COLHDC	(	RM1 Mgt. St	)
A#	K00325	8S 0	COLHDC	(	Recd. Date	)
A#	K00324	8S 0	COLHDC	(	Recd. Time	)
A#	K03208	1A	COLHDC	(	Delete Status	)
A#	K01084	7A	COLHDC	(	Person in Charge Code	)
A#	K01535	5A	COLHDC	(	Person in Charge Dept. Code	)
A#	K01179	7A	COLHDC	(	Reg. Pwr. Code	)
A#	K01181	5A	COLHDC	(	Reg. Pwr. Dept. Code	)
A#	K00975	18A	COLHDC	(	Usage Orig. Mgt. St	)
A#	K01836	1A	COLHDC	(	HS Cl	)
A#	K00377	1A	COLHDC	(	Sales Cl	)
A#	K01838	1A	COLHDC	(	Mode of Transaction	)
A#	K01839	2A	COLHDC	(	Shipment Reason	)
A#	K01840	2A	COLHDC	(	Arrival Reason	)
A#	K08429	1A	COLHDC	(	Trans. F. Cl. S	)
A#	K01843	8S 0	COLHDC	(	Entry Date	)
A#	K01844	8S 0	COLHDC	(	Trans. No.	)
A#	K06786	7A	COLHDC	(	BS Report No.	)
A#	K01847	6A	COLHDC	(	Collector Code	)
A#	K01848	220	COLHDC	(	Name of Customer Person in Charge	)
A#	K04044	20A	COLHDC	(	Name (Name) of Customer Person in Charge	)
A#	K04000	420	COLHDC	(	Trans. Name	)
A#	K01849	280	COLHDC	(	Trans. Valid Period	)
A#	K01850	23 0	COLHDC	(	No. of TXT Lines	)
A#	K01851	8S 0	COLHDC	(	Trans. End Date Sched.	)
A#	K01852	18A	COLHDC	(	HDR Mgt. St	)
A#	K01854	13P 0	COLHDC	(	Trans. Total Amount	)
A#	K01855	13P 0	COLHDC	(	Trans. Total Amt. Includes of Consumption Tax	)
A#	K01856	13P 0	COLHDC	(	Qty. Pr. Total Amt.	)
A#	K01857	13P 0	COLHDC	(	Qty. Unit Price Total Amt.	)
A#	K01858	13P 0	COLHDC	(	Qty. Unit Price Disc. Total Amt.	)
A#	K01859	13P 0	COLHDC	(	Qty. Unit Price Total Amt.	)
A#	K00380	1A	COLHDC	(	Disc. Cl	)
A#	K00801	4S 2	COLHDC	(	Sales Unit Price Disc. Rate	)
A#	K01860	13P 0	COLHDC	(	Disc. Total Amt.	)
A#	K01865	8P 2	COLHDC	(	Total No. of Prod. Transmitted	)
A#	K00470	7P 0	COLHDC	(	Total No. of Prod. Withdrawn	)
A#	K01860	7P 0	COLHDC	(	No. of Possible Inventory Prod.	)
A#	K01867	7P 0	COLHDC	(	No. of Impossible Specialty Prod.	)
A#	K00429	7S 0	COLHDC	(	Shipment Bank Code	)
A#	K01877	1S 0	COLHDC	(	Credit Sales Acceptance FLG	)
A#	K00819	13P 0	COLHDC	(	Credit Sales Total Amt.	)

PW1 V223440 531105

SEU Origin List

File . . . . . CTH010/QMSSRC

Ser . . . . . K0638P01

8	1	2	3	4	5	6	7
	A	XD0020	13P 0	COLBDC	Credit Sales Paid-in Amt.		
	A	XD0021	88 0	COLBDC	Credit Sales Strike-out Date		
	A	XD0022	13P 0	COLBDC	Credit Sales Net Strike-out		
	A	XD1878	18 0	COLBDC	Credit Purchase Acpt. FLG		
10	A	XD0023	13P 0	COLBDC	Credit Purchase Total Amt.		
	A	XD0024	13P 0	COLBDC	Credit Purchase Payment Amt.		
	A	XD0025	88 0	COLBDC	Credit Purchase Strike-out Date		
	A	XD0026	13P 0	COLBDC	Credit Purchase Strike-out Reserve		
	A	XD1415	1A	COLBDC	Dispatch CL		
	A	XD4045	2A	COLBDC	Dispatch Date		
15	A	XD4046	1A	COLBDC	Gross Position CL No.		
	A	XD0056	1A	COLBDC	Delivery Note Insurance FLG		
	A	XD9228	1A	COLBDC	XD9210 Insurance Index FLG		
	A	XD9229	1A	COLBDC	XD9230 Insurance Index FLG		
	A	XD9242	1A	COLBDC	XD9250 Insurance Index FLG		
	A	XD9284	1A	COLBDC	XD9290 Insurance Index FLG		
20	A	XD9388	1A	COLBDC	Reserve 1		
	A	XD9389	1A	COLBDC	Reserve 2		
	A	XD9400	1A	COLBDC	Reserve 3		
	A	XD9401	1A	COLBDC	Reserve 4		
	A	XD9402	1A	COLBDC	Order Appl. Order Person in Charge CL		
25	A??						
	A	XD9403	1A	COLBDC	Change Screen CL		
	A??						
	A??						
	A??						
	A??						
30	A	XD9404	1A	COLBDC	Reserve 7		
	A	XD9405	1A	COLBDC	Acct. V/P Done FLG		
	A	XD9406	1A	COLBDC	Reserve 0-99 CL		
	A	XD9407	1A	COLBDC	Over Credit Limit Amt. FLG		
	A	XD9408	1A	COLBDC	Next Trm. Bkt. FLG		
35	A	XD9409	1A	COLBDC	Trm. Extension Done FLG		
	A	XD4028	88 0	COLBDC	Estimate No.		
	A	XD4029	88 0	COLBDC	Rec. Order No.		
	A	XD4452	28 0	COLBDC	Rec. Order Line No.		
	A	XD4030	88 0	COLBDC	Placed Order No.		
	A	XD4453	28 0	COLBDC	Placed Order Line No.		
40	A	XD4031	88 0	COLBDC	Buying-in No.		
	A	XD4434	28 0	COLBDC	Buying-in Line No.		
	A	XD4032	88 0	COLBDC	Shipping No.		
	A	XD4455	28 0	COLBDC	Ship. Line No.		
	A	XD4033	88 0	COLBDC	Payment No.		
	A	XD4034	88 0	COLBDC	Pay-in No.		
45	A	XD4035	88 0	COLBDC	Sales No.		
	A	XD4456	28 0	COLBDC	Sales Line No.		
	A	XD4036	88 0	COLBDC	Issue No.		
	A	XD4457	28 0	COLBDC	Issue Line No.		
	A	XD4289	88 0	COLBDC	Sales Return Appl. No.		
50	A	XD4458	28 0	COLBDC	Sales Return Appl. Line		
	A	XD4290	88 0	COLBDC	Buying-in Return Appl. No.		
	A	XD4459	28 0	COLBDC	Buying-in Return Appl. Line		
	A	XD9568	88 0	COLBDC	Facsim. No.		

55

PW1 V2R3MD 091105

SEU Origin List

File . . . . . CTN010/QDBSSRC

Bar . . . . . K638PD1

E# . . . . . 1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . 6 . . . . . 7 . . . . .

A	ED1457	88 0	COLHDC	Loan No.
A	ED0436	29 0	COLHDC	Loan Line No.
A	ED0437	88 0	COLHDC	Loan Return No.
A	ED0438	29 0	COLHDC	Loan Return Line No.
A	ED0444	7A	COLHDC	SN No.
A	ED0411	2A	COLHDC	Account CL
A	ED0412	7A	COLHDC	Account #
A	ED1786	420	COLHDC	Remarks 1
A	ED1787	420	COLHDC	Remarks 2
A	EDS410	420	COLHDC	Remarks 3
A	EDS411	420	COLHDC	Remarks 4
A	EDS412	420	COLHDC	Remarks 5
A	ED4437	200	COLHDC	Customer Trans. No.
A	EDS564	1A	COLHDC	Customer Ship Sequence/Trans. CL
A	EDS565	1A	COLHDC	Inventory Security Data FLD
A	ED0459	8A	COLHDC	Billing Code
A	ED1671	2A	COLHDC	Return Reason Code
A	ED1447	2A	COLHDC	Sales CL
A	EDU309	1A	COLHDC	Consumption Tax Y/N CL
A	EDU384	1A	COLHDC	Sales Start-up CL
A	ED0201	1A	COLHDC	Install CL
A	ED0602	1A	COLHDC	Auto. Shipping CL
A	EDS566	1A	COLHDC	Partial Delivery Possibility CL
A	ED0121	8A	COLHDC	RM Customer Code
A	EDS567	1A	COLHDC	Maker's Direct Distribution CL
A	EDS568	1A	COLHDC	Customer Direct Distribution CL
A	EDS627	8A	COLHDC	Acpt. Customer Code
A	ED0454	1A	COLHDC	Designated Ship CL
A	EDV201	11A	COLHDC	Customer Designated Trans. No.
A	ED1261	10A	COLHDC	Customer name (name)
A	EDV320	1A	COLHDC	EOS CL
A	EDV321	1A	COLHDC	Reserve CL 2
A	ED1771	10A	COLHDC	Delivery Destination Code
A	ED1772	10A	COLHDC	Reserve 2
A	ED1773	10A	COLHDC	Reserve 3
A*				
A	E ED1452			
A*				

\* \* \* End of Origin Specification \* \* \*

2 - 2. DTL

FW1 V228MD 831105

SEL Origin List

File . . . . . CTN010/08033NC

Bar . . . . . R052BP02

20...+... 1 ...+... 2 ...+... 3 ...+... 4 ...+... 5 ...+... 6 ...+... 7 ...+...

+++++ System Name . . . . . Catana New Sales/Distribution Management System.

++ File Name . . . . . Receive Transaction File DTL

++ DDS Type PF . . . . . PF

++ Entry Date . . . . . = 85/ 8/30

++ Change Date . . . . . = 85/ 8/30

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

+++++\*\*\*\*\*

PW1 V2R3M0 991105

SEU Origin List

File ..... CTNOLC/QDDSSRC

Line ..... K0522F02

0	1	2	3	4	5	6	7	8	9
A	K05252	1A			COLHDC	Product Status CL 2			
A	K05302	7P 0			COLHDC	No. of Inventory Location Stock 1			
A	K05204	7P 0			COLHDC	Inventory Location Security No. 1			
A	K05103	1A			COLHDC	Inventory CL 3			
A	K05158	9A			COLHDC	Inventory Location Code 2			
A	K05203	1A			COLHDC	Security Method 3			
A	K01072	5A			COLHDC	Staff No. 3			
A	K05253	1A			COLHDC	Product Status CL 2			
A	K05303	7P 0			COLHDC	No. of Inventory Location Stock 1			
A	K05205	7P 0			COLHDC	Inventory Location Security No. 1			
A	K05104	1A			COLHDC	Inventory CL 4			
A	K05154	9A			COLHDC	Inventory Location Code 4			
A	K05204	1A			COLHDC	Security Method 4			
A	K01073	5A			COLHDC	Staff No. 4			
A	K05254	1A			COLHDC	Product Status CL 4			
A	K05304	7P 0			COLHDC	No. of Inventory Location Stock 1			
A	K05206	7P 0			COLHDC	Inventory Location Security No. 4			
A	K05105	1A			COLHDC	Inventory CL 5			
A	K05155	9A			COLHDC	Inventory Location Code 5			
A	K05205	1A			COLHDC	Security Method 5			
A	K05428	5A			COLHDC	Staff No. 5			
A	K05255	1A			COLHDC	Product Status CL 5			
A	K05305	7P 0			COLHDC	No. of Inventory Location Stock 5			
A	K05207	7P 0			COLHDC	Inventory Location Security No. 7			
A	K01904	7P 0			COLHDC	Product Security Total			
A	K04430	820			COLHDC	Final Arrival Point Name 1			
A	K05551	8A			COLHDC	Final Arrival Point Postal Code 1			
A	K05801	420			COLHDC	Final Arrival Point Address 1-1			
A	K05851	420			COLHDC	Final Arrival Point Address 2-1			
A	K05701	420			COLHDC	Final Arrival Point Address 3-1			
A	K05751	320			COLHDC	Final Arrival Point Department 1			
A	K05801	220			COLHDC	Final Arrival Point Person in Charge 1			
A	K05851	12A			COLHDC	Final Arrival Point TEL 1			
A	K05901	12A			COLHDC	Final Arrival Point FAX 1			
A	K04101	5P 0			COLHDC	No. of Arrival Products at Arrival point 1			
A	K05401	9A			COLHDC	Start Point Location Code 1			
A	K05451	9A			COLHDC	Arrival Point Location Code 1			
A	K05501	9A			COLHDC	Final Arrival Point Code 1			
A	K05951	8S 0			COLHDC	Arrival-point Arrival Schedule 1			
A	K06001	8S 0			COLHDC	Final Arrival-point Arrival Schedule 1			
A	K06051	1A			COLHDC	Routing Judgement 1			
A	K05589	1A			COLHDC	Early/Mid/Late of Month Sold CL 1			
A	K04460	8S 0			COLHDC	Trans. Date No.1			
A	K04461	2S 0			COLHDC	Trans. Date Line No.1			
A	K09351	5P 0			COLHDC	No. of Arrival Products at Arrival point 2			
A	K06102	9A			COLHDC	Start Point Location Code 2			
A	K06158	9A			COLHDC	Arrival Point Location Code 2			
A	K06202	9A			COLHDC	Final Arrival Point Code 2			
A	K06852	8S 0			COLHDC	Arrival-point Arrival Schedule 2			
A	K06702	8S 0			COLHDC	Final Arrival-point Arrival Schedule 2			
A	K06752	1A			COLHDC	Routing Judgement 2			
A	K05570	1A			COLHDC	Early/Mid/Late of Month Sold CL 2			
A	K07482	8S 0			COLHDC	Trans. Date No.2			

PR1 V223M0 681105

SEU Origin List

File . . . . . C79010/00055RC

Plan . . . . . K0528P02

8	1	2	3	4	5	6	7
A	RE0468	2S 0	COLHDC	Time Base Line No.2			
A	RE0601	5P 0	COLHDC	Max. of Arrived Products at Arrived-Point 3			
A	RE0708	9A	COLHDC	Start Point Location Code 3			
A	RE0163	9A	COLHDC	Arrival Point Location Code 3			
10	A	RE0900	9A	COLHDC	Final Arrived Point Code 3		
A	RE7363	8S 0	COLHDC	Arrived-point Arrived Schedule 3			
A	RE7403	8S 0	COLHDC	Final Arrived-point Arrived Schedule 3			
A	RE7453	1A	COLHDC	Reaching Judgement 3			
A	RE5571	1A	COLHDC	Early/Mid/Late of Month Schl. Cl. 3			
A	RE0484	8S 0	COLHDC	Time Base Line No.3			
15	A	RE0465	2S 0	COLHDC	Time Base Line No.3		
A	RE0651	5P 0	COLHDC	Max. of Arrived Products at Arrived-Point 4			
A	RE7504	9A	COLHDC	Start Point Location Code 4			
A	RE7554	9A	COLHDC	Arrival Point Location Code 4			
A	RE7604	9A	COLHDC	Final Arrived Point Code 4			
A	RE0054	8S 0	COLHDC	Arrived-point Arrived Schedule 4			
20	A	RE0104	8S 0	COLHDC	Final Arrived-point Arrived Schedule 4		
A	RE0154	1A	COLHDC	Reaching Judgement 4			
A	RE0672	1A	COLHDC	Early/Mid/Late of Month Schl. Cl. 4			
A	RE0465	8S 0	COLHDC	Time Base Line No.4			
A	RE0467	9S 0	COLHDC	Time Base Line No.4			
25	A	RE0101	5P 0	COLHDC	Max. of Arrived Products at Arrived-Point 5		
A	RE0205	9A	COLHDC	Start Point Location Code 5			
A	RE0265	9A	COLHDC	Arrival Point Location Code 5			
A	RE0305	9A	COLHDC	Final Arrived Point Code 5			
A	RE0755	8S 0	COLHDC	Arrived-point Arrived Schedule 5			
A	RE0805	8S 0	COLHDC	Final Arrived-point Arrived Schedule 5			
30	A	RE0855	1A	COLHDC	Reaching Judgement 5		
A	RE0573	1A	COLHDC	Early/Mid/Late of Month Schl. Cl. 5			
A	RE0468	8S 0	COLHDC	Time Base Line No.5			
A	RE0469	2S 0	COLHDC	Time Base Line No.5			
A	RE0405	7P 0	COLHDC	Procurement Responsibility Total			
35	A	RE1124	13P 3	COLHDC	Receiver Price		
A	RE0851	13P 3	COLHDC	Manufacturing Unit Price			
A	RE0701	4S 2	COLHDC	Manufacturing Unit Price Discount Rate			
A	RE0751	4S 2	COLHDC	Manufacturing Special Discount Rate			
A	RE0801	18P 3	COLHDC	Buying-in Unit Price			
A	RE0472	9P 0	COLHDC	Buying-in Unit Price Discount Amount			
40	A	RE0851	4S 2	COLHDC	Buying-in Unit Price Discount Rate		
A	RE0901	4S 2	COLHDC	Buying-in Special Discount Rate			
A	RE0951	18P 3	COLHDC	Sales Unit Price			
A	RE0473	9P 0	COLHDC	Sales Unit Price Discount Amount			
A	RE0001	4S 2	COLHDC	Sales Unit Price Discount Rate			
45	A	RE0051	4S 2	COLHDC	Sales Special Discount Rate		
A	RE0701	18P 3	COLHDC	Loan Unit Price			
A	RE0478	9P 0	COLHDC	Loan Unit Price Discount Amount			
A	RE0751	4S 2	COLHDC	Loan Unit Price Discount Rate			
A	RE0801	4S 2	COLHDC	Loan Special Discount Rate			
50	A	RE0001	9P 0	COLHDC	Sales/Buying-in Rough Profit		
A	RE0151	5S 2	COLHDC	Sales/Buying-in Rough Profit Rate			
A	RE0373	3S 0	COLHDC	Wholesale Rate			
A	RE0201	9P 0	COLHDC	Transacted Quantity Unit Price Amount			
A	RE0251	9P 0	COLHDC	Transacted Quantity Unit Price Discount Amount			

55



PWL V2R3M0 931105

SEU Origin List

File ..... CTN010/QDD33RC

Bpar ..... K0638702

R#...t... 1 ...t... 2 ...t... 3 ...t... 4 ...t... 5 ...t... 6 ...t... 7 ...t...

5	A	KB3002	9P 0	COLHDC	Transaction on Consumption for Account
	A	KB4020	88 0	COLHDC	Balance No.
	A	KB4029	88 0	COLHDC	Rec. Order No.
	A	KB4452	28 0	COLHDC	Rec. Order Line No.
10	A	KB4030	88 0	COLHDC	Placed Order No.
	A	KB4453	28 0	COLHDC	Placed Order Line No.
	A	KB4031	88 0	COLHDC	Buying-in No.
	A	KB4454	28 0	COLHDC	Buying-in Line No.
	A	KB4082	88 0	COLHDC	Shipping No.
15	A	KB4455	28 0	COLHDC	Ship. Line No.
	A	KB4033	88 0	COLHDC	Payment No.
	A	KB4034	88 0	COLHDC	Print-in No.
	A	KB4035	88 0	COLHDC	Salary No.
	A	KB4456	28 0	COLHDC	Salary Line No.
20	A	KB4086	88 0	COLHDC	Move No.
	A	KB4457	28 0	COLHDC	Move Line No.
	A	KB4280	88 0	COLHDC	Sales Return Appl. No.
	A	KB4458	28 0	COLHDC	Sales Return Appl. Line 0
	A	KB4290	88 0	COLHDC	Buyer-in Return Appl. No.
25	A	KB4459	28 0	COLHDC	Buyer-in Return Appl. Line 0
	A	KB5583	88 0	COLHDC	Recall No.
	A	KB1057	88 0	COLHDC	Loan No.
	A	KB4836	28 0	COLHDC	Loan Line No.
	A	KB4937	88 0	COLHDC	Loan Return No.
	A	KB4988	28 0	COLHDC	Loan Return Line No.
30	A	KB0844	7A	COLHDC	Bill No.
	A	KB1571	2A	COLHDC	Finance Code
	A	KB5529	1A	COLHDC	Payment Hold Cl.
	A	KB7013	10A	COLHDC	Product Name (Case)
	A	KB7030	9A	COLHDC	Reserve A
35	A	KB7031	9A	COLHDC	Reserve B
	A	KB7032	9A	COLHDC	Reserve C
	A	KB7033	9A	COLHDC	Reserve D
	A	KB7034	9A	COLHDC	Reserve E
	A	KB7035	9A	COLHDC	Reserve F
40	A	KB7036	9A	COLHDC	Reserve G
	A	KB7037	9A	COLHDC	Registry-Tax Mgt. SM Up 0
	A	KB7038	9A	COLHDC	Registry-Tax Mgt. SM Down 0
	A	KB7039	9A	COLHDC	Product Buyer-in Party Code
	A	KB7320	1A	COLHDC	ECB Cl.
45	A	KB9321	1A	COLHDC	Reserve Cl. 2
	A	KB1771	7A	COLHDC	Reserve 1
	A*				
	A	E KE1001			
	A	E KE1878			
	A*				

\* \* \* End of Origin Specification \* \* \*

## W02 Homogeneity Vector (Reference Key)

```
*****
* LP0004 P F 4 Reference
*****
```

```
LP0004-SIC SECTION.
```

```
LP0004-START
IF NOT < PRNTY NO OF W0204(PS) = 04 )
  GO TO LP0004-EXIT
```

```
END-IF.
```

```
10 L01540 Q P C D (LP0004)
```

```
IF ERR-IMP NOT = "1"
```

```
IF A01540 OF KH201E(PS) = SPACE
```

```
  MOVE 1 TO ERR-IMP
```

```
  MOVE 2009 TO MSG-NO
```

```
  MOVE 81 TO A01540-C OF W0204(PS)
```

```
  MOVE SPACE TO A01580 OF KH201E(PS)
```

```
ELSE
```

```
* OPEN K213DL01
```

```
IF K213DL01-OPEN NOT = "1"
```

```
  OPEN INPUT K213DL01
```

```
  IF FLS751 NOT = ZERO
```

```
    MOVE 8800 TO MSG-NO
```

```
    MOVE 1 TO ERR-IMP
```

```
    GO TO MAIN-END
```

```
  ELSE
```

```
    MOVE "1" TO K213DL01-OPEN
```

```
  END-IF
```

```
END-IF
```

```
  MOVE A01540 OF KH201E(PS) TO W01540
```

```
  MOVE 2880 TO SGLCODE
```

```
  MOVE W01540 TO SK1084 OF K213DL01-REC
```

```
  READ K213DL01
```

```
  INVALID EBY
```

```
  MOVE 100 TO SGLCODE
```

```
END-READ
```

```
IF SGLCODE = ZERO
```

```
  MOVE SMD782 OF K213DL01-REC TO R-W01560
```

```
END-IF
```

```
IF SGLCODE = ZERO
```

```
  MOVE R-W01560 TO INDATA
```

```
  MOVE 16 TO CTRK81A
```

```
  REFERENCE EXPR02
```

```
  MOVE OUTDATA TO A01580 OF KH201E(PS)
```

```
ELSE
```

```
  MOVE "1" TO ERR-IMP
```

```
  MOVE 2001 TO MSG-NO
```

```
  MOVE 81 TO A01540-C OF W0204(PS)
```

```
  MOVE SPACE TO A01580 OF KH201E(PS)
```

```
END-IF
```

```
END-IF.
```

```
END-IF
```

```
* Determination of homogeneity rate and the next screen in the case of customer code
```

```
IF ERR-IMP NOT = "1"
```

```
IF CSR-LCKX OF W0204(PS) = "A12590"
```

```
  MOVE 3 TO ROUTE-NO
```

```
  MOVE "EH600Q" TO L-GAMER-NO
```

```
END-IF
```

```
* Determination of homogeneity rate and the next screen in the case of Delivery destination code
```

```
IF CSR-LCKX OF W0204(PS) = "A13610"
```

```
  MOVE 3 TO ROUTE-NO
```

```
  MOVE "EH600Q" TO L-GAMER-NO
```

W03: Duplicate Vector

W03KH201E

```

***** Beginning of Data *****
***** Received Order Entry (Distribution) *****
***** IF GAMER-NO OF CRTL-AREA = KH201E *****
***** DISPLAY KH201E LAY-PLG = LAYE-PLG *****
***** DISPLAY KH201E LAY-PLG = LAYE-PLG *****
***** IF LAYE-PLG = 1 *****
***** Reg. Per. Code ***** YD1179KH201E:R
***** MOVE 401540 OF KH201E(STG1) *****
***** TO 401170 OF BP-AREA *****
***** Shipment Reason ***** YD1839KH201E:R
***** MOVE 407500 OF KH201E(STG1) *****
***** TO 401839 OF BP-AREA *****
***** Customer Code ***** YD1847KH201E:R
***** MOVE 412500 OF KH201E(STG1) *****
***** TO 401847 OF BP-AREA *****
980424***** Transaction No. ***** YD1844KH201E:R
***** IF 407500 OF KH201E(STG1) IS NUMERIC *****
***** MOVE 407500 OF KH201E(STG1) *****
***** TO 401844 OF BP-AREA *****
***** BDM-IF *****
980513***** Received Order No. ***** YD1844KH201E:R
***** IF 407500 OF KH201E(STG1) IS NUMERIC *****
***** MOVE 407500 OF KH201E(STG1) *****
***** TO 404020 OF BP-AREA *****
***** BDM-IF *****
980513***** Estimate No. ***** YD4028KH201E:R
***** IF 404000 OF KH201E(STG1) IS NUMERIC *****
***** MOVE 404000 OF KH201E(STG1) *****
***** TO 404020 OF BP-AREA *****
***** RNE-IF *****
***** Total Amt ***** YD1854KH201E:R
***** MOVE 404300 OF KH201E(STG1) *****
***** TO 401854 OF BP-AREA *****
***** Qty Unit Price ***** YD1857KH201E:R
***** MOVE 404300 OF KH201E(STG1) *****
***** TO 401857 OF BP-AREA *****
***** Name of Customer Person in Charge (Contingent) ***** YD4044KH201E:R
***** MOVE 414000 OF KH201E(STG1) *****
***** TO 404044 OF BP-AREA *****
***** Remarks 1 ***** YD1780KH201E:R
***** MOVE 417800 OF KH201E(STG1) *****
***** TO 401780 OF BP-AREA *****
***** Remarks 2 ***** YD1787KH201E:R
***** MOVE 417870 OF KH201E(STG1) *****
***** TO 401787 OF BP-AREA *****
***** Customer Trans. No. ***** YD4037KH201E:R
***** MOVE 412000 OF KH201E(STG1) *****
***** TO 404037 OF BP-AREA *****
***** Distribution Of ***** YD1412KH201E:R
***** MOVE 414130 OF KH201E(STG1) *****
***** TO 401412 OF BP-AREA *****
***** Person in Charge Code ***** YD1034KH201E:R
***** MOVE 410000 OF KH201E(STG1) *****
***** TO 401034 OF BP-AREA *****
***** Customer Direct Distribution Cl ***** YD3508KH201E:R
***** MOVE 411210 OF KH201E(STG1) *****
***** TO 403508 OF BP-AREA *****
***** BDM-IF *****
***** IF LAYE-PLG = 1 *****
***** PREPARE VARYING SI FROM 1 BY 1 *****
***** UNTIL SI > 6 *****
***** LASTING CONTROL *****
***** MOVE SI TO TI *****
***** Final Arrival Point Code 1 ***** YD5501KH201E:R
***** IF 411210 OF KH201E(STG1) NOT = 1 *****

```

**W3: Homogeneity Vector**

**■ 4R42**

```

***** Beginning of Data *****
***** Received Order (HDR) *****
***** Quantity Unit Price Total Amount ***** L18570
UDOTIT+4444 IF TKNM = CWS-BF AND EDU360 OF EF-AREA NOT = "1"
IF ED5001 OF EF-AREA(P1) IS NUMERIC
AND ED1857 OF EF-AREA(P1) IS NUMERIC
IF P1 = 1
MOVE ZERO TO ED1857 OF EF-AREA
END-IF
IF ED5001 OF EF-AREA(P1) NOT = ZERO
COMPUTE ED1857 OF EF-AREA = ED1857 OF EF-AREA
+ ED5001 OF EF-AREA(P1)
ON SIZE REPORT
MOVE ALL "9" TO ED1857 OF EF-AREA
IF ERF-INF = SPACE
MOVE 1 TO ERF-INF
MOVE 3018 TO MSC-MD
MSC=11
END-COMPUTR
END-IF
END-IF
***** Quantity Unit Price Total Amount ***** L18580
IF TKNM = CWS-BF
IF ED1858 OF EF-AREA(P1) IS NUMERIC
AND ED5001 OF EF-AREA(P1) IS NUMERIC
AND ED3251 OF EF-AREA(P1) IS NUMERIC
***** Discount Cl. NOT = "1"
IF EDU360 OF EF-AREA NOT = "1"
IF P1 = 1
MOVE ZERO TO ED1858 OF EF-AREA
END-IF
IF ED5001 OF EF-AREA(P1) NOT = ZERO
COMPUTE ED1858 OF EF-AREA
= ED1858 OF EF-AREA
+ ED3251 OF EF-AREA(P1)
ON SIZE REPORT
MOVE ALL "9" TO ED1858 OF EF-AREA
IF ERF-INF = SPACE
MOVE 1 TO ERF-INF
MOVE 3018 TO MSC-MD
MSC=11
END-COMPUTR
END-IF
END-IF
***** Discount Cl. = "1"
IF EDU360 OF EF-AREA = "1"
MOVE ED1858 OF EF-AREA
TO ED1858 OF EF-AREA
END-IF
END-IF
***** Quantity Regular Price Total Amount ***** L18590
IF TKNM = CWS-BF
IF ED5001 OF EF-AREA(P1) IS NUMERIC
AND ED1858 OF EF-AREA(P1) IS NUMERIC
AND ED1124 OF EF-AREA(P1) IS NUMERIC
IF P1 = 1
MOVE ZERO TO ED1858 OF EF-AREA
END-IF
IF ED5001 OF EF-AREA(P1) NOT = ZERO
COMPUTE ED1858 OF EF-AREA = ED1858 OF EF-AREA
+ ED1124 OF EF-AREA(P1) + ED5001 OF EF-AREA(P1)
ON SIZE REPORT
MOVE ALL "9" TO ED1858 OF EF-AREA

```

W03: Homogeneity Vector

```

      IF ERR-INF = SPACE
      MOVE 1 TO ERR-INF
      MOVE 3019 TO MSG-NO
      END-IF
    END-COMPUTE
  END-IF
END-IF.
***** Disc. Total Amount L10990
  IF TERM = CHS-BP
  IF K01000 OF EF-AREA NOT = 1
  AND K01000 OF EF-AREA IS NUMERIC
  AND K0251 OF EF-AREA IS NUMERIC
  IF 1 = 1
  MOVE ZERO TO K01000 OF EF-AREA
  END-IF
  IF K05001 OF EF-AREA(PI) NOT = ZERO
  COMPUTE = K01000 OF EF-AREA
  + K01000 OF EF-AREA
  + K0251 OF EF-AREA(PI)
  ON SIZE ERROR
  MOVE ALL 0 TO K01000 OF EF-AREA
  IF ERR-INF = SPACE
  MOVE 1 TO ERR-INF
  MOVE 3019 TO MSG-NO
  END-IF
  END-COMPUTE
  END-IF
  END-IF.
***** Transmission Total Amount L18540
  IF TERM = CHS-BP
  IF K01854 OF EF-AREA IS NUMERIC
  AND K01854 OF EF-AREA IS NUMERIC
  AND K01854 OF EF-AREA IS NUMERIC
  COMPUTE K01854 OF EF-AREA = K01854 OF EF-AREA
  ON SIZE ERROR
  MOVE ALL 0 TO K01854 OF EF-AREA
  IF ERR-INF = SPACE
  MOVE 1 TO ERR-INF
  MOVE 3019 TO MSG-NO
  END-IF
  END-COMPUTE
  END-IF
  END-IF.
***** Term. Total Amount including of Consumption Tax L18550
  IF TERM = CHS-BP
  IF K01855 OF EF-AREA IS NUMERIC
  AND K01854 OF EF-AREA IS NUMERIC
  AND K10903 IS NUMERIC
  IF (K09001 OF W0F-AREA = 1)
  IF K01854 OF EF-AREA >= 1800
  COMPUTE = K01854 OF EF-AREA * (1 + K10903) + 0.5
  ON SIZE ERROR
  MOVE ALL 0 TO K01855 OF EF-AREA
  IF ERR-INF = SPACE
  MOVE 1 TO ERR-INF
  MOVE 3019 TO MSG-NO
  END-IF
  END-COMPUTE
  ELSE
  COMPUTE = K01855 OF EF-AREA
  ON SIZE ERROR
  MOVE ALL 0 TO K01855 OF EF-AREA
  IF ERR-INF = SPACE

```

## W04: Duplicate Vector

## Duplicate Vector Group 1 (Tail)

Y17990 Wholesale Cost No.

Y04360 Total Amount

Y04360-SEC SECTION.

Y04360-START.

IF REP-IMP NOT = "1"

AND GAMER-NO OF W0204(PS2) = "KH2018"

IF PPART-NO OF W0204(PS2) = 1

OR PPRST-NO OF W0204(PS2) = 12

MOVE ZERO TO A04360 OF KH2018(PS1)

ELSE

IF KD1857 OF W03-ED18 = 18 NUMERIC

MOVE KD1857 OF W03-ED18

TO A04360 OF KH2018(PS1)

END-IF

END-IF

END-IF

Y04360-EXIT.

EXIT.

## W04: Homogeneity Vector

L04360 Total Amount

L04360-SEC SECTION.

L04360-START.

MOVE ZERO TO WK-KINGAKU.

PERFORM VARYING PJ FROM 1 BY 1

UNTIL PJ = 5

IF A08311 OF KH2018(PS1 PJ) NOT = SPACE

AND A08221 OF KH2018(PS1 PJ) IS NUMERIC

AND A08221 OF KH2018(PS1 PJ) NOT = ZERO

AND A10781 OF KH2018(PS1 PJ) IS NUMERIC

AND A10781 OF KH2018(PS1 PJ) NOT = ZERO

AND A16721 OF KH2018(PS1 PJ) IS NUMERIC

AND A16721 OF KH2018(PS1 PJ) NOT = ZERO

COMPUTE WK-KINGAKU

= WK-KINGAKU + A16721 OF KH2018(PS1 PJ)

END-IF

END-PERFORM.

MOVE WK-KINGAKU TO A04360 OF KH2018(PS1).

L04360-EXIT.

EXIT.

## Industrial Applicability

[0189] In the traditional software development the dependency on personal abilities is extremely high as well as having high personal ability is required for all staff involved, which has brought about fundamental problems. This invention has realized a development methodology, by theoretically grasping the consciousness action existing in the depths of the thinking method in relation to the cognitive action, and it is applicable to any fields including OS middle game, proc-

ees control and business software.

[0197] Since the software structure which is induced by the invention is determined theoretically, it is recurrent and becomes the one and only. As a result, the software developed is not a black box any more, thereby eliminating human errors from the quality viewpoint, so that the system becomes stiff with the clear structure. Therefore, not only an exact estimate of software development is made possible development but, also planning and the development management can be performed with ease.

[0198] Fig. 45 shows the effects. Compared with the traditional method, the development period is shortened by 1/2 to 1/3; the total development volume is compressed by 20% to 30%; the maintainability increases by 40 to 100 times; and the working efficiency is enhanced by 40 to 100 times.

[0199] In the traditional software, definitives comprised of screens, vouchers and files take up 50% and their logic takes up 70% of the whole software developed, thereby necessitating a document respectively. However, in this invention, the homogeneity map which is corresponding to the above-mentioned logic in the traditional method does not require a document, so that it can cut the volume of documents by 70% compared with that of the traditional method.

## Claims

### 1. The software production method comprising the following steps

the step to determine a definitive identifier which is a screen necessary to the software to be produced;  
the step to sort out words existing in said definitive identifier;  
the step to create the homogeneity map in which all pellets necessary to the software have been plotted in accordance with the process flow based on the definitive identifier;  
the step to determine necessary files based on the sorted-out words and the created homogeneity map;  
the step to create first tense control vectors which execute screen editing or file editing, second tense control vectors which determine the homogeneity route, and third tense control vectors which execute file updating for all the sorted-out words;  
the step to create three kinds of the pellets which are made by binding the first, second and the third tense control vectors per screen unit, respectively, and to create pallet functions which execute each of the tense control vectors with autonomous significance inside each of the pellets; and  
the step to assemble the three kinds of the pallet functions into a pallet chain function having the structure of transmitting a screen based on the pallet function concerned with the first tense control vector, receiving the screen to execute the pallet function concerned with the second tense control vector, and determining, in accordance with this execution result, one homogeneity route from the plural homogeneity routes taking at least one homogeneity route for executing the pallet function concerned with the third tense control vector.

### 2. The processing apparatus comprising:

first means for possessing a first tense control vector to execute screen editing or file editing which is to be created for all words existing in the screen necessary to the software to be produced, a second tense control vector to determine the homogeneity route, and a third tense control vector to execute file updating;  
second means for executing each of the tense control vectors with autonomous significance inside each of three kinds of pellets which are made by binding the first, the second and the third tense control vectors per screen unit, respectively; and  
third means for transmitting a screen based on the execution of the second means concerned with the first tense control vector, receiving the screen to execute the second means concerned with the second tense control vector, and determining in accordance with this execution result, one homogeneity route from the plural homogeneity routes taking at least one homogeneity route for executing the second means concerned with the third tense control vector.

### 3. The recording medium on which a program is recorded, said program comprising:

first means for possessing a first tense control vector to execute screen editing or file editing which is to be created for all words existing in the screen necessary to the software to be produced, a second tense control vector to determine the homogeneity route, and a third tense control vector to execute file updating;  
second means for executing each of the tense control vectors with autonomous significance inside each of three kinds of pellets which are made by binding the first, the second and the third tense control vectors per screen unit, respectively; and  
third means for transmitting a screen based on the execution of the second means concerned with the first

tense control vector, receiving the screen to execute the second means concerned with the second tense control vector, and determining, in accordance with this execution result, one homogeneity route from the plural homogeneity routes taking at least one homogeneity route for executing the second means concerned with the third tense control vector.

4. The process method comprising the following steps:

the step to determine a screen to be displayed;  
 the step to activate a first tense control vector (W04 pallet) for implementing screen editing or file editing;  
 the step to display the screen edited based on the first tense control vector (W04 pallet);  
 the step to receive the operational contents on the screen displayed;  
 the step to activate a second tense control vector (W02 pallet) for determining, the homogeneity route based on the operational contents;  
 the step to judge the homogeneity route in accordance with the homogeneity route determined by the second tense control vector (W02 pallet); and  
 the step to activate a third tense control vector (W03 pallet) for implementing file updating based on the judging results of the homogeneity route.

5. The processing apparatus comprising:

the means for determining a screen to be displayed;  
 the means for activating a first tense control vector (W04 pallet) for implementing screen editing or file editing;  
 the means for displaying the screen edited based on the first tense control vector (W04 pallet);  
 the means for receiving the operational contents on the screen displayed;  
 the means for activating a second tense control vector (W02 pallet) for determining the homogeneity route based on the operational contents;  
 the means for judging the homogeneity route in accordance with the homogeneity route determined by the second tense control vector (W02 pallet); and  
 the means for activating a third tense control vector (W03 pallet) for implementing file updating based on the judging results of the homogeneity route.

6. The recording medium on which a program is recorded, said program comprising,

the means for determining a screen to be displayed;  
 the means for activating a first tense control vector (W04 pallet) for implementing screen editing or file editing;  
 the means for displaying the screen edited based on the first tense control vector (W04 pallet);  
 the means for receiving the operational contents on the screen displayed;  
 the means for activating a second tense control vector (W02 pallet) for determining the homogeneity route based on the operational contents;  
 the means for judging the homogeneity route in accordance with the homogeneity route determined by the second tense control vector (W02 pallet); and  
 the means for activating a third tense control vector (W03 pallet) for implementing file updating based on the judging results of the homogeneity route.



FIG. 1

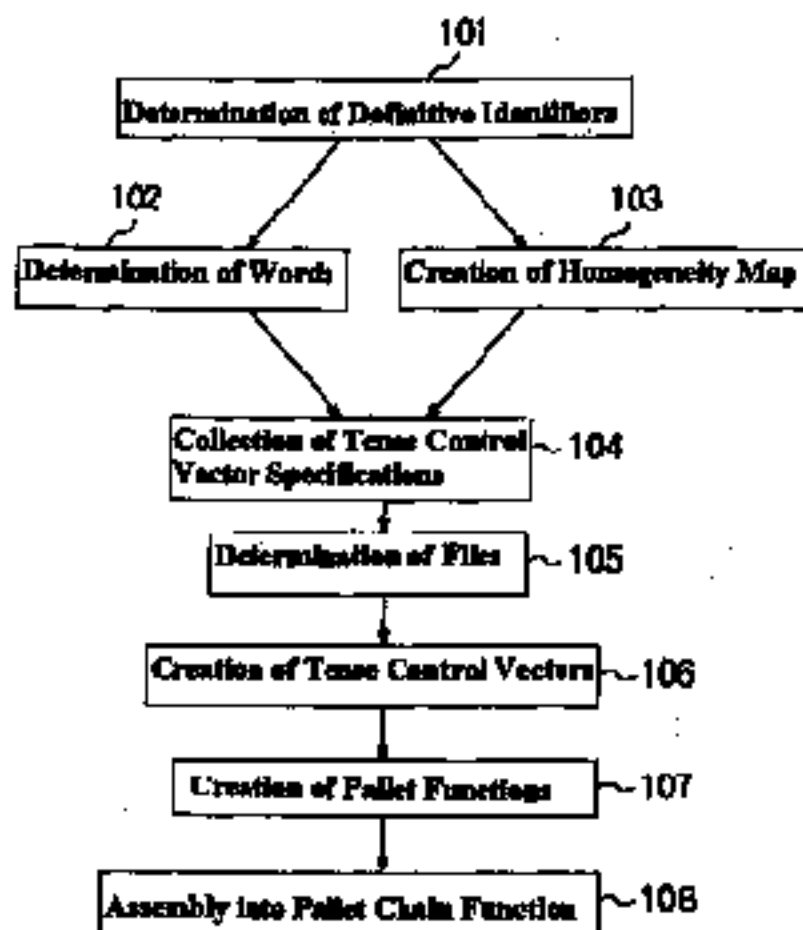


FIG. 2

1	2	3	4	5	6	7	8
I 234567890123456789012345678901234567890123456789012345678901234567890							
1	KH211E Sales Entry (direct sales)				JD DD DD		TT TT TT
2	123456789	00000000000000000000			00000000		
3	45	00000000000000000000			000000		
4	123456789	00000000000000000000000000000000			000000		
5	123456789	00000000000000000000000000000000			00000000		
6	123456789	00000000000000000000000000000000			00000000		
7	1234567890123456789012345678901234567890123456789012345678901234567890 TEL 000000000000						
8	1234567890123456789012345678901234567890123456789012345678901234567890						
9	Line*						
10							
11	06	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
12	07	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
13	08	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
14	09	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
15	10	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
16	11	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
17	12	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
18	13	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
19	14	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
20	15	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
21	16	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
22	17	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
23	18	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000
24	19	1234567890123456789012345678901234567890123456789012345678901234567890	00000000	00000000	00000000	00000000	00000000

FIG. 3

[illegible]



**FIG. 5**

[illegible]

FIG. 6

[illegible]

FIG. 7

行	1-0										11-20										21-30										31-40										4-5														
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6									
1	KH5010																																																						
2	Department										X: X																																												

FIG. 8

桁		130-140				141-150				151-160				161-170				180-190																		
行		3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7
1	Date																																			
2	Y/M/D																																			
3	PAGE																																			
4	ZZZ																																			
5																																				
6																																				
7																																				
8																																				
9	Your Order No.																																			
10		Inst.				City				Shipment				Sales																						
11		N				N				N				N																						
12		N				N				N				N																						
13		N				N				N				N																						
14																																				
15																																				
16																																				
17	Your Order No.																																			
18		Inst.				City				Shipment				Sales																						
19		N				N				N				N																						
20		N				N				N				N																						



FIG. 9

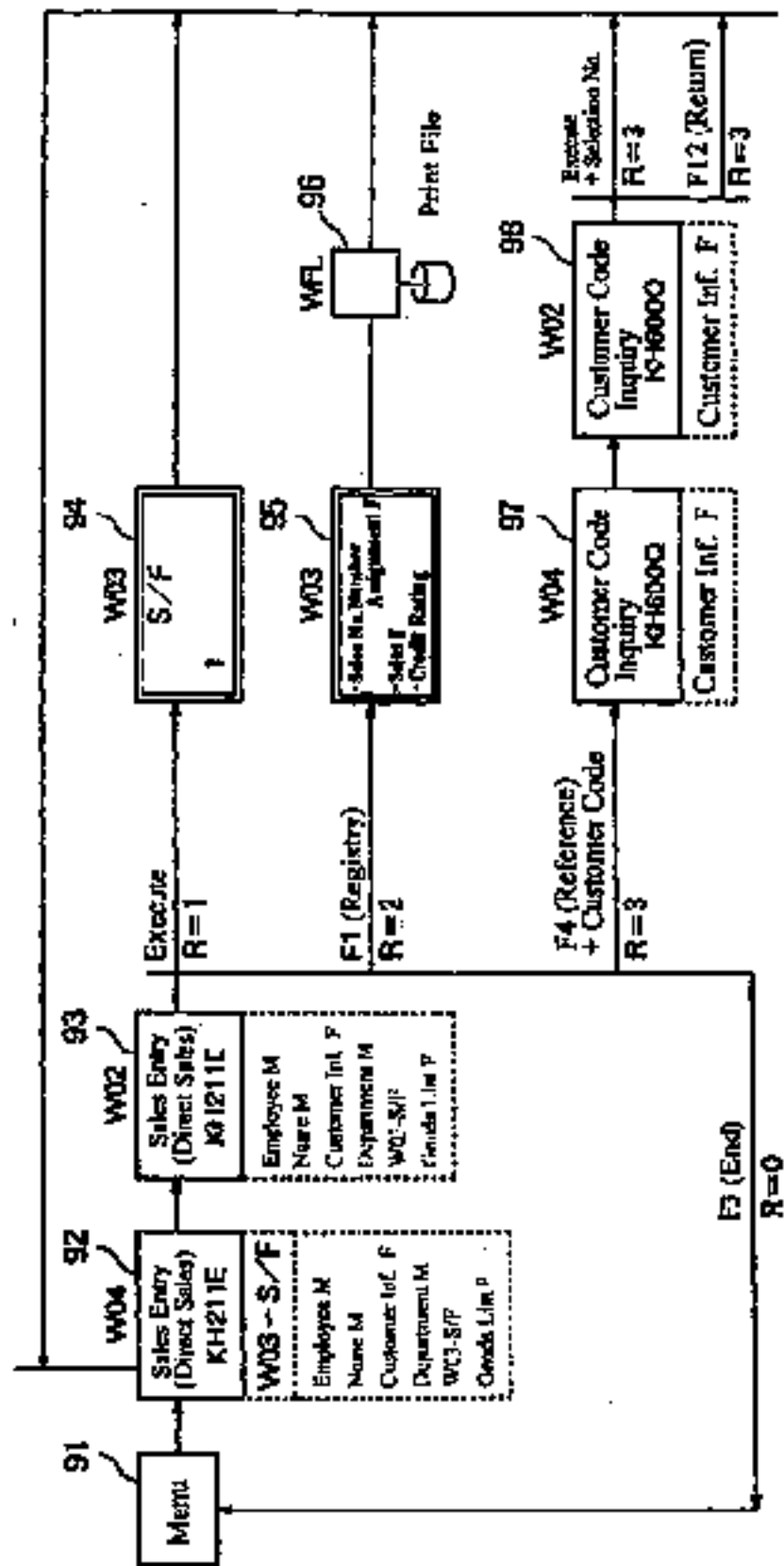


FIG. 10

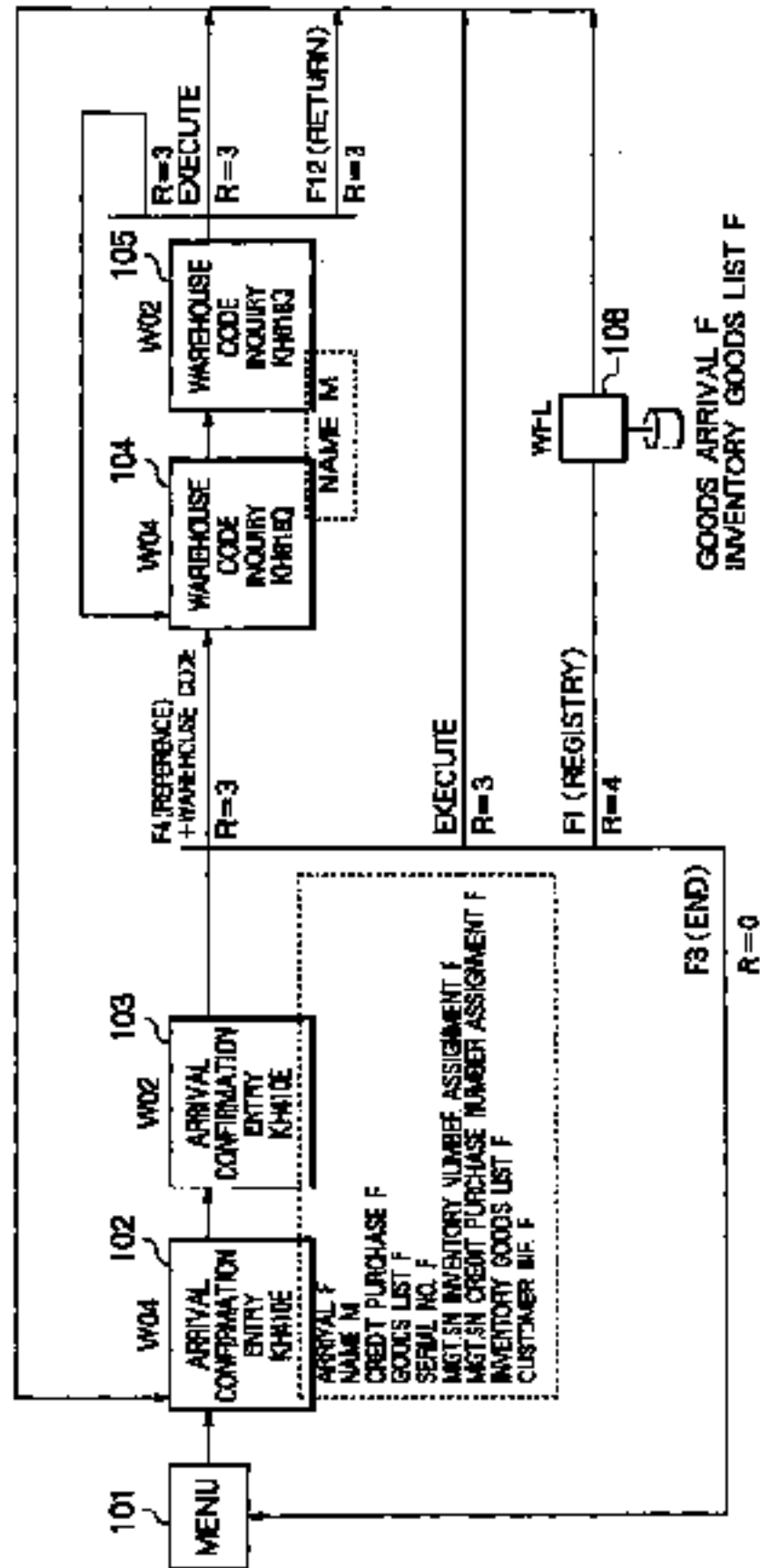


FIG. 11

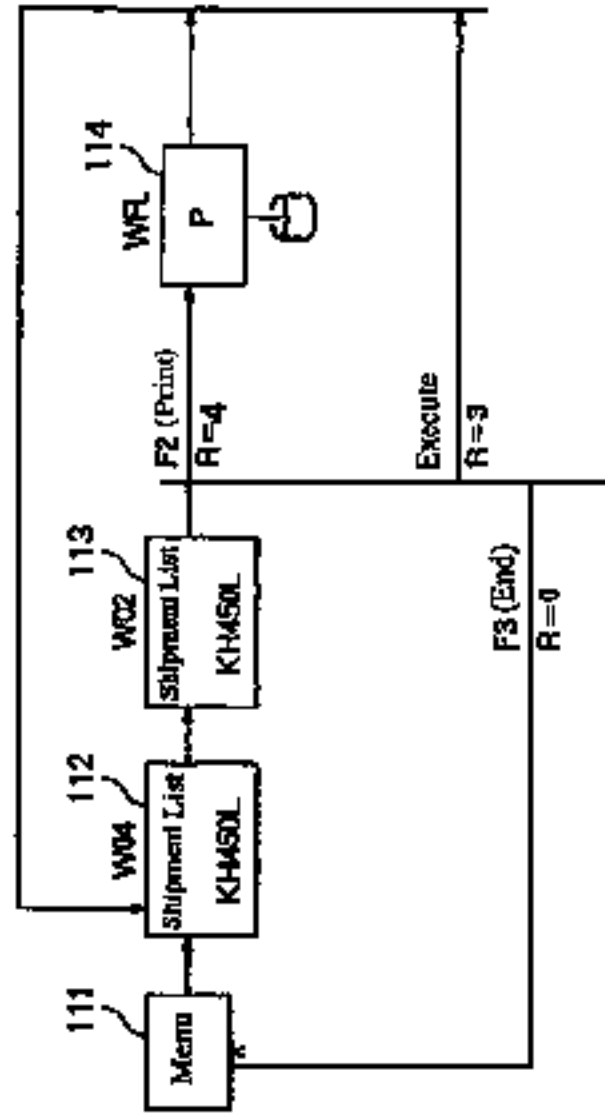


FIG. 12

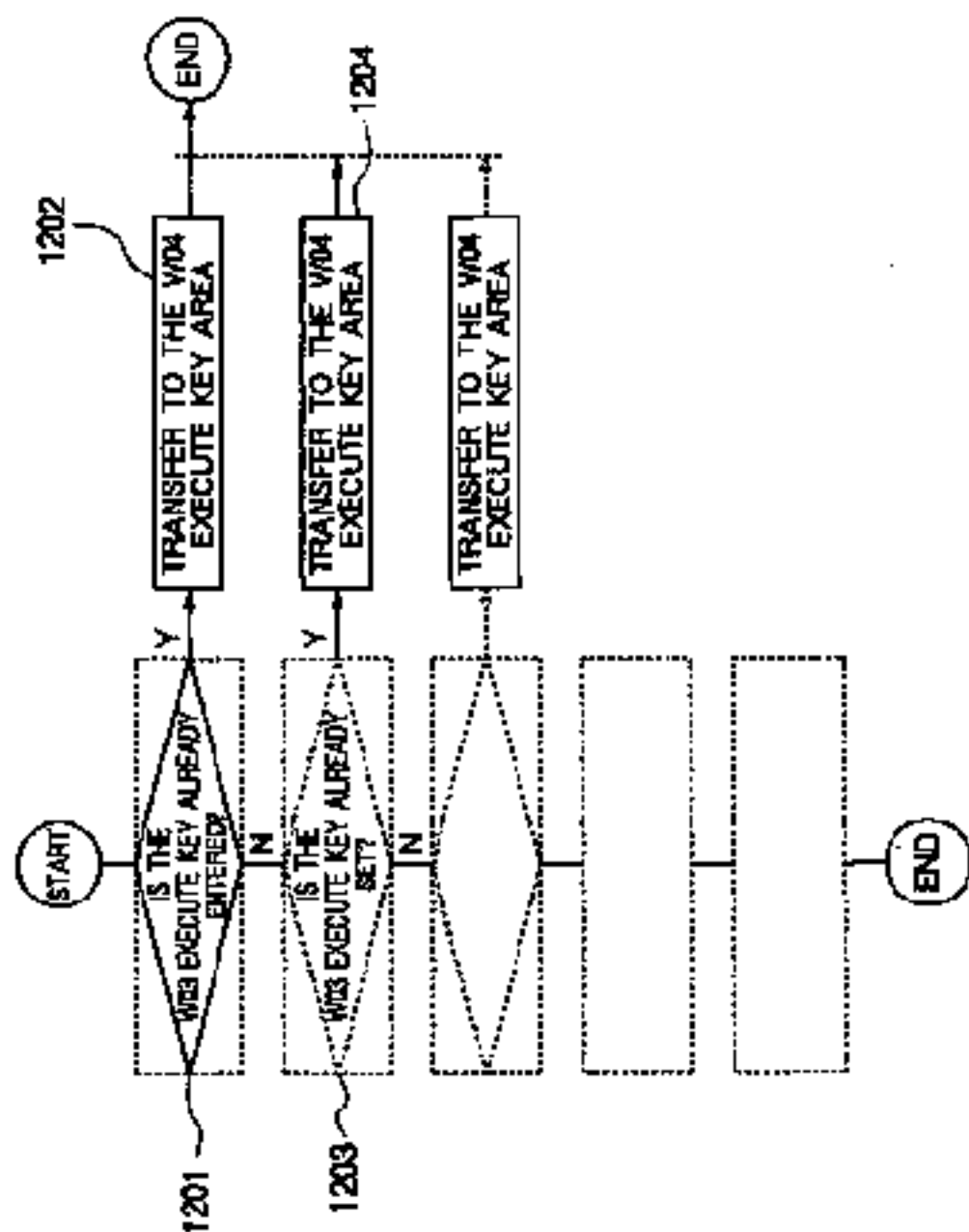


FIG. 13

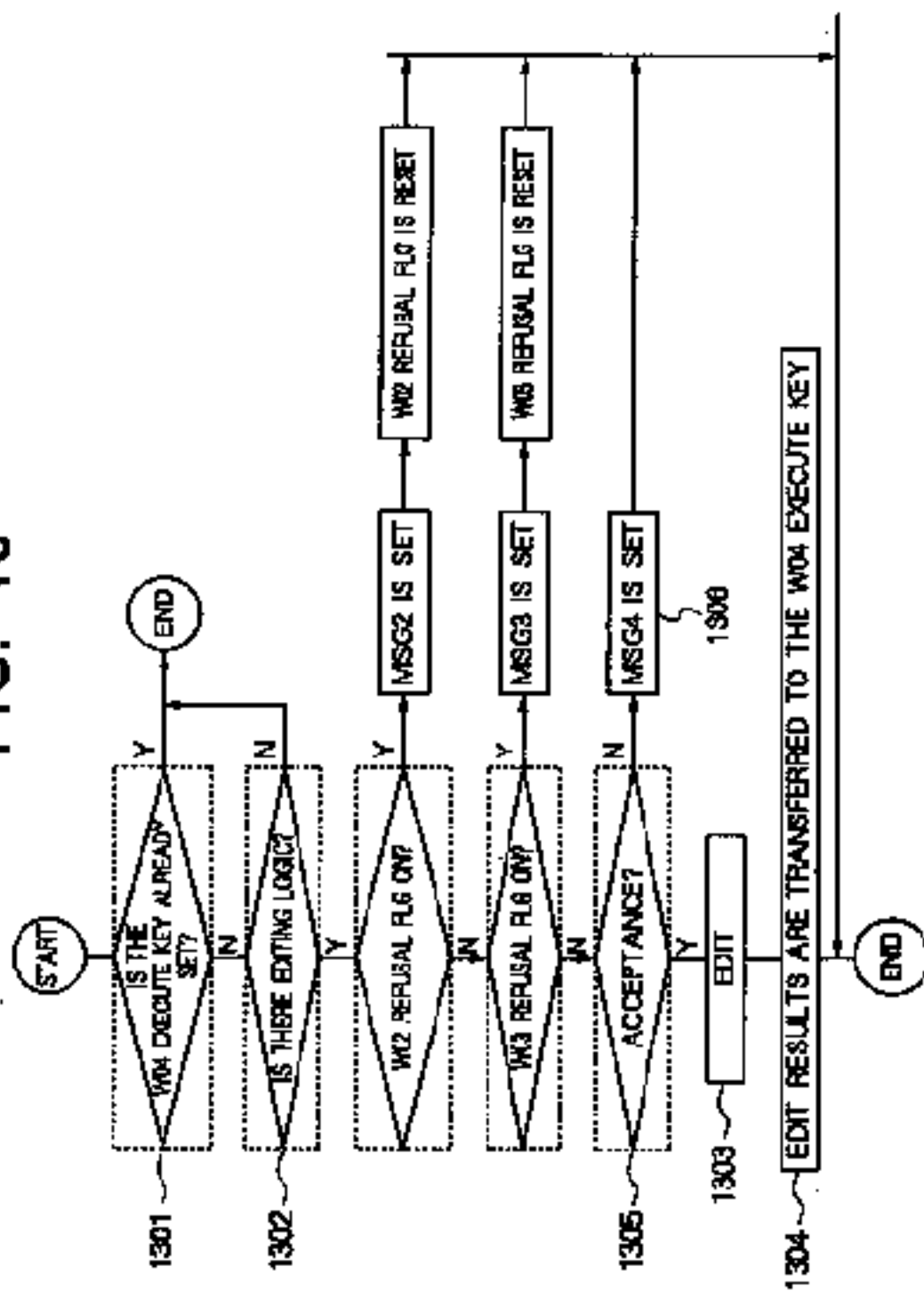


FIG. 14

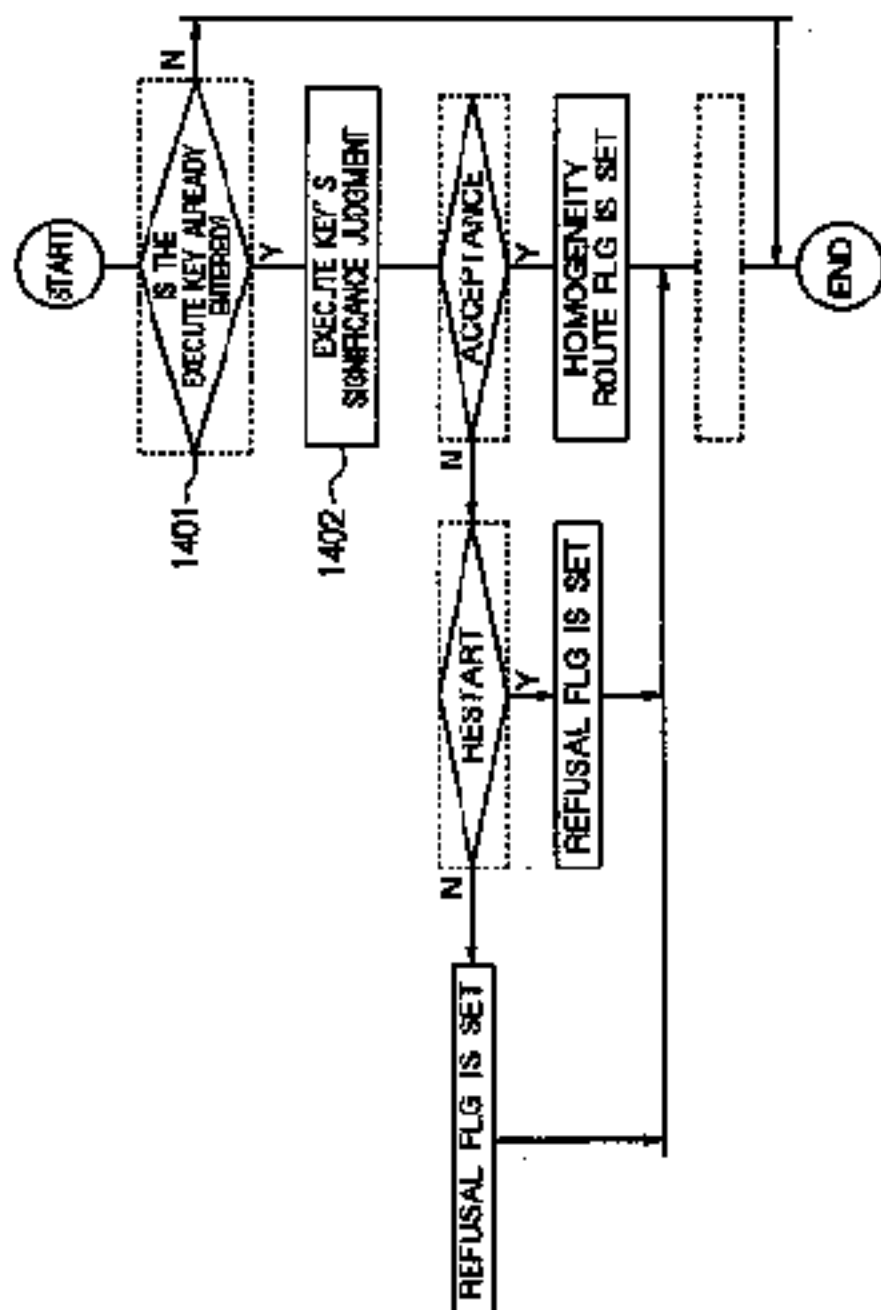


FIG. 15

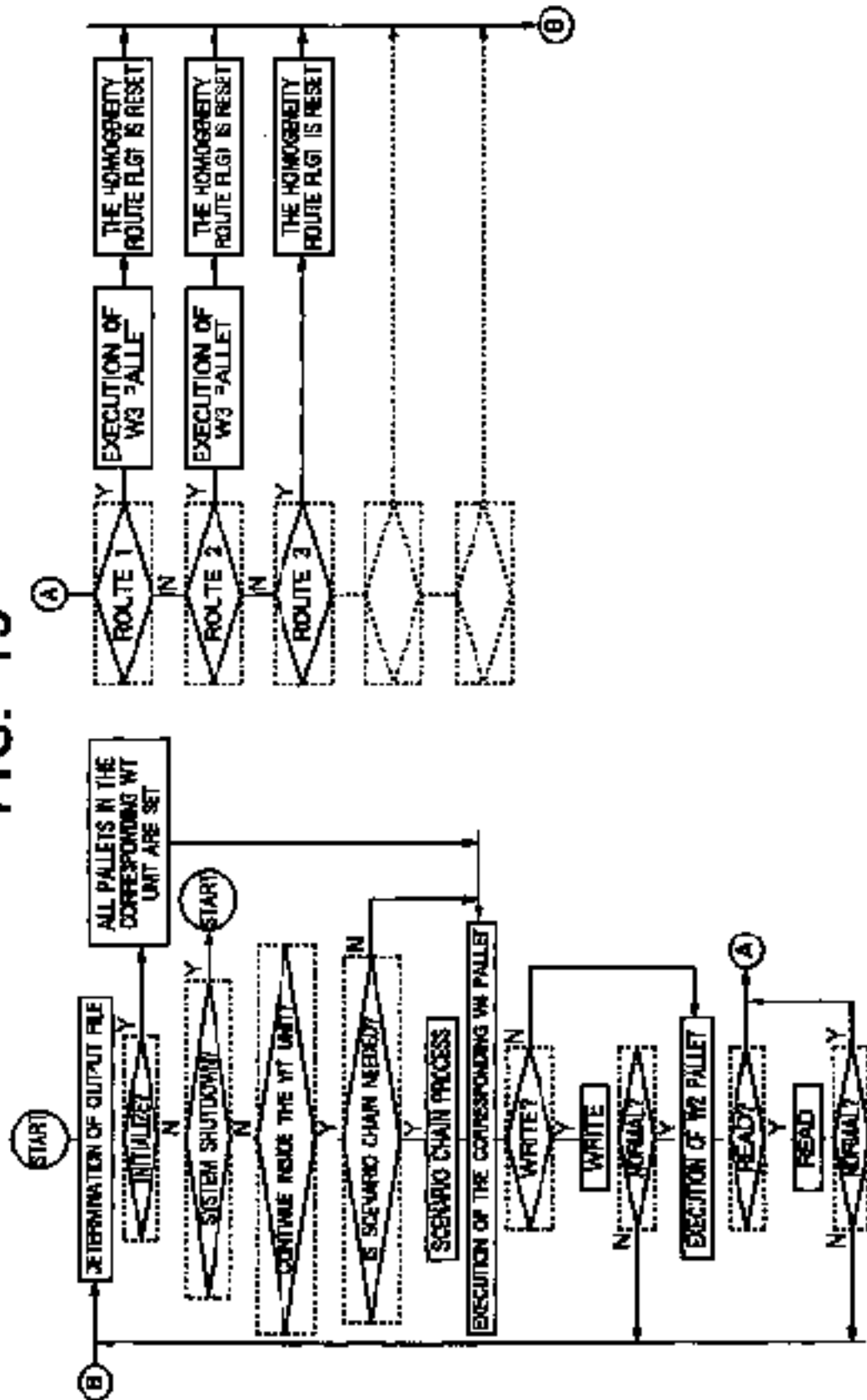


FIG. 16

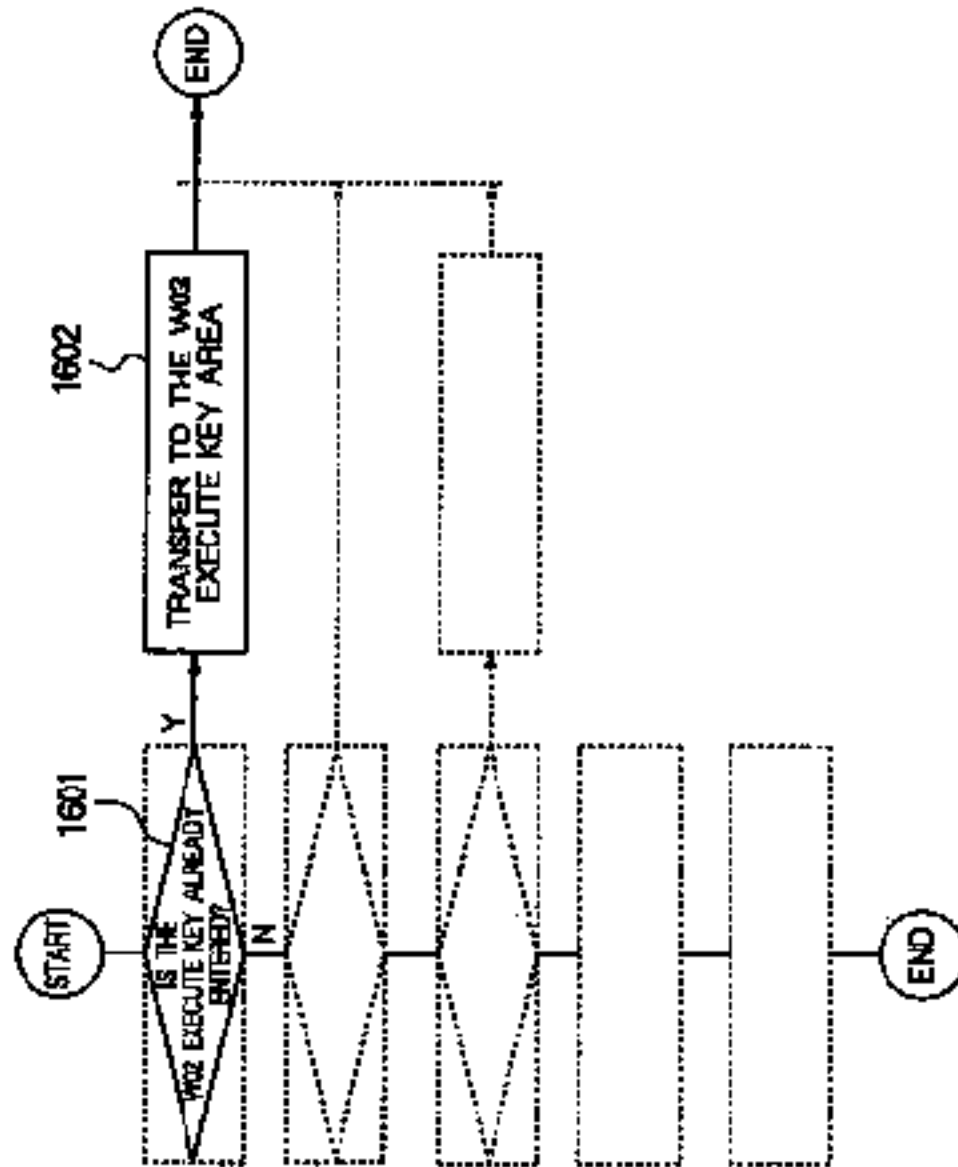




FIG. 17

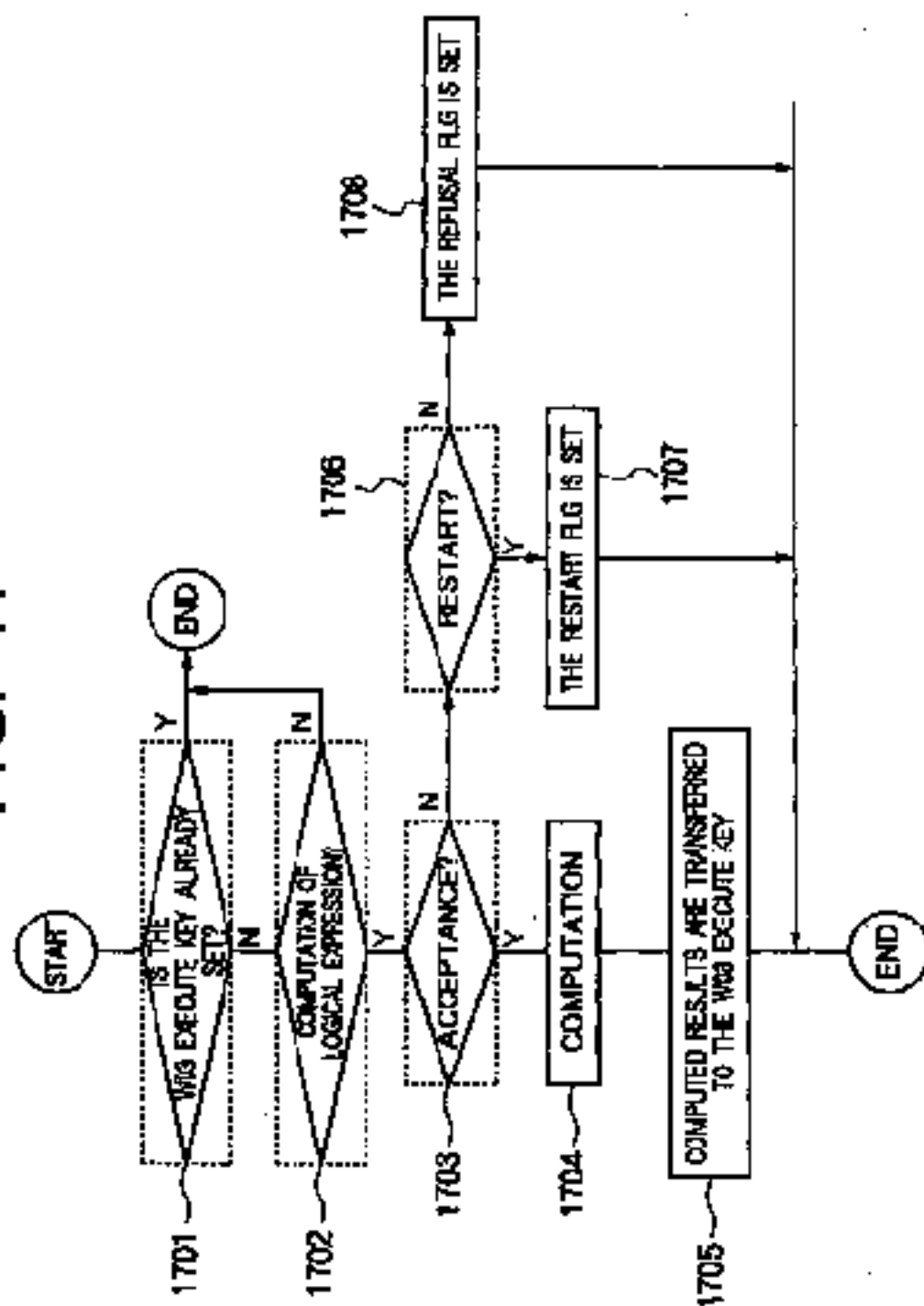


FIG. 18

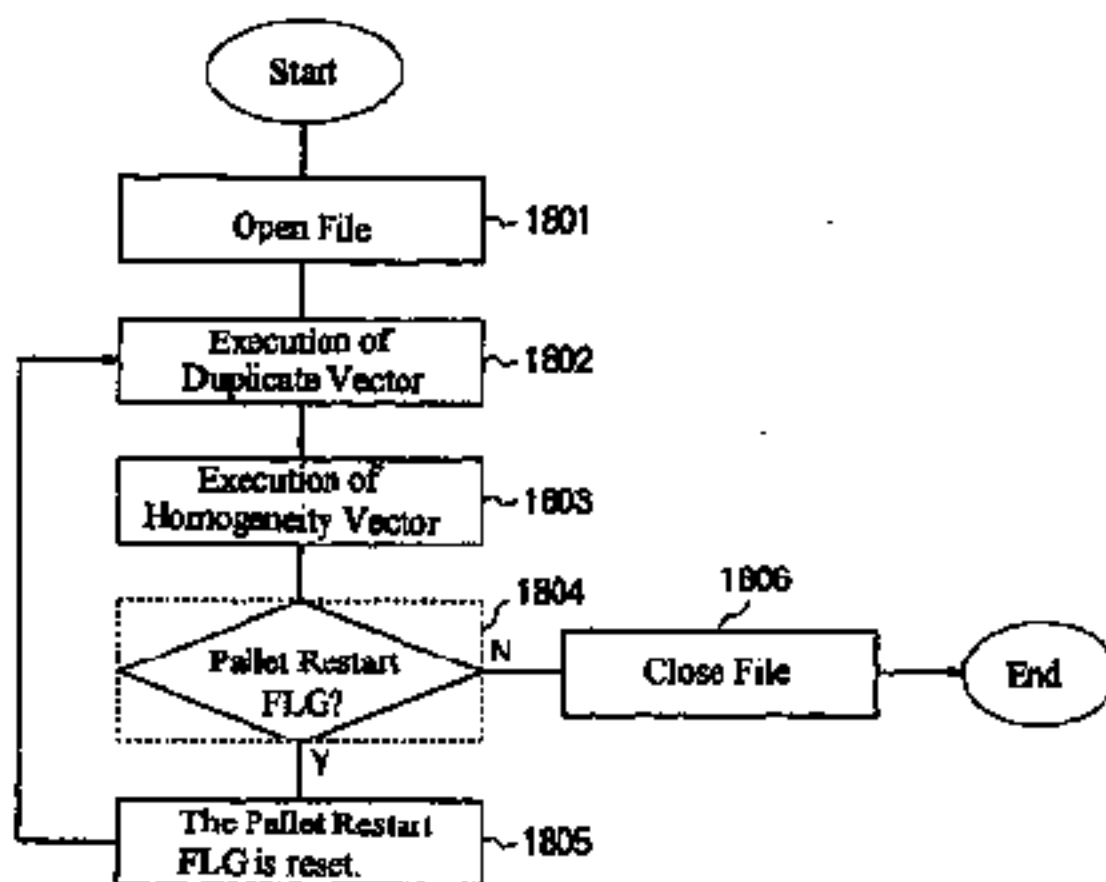


FIG. 19

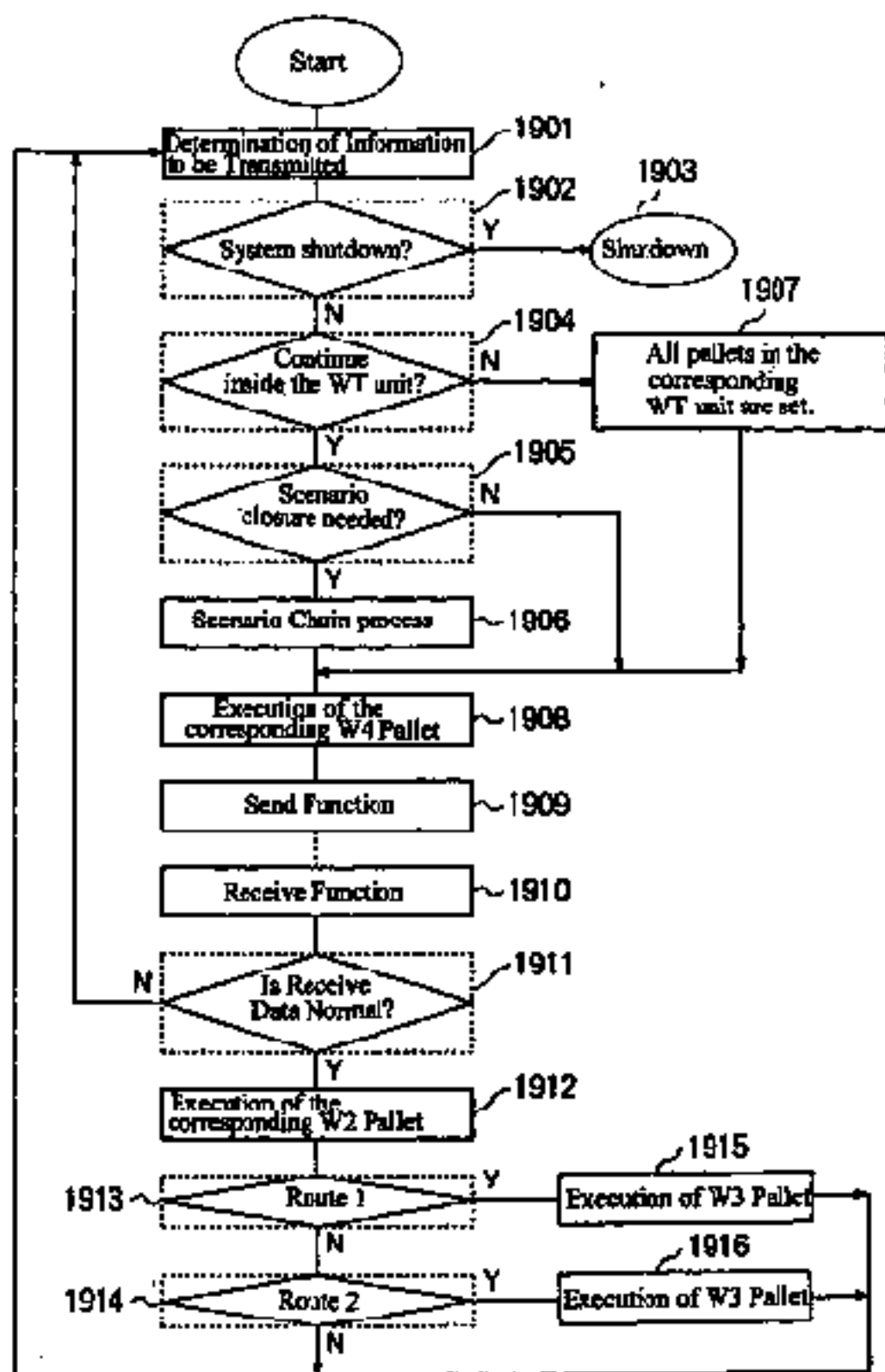


FIG. 20

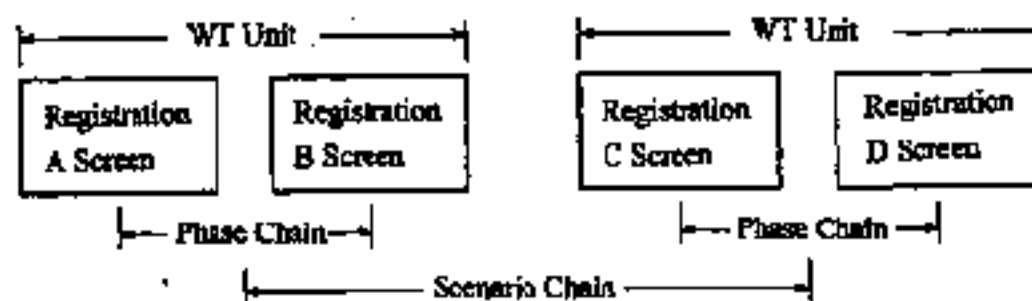


FIG. 21

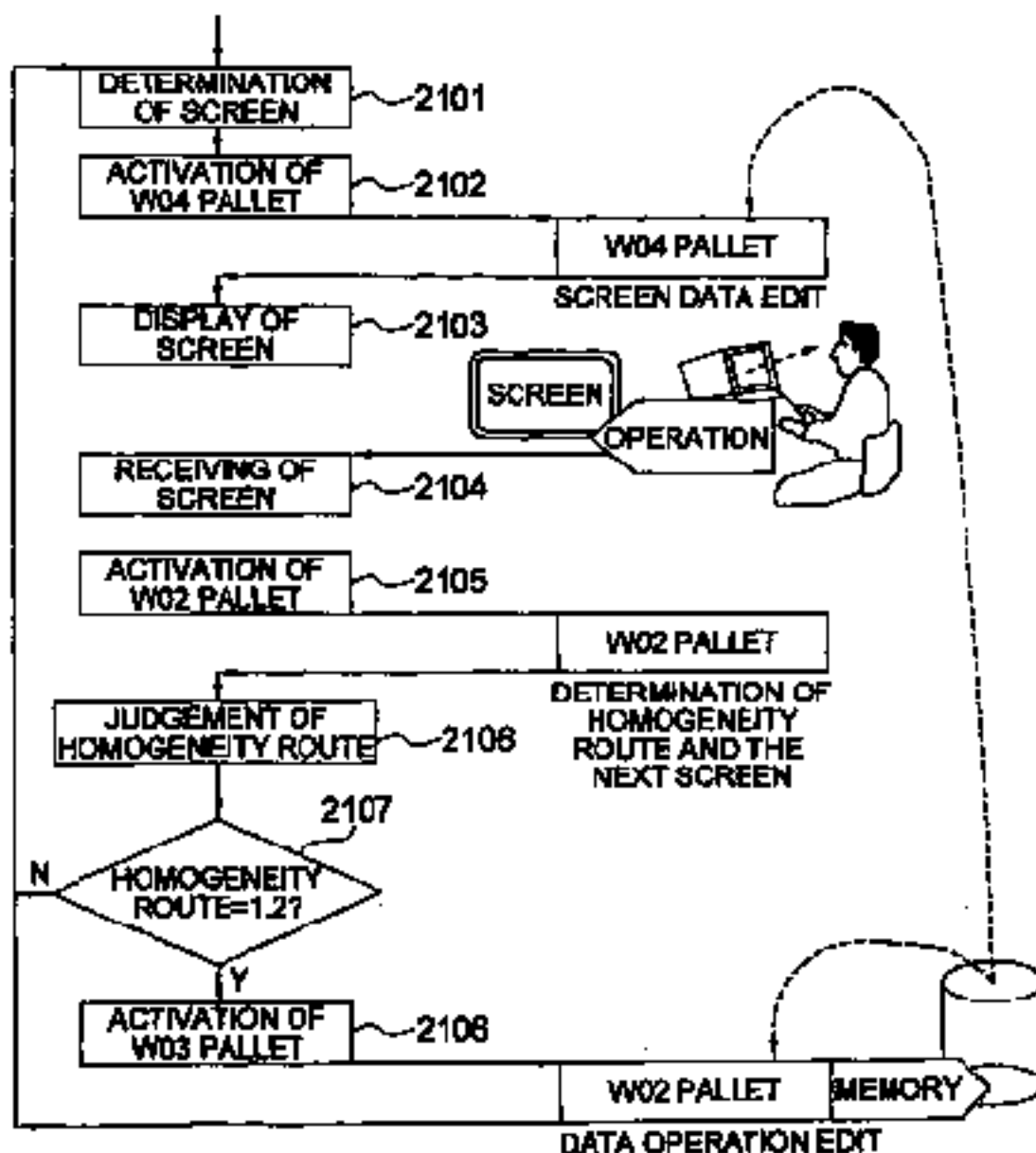


FIG. 22

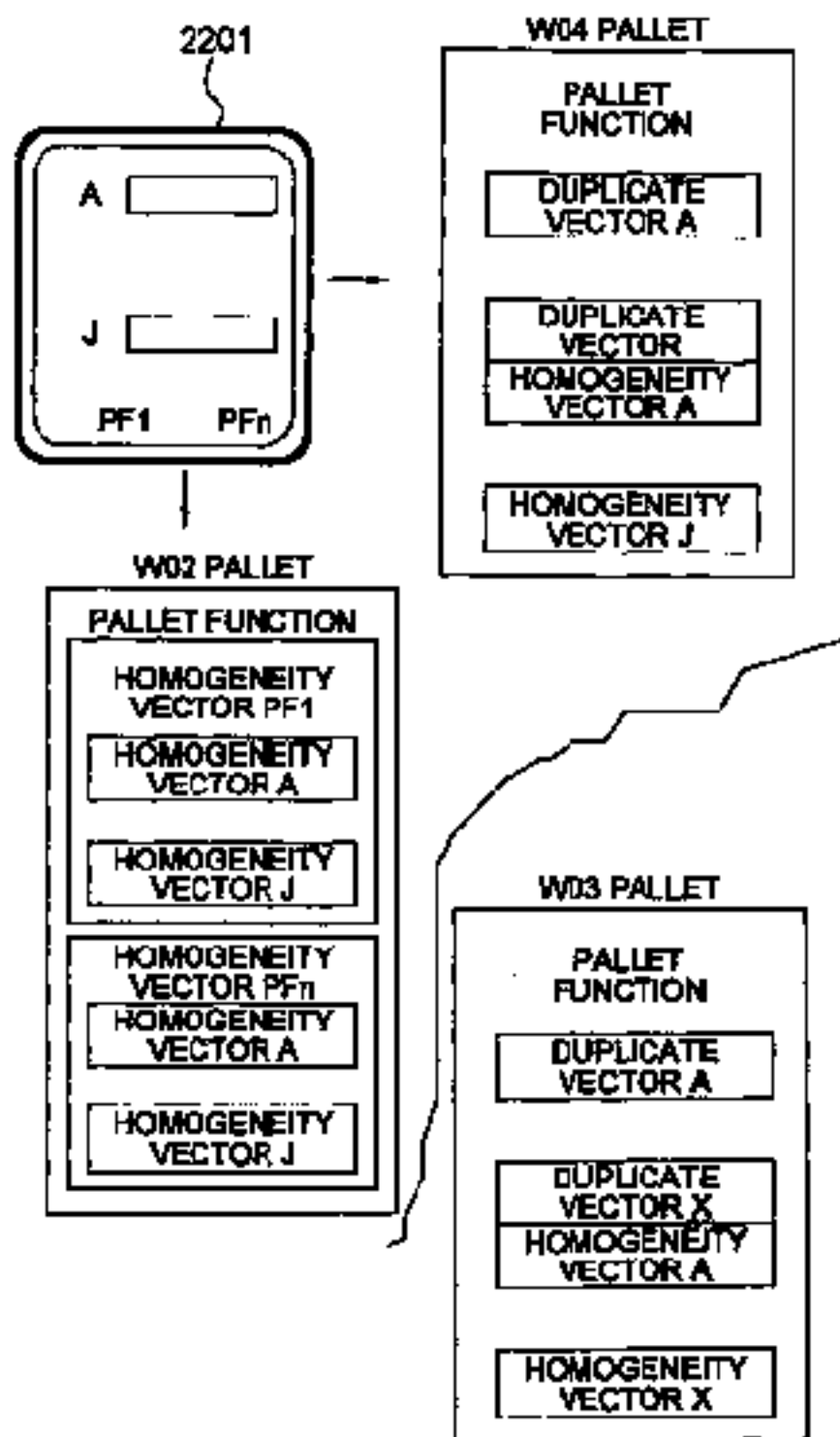




FIG. 24

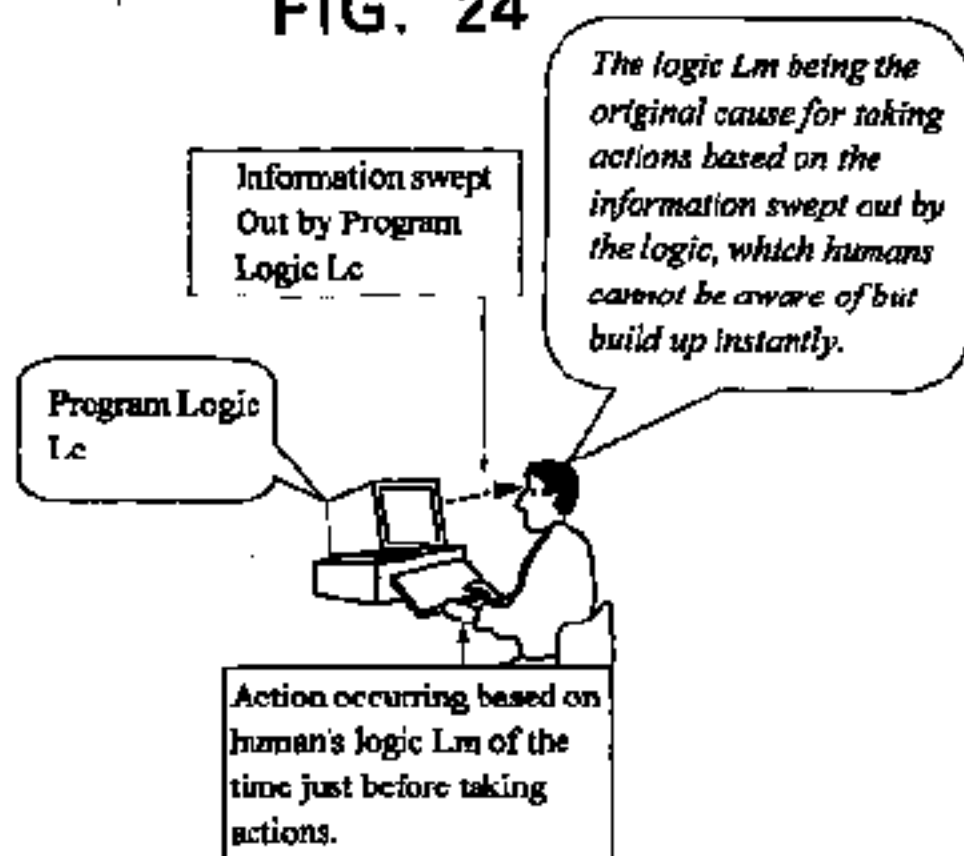




FIG. 25

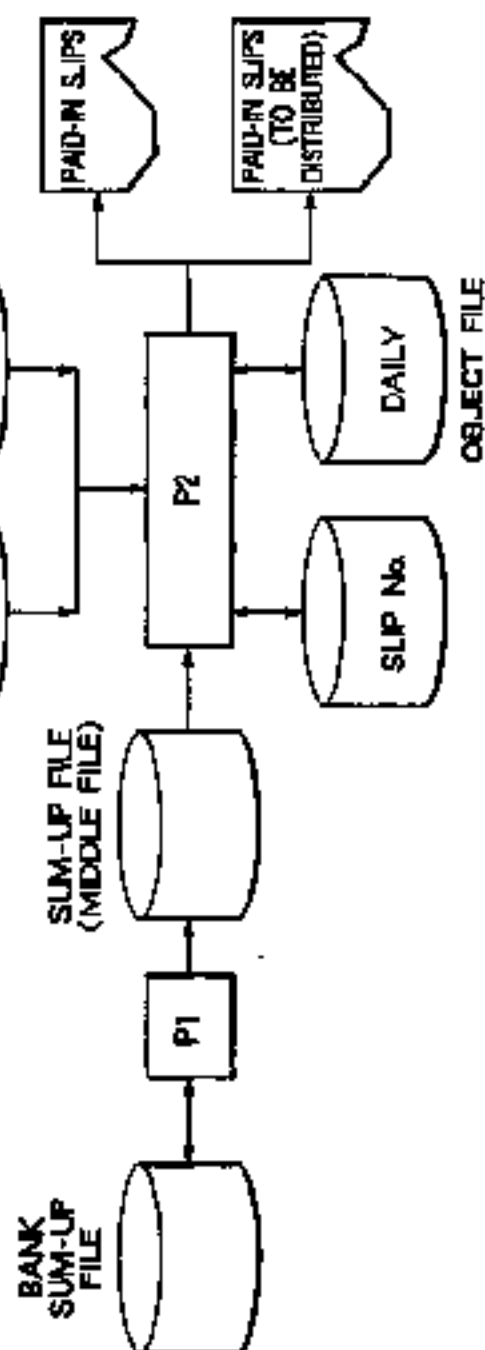


FIG. 26

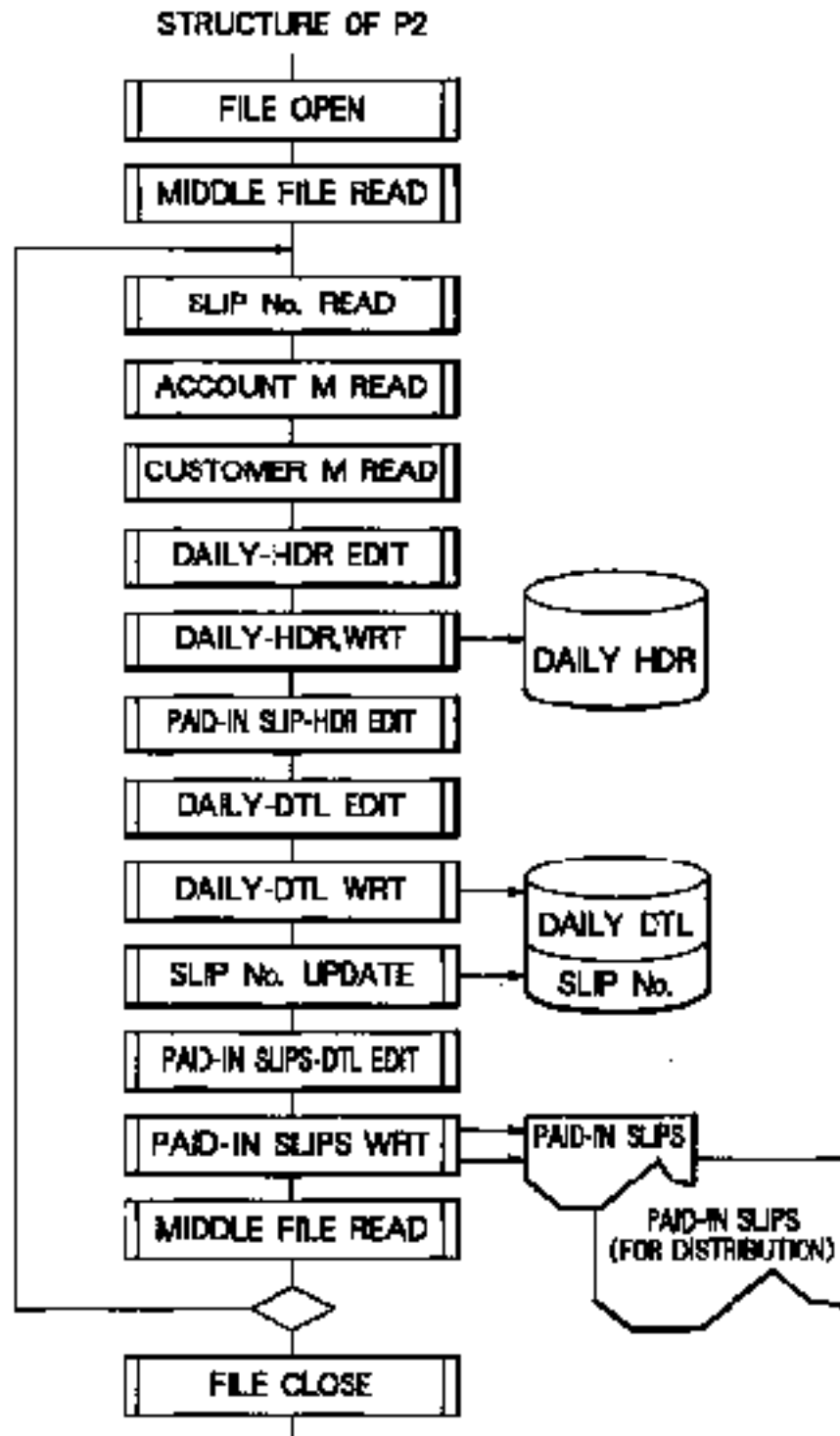


FIG. 27

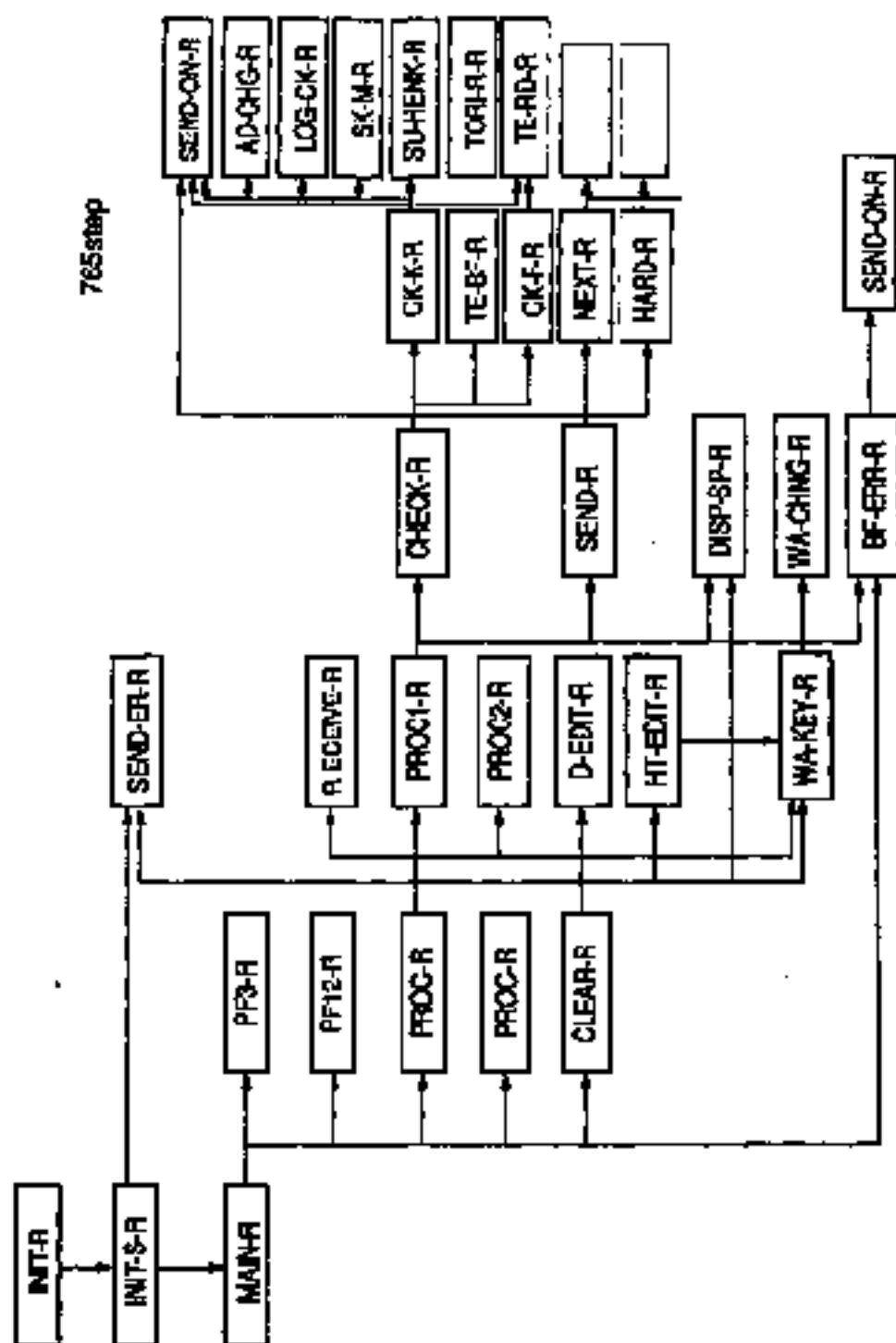


FIG. 28

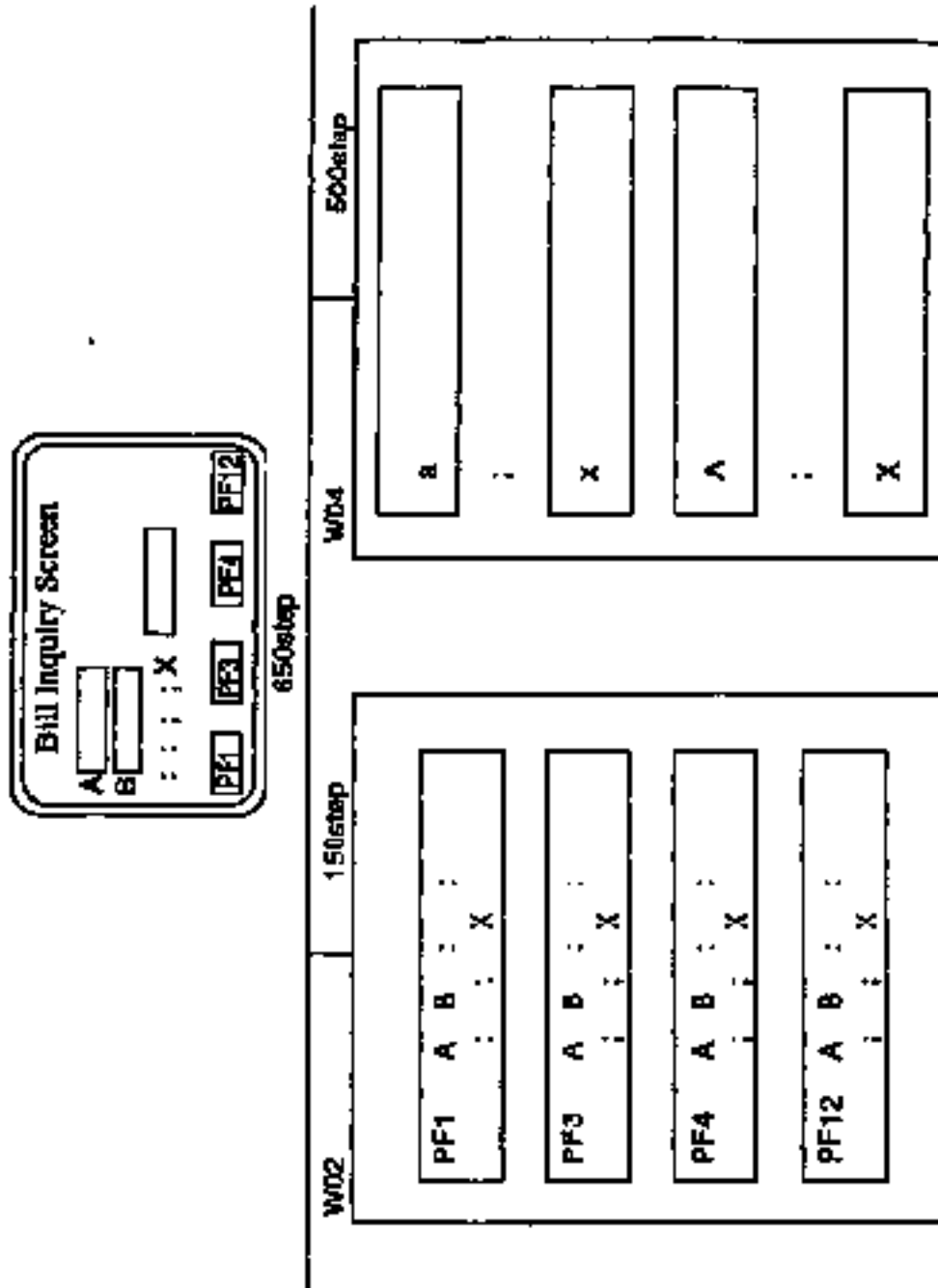


FIG. 29

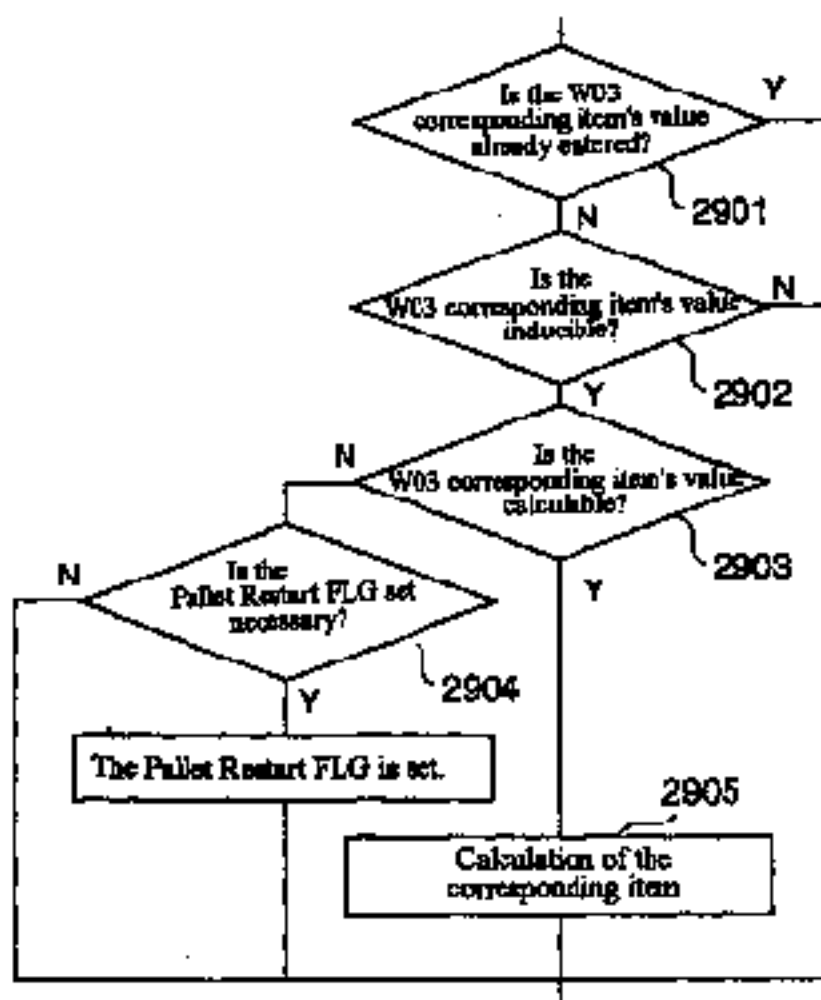


FIG. 30

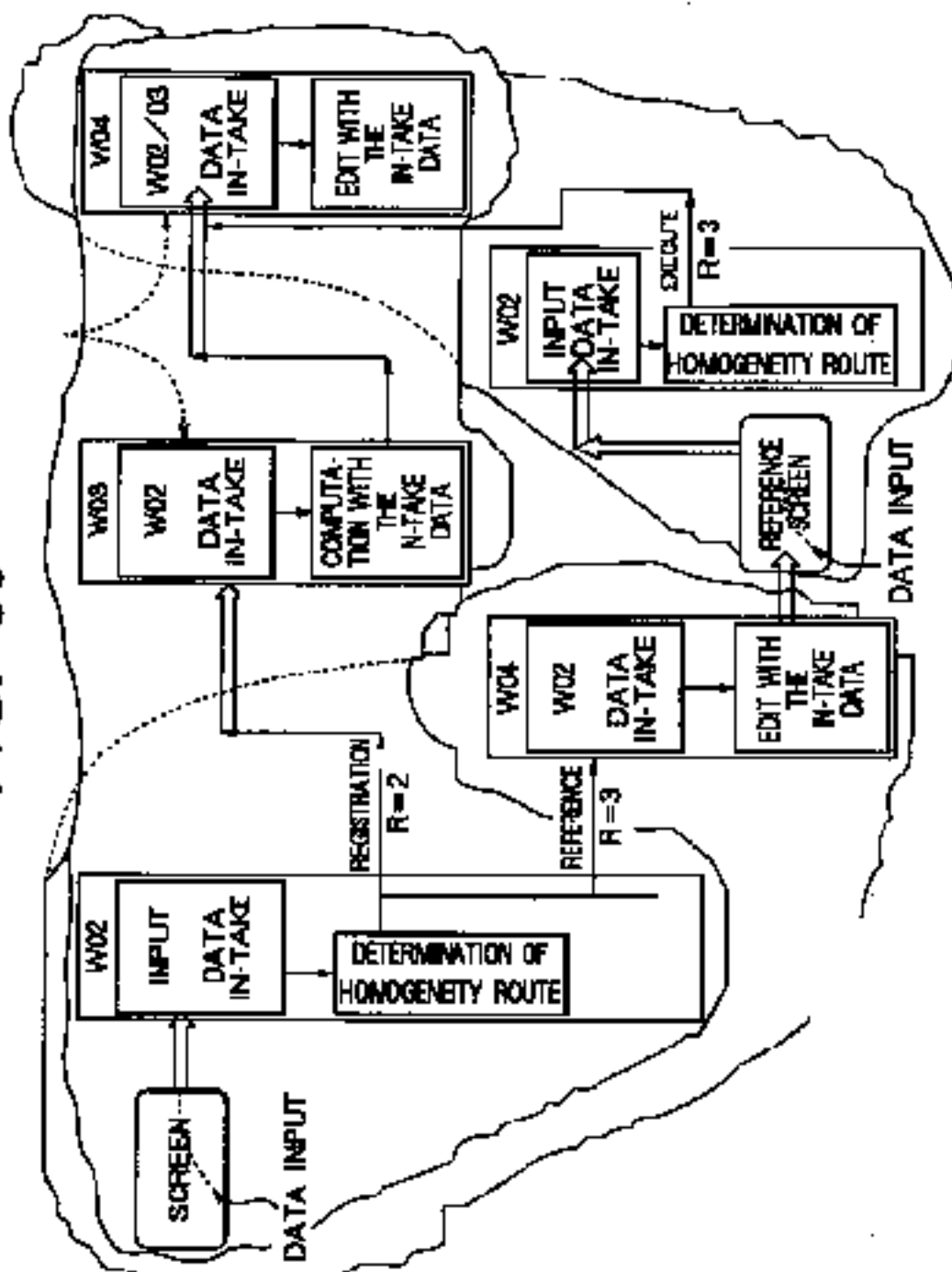


FIG. 31

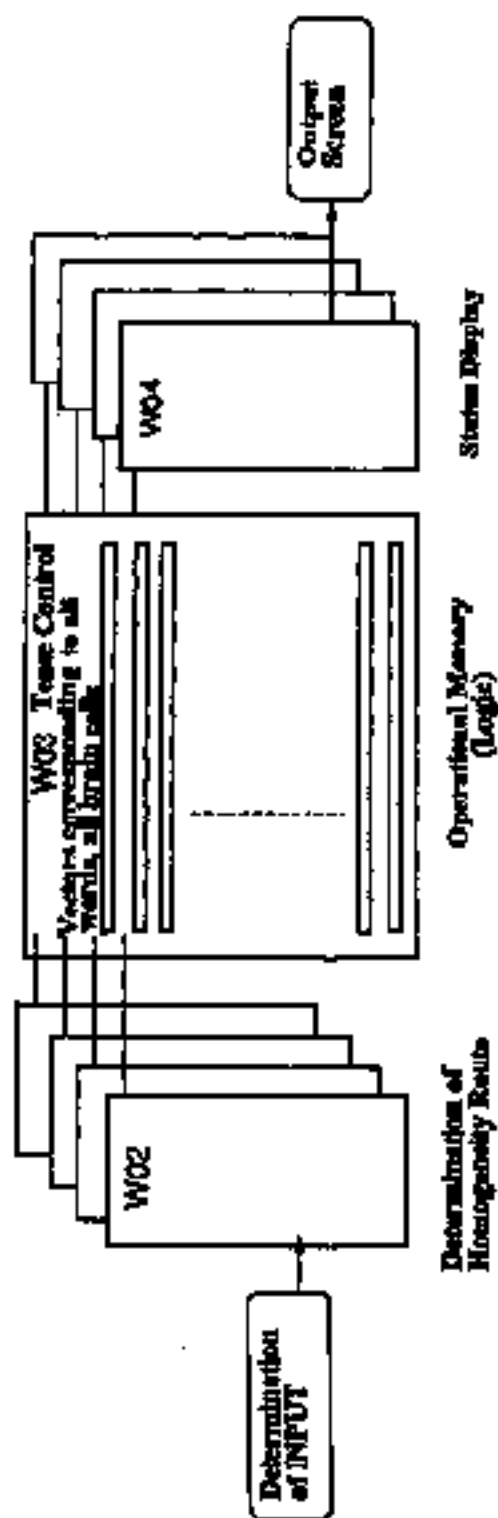


FIG. 32

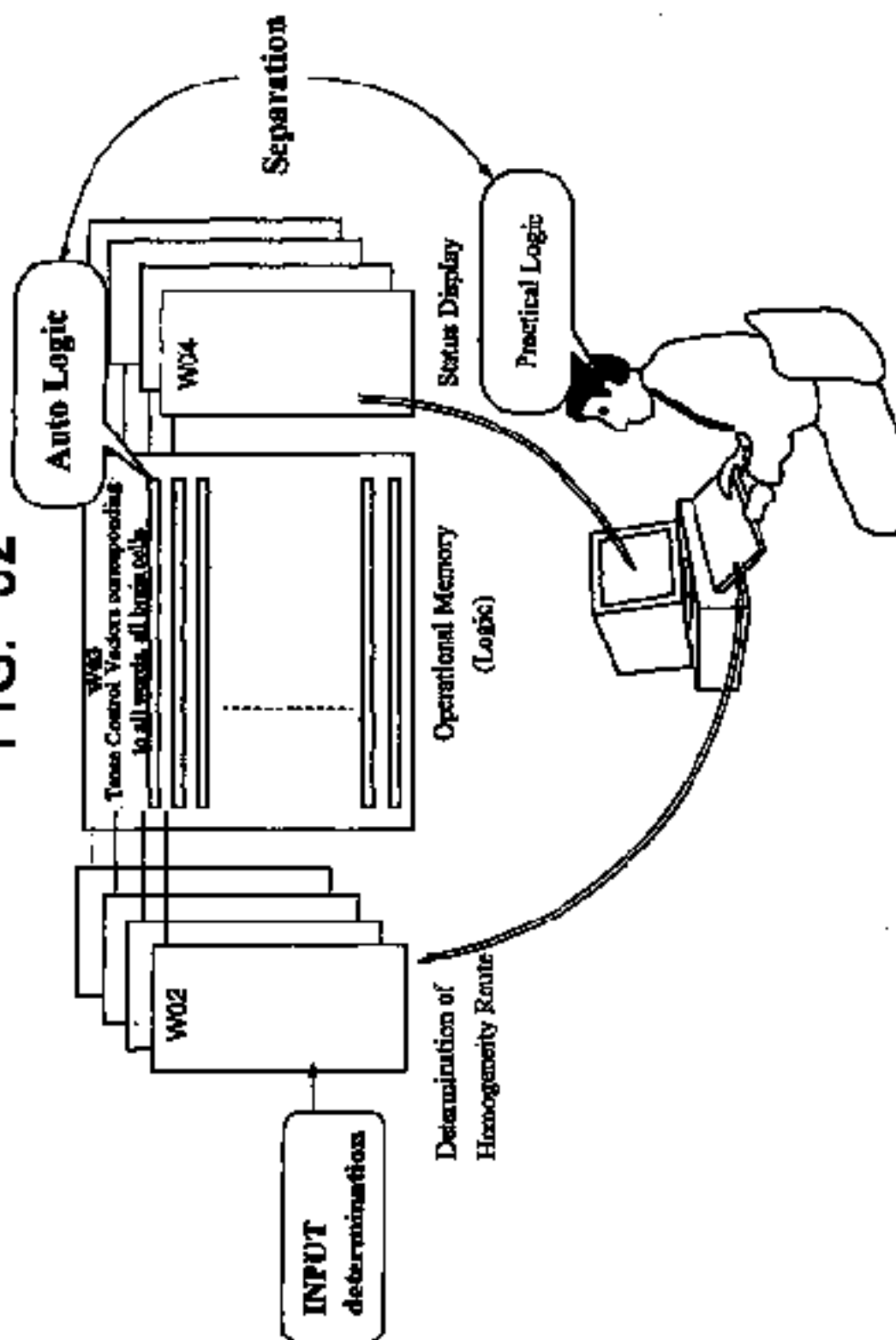




FIG. 33

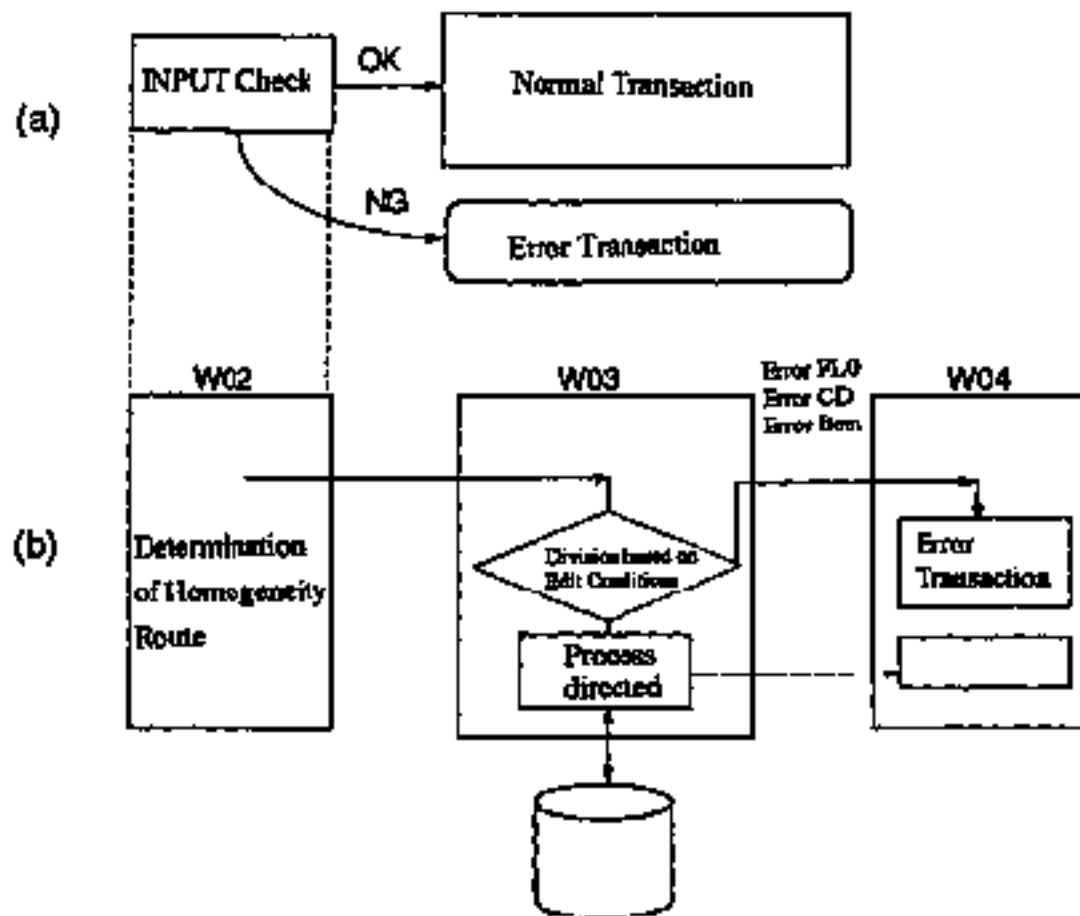


FIG. 34

(a)

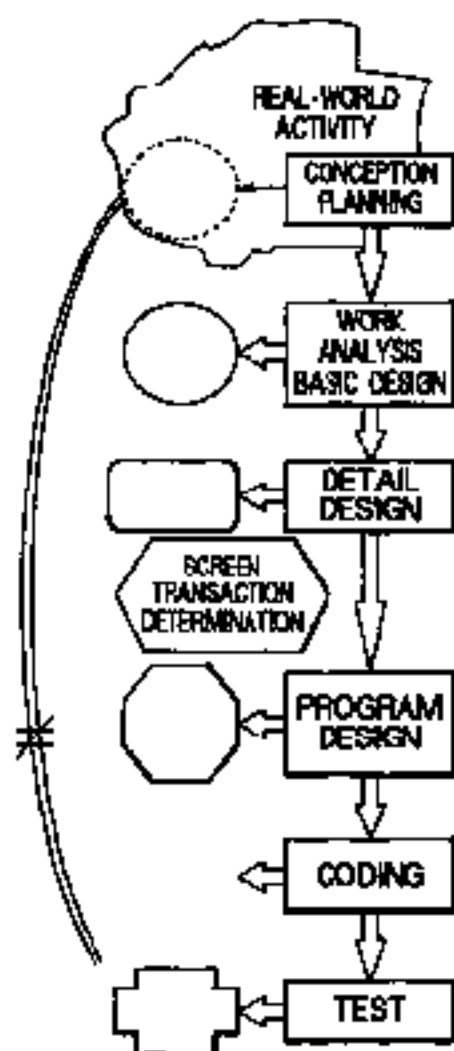


FIG. 34

(a)

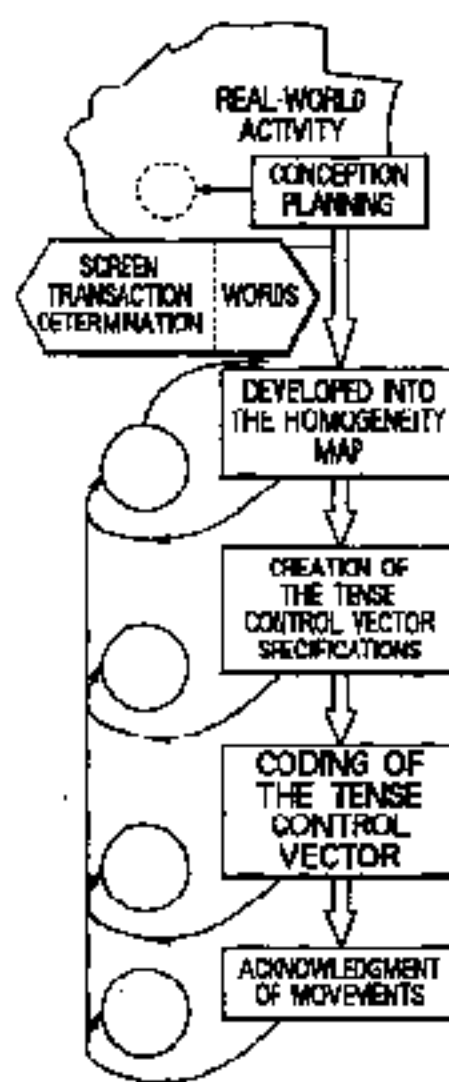


FIG. 35

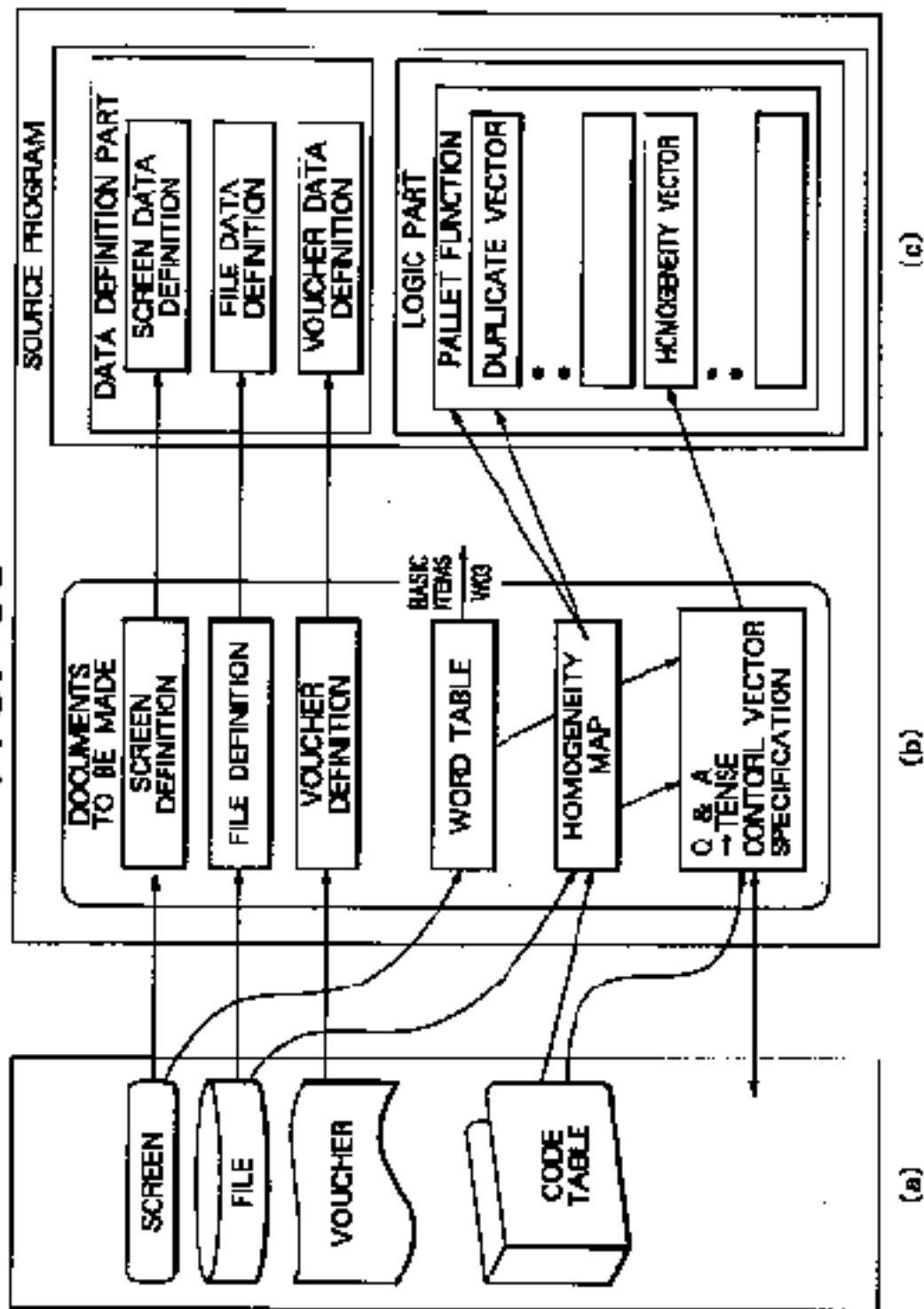


FIG. 36

SCREEN NAME	RECEIVED ORDER DATA ENTRY	SCREEN NO.	K-201F	FUNCTION (TRANSACTION UP TO THE NEXT SCREEN, THE NEXT SCREEN IDENTIFY)		
<b>WORD PLACEMENT DIAGRAM (LAYOUT)</b>						
01	01020304050607080910111213141516171819202122232425262728293031323334353637383940			INITIAL REGISTRY BASED ON INPUT DATA (R=1) -NONE		
02	K-201E			EXECUTE REGISTRY BASED ON INPUT DATA (R=2) -NONE		
03	O P C D	9999999	X X X X X X X X X X X X X X X X	TRANSITION TO THE REFERENCE SCREEN OF VARIOUS CODES (R=3)		
04	REFERENCE ORDER CLASSIFICATION	99	X X X X	RECEIVED ORDER CLASSIFICATION FIELD--K-201F		
05	CUSTOMER	8888888888	X X X X X X X X X X X X X X X X X X X X	CUSTOMER FIELD--K-201F		
06	DELIVERY	8888888888	X X X X X X X X X X X X X X X X X X X X	DELIVERY DESTINATION FIELD--K-201F		
07	DESTINATION	8888888888	X X X X X X X X X X X X X X X X X X X X	DISTRIBUTION WAREHOUSE FIELD--K-201F		
08	SALES CLERK	88888888	X X X X X X X X X X X X X X X X	SALES IN CHARGE FIELD--K-201F		
09				TRANSITION TO THE RECEIVED ORDER PRODUCT INFO REFERENCE SCREEN (R=4) -NONE		
10				TRANSITION TO THE MENU SCREEN (R=5) -NONE		
11						
12						
13	PRODUCT CODE	QTY	UNIT	PREVIOUS ORDER UNIT	AMOUNT	CLASSIFICATION
14	PRODUCT NAME					OTHER PARTY PRODUCT
15	01	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
16	02	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
17	03	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
18	04	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
19	05	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
20	06	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
21	07	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
22	08	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
23	09	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
24	10	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
25	11	99999	99999	9,999,999,999	9,999,999,999	999,999,999,999
TOTAL AMOUNT 99,999,999,999						
RECEIVED ORDER TRANSACTION INFORMATION IS ENTERED INTO THE SYSTEM FILE TO BE MADE/UPDATED (1) RECEIVED ORDER BUSINESS FILE - CREATE (2) INVENTORY MANAGEMENT FILE - UPDATE (3) CREDIT RATING MANAGEMENT FILE - UPDATE (4) TRANSACTION NO. FILE - UPDATE						
REMARKS						

FIG. 37

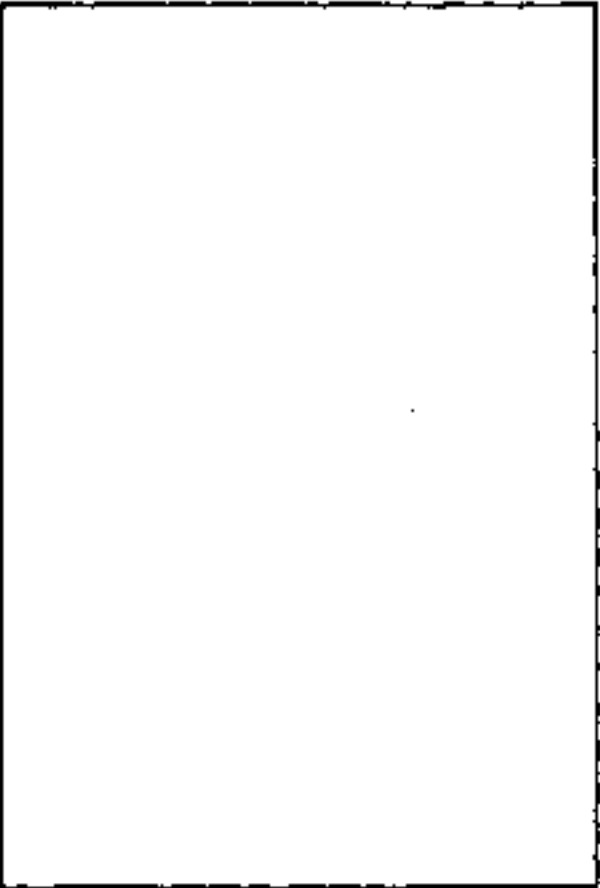
VOUCHER NAME: _____ IDENTIFIER: _____		OUTPUT CONTROL METHOD (NEW LINE, NEW PAGE ETC.)	
WORD PLACEMENT DIAGRAM (LAYOUT)			
010203040506 ..... 01828384858687			
			
OUTPUT POINT OUTPUT LOCATION OUTPUT DEVICE KINDS OF FORM  OUTPUT TIME		REMARKS	
VOUCHER OUTPUT CONDITIONS			

FIG. 38

FILE NAME		IDENTIFIER		FILE CLASSIFICATION	priority	BELONGING AREA	Y001/W003
No	ITEM NAME	ITEM ID	ATTRIBUTE	CONTENTS/MEANING/OTHERS (TRANSACTION CONDITIONS PART)			REMARKS

**FIG. 39**

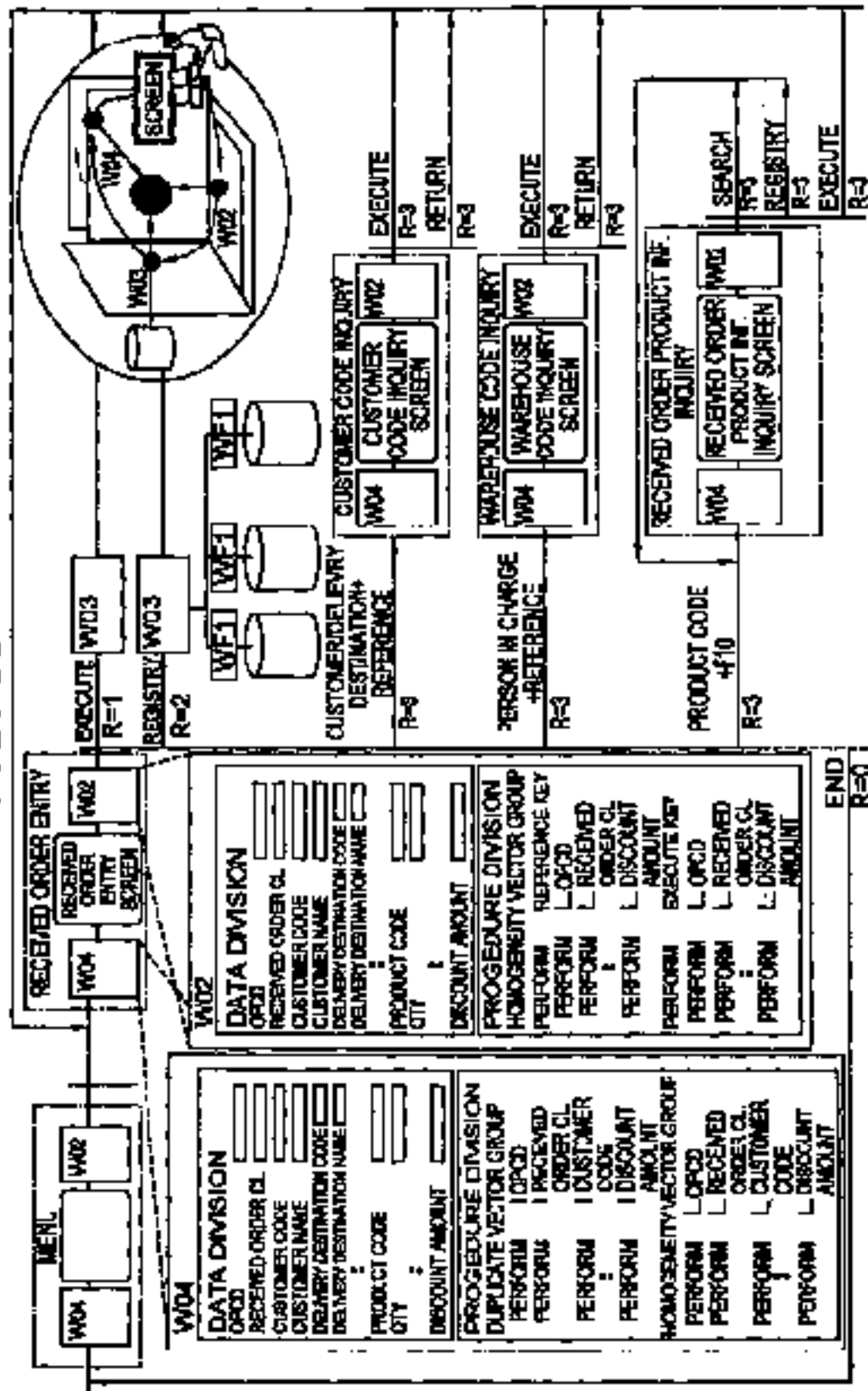


FIG. 40

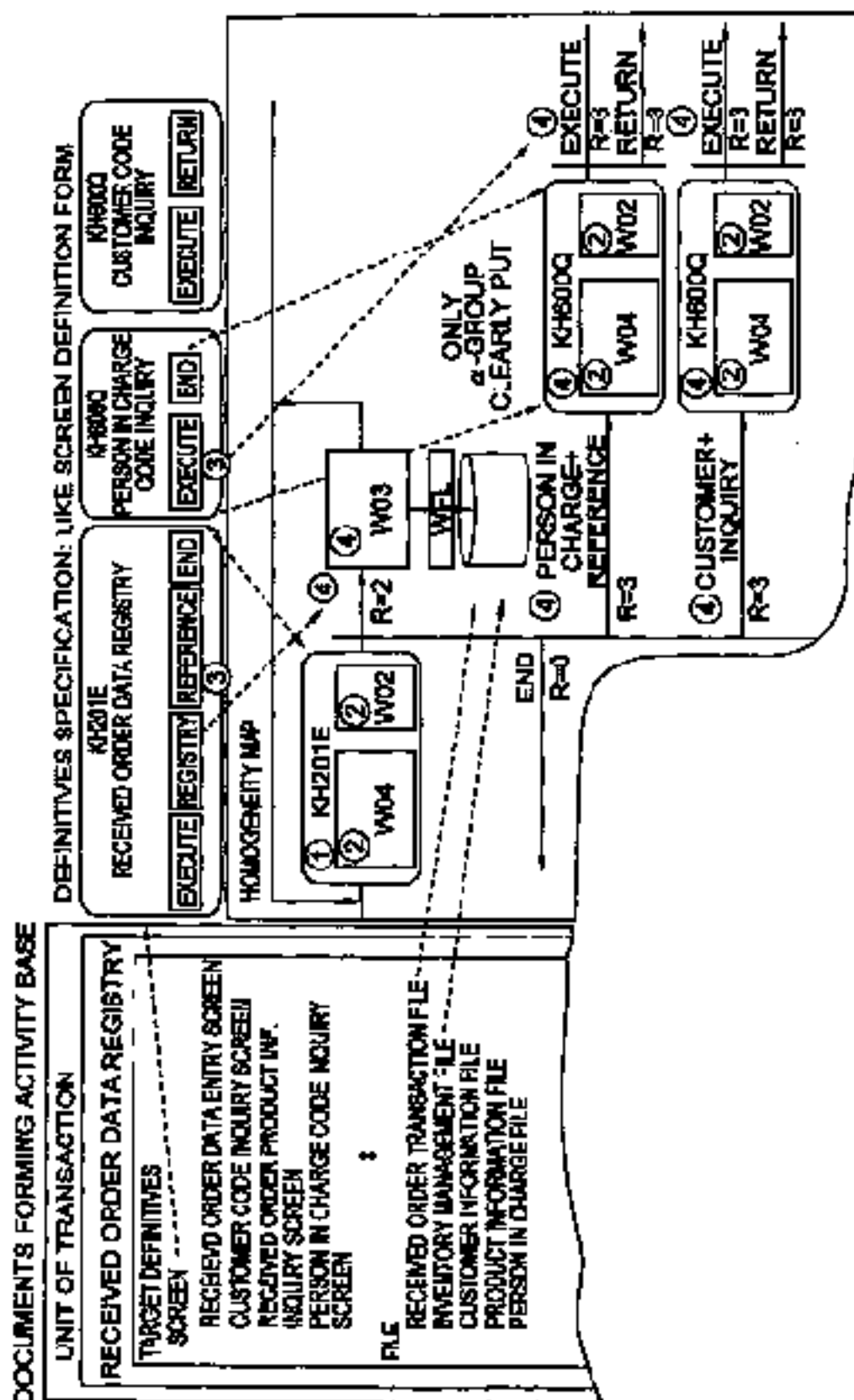




FIG. 41

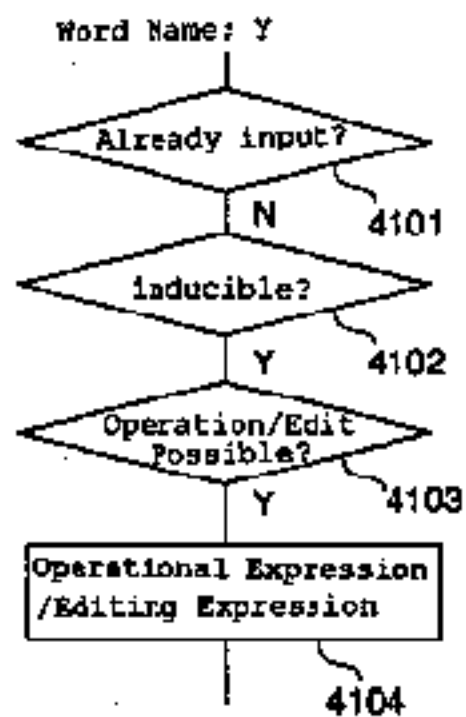


FIG. 42

DEFINITIVE NAME	MULTIPLE TRANSACTION FILE	DEFINITIVE ID	KD62BP	PALLET DRAIN FUNCTION CL	# OF AREA CL	WCS	PALLET #	WCS03H210E	TENSE CONTROL VECTOR CL	LOGIC
No.	ITEM NAME	ITEM ID	OPERATIONAL SIGNIFICANCE CONDITIONS	OPERATIONAL EXPRESSION	REMARKS					
76	DISCOUNT TOTAL AMOUNT	KD1088	TRANSACTION CL IS ORDER RECEIVE AND TRANSACTION CL IS EXCEPT 1 (NO DISCOUNT) AND PRODUCT QTY OF EACH TRANSACTION IS NOT 0.	DISCOUNT TOTAL AMOUNT (KD1088) OPERATION TIME NUMBER = 2 (TRANSACTION QTY UNIT PRICE DISCOUNT AMOUNT (KEC261))	WHEN OPERATION IS ACCEPTED, THE OPERATION ACCEPTANCE FLAG IS SET. WHEN THE TRANSACTION QTY UNIT PRICE DISCOUNT AMOUNT IS NOT CALCULATED, THE PALLET RESTART PROCESS IS EXECUTED.					
77	QTY UNIT PRICE TOTAL AMOUNT	KD1857	BUSINESS CL IS ORDER RECEIVE AND PRODUCT QTY OF EACH TRANSACTION IS NOT 0.	QTY UNIT PRICE TOTAL AMOUNT (KD1857) OPERATION TIME NUMBER = 2 (TRANSACTION QTY UNIT PRICE DISCOUNT AMOUNT (KEC201))	WHEN OPERATION IS ACCEPTED, THE OPERATION ACCEPTANCE FLAG IS SET.					
78	TRANSACTION TOTAL AMOUNT	KD1854	TRANSACTION CL IS ORDER RECEIVE ONLY.	TRANSACTION TOTAL AMOUNT (KD1854) QTY UNIT PRICE TOTAL AMOUNT (KD1851) -DISCOUNT TOTAL AMOUNT (KD1088)	WHEN OPERATION IS ACCEPTED, THE OPERATION ACCEPTANCE FLAG IS SET. WHEN THE QTY UNIT PRICE TOTAL AMOUNT AND THE DISCOUNT TOTAL AMOUNT IS NOT CALCULATED, THE PALLET RESTART PROCESS IS EXECUTED.					
79	QTY PRICE TOTAL AMOUNT	KD1856	TRANSACTION CL IS ORDER RECEIVE AND THE TRANSACTION PRODUCT IS NOT ORDER UNACCEPTABLE, THE TRANSACTION PRODUCT QTY IS NOT 0.	QTY PRICE TOTAL AMOUNT (KD1856) PRICE (KE1124) +DISCOUNT PRODUCT QTY (KE1001)	WHEN OPERATION IS ACCEPTED, THE OPERATION ACCEPTANCE FLAG IS SET. WHEN THE TRANSACTION PRODUCT IS NOT ORDER UNACCEPTABLE, MESSAGE code 101 IS RESPONDED AND THE CORRESPONDING PRODUCT CODE FIELD IS DISPLAYED REVERSELY.					

FIG. 43

No.	ITEM NAME	DEFINITIVE NAME	ITEM d	K201E	PALLET CHAIN FUNCTION CL	AREA CL	WOM	PALLET N	LAMA1C40	TENSE CONTROL MESSAGE CL	LOGIC
56	TOTAL AMOUNT		A04360	PRODUCT QTY OF EACH TRANSACTION AND THE UNIT PRICE IS NOT 0.	OPERATIONAL SIGNIFICANCE CONDITION	DISCOUNT TOTAL AMOUNT (A04360) SPECIFICATION LINE NUMBER = 2 (TRANSACTION QTY UNIT PRICE AMOUNT (A16721))			OPERATION A... EXPRESSION	REMARKS	
										WHEN OPERATION IS ACCEPTED, THE OPERATION ACCEPTANCE FLAG IS SET.	
										WHEN THE TRANSACTION QTY UNIT PRICE AMOUNT IS NOT CALCULATED, THE PALLET RESTART PROCESS IS EXECUTED.	
57	OPCD		A01540	UNCONDITIONAL		THE CORRESPONDING OPCD MUST EXIST IN THE PERSON IN CHARGE MASTER.				WHEN NOT EXISTING IN THE PERSON IN CHARGE MASTER, THE MESSAGE OP= 2001 IS RESPONDED, AND THE CORRESPONDING OPCD FIELD IS DISPLAYED REVERSELY.	
58	OPERATION PERSON IN CHARGE NAME		A01580	IN THE CASE THIS OPCD EXISTS IN THE PERSON IN CHARGE MASTER		OPERATION PERSON IN CHARGE NAME (A01580 OF K201E) = OPERATION IN CHARGE NAME (SN0792 OF PERSON IN CHARGE MASTER)					

FIG. 44

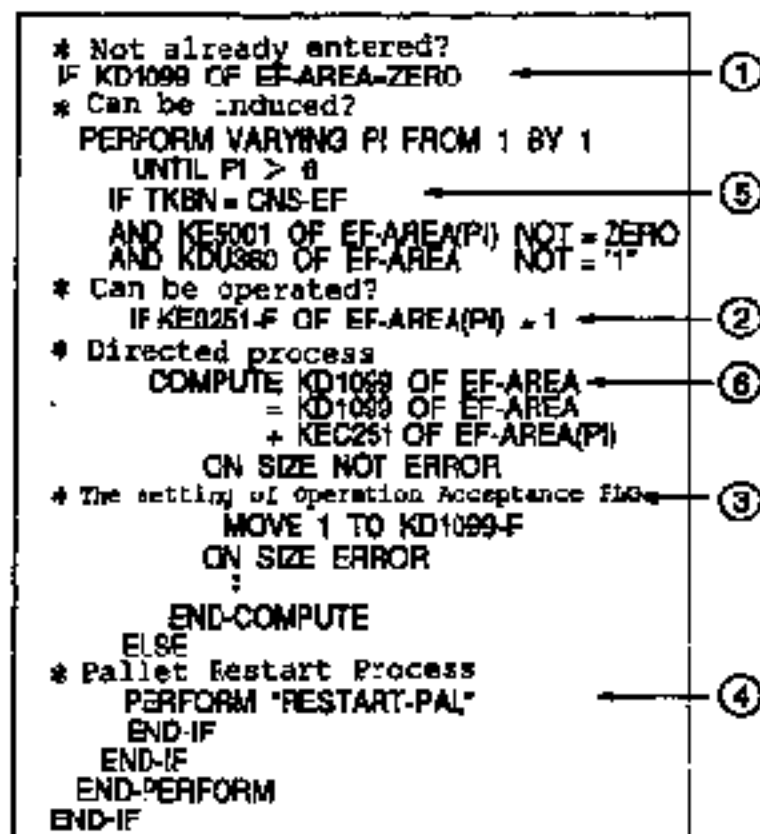


FIG. 45

Target Points	Traditional	LYEE	Effects
① Improvements in working method			Short-term development realized: 1/2 - 1/10
② Establishment of Quality Concept	<p>Work logic produced by user</p>	<p>Work logic by user</p>	Compression of the gross development volume: 20% - 80%
③ Exclusion of Empiricism	<p>Dependent on empiricism</p>	<p>LYEE theory</p>	Enhancement of the maintainability: 40 - 100 times.
④ Specialization of the Thinking Method	<p>Tool effects</p>	<p>Tool effects</p>	Enhancement of the work efficiency: 40 - 100 times.

FIG. 46

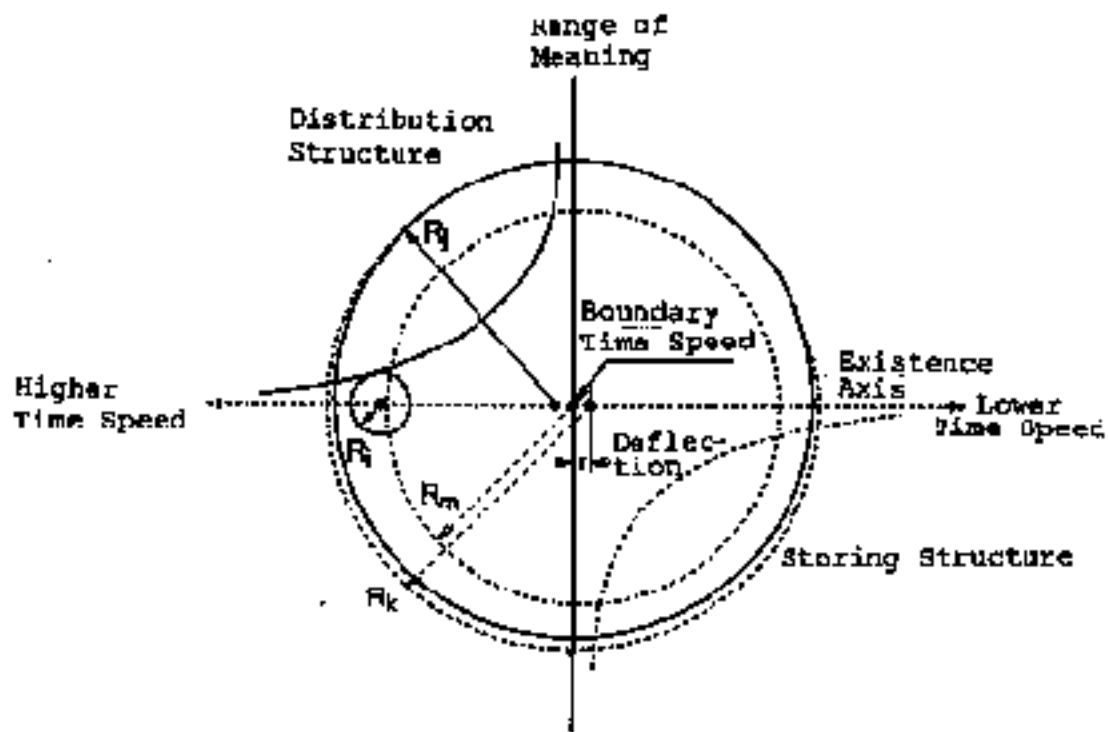
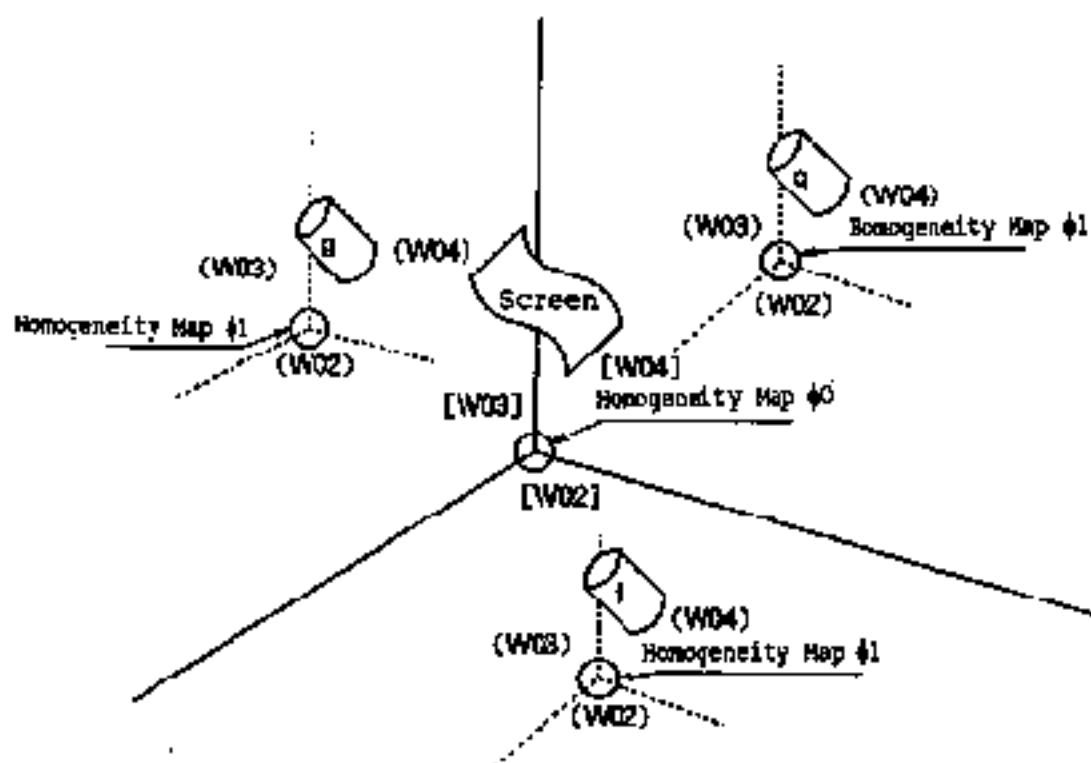




FIG. 48





## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP97/01492

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> Int. Cl. <sup>6</sup> G06F9/06 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS RESEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) Int. Cl. <sup>6</sup> G06F9/06 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1978 - 1997 Kokai Jitsuyo Shinan Koho 1972 - 1994 Toroku Jitsuyo Shinan Koho 1994 - 1997 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) JGIS, "VOCUJ"		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Classification of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP, 6-332673, A (Institute of Software Scientific Constructions Co., Ltd., JR East Japan Information Systems Co.), December 2, 1994 (02. 12. 94) (Family: none)	1, 2
A	JP, 5-108319, A (Hitachi, Ltd.), April 30, 1993 (04. 08. 93) (Family: none)	1, 2
A	JP, 4-137038, A (K.K. Business System Kankyusho), May 12, 1992 (12. 05. 92) (Family: none)	1, 2
A	JP, 6-348496, A (Fujitsu Ltd.), December 22, 1994 (22. 12. 94) (Family: none)	1, 2
A	Strategic Computer, Vol. 33, No. 8, August 1994 (Tokyo), Shigenaki Towara "Account of experiments on 'The VOCUJ' the idea about extraordinary method of developing software, by a user - Challenge of NTP data communications - (in Japanese)" p. 51-56	1, 2, 4, 5
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family member.		
* Special categories of cited documents: "A" documents defining the general state of the art which is so constituted as to be of particular relevance "B" earlier documents but published on or after the international filing date "C" documents which may have priority claims which are cited to establish the publication date of another claim or other special reason (as specified) "D" document relating to an oral disclosure, use, exhibition or other means "E" document published prior to the international filing date but later than the priority date claimed "F" later documents published after the international filing date whose priority date and are in conflict with the application but which are contained in the prior art or directly underlying the invention "G" document of particular relevance for claims involving matter he considered novel or claims he considered to involve an inventive step where the document is closely prior "H" document of particular relevance for claims involving matter he considered to involve an inventive step where the document is considered without regard to such document, such as combined as being obvious to a person skilled in the art "I" document of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
August 19, 1997 (19. 08. 97)		August 26, 1997 (26. 08. 97)
Name and mailing address of the ISA/		Authorized officer
Japanese Patent Office		
Facsimile No.		Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP97/01492

**Box I** Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(b) for the following reason:

1. ☒ Claims Nos.: 3, 6

because they relate to subject matter not required to be searched by this authority, namely:

The recording medium mentioned in claims 2 and 4 has a distinctive feature in a recorded program only, and hence the Claims are deemed to be mere presentations of information.

2. ☐ Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to enable an expert (but not a specialist) international search report to be drafted and, specifically:

3. ☐ Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II** Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effect justifying an additional fee, this Authority did not require payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims, it is covered by claim Nos.:

Remarks on Prior Art

☐ The additional search fees were accompanied by the applicant's promise.

☐ The promise accompanied the payment of additional search fees.

Form PCT/ISA/GII (continuation of first sheet (3)) (July 1992)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP97/01493

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO, 97/16784, A1 (Fumio Negoro), May 9, 1997 (09. 05. 97) (Family: none)	1, 2, 4, 5
A	JP, 4-238534, A (Hitachi, Ltd.), August 26, 1992 (26. 08. 92) (Family: none)	1, 2 4, 5
X	JP, 5-73290, A (Hitachi, Ltd., Hitachi Software Eng. Co., Ltd.), March 26, 1993 (26. 03. 93) (Family: none)	4, 5
X	JP, 5-237870, A (Nippon Telegraph & Telephone Corp.), October 8, 1993 (08. 10. 93) (Family: none)	4, 5
X	JP, 4-181455, A (Hitachi, Ltd., Hitachi System Engineering K.K.), June 26, 1992 (26. 06. 92) (Family: none)	4, 5

Form PCTISA/210 (continuation of second sheet) (July 1992)