

table name and the column name which are fixedly referred to by the bind processing program and the data definition processing program.

The view definition that the system programs utilize is as follows.

The bind processing program and the data definition program require to utilize fixed table and column names for the purpose of referring to essential information as the data structure of the dictionary. On the other hand, in the case of modification of the dictionary structure by the user, modification of the table and column names to new names is desired sometimes. For this reason, in the dictionary data description, sections which are candidates for reference or modification by the bind processing program and the data definition processing program are isolated from base table modification by the view definition. Thereby, it becomes possible to modify table names and column names of default values.

In addition, the modification of the storage structure of data (modification of the data organization, storage key data, etc.) in these tables will also become possible.

3.2 Modification of System Programs

The data definition processing program, the bind processing program and the dictionary reorganization program are recreated to accommodate the user-defined new dictionary structure.

The recreation is performed by referring to the new dictionary definition information stored in the dictionary by the bind processing program at the time of the distribution. The dictionary accessing SQL module description utilized for creating the data definition processing program and the bind processing program is converted by the bind processing program at the time of the distribution to accommodate the new dictionary structure. The dictionary data retrieval SQL module utilized for the dictionary reorganization program is not a candidate for recreation because it is required to operate as the dictionary structure prior to modification.

FIG. 23 is a diagram for use in explanation of a recreation procedure for the data definition processing program and the bind processing program according to an embodiment of the present invention.

As shown in this figure, the bind processing program (BIND-PROG) at the time of the distribution makes reference to the new dictionary definition data which has been set in the previous section 3.1 to generate an access procedure for a dictionary which is adaptable to a new data structure which has not been created yet.

3.3 Reorganization to New Dictionary

The dictionary in this state takes a form in which data describing the new dictionary structure is stored on the dictionary structure defined by the default data structure. On the other hand, the data definition processing program and the bind processing program for the new dictionary structure have been converted to permit data access to the new dictionary structure. Thus, the dictionary definition data retained in the dictionary in this state is reorganized on a structure which is defined as a new dictionary structure by the new dictionary reorganization program.

FIG. 24 is a diagram for use in explanation of a reorganization processing of dictionary definition data according to an embodiment of the present invention.

A new dictionary reorganization program (RE-PROG-USER) 231 shown in FIG. 24 retrieves definition data defining a new dictionary structure stored in the default dictionary structure in accordance with a dictionary data retrieval process (RE-PROG-DB1) 232 and stores the data in a working file 230.

Data storage space on the dictionary 234 is deleted, and data in the working file 230 is moved to a new dictionary structure by a dictionary data insertion process (RE-PROG-DB2-USER) 233.

In the process of accessing dictionary-structure dependent data, data stored in the default dictionary structure can be accessed by a dictionary data retrieval process (RE-PROG-DB1) 232 at the time of the distribution. The insertion of data into the new dictionary structure can be performed by the dictionary data insertion process (RE-PROG-DB2-USER) 233 which was generated at the time of the modifying of the system programs.

In addition, the dictionary structure can be modified by the above-described procedures in the implemented state as well. However, the user-defined table data added after the reorganization to the new dictionary structure must be moved on user's own responsibility.

As described above, according to the present invention, the modification of logical structures (table names, table structure, etc.) for managing database definition information in the place where a database management system has been installed and the modification of storage structures (data organization, storage key items, etc.) to conform to an amount of the database definition information and access forms are made possible.

In addition, there is no need for developing a special program for handling database definition information, whereby development efficiency is improved.

What is claimed is:

1. A method for developing a new database management system by using an existing database management system both of the existing database management system and the new database management system responding to requests in an identical query language, the existing database management system including a dictionary to store definition information of tables managed by the new database management system, an executable data definition program to update contents of the dictionary and an executable binding program to translate a source program described in the identical query language into an executable program by referring to the dictionary, said method comprising the steps of:

- (a) defining dictionary information for the new database management system;
- (b) storing a binding source program for a new executable binding program, including in the binding source program a reference to dictionary information described as an access to a dictionary table having a specified table name;
- (c) storing the dictionary information in a definition data table of the existing database management system using the specified table name;
- (d) translating the binding source program into a transitional executable binding program by execution of the executable binding program of the existing database management system;
- (e) translating the binding source program into the new executable binding program of the new database management system by the transitional executable binding program;
- (f) storing a definition source program for a new executable definition program;
- (g) translating the definition source program into the executable definition program by the transitional executable binding program; and
- (h) setting up the new database management system with the dictionary information, the new executable binding program and the new executable definition program.