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A TOOL FOR USE IN
ON-LINE DATA DICTIONARY CREATION

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B. S., Soochow University, 1975

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Computer Science

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1983

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ACKNOWLEDGEMENTS

I would like to thank Dr. Elizabeth Unger for her constant guidance, suggestions, and tireless editing. I would like to thank Drs. David Gustafson and Rod Bates for serving as committee members. Thanks also to my fiancée, Esther, for her encouragement.

CHAPTER 1. INTRODUCTION

As the eighties are upon us, one fact stands out clearly: past practices and procedures in the data processing (DP) field are inadequate to meet the challenges of the future. There is a need to increase the productivity of an enterprise, to stabilize software costs, and to plan and manage the most critical resource of the eighties, the information resource, in a more effective fashion. In this report, we address a suggested partial solution to these needs, the data dictionary. The focus is the creation of a dictionary of data about data, i.e., metadata, by the ultimate user of the data.

1.1 Problems

Conventional data definition has been inadequate. The manner in which data has been defined in most of today's application systems has been a function of (1) the programming language used, (2) the characteristics of the programming language used, and (3) the habits of the individual programmers who have written the programs. Some of today's programming languages have the characteristics that data definitions can be embedded in the executable statements. If data definitions are only used in one program, no data administration problem is raised. An advance toward disciplined programming occurred when the data division was defined in the COBOL language. In this division, all of the data definitions used by a program

are stated explicitly. This made the task of retrieving all data definitions much easier than in languages which allow definitions to be scattered throughout the programs. COBOL did not fully solve the problem of controlled data definitions. If the same data file is used by five programs, each program would include the data definitions for that file. If changes are made in the data definitions for file, it is necessary that all programs that use the file be identified and their data divisions changed.

Many user organizations have ended up with multiple data files in which the same data item has been defined differently and or with a different name, different field length, different updating cycle, etc. (semantic redundancy). Additionally, different data items have ended up with the same name (syntactic redundancy). Sometimes the same data item has been defined "well" in certain instances and "poorly" in others, to the point where the same data item in two files cannot be compared. Other difficulties from conflicting data definitions have included (1) the need for special programs to convert 'division' data to conform with the 'corporate' data definitions, (2) loss of data integrity, due to mistakes because of the multiple definitions of the same data item, (3) confusion in interpretation, with consequent mistakes in decision making, due to the multiple definitions, (4) loss of opportunity for using the data for additional purposes, because

the data items were poorly defined in the first place, and (5) loss of opportunity for sharing the data across organizational boundaries.

Although Data Base Management System (DBMS) have helped to provide more data management, problems still exist. Database technology has offered a solution to the problem of conflicting data definitions, but the promise it has offered has not been fulfilled to anywhere near its potential. DBMS offer the opportunity to store data in non-redundant form, that is, a data item would be stored only once and would be made available to all application programs that require it. Moreover, the data definition would be explicit and would be stored with the database, not with the individual programs. In theory, if an organization starts using database technology, from that point on, the data definitions would be under control. In practice, that has not happened.

Let's look at how a database is designed conventionally. The following summary is typical of conventional database design process:

1. The user expresses an urgent need for resolving a business problem. The user approaches the DP department.
2. The systems analyst thinks he understands the user's needs and writes up the requirements specifications.

3. The user approves the specifications, assuming the systems analyst understand the business problem to be resolved.
4. The applications programmer starts to write code and test data. The entire system is developed by the applications staff.
5. However, before implementing the system in production, the user sees the reports or the output to be created. Often it at this time that the user first realizes what is really needed.
6. Changes and more changes are suggested. As a result, two factions are formed and an ever-running battle between the user group and DP commences.

No one is creating the communication problems intentionally. In many instances, users don't know what they want. And the DP people think they understand the problems, when in reality they don't. If users could see the evolving process of data base design and could see what types of "views" they could receive, they would be in a better position to tell systems analysts what they really want. To realize the objectives of correct data, minimum redundancy and the best possible communication between users, a centralized control mechanism is mandatory.

To validate the above design scenario, the following statistics are taken from the case history of a medium to large size company with a 12-year-old data processing department

running an IBM 3033. The company runs approximately 60 systems, with an average of 50 programs per system. These 3000 programs access about 2,400 physical data sets. However, because of a lack of naming standards the company has found that each data set is referred to in its programs by as many as five file names. In the worst case, it is therefore possible that the number of file definitions at the installation could be 12,000. What is more horrifying is that with three record types per file there is a possibility of up to 36,000 record definitions, and at 10 fields per record, we are left with an awesome possibility of 360,000 item definitions. The worst case, fortunately, rarely arises. However, even if the numbers are divided by three, the task of analyzing them and applying standards to them before loading them onto the dictionary is an enormous task.

Programs and systems are usually built, modified and expanded over many years and by many programmers. Everywhere standards were in place and enforced, different programming languages required different constraints. Accordingly, a single field could be called by 10 different names in 10 different programs. The naming problem falls into three main areas: synonyms, homonyms and aliases. Synonyms are different names for the same entity that have become accepted due to common corporate usage. For example, the ACCOUNT NUMBER to the accounts department is the CUSTOMER CODE to the sales

department. Homonyms occur when the same name has a different meaning according to the context in which it is used. An example is the name INVOICE, which has totally different implications in accounts receivable and accounts payable context. Aliases are different names for the same entity, which are determined for DP technical reasons. These may be planned, as in the case of different programming languages, or unplanned, as in the case where no standards exist. It is necessary for occurrences of all these names to be identified and related to a single naming scheme.

At this point, we see there is a need for better data definitions, as well as better control of them. One useful suggested tool is the Data Dictionary (6).

1.2 The Data Dictionary

A Data Dictionary (DD) enables one to control and manage metadata in the design, implementation, operation and expansion phase of a data base. The data dictionary is a data base which stores information about data such as its origin, description, relationship to other data, usage, responsibility and format (13).

The Data Dictionary is used in different ways by different types of people (9). The data base administrator needs a dictionary to help ensure consistency among the data items, to educate users about the data base content, and to help ensure

that different departments define the same data in the same way. The system analysts may use it to see what data are available when they are designing applications. The programmers may use it to ensure that they have the name and coding of data items or segments correct in their programs. Terminal users may employ it to guide their interrogation of the data base. Management may use it as a guide to what data could be made available to them. The conceptual description of DD includes the idea of both a documentation tool and a data directory. In summary, a Data Dictionary is

- (1) A system for the definition and control of the corporation's data resources.
- (2) A tool that will aid maintain and store all information describing the data used by the organization.
- (3) And most importantly, a tool to aid in the full use of available data assets.

1.3 Summary

Throughout the report, the final goal is design and implement a tool to build an on-line data dictionary which can solve the problems described earlier. By concentration on centralized data definitions, a data dictionary can make the data definition standards, reduce undesired redundancies and

inconsistencies in the data definition. Also, it provides the documentation support needed by the DBMS user. Moreover, data dictionary systems act as "bridge" that serve to pass data between the dictionary database and data descriptions of conventional files and DBMS. On-line tool can give user fast response. It allows direct access to computer so that user can feel "hands on" experience. In chapter 2, we defined the data dictionary in further detail. Chapter 3 provides definition of the various software components which contribute to the data dictionary creation tool. Chapter 4 describes the implementation of the data dictionary creation tool. Chapter 5 summaries the result of this work, critiques the tool and provides suggestions for future research.

CHAPTER 2. DATA DICTIONARY

2.1 Definition

A Data Dictionary is a source of metadata (8) including data elements, records, files, subschemas and schemas. For each unique data element, there should be a very specific narrative definition describing its meaning to the organization; its structure or format; type of representation, e.g., alphabetic, numeric, alphanumeric, binary, decimal, octal, hexadecimal; a security classification; allowable range in value and the organization responsible for its validity and accuracy. A data dictionary is a source of information relating to the use of a specific data element. The data dictionary identifies existing files in which the element can be found, programs which access the data element, the reports in which the data element may be found, users receiving those reports and any data structure of which it is a part (10).

A DD identifies the data elements contained within an information system and serves as a source of information for the elimination of duplicated data. It assists systems analysts and programmers by providing a reference point for all data within all information systems. Where a data base is a part of an information system then the DD would also include logical as well as physical data.

The data dictionary has two major types of interfaces: one with the people involved and the other with the software involved(See Figure 2.1).

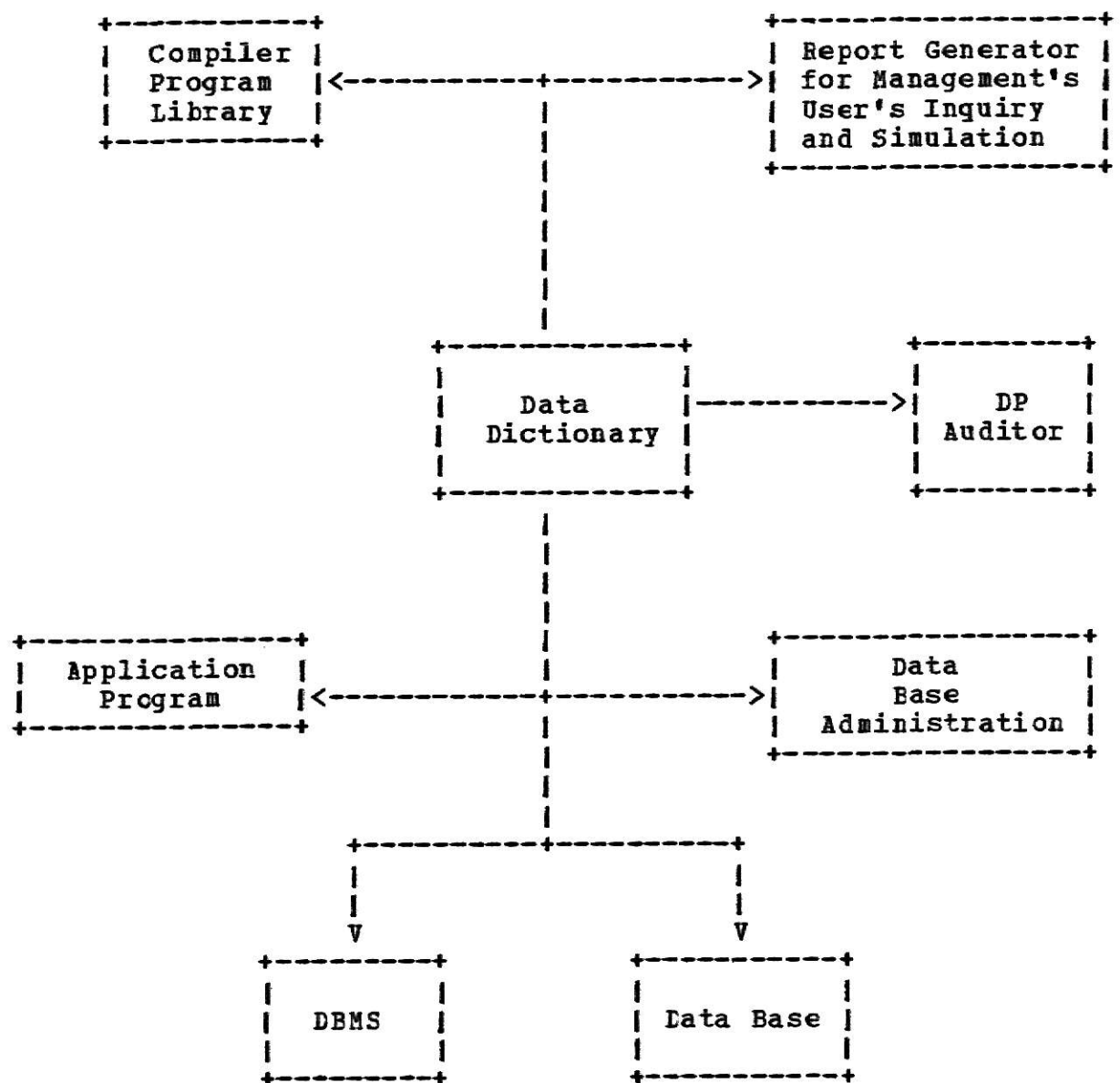


Figure 2.1 Data Dictionary Interfaces in Data Base Environment

2.2 Advantages of Data Dictionary

The effective use of a DD system can provide the organization with a range of tangible and measurable benefits. The use of a dictionary system will focus attention of the organization on data as a resource which may be managed in similar fashion to other resources of the enterprise. Other benefits can be identified which are associated with specific activities carried out by the organization. The degree to which such expected benefits can be realized by an organization depends on a number of factors:

1. Degree of commitment: The effectiveness of a data dictionary system is directly related to the commitment made by the organization to the use of the system. Many aspects of the dictionary system take the form of a control mechanism. Since controls generally translate into constraints of various kinds on different classes of users, a substantial commitment to the need for controls imposed by the dictionary system must exist within the organization. Users will find ways of circumventing these controls, which can result in adverse effects on the problem which the dictionary system was intended to help solve.

2. Data Administration: The use of a DD system implies the existence of a control organization entity within the enterprise which has responsibility and custody of the DD database. I shall call this function Data Administration, or shall refer to it by the title of the person who performs it, the Data Administrator. The needs for such an organization entity are manifold. The usefulness of the dictionary database is related to its integrity and consistency. If control over its contents are decentralized, a certain measure of assurance over its integrity is lost. Sharing of data, even in the definitional domain, necessitates the resolution of conflicts between users in a consistent manner. Most important, however, is the fact that the task of managing the data resource as a whole cannot be assumed, a priori, to be amenable to decentralization.

3. Current Status of the Database Future Plans: It may be argued that if the enterprise's data processing activities are in a stationary state where no application development or hardware/software conversions are planned, and where maintenance is minimal, a data dictionary system is not needed. These conditions are encountered very rarely. The

environment of the organization changes personnel and the techniques used by them in using data. The value of DD system will be related to the degree of the planning to manage these changes and new development. Since changes in the system invariably involve the database, the dictionary system can be a powerful tool in the development of a comprehensive plan for these changes.

Subject to the above factors, the use of a data dictionary system can be expected to lead to benefits in the following areas (6):

1. Data Redundancy

Data Redundancies often occur during system design when the need for a data item occurs which, unknown to the designer, already exists in the enterprise's database. Such redundancies not only waste storage space but create update problems, since potentially a lack of consistency between the redundant elements exists. By identifying the different definition of the same data item, through the use of a DD, an organization can standardize to one definition or at least control multiple definition of that data item. Further, the accepted definition for all data items will be found in the dictionary. In this sense the dictionary system does

not entirely eliminate data redundancy, but reduces the chances of unintentional redundancy. There exists many cases where redundancies are planned and occur intentionally for reasons of efficiency or convenience. In these cases the dictionary database will serve as documentation of such events. In the case of an existing database the use of a data dictionary system is an efficient way to discover existing redundancies which then can be useful input to a program redesign efforts.

2. System Development

The use of a DD system will reduce development costs and elapsed time, while at the same time lead to a superior product. Decreased costs and lead times are achieved by making centrally maintained definitions available in a consistent manner to designers, analysts and programmers, thus reducing duplication of effort. The quality of the product will improve, since the use of the dictionary system will eliminate many of the misunderstandings that occur when separate, and not entirely consistent, data definitions exists in the development process. By providing centrally maintained data definitions, the data dictionary can support programming standards and naming standards. Both system design and programming can be done faster because the data is defined.

3. System Maintainability

System maintainability is enhanced when complete documentation of the data used by a program or module is available in the dictionary database. As errors are detected, the communication between users and maintenance programmers is improved, since they will be using the same data definition.

4. Impact of Change

As changes to a system are proposed, a common problem is to access and analyze the impact of a data change on other programs or modules. An error in this assessment can cause not only production failures when the changes are made to the production system, but errors in projected costs and project schedules. The task of analyzing the impact of such a change is facilitated by a data dictionary system, since the data dictionary maintains data on all the usage of entries in the dictionary database.

5. Data Standards

The dictionary database, containing all definitions of data used by the enterprise is an effective tool for the establishment and enforcement of standards relating to data usage and other attributes such as format, meaning

and integrity criteria.

6. Data Base Creation

The process of creating a new data base is lengthy and complicated. One problem is to assure that the all people working on the project have access to the most recent information. The central dictionary database is a very efficient location for this information and can be accessed at all times by the personnel concerned with the project. This common understanding generally results in few iterations in the design process as well as a better and more maintainable data base once it is transferred to the production environment. In fact, the DD can be very helpful to users in all phases of the data base system's life cycle (1).

7. Auditing of Use of Data

By means of the "where used" feature of DD system, complete audits can be conducted to show the use to which a given data entity is put by the enterprise. Such audits may serve a useful purpose for different reasons. Among them is enabling it to be connected with a cost benefit study of the organization's system, or it may be used to satisfy particular privacy/confidentiality requirements.

8. Reduction of Administration Effort

The use of a DD system will tend to substantially reduce the time and effort required to administer the enterprise's data because many of the facilities available within the dictionary system are aimed at the task administering the data. Many of the problems associated with this task of administration involve the use of thousands of frequently changing data and program definitions. The magnitude of the task without the use of central dictionary database tends to be of such enormous magnitude that it is difficult to carry it out at all.

9. Automatic Generation Capability

The data dictionary can be interfaced to other software systems, so as to automatically generate input for those systems. Program data definitions (such as COBOL Data Divisions) can be supplied by the dictionary, as can program input-output area definitions. The definitions required by the DD associated with the data bases management system can be automatically generated. The dictionary can generate reports about the data definitions, as well as documentation about the data base.

We see from the above description that the data dictionary

plays an important role in the managing the data resource. To be complete and useful, a data dictionary should

- (a) maintain the full description of all data throughout the organization and their attributes,
- (b) provide cross-reference information,
- (d) be flexible

Thus far, a data dictionary has been defined as a centralized repository of data descriptions and the benefits of a data dictionary apply to any environment. Described above is a data dictionary that has some immediate practical uses with present hardware and software capabilities and is therefore more oriented toward the management-use mode. Future hardware and software development will undoubtedly expand its scope and use, especially in the computer use area. Chapter 3 will discuss an approach to create a data dictionary within an on-line environment.

CHAPTER 3. TOOLS FOR USE IN AN ON-LINE DATA DICTIONARY

Access to a data dictionary can, in general, occur in either a batch or in an on-line mode.

An on-line system (15) is one which inputs data as they are made available to the organization and in which the files are (1) immediately updated with the new data and (2) immediately available for inquiry. Perhaps the best means of describing an on-line system is to compare it with its alternative, a batch system. With a batch system, input data are accumulated for some specified time period or until some prescribed amount of data are accumulated. The input data, which have some similar characteristics, are then recorded. The program for the processing of these data and their related files are made available for the processing and file updating. Upon completion of the recording, the programs and the files are removed from access. On the other hand, in an on-line system, the processing program and related files are accessible at all times so that data can be recorded as they become available.

The demand for storage space for the operation of an on-line computer system is proportionally much greater than that of a batch mode computer system because all files and processing programs must be readily available. In a batch mode, the programs and related data files may be made

available in internal storage only when needed. An on-line system requires that all processing programs and related files be immediately accessible.

Fourth generation computers have been developed which provide vast internal storage capacity. In addition to development in the central processing unit, extensive improvements have been made in the input-output units. Intelligent terminals have been developed. The data can be projected onto the terminal and held until the operator chooses to transmit the data to the central processing unit. Correction can be made simply by returning to the area on the screen where the error occurred, and making a correction.

The on-line system provides the user with three major advantages:

1. It offers more rapid retrieval of data in greater quantities than can be handled by most manual offline systems.
2. It offers the opportunity to act in concert for the sharing of information or for the solution of a common problem.
3. It brings the user closer to the operation of the computer.

Figure 3.1 shows a typical basic on-line system function. In Figure 3.1, input data messages and inquiries are entered into the system and immediately edited. This involves checking for a valid input message type, numbers in fields specified as numeric, letters in fields specified as alphabetic, data length within defined limits, and so forth.

When the editing process is successfully completed, the data base is searched for the applicable records. Fruitless searches and other input errors discovered by the editing process result in error message being sent back to the initiating input station. These messages contain enough information to permit the system user to determine what is wrong with his input message.

If the input is correct and the necessary data found in the data base, any required processing is performed. This may include computation of commissions, taxes, fees, and percentages, arithmetical or logical modifications of existing values, and the like. For input data messages, the termination of such processing leads to modification of the data base, as directed by the input message. The final step is the transmission of a response to the message initiator that the modification has been made, in the case of input data, or that the required information has been received, in the case of an inquiry.

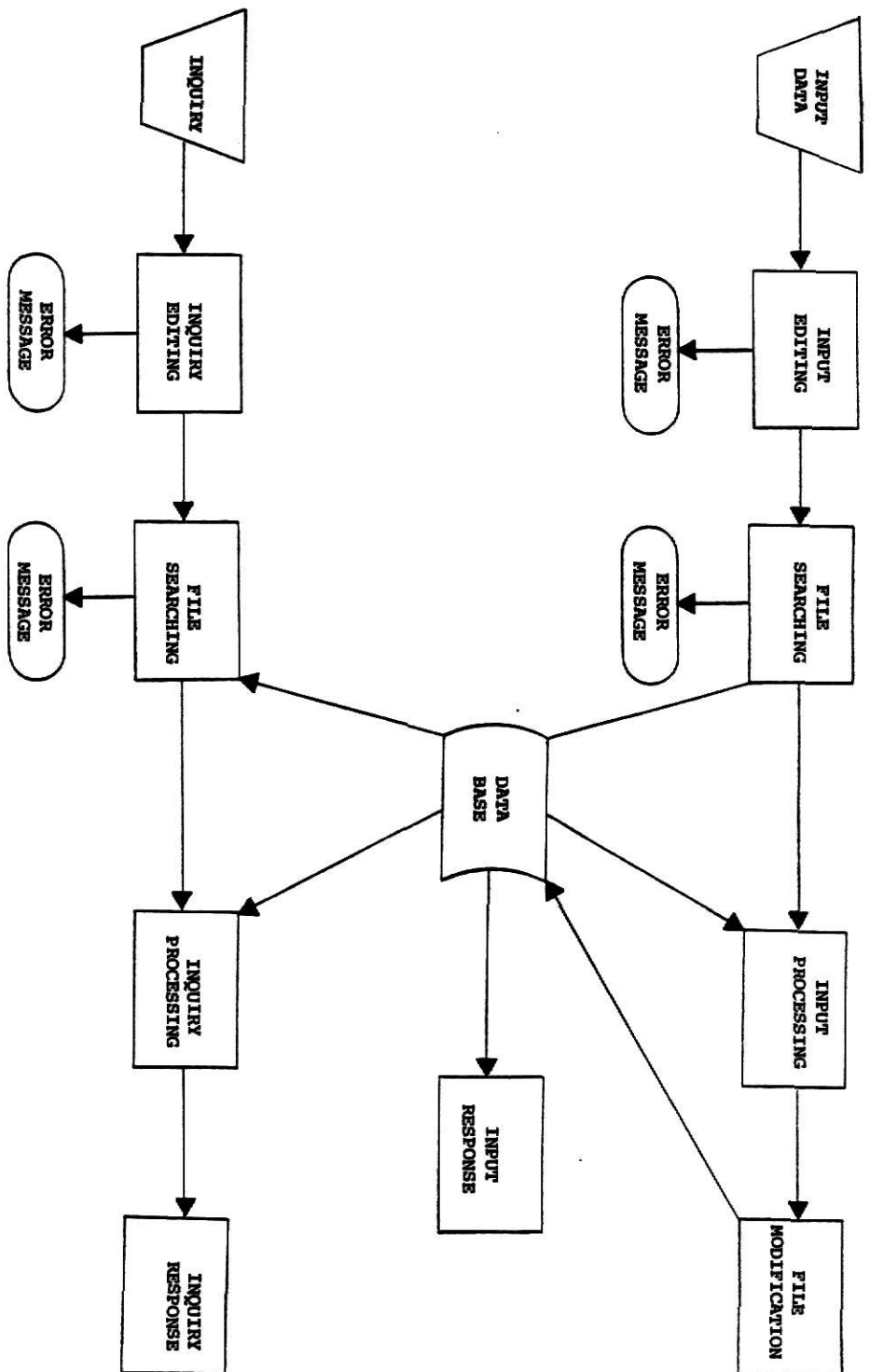


Figure 3.1 Basic On-Line System Flow Diagram

Now that we have some knowledge of on-line processing, how can we set up an on-line processing? What do we need for the on-line system creation? Following are tools for the on-line data dictionary creation tool:

1. User-friendly display device
2. Transaction processing support
3. Spelling checker
4. Transaction formatter

3.1 User-Friendly Display Device

The term "display device" means a Cathode Ray Tube (CRT) and its associated hardware, which operates on-line to a computer. The display device provides the setting for the human-machine interface. The terminal user initiates his request (for processing) by depressing an appropriate key. This action causes the terminal to generate a signal that uniquely identifies a process. Subsequent processor action in a user-friendly environment may be to display cues or options from which the user can make a selection. Cue material is furnished in order to clarify what operations are to be performed by the user.

For a given set of procedures, a display service program will provide the appropriate cues and procedural messages.

Since the user is frequently given choices of actions, the display service program must also recognize the choice made by the user and then modify all subsequent steps in order to accommodate the newly imposed condition.

In terms of software, display interfaces are designed to handle the range of operations for which the console is to be responsive. These operating characteristics form the basis for defining what may be called a display service program. The purpose of the program is to establish an operating link between the user and the processing facility. Fig 3.2 Display Interface Logic Flow, shows the main features of the interface. The functions identified within the dashed lines represent the three major components of the display service program. Boxes below the dashed lines show operations that are carried out by the system executive program and its associated program library. Program calls are generated when the control portion of the display service program determines that the execution of a program is required in order to service a request. Using Figure 3.2 we can show the operations required for the execution of a data retrieval program. A request to execute the program is passed to the system execute program. When the retrieval program has terminated its operation, control is passed back to the display service program. The data that results from the execution of the retrieval program is then taken from

storage buffers and formatted for the display console.

Human factors associated with display devices and interface software are critical to the performance of the system. One common problem is operator frustration. The operator at a remote console ordinarily has little or no knowledge of the problems which can cause an unexpected action of the display terminal. The system queues may be overloaded so that no more input messages can be accepted. The operator may receive a message from the computer that some input contains an error. Another human engineering consideration is the "attention span" of the operator. His attention span diminishes in duration as the end of the work day approaches. The system designer can build mechanisms into the system for holding the operator's attention. One such mechanism is a question-answer technique of data entry. The questions could create a simple but interest-catching dialogue between the operator and the machine. A sophisticated system could also monitor operator errors and suggest to the operator that a break be taken when the errors exceed the normal rate.

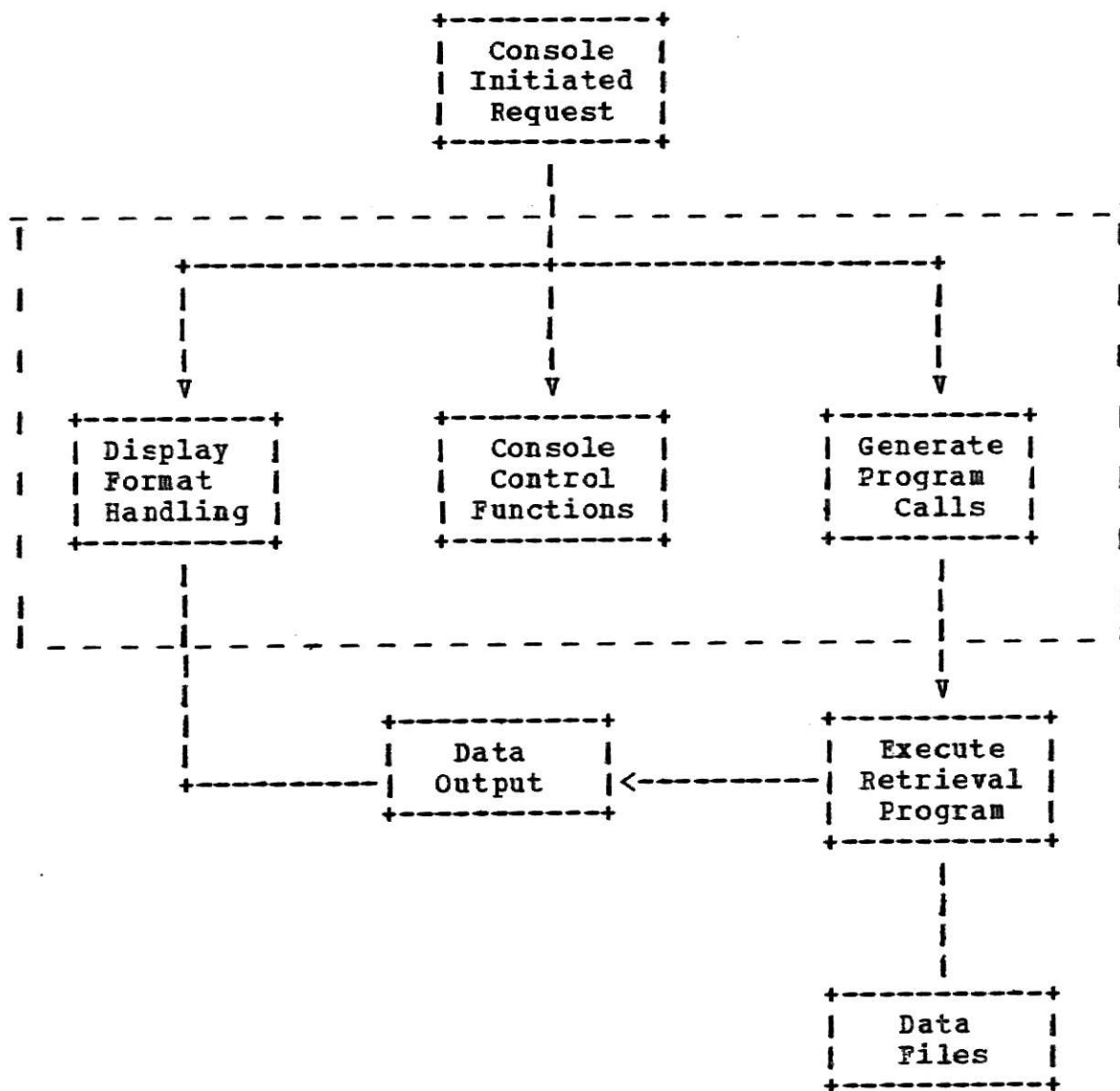


Fig 3.2 Display Interface Logic Flow

3.2 Transaction Processing Support

A transaction processing system is one in which each transaction or terminal screen load is processed independent of all other transactions. The major transaction processing (TP) system component involved is a transaction manager or the "Transaction Handler" as it is generally referred to. It is the Handler's job to allow each terminal operator initial access to the TP system, to allow the operator to select the action needed to process the transaction required, and to perform general housekeeping as and when needed.

If security support is specified during TP system generation, then the Handler will automatically send a sign-on request to the terminal when it is switched on. The operator response to this must be to enter required identification information.

Once the operator has successfully signed on, or as soon as the terminal is switched on, if security support is not generated, the Handler invites the operator to select a transaction. This message can be customised, for example by replacing it with a list of transactions that the operator can use. This list is generally referred to as a menu, and it is possible to have a different initial menu for each terminal. Each transaction action is defined at system generation time by giving it a unique code.

3.3 Spelling Checker

Computers are being used extensively for document preparation. The typical system is a time-shared one with file systems, text editors, and text formatting programs. With the increase in word and text processing computer systems, spelling correction (18) will become more and more common. Our interest here is in the possibility of analyzing data items for spelling errors. Several systems can analyze a text file for potential spelling errors and point out probable correct spellings. Several companies, including IBM, have recently begun to promote systems including spelling checkers. The problem for a spelling checker is quite simple: Given an input file of text, identify those words which are incorrectly spelled.

Recently, several spelling checkers have been written for the sole purpose of checking text. Research in this area extends back to 1957, but the first spelling checker written as an application program appears to have been SPELL written for the DEC-10 by Ralph Gorin at Stanford in 1971. This program and its revisions are widely distributed today. The UNIX operating system provide two spelling checkers: TYPO and SPELL (10, 16, 17). Another spelling checker has been written for IBM/360 and IBM/370 systems and is in use at the IBM Thomas J. Watson Research Center in Yorktown Heights (10). A result of using spelling checker is that it can

reduce the redundancies in data item definition.

What is a potential data item name? It is a sequence of characters, ended with a delimiter. Delimiters include blanks and special characters, such as commas, periods, colons, and so on. Data item names which are totally numbers are ignored by Spelling Checkers. Hyphens are generally considered legal characters if they occur between two characters. Another concern is the case of the characters in a data item name. Most frequently, all characters will be uppercase. Once these decisions are made, creating a list of all data items is relatively straightforward.

The key to a spelling checker program is obviously its internal table of data items (21). We need to be able to search the table quickly and find a data name (if it exists), or determine it is not the table. We also need to be able to add new data items to the table, although we need not delete them. The speed of the program is especially dependent on the search algorithm.

The use of an external list (a dictionary) of correctly data names is the major factor in spelling checkers. An interactive spelling checker uses the following basic algorithm:

Check. For each data name, search the dictionary.

If the data name is not in the dictionary, inform

the user of this fact and ask the user to verify a new data name or to respell the data name.

The options available to the user are determined by user needs. If the user needs help, we can bring the 10 most available data items (5 either side alphabetically of the data name) to the screen (2), and let user choose one of them or indicate the name is spelled correctly.

3.4 Transaction Formatter

In order to design the application display, it is necessary to make a thorough analysis of the data to be entered or displayed. The principle data characteristics that must be determined are:

1. Number of data characters per transaction

This is a basic constraint on technique and format. If, for example, the number of characters is nearly that of the screen capacity of the device used, the temptation is to squeeze it all onto one display page, especially where a fixed-field approach is generally being used. This avoids the complication of paging (the use of multiple screens) or conversation; it also may compromise human factors (e.g., by making visual verification or field identification very difficult and error prone) to

the point where the costs to the operational system outweigh the development cost savings. Some data entry techniques require more keying time and/or more keystrokes than others. The more characters per transaction, the more critical the keying time becomes.

2. Number of data items per transaction

In general, the fewer number of data items, the easier it is for the operator/user to remember, identify, and check them.

3. Number of data characters per item; number of occurrences of each item per transaction

These affect technique and formatting in a number of ways. For example, in a fixed-form approach, it is more reasonable to make the trade-off in favor of easily understood item identifiers, (usually longer than coded identifiers) when there is to be a large number of data characters for that item. This is because the ratio of data entry characters to screen characters can remain high.

4. Frequency of appearance of data item; variable number of occurrences per transaction

If a transaction is highly variable in terms of

which or how many data items will appear, a fixed-form approach is not efficient.

5. Interdependence among data items

Groups of related items should be grouped physically together; logical hierarchies should be represented symbolically in subgroupings; key field (e.g., customer number, SSN) should be placed first in a line or column.

6. Physical structure of the data item

This should be considered and taken advantage of where possible. For example, if name and social security number were the only data items in a transaction, field identification could be handled through the software by a direct analysis of the item's physical structure. Sequence, position, or identifying codes would not be needed.

7. Source of the data

This is often the single most important factor. If all data items come from one source document, the display and data entry format should follow the format and sequence of the source as closely as possible.

8. Accuraccy of the source data

Errors in source data may be compensated by the technique employed. For example, a two-step technique may be used in which the system perform reasonableness checks on the data and provides feedback to the operator, and the operator verifies the data's reasonableness before sending a signal to process that entered data. For example, computer may be programmed to send a message to the operator if the amount field of a charge account purchase exceeds a certain amount or if a number field contains charcters. The operator would be required to change/verify the amount or correct characters. If he were in doubt, he would give a negative response and the input would be ignored or aborted.

9. Confidentially in data item

A search request format may contain a header with the sender's ID and the password required to gain access to the file. Another consideration is that confidential data, particularly classfied military material, should be erased from the screen automatically by the computer after a maximum time, such as 30 seconds.

10. Volume of transaction

With qualification, the higher the volume of a transaction, the simpler the technique should be. The rational here is that very high volume transactions become highly familiar to the user and thereby do not require elaborate item identifiers, question-answer series, or operator aids. This factor must be considered carefully, in view of the increased payoff for accuracy on a high volume transaction, the increased criticality of communications line utilization, and processing time. Development and design costs are amortized more rapidly over a large volume transaction, so operating efficiency should take more precedence over development cost consideration for the highest volume transactions than for average volume ones.

Based on above discussion, we have the tools to create an on-line data dictionary. How can we connect them together to reach our final goal? Chapter 4 gives us a general overview of system design for such an on-line tool. A complete user guide is also presented here in Chapter 4.

CHAPTER 4. IMPLEMENTATION

In the preceding chapters, we have discussed the data dictionary and software tools which can be used to create an on-line tool to help users to create a data dictionary. This chapter discusses the design and implementation of data dictionary creation tool for use at Kansas State University using local revisions of the software discussed. The hardware environment used for the tool implementation is IBM/370 running under OS/VS operating system with 3270-like terminal such as Courier terminals in Cardwell Hall. Some software existed; other software was written to create the system. A block diagram of the system is provided in Figure 4.1. In the next sections, we will describe each of the software blocks individually.

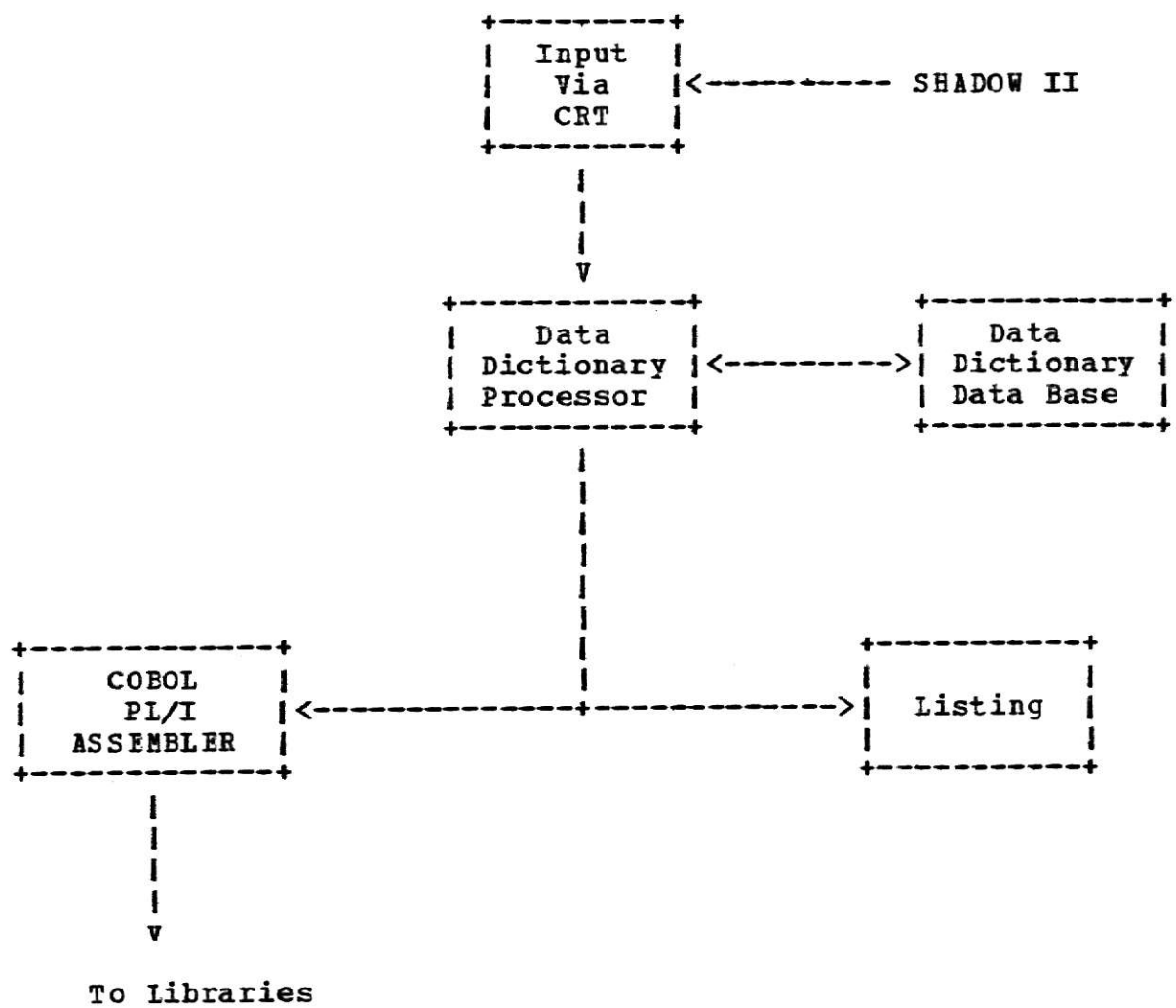


Figure 4.1 Data Dictionary System Flow

4.1 Data Dictionary Data Base

A data entity represent data of various structural classes. The terminology varies widely. The one chosen here is used by the CODASYL Systems Committee in its May 1971 report "Feature Analysis of Generalized Data Base Management Systems".

An item is the primitive or most elementary data structure from which all other data structures are ultimately composed. Examples are month, day, year; these three items could compose date.

Attributes for an item are:

Dictionary name - the name by which the item is known in the dictionary database.

Data code - unique number for data item, the system generates this number.

Alias names - other names by which the data item is referred to.

Description - statement describing the meaning of the item.

Internal representation:

(a) length or size of data field

(b) data field justification - right or left

(c) level - input, output or both

(d) usage - decimal, binary, COMP-3 or COMP

Date the entry was last changed or created.

(data dictionary name entry)

Security level - information to be used for access to the dictionary data for an item.

A list of program/file use the data items.

The data dictionary created by the tool contains three categories of information: identification, definition and representation. Identification information furnishes the data element with unique labels and links the elements to alias name, records, files, and programs in which it is used. Definition information explains the content, purpose, source and use of the data element. Representation information describes the length, level, and format of the data item (6, 13).

There may be two or more versions of the data dictionary data bases: test and production (with the possibility of multiple test versions). Test version will be needed for testing new application system programs, new data base organization, and/or new data dictionary organization. The structure of data dictionary data base is shown in Appendix B.

4.2 SHADOW II

SHADOW II is a Teleprocessing and Multi-tasking Monitor. It provides the support necessary for writing on-line programs. With the command-level features, the requests for on-line services (display data on a terminal, read an on-line file, retrieve data from data base, etc) are coded as simple, easy-to-use Commands in the user's application program (ANS COBOL, PL/I, ASSEMBLER). SHADOW II interfaces between the application program and the operating system, utilizing telecommunication and data-access methods available in the latter.

SHADOW II is really much more than a Teleprocessing (TP) Monitor. With all its features it becomes a complete "System Manager" for all T.P. users, big or small. SHADOW II is primarily a "system software" product. That is, it automatically performs the software functions required by the user, leaving him to concentrate completely on the development of his application programs(25).

All T.P. applications comprise one or more logical transactions. Each of these transactions may in turn consist of one or more program modules, and each program module may have one or more units of work to perform. SHADOW II enables the relationship between logical transactions and program modules to be defined in any way to suit the

application being programmed.

On-Line Mapping System (OLMS) is a very powerful facility within SHADOW system(26). It can enable application programmers and system analysts to design their own display screen easily. The function of the OLMS is to:

- (a) reduce the work involved in coding a screen layout
- (b) reduce the compile time or assembly time associated with the standard SHADOW II mapping system
- (c) ease the process of amending a map or creating a map similar to an existing screen layout
- (d) ease the process of writing code to use the SHADOW II Mapping system.

The OLM system is designed to be used with the SHADOW II mapping system and will produce source code and object code for maps which can be used in ASSEMBLER, COBOL or PL/I programs. OLM has been designed to minimise operator action by ensuring that all screen conversations are, as far as possible, self explanatory. All the screens contain abbreviated reminders of valid input. If a field is entered in error, then only that field needs to be reentered. Successful completion of a command is always indicated by a confirmation message. The OLM system is accessed via 3270

model terminals. It requires on-line disk storage for the map file and the punch file. The map file contains information about all maps that have been created with OLM. The punch file (which may be on tape instead of disk) contains IEBUPDTE (OS) compatible card images which can be catalogued to OS PDS (partition data set) in batch. Card images are written to the punch file with the OLM command PUNCH, specifying the name of the map.

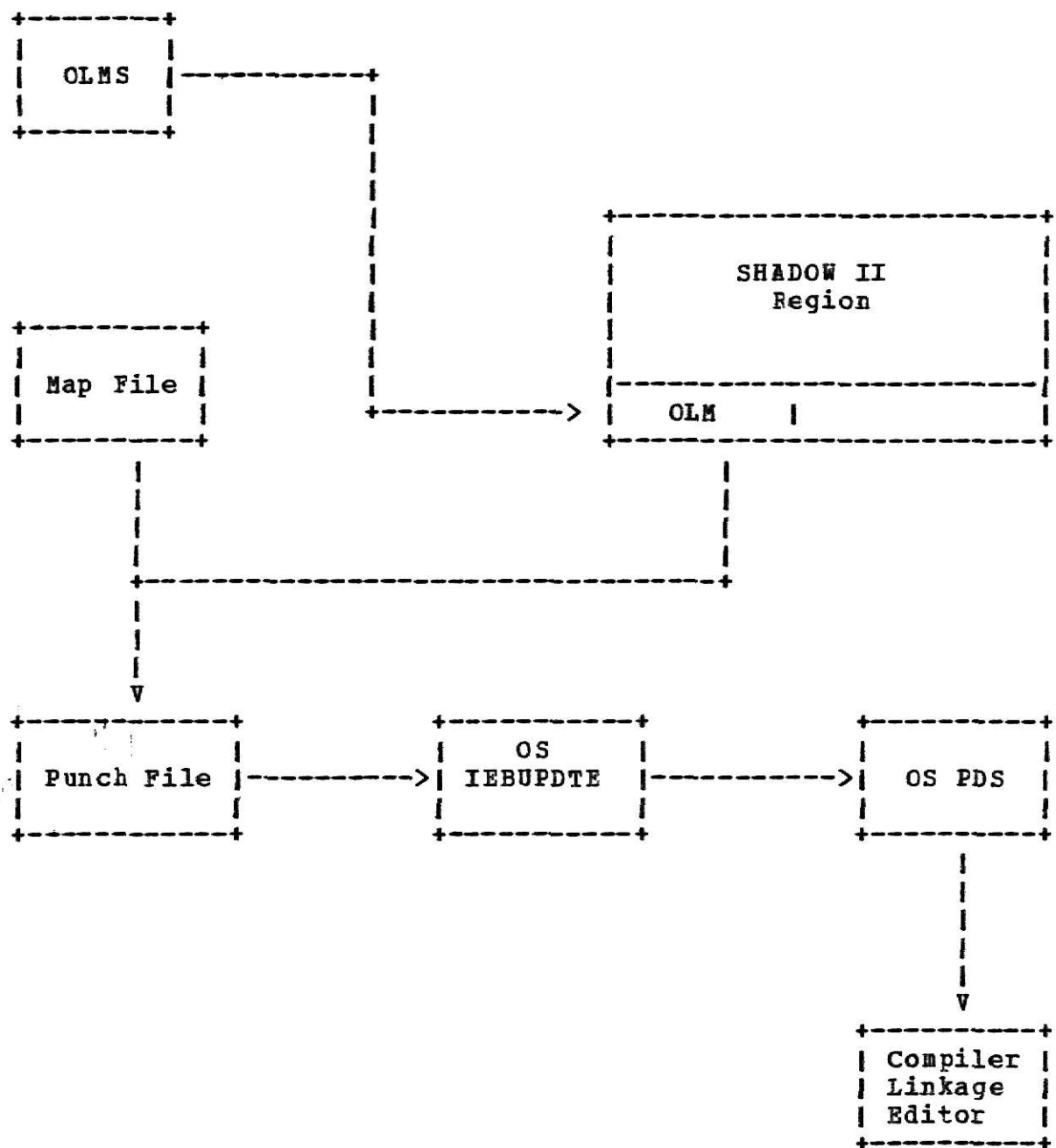


Figure 4.2 On-Line Mapping Environment

Figure 4.2 shows the OLM environment. There are 5 steps in the process of defining and using a map with OLM and SHADOW II.

- (1) Creating the map with OLM.
- (2) Punching the map to an intermediate punch file.
- (3) Cataloguing the content of the intermediate punch file in a batch partition.

OS - Cataloguing to a PDS with IEBUPDTE.

- (4) Linking the map and possibly the configuration if the map is not EMBEDDED.
- (5) Copying the structures and data into the SHADOW application program, and coding SHADOW statemnets to use the maps.

The reader may wonder what display screens look like in this report. When determining the layout of a display, certain knowledge should be understood. The screen is normally about the size of a sheet of typing paper, or about 8-1/2" x 11". The possible length of a line on the CRT screen may be 80 characters, sometimes more. Unlike a typewriter, which moves the carriage into position before printing, the display moves only the electronic beam which traces characters on the screen. As each character is

entered by the operator, the beam normally moves one position to the right and awaits the entry of the next character. In order for the operator to know where the next character will appear on the screen, a cursor is used. The cursor is a on-character underline, which blinks on and off under the position where the next character to be entered will appear.

Now that we have some knowledge of screen environment. let's look at our screen for ADD, CHANGE, DELETE and QUERY processes. These are four basic transactions throughout the report.

1. Add - add a new data item into dictionary
2. Change - modify/update existing data items.
3. Delete - delete an existing data item from dictionary.
4. Query - inquiry an existing data item.

Using advanced hardware and program control features, the operator can make headings and key terms appear on the screen with greater light intensity. The overall layout should take advantage of visual impact techniques such as are used in other good presentations of graphic art. All maps defined are shown in Appendix C.

4.3 Data Dictionary Processor

The Data dictionary processor contains the spelling checker program and application programs. The spelling checker program checks for syntactic data redundancies. The application programs retrieve data from database or updating data into database. By means of commands, the data dictionary processor is able to produce CRT displays and printed listing/reports containing information about the data in the data base. It is also able to produce several types of structure statements about files, records, fields etc. Each type of these structure statements has a specific use. For example, produced as output of data dictionary are COBOL, ASSEMBLER Language and PL/I data structures which are stored in operating system libraries so that they can subsequently be used in the compilation of application program requiring them.

The performance of an interactive spelling checker is important. The user is waiting for the checker and the checker must therefore be sufficiently fast to avoid frustration. The speed of the spelling checker program is depend on the search time. A hash table approach was chosen because it seem the most reasonable for the table. The table would be most useful if it were sorted. Sorting can be done either alphabetically or by frequency. Attaching a frequency count to each table entry provides the number of uses of

each data item. This can speed the process by searching higher frequency items first; it may also help in determining misspellings. The structure of the spelling checker dictionary is thus of great importance. It must provide very fast searches. The "correct" structure must be determined for the configuration of the computer system. Such factors as memory size, file access methods, and the existence of virtual memory can be significant in determining appropriate structures. If the memory is large enough, the entire dictionary can be kept in memory, making operations easier and faster. If the memory is virtual as opposed to physical, however, the dictionary structure should be minimize page faults while searching. Knuth is a good source for different data structures and search algorithms(11). Knuth gives a hashing algorithm which results in only one comparison to identify any of the 31 most frequently used words in English. However, there is no "best" algorithm; each machine and each system make different demands on the dictionary data structure. The structure of the spelling checker used in this implementation is based on trees (11, 18, 20, 22). The memory requirement should be kept as small as possible in order to improve performance. Dodds (3) suggests using a hashing technique to reduce table size.

4.4 User Interface

To design the user interface, we have assumed the presence of a terminal screen and printer, along with a data base management system (DBMS) to control and access the data dictionary database. All terminal input is edited by system edit modules which do data field checks plus relational data checks prior to acceptance for data base update and messages are returned if there are errors. Data for the update of the data dictionary and data dictionary database is controlled by one central activity. The data dictionary database is updated by computer specialists whose function is to control and document the system master files and their standard file description. Whenever data elements in application system are revised, added, or deleted, maintenance on the data elements officially begins. For example, if the "type" and "size" of data element are changed, then all the files, programs, reports which contain that data element in that particular application require revision. The user is in effect a data entry operator. The user needn't have programming experience, and doesn't have knowledge of the DBMS. The user interface is a group of application programs, working through a set of screen formats. The data movement through the system is shown in Figure 4.1. The user doesn't need to know the commands or worry about the syntax of on-line programming language. All

one has to do is call up menus and fill in fields by instructions on the screen. One thing we like to mention here is that the users are allowed to perform query only.

Seven screens are necessary in the entire system. Some particular fields on the screen may be set up in high intensity to catch user's attention. Generally, error message and return message would be in high intensity. A brief algorithm for all processes are shown in Figure 4.3. All user has to do is to press Program Function Key on 3270 type terminal keyboard, say PF1, to get into the system. The system will bring the SHADOW II Sign-On Screen (as shown in Appendix D) to the user. And the user has to enter user name and password. At this point, a security check will be performed here to allow authorized persons with the appropriate password to get into the system. If the user pass the security check, then the system will again bring SHADOW II Transaction Menu Screen (as shown in Appendix D) in front of the user. The User then enters the transaction code for data dictionary application, say DDS0. After the users hit ENTER key, a user-defined menu screen (as shown in Appendix D) will be shown on the terminal. The user-defined menu screen is a menu of the kinds of processing available: adding new data, changing data, deleting and querying. There is a screen for each of these. From this point, the processes are under user's control. User enter the data item

name and select one of transaction code shown on the user-defined menu, say DDUD, and update screen (as shown in Appendix D) will be shown on the terminal. The user can update any value necessary. When update is done, the new values in the update fields would be shown in high intensity to attract user's attention.

If new data information is to be entered, the operator can input all the values available. Then the transaction can return indication of success or failure. Necessary checking and editing would also be done. Query process is done only for inquiry data item information. In this mode, user cannot update any values on the screen.

In summary, the typical communication sequence for on-line data dictionary creation tool application are:

Operator: Hit Program Function Key, PF key

System: Display SHADOW II Sign-On Screen

Operator: Enter initial name & password

System: Display SHADOW II Transaction Menu Screen

Operator: Enter transaction code

System: Display User-Defines Menu Screen

Operator: Enter transaction code and data item name

System: Display ADD, CHANGE, DELETE and QUERY screen

depending on the transaction code user entered

The screen structure is shown in Figure 4.4.

Add - Look up the dictionary, if data name not in the dictionary, processes an addition. If the data name already exists in the dictionary, ask the user try again. (may be bring the information to the user, let user see what is already in the dictionary.)

Change - Look up the data name in the dictionary, if data name not in the dictionary, bring 5 or more data names from either side alphabetically and let user decide what to do next.

Delete - Look up the data name in the dictionary, if data name is not in the dictionary, bring the message to user and ask user to reenter it. If found in the dictionary, system will check for security see if the user is authorized person to delete this particular data name from the dictionary.

Figure 4.3 Algorithms For Processes

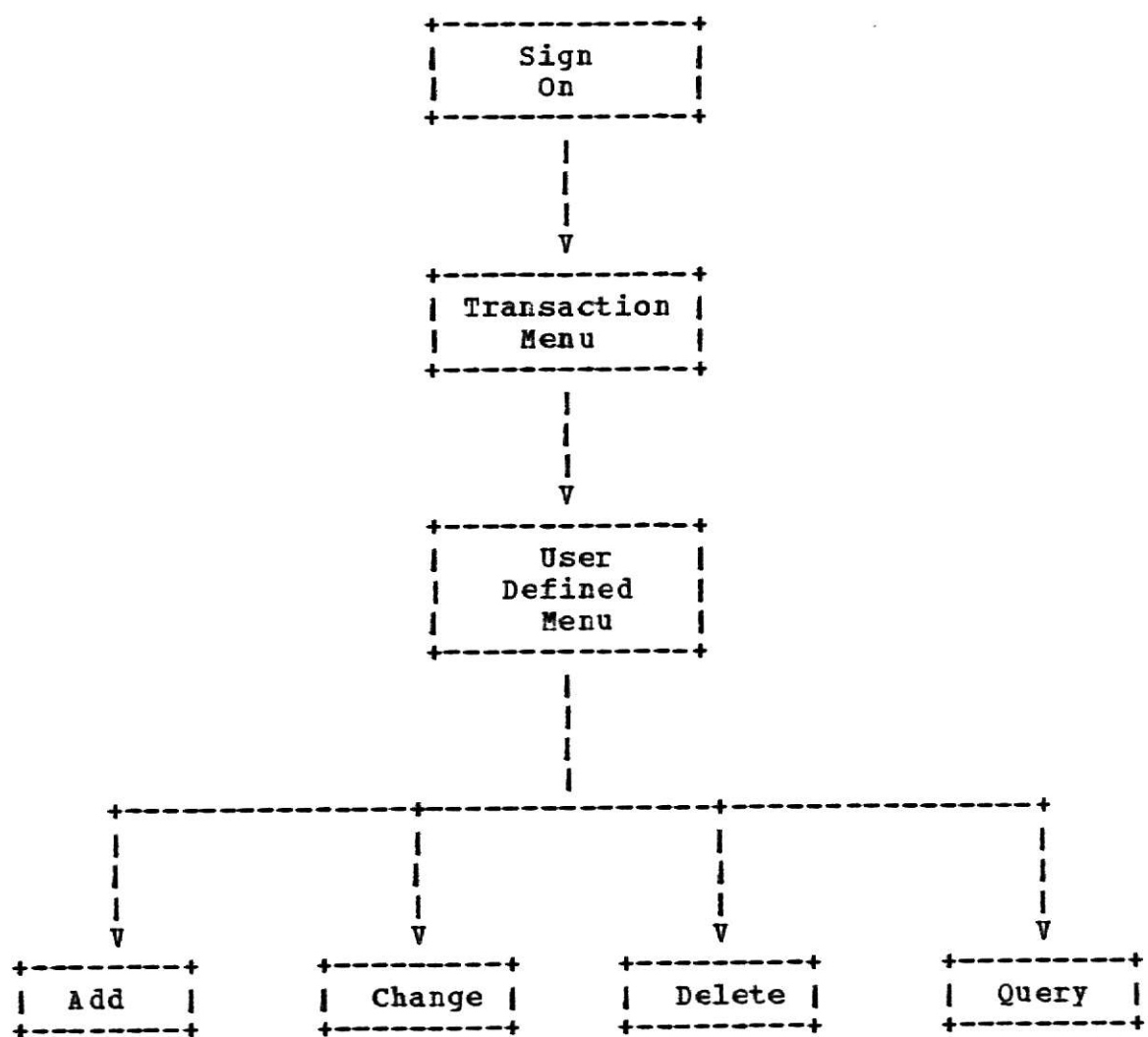


Figure 4.4 Structure of Screen Invocations

4.5 System Design Considerations

In this section, we will discuss a few particular points and tips with regard to the use of SHADOW II for this report. Some general rules for TP systems design can be summarized as follows:

- (a) Make it simple for the terminal operators
 - (b) Ensure correct file or data base design and structures
 - (c) Beware of hardware limitations
 - (d) Avoid long delay time within a transaction
 - (e) Don't be too ambitious
1. Terminal operators should be given the maximum amount of information displayed in an easy-to-read format.
 2. The application system should be designed so that they can perform their transactions with as few key depressions as possible,
 3. Data Base Management System normally give the user much more flexibility than any of the conventinal file access techniques, but usually at great expense in both core storage overheads and response times.

4. The hardware you have to work with will bring certain constraints in system design. If you have an application which demands a full screen of output to complete a transaction successfully, try to make a "conversational" approach where the user is given something to do between responses from the computer.
5. You should not design transaction which includes a great deal of processing in any one step. For instance, if you wish to access a large number of files and perform a considerable amount of processing within a transaction, response times will suffer accordingly. Again, for these types of transaction, take a conversational approach by responding to the terminal at several stages of the transaction.

CHAPTER 5. CONCLUSIONS

5.1 Conclusions

Data dictionary systems will play increasingly important roles in tomorrow's information resource management environments. The benefits of a data dictionary system include increased control over the data, reduced cost and time requirements for application development, and enhanced independence of data across computing environments.

We have shown an approach in which the on-line data dictionary can be used as a tool to control and manage data in data processing activity. We have discussed the design of a tool used to create this on-line data dictionary. We have also described the system involved in implementing this approach.

The on-line system user is dependent on the computer. The response time is the major factor for the user concerned within on-line environment. It has been observed that terminal users become restless and frustrated when they do not receive a fast response (1/2 seconds). Ideally, the computer hardware/software should have sufficient capacity to provide a fast response at all times.

Some of the data processing people felt strongly that the data dictionary should be always on-line to the computer and

designed so that all entries to the DBMS directory have to go through the data dictionary. This is the only way, they believe, to insure that the data dictionary is always up to date. If the regular entry point is left open for making changes to the DBMS directory, then some of the changes will not get into the data dictionary. Then, if the DBMS directory gets destroyed and if there is no back-up copy of it, the whole data base may be rendered useless. (This has actually happened, with a resultant loss to the company of a very substantial amount of money.)

In addition to making sure that the data dictionary is up-to-date, two other steps should be taken -- one is to dump the data dictionary periodically and put it into backup storage, and the other is to journalize the changes to the data dictionary between dumps. If the data dictionary is relatively small in the number of characters stored, it may be economic to create the backup copy after each updating and thus avoid the need to journalize the changes.

5.2 Future Research

One assumption that was made before undertaking this report is that the roles and structures of an on-line data dictionary are in a centralized environment. A tool for use in on-line data dictionary creation has been designed and implemented using packaged software and available

technology in a current generation computer. Enhancements to this system would be to replace the spelling checker program with a much better algorithm. Additionally we would like to introduce semantic redundancy checking. That is, a program which examines a document and its data item for meaning and checks for existing data items with this same meaning would be helpful. Additions also should check that the ideas in the document are properly developed and presented, that conclusions are correctly based on the facts presented (or known), and that the document is complete and consistent. The tool could be extended to the creation an on-line data dictionary in a distributed environment (8). The initial practical application of this technology may first occur in a data communications network.

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Appendix A

File Description With/Without Data Dictionary

---- File description using Data Dictionary ----

FD TRANSACTION-IN
RECORD CONTAINS 92 characters
RECORDING MODE F
LABEL RECORDS STANDARD
BLOCK CONTAIN 0 CHARACTERS
DATA RECORDS ARE INVOICE-RECORD,
PAYMENT-RECORD.

01	INVOICE-RECORD.	
03	CUSTOMER-NUMBER	PIC X(7) .
03	INVOICE-NO	PIC 9(7) .
03	INVOICE-DATE	PIC X(6) .
03	TAX-CODE	PIC XX.
03	INVOICE-NO-AMOUNT	PIC S9(11)V99 COMP-3.
03	FILLER	PIC X(63) .
01	PAYMENT-RECORD.	
03	CUSTOMER-NUMBER	PIC X(7) .
03	TAX-CODE	PIC XX.
03	INVOICE-NO	PIC 9(7)
		OCCURS 9 TIMES
		INDEXED BY INVOICE-IX.
03	PAY-AMOUNT	PIC S9(11)V99 COMP-3.
03	FILLER	PIC X(13) .

---- File description without using Data Dictionary ----

```

FD  TRANSACTION-IN
    RECORD CONTAINS 92 characters
    RECORDING MODE F
    LABEL RECORDS STANDARD
    BLOCK CONTAIN 0 CHARACTERS
    DATA RECORDS ARE INVOICE-RECORD,
                        PAYMENT-RECORD.

01  INVOICE-RECORD.
    03  INV-CUSTOMER-NUMBER          PIC X(7) .
    03  INVOICE-NO                   PIC 9(7) .
    03  INVOICE-DATE                 PIC X(6) .
    03  INVOICE-TAX-CODE             PIC XX .
    03  INVOICE-NO-AMOUNT            PIC S9(11)V99  COMP-3.
    03  FILLER                      PIC X(63) .

01  PAYMENT-RECORD.
    03  PAY-CUSTOMER-NUMBER          PIC X(7) .
    03  PAY-TAX-CODE                 PIC XX .
    03  PAY-INVOICE-NO              PIC 9(7)
                                     OCCURS 9 TIMES
                                     INDEXED BY INVOICE-IX.
    03  PAY-AMOUNT                  PIC S9(11)V99  COMP-3.
    03  FILLER                      PIC X(13) .

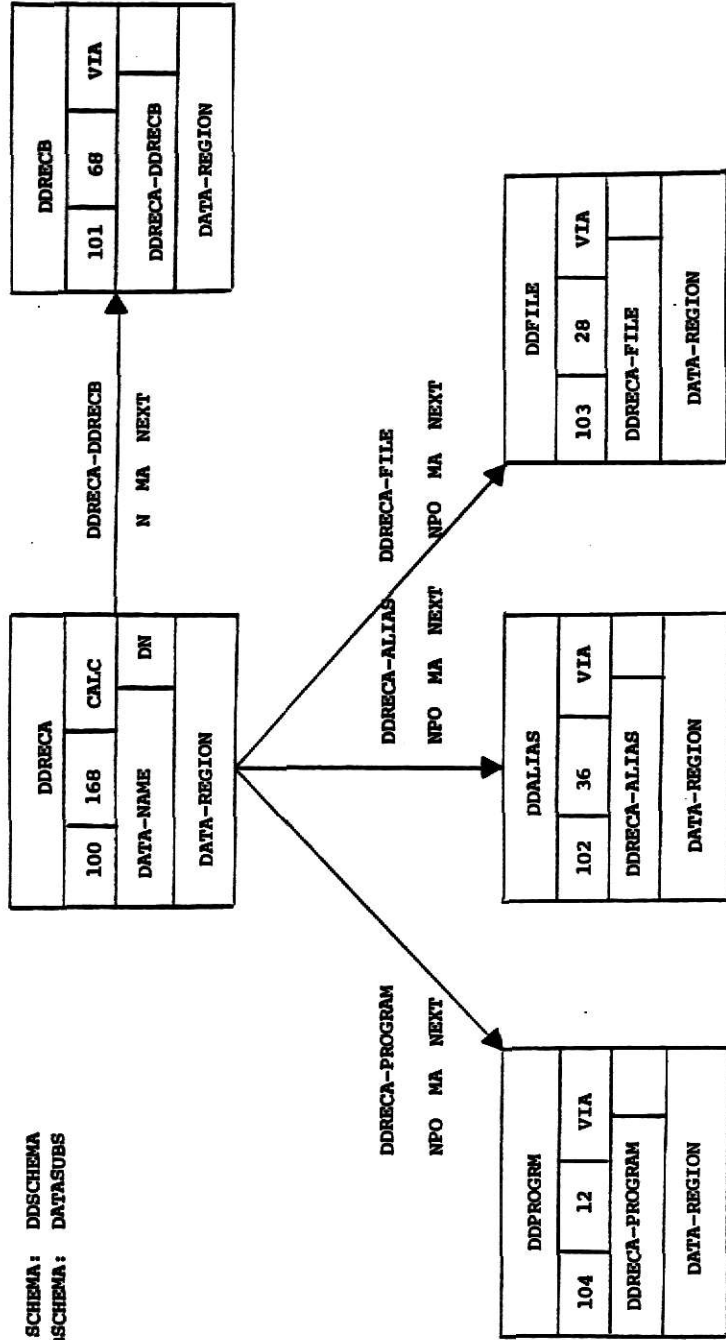
```

Appendix B

Data Dictionary Data Base

SCHEMA: DDSHEMA
 SUBSCHEMA: DATASUBS

DATA STRUCTURE DIAGRAM



```

*****
*
*          SCHEMA DESCRIPTION
*
*****

```

```

SCHEMA DESCRIPTION.
SCHEMA NAME IS          DDSHEMA.
AUTHOR.                LAI, CHIN-HO.
DATE.                  11/82.
INSTALLATION.          COMPUTER SCIENCE DEPARTMENT
                        KANSAS STATE UNIVERSITY
                        MANHATTAN, KANSAS 66506.

```

```

REMARKS.
  DDSHEMA - SCHEMA NAME FOR DATA DICTIONARY DATABASE.

```

```

*****
*
*          FILE DESCRIPTION
*
*****

```

```

FILE DESCRIPTION.
FILE NAME IS          DATAFILE ASSIGN TO DDDATAFIL.
FILE NAME IS          INDXFILE ASSIGN TO DDINDEX.

```

```

*****
*
*          AREA DESCRIPTION
*
*****

```

```

AREA DESCRIPTION.
AREA NAME IS          DATA-REGION
                        RANGE IS 8386001 THRU 8386040
                        WITHIN FILE DATAFILE
                        FROM 1 THRU 40.
AREA NAME IS          DATA-INDX-REGION
                        RANGE IS 8386051 THRU 8386070
                        WITHIN FILE INDXFILE
                        FROM 1 THRU 20.

```

```

*****
*
*               RECORD DESCRIPTION
*
*****

```

```

RECORD NAME IS          DDRECA.
RECORD ID IS           100.
LOCATION MODE IS        CALC USING DATA-CODE
                        DUPLICATES NOT ALLOWED.
WITHIN                 DATA-REGION AREA.

```

```

03 DATA-NAME          PIC X(30).
03 DATA-CREATED-DATE.
05 DATA-CREATED-YY    PIC XX.
05 DATA-CREATED-MM    PIC XX.
05 DATA-CREATED-DD    PIC XX.
03 DATA-CHANGED-DATE.
05 DATA-CHANGED-YY    PIC XX.
05 DATA-CHANGED-MM    PIC XX.
05 DATA-CHANGED-DD    PIC XX.
03 DATA-USER          OCCURS 6 TIMES.
05 DATA-USER-NAME     PIC X(20).
03 DATA-REVISED-PERSON PIC XXX.
03 FILLER              PIC XXX.

```

```

RECORD NAME IS          DDRECE.
RECORD ID IS           101.
LOCATION MODE IS        VIA DDRECA-DDRECB SET.
WITHIN                 DATA-REGION AREA.

```

```

03 DATA-DESC          PIC X(40).
03 DATA-DEFINITION    PIC X(30).
03 DATA-LENGTRH       PIC X(10).
03 DATA-JUSTIFY       PIC X.
88 DATA-JUSTIFY-RIGHT VALUE 'R'.
88 DATA-JUSTIFY-LEFT  VALUE 'L'.
03 DATA-LEVEL         PIC X.
88 DATA-INPUT         VALUE 'I'.
88 DATA-OUTPUT        VALUE 'O'.
88 DATA-INPUT-OUTPUT  VALUE 'B'.
03 DATA-USAGE         PIC X(12).
03 FILLER              PIC X(4).

```

```

RECORD NAME IS          DEALIAS.
RECORD ID IS           102.
LOCATION MODE IS        VIA DDRECA-ALIAS SET.
WITHIN                 DATA-REGION AREA.

```

```

03 DATA-ALIAS-NAME    PIC X(30).
03 FILLER              PIC X(6).

```

RECORD NAME IS
RECORD ID IS
LOCATION MODE IS
WITHIN

03 DATA-FILE-USED
03 FILLER

RECORD NAME IS
RECORD ID IS
LOCATION MODE IS
WITHIN

03 DATA-PROGRAM-USED
03 FILLER

RECORD NAME IS
RECORD ID IS
LOCATION MODE IS
WITHIN

03 FILLER

RECORD NAME IS
RECORD ID IS
LOCATION MODE IS
WITHIN

MINIMUM ROOT LENGTH IS
MINIMUM FRAGMENT LENGTH IS

03 IDODBK
03 IDTOP
03 IDBOT
03 IDO
03 IDL
03 IDTBL.
05 IDENTRY

RECORD NAME IS
RECORD ID IS
LOCATION MODE IS
WITHIN

03 ISVIA
03 ISTEB

DDFILE.
103.
VIA DDRECA-FILE SET.
DATA-REGION AREA.

PIC X(20).
PIC X(8).

DDPROGRM.
104.
VIA DDRECA-PROGRAM SET.
DATA-REGION AREA.

PIC X(8).
PIC X(4).

IXOWNER.
999.
DIRECT.
DATA-INDX-REGION AREA
FROM 8386052 THRU 8386052.

PIC X(8).

IXDET.
9998.
DIRECT.
DATA-INDX-REGION AREA
FROM 8386053 THRU 8386070.
RECORD LENGTH.
RECORD LENGTH.

PIC S9(8) COMP.
PIC S9(4) COMP.
PIC S9(4) COMP.
PIC S9(4) COMP.
PIC S9(4) COMP.

PIC X
OCCURS 0 TO 788 TIMES
DEPENDING ON IDL.

IXSET.
9997.
CALC USING ISNAME
DUPLICATES ARE NOT ALLOWED.
DATA-INDX-REGION AREA
FROM 8386052 THRU 8386052.

PIC S9(4) COMP.
PIC S9(4) COMP.

03 ISTET
 03 ISOFFST
 03 ISTO
 03 ISKL
 03 ISDBKL
 03 ISMBRO
 03 ISOPT
 03 ISEQ
 03 ISRECN
 03 ISNAME

RECORD NAME IS
 RECORD ID IS
 LOCATION MODE IS
 WITHIN

03 IXSSN
 RECORD NAME IS
 RECORD ID IS
 LOCATION MODE IS
 WITHIN

03 IXKDSP
 03 FILLER

PIC S9(4) COMP.
 PIC S9(4) COMP.
 PIC S9(4) COMP.
 PIC S9(4) COMP.
 PIC S9(4) COMP.
 PIC S9(4) COMP.
 PIC S9(4) COMP.
 PIC X(16).
 PIC X(16).

IXSUB.
 9995.
 CALC USING IXSSN
 DUPLICATES NOT ALLOWED.
 DATA-INDX-REGION AREA
 FROM 8386052 THRU 8386052.

PIC X(8) .

IXREC.
 9996.
 VIA IXSUB-IXREC SET.
 DATA-INDX-REGION AREA
 FROM 8386052 THRU 8386052.

PIC S9(4) COMP.
 PIC X(6) .

```

*****
*
*           SET DESCRIPTION
*
*****

```

```

SET NAME IS      DDRECA-DDRECB.
ORDER IS         NEXT.
MODE IS          CHAIN.
OWNER IS         DDRECA
                 NEXT DBKEY POSITION IS 1
MEMBER IS        DDRECB
                 NEXT DBKEY POSITION IS 1
                 MANDATORY AUTOMATIC.

```

```

SET NAME IS      DDRECA-ALIAS.
ORDER IS         NEXT.
MODE IS          CHAIN LINKED TO PRIOR.
OWNER IS         DDRECA
                 NEXT DBKEY POSITION IS 2
MEMBER IS        PRIOR DBKEY POSITION IS 3
                 ALIAS
                 NEXT DBKEY POSITION IS 1
                 PRIOR DBKEY POSITION IS 2
                 LINKED TO OWNER
                 OWNED DBKEY POSITION IS 3
                 MANDATORY AUTOMATIC.

```

```

SET NAME IS      DDRECA-PROGRAM.
ORDER IS         NEXT.
MODE IS          CHAIN LINKED TO PRIOR.
OWNER IS         DDRECA
                 NEXT DBKEY POSITION IS 4
MEMBER IS        PRIOR DBKEY POSITION IS 5
                 PROGRAM
                 NEXT DBKEY POSITION IS 1
                 PRIOR DBKEY POSITION IS 2
                 LINKED TO OWNER
                 OWNED DBKEY POSITION IS 3
                 MANDATORY AUTOMATIC.

```


SET NAME IS
ORDER IS
MODE IS
OWNER IS

MEMBER IS

SET NAME IS
ORDER IS
OWNER IS

MEMBER IS

SET NAME IS
ORDER IS
MODE IS
OWNER IS

MEMBER IS

DDRECA-FILE.
NEXT.
CHAIN LINKED TO PRIOR.
DDRECA
NEXT DBKEY POSITION IS 6
PRIOR DBKEY POSITION IS 7
FILE
NEXT DBKEY POSITION IS 1
PRIOR DBKEY POSITION IS 2
LINKED TO OWNER
OWNED DBKEY POSITION IS 3
MANDATORY AUTOMATIC.

IX-DATA-NAME.
SORTED.
IXOWNER
NEXT DBKEY POSITION IS 1
DDRECA
NEXT DBKEY POSITION IS 8
OPTIONAL MANUAL
ASCENDING KEY IS DATA-NAME
DUPLICATES NOT ALLOWED.

IXSET-ISDET.
NEXT.
CHAIN LINKED TO PRIOR.
IXSET
NEXT DBKEY POSITION IS 3
PRIOR DBKEY POSITION IS 4
IXDET
NEXT DBKEY POSITION IS 1
PRIOR DBKEY POSITION IS 2
MANDATORY AUTOMATIC.

SET NAME IS
ORDER IS
MODE IS
OWNER IS

MEMBER IS

SET NAME IS
ORDER IS
MODE IS
OWNER IS

MEMBER IS

IXSET-ISREC.
NEXT.
CHAIN LINKED TO PRIOR.
IXSET
NEXT DBKEY POSITION IS 1
PRIOR DBKEY POSITION IS 2
IXREC
NEXT DBKEY POSITION IS 3
PRIOR DBKEY POSITION IS 4
MANDATORY AUTOMATIC.

IXSUB-ISREC.
NEXT.
CHAIN LINKED TO PRIOR.
IXSUB
NEXT DBKEY POSITION IS 1
PRIOR DBKEY POSITION IS 2
IXREC
NEXT DBKEY POSITION IS 1
PRIOR DBKEY POSITION IS 2
MANDATORY AUTOMATIC.

```

*****
*
*                               DMCL DESCRIPTION
*
*****

```

DEVICE-MEDIA DESCRIPTION.

```

DEVICE-MEDIA NAME IS      DATA DMCL OF SCHEMA DDSHEMA.
AUTHOR.                  LAI, CHIN-HO.
DATE.                    11/82.
INSTALLATION.            COMPUTER SCIENCE DEPARTMENT
                           KANSAS STATE UNIVERSITY
                           MANHATTAN, KANSAS 66506.

```

REMARKS.

DATADMCL - DMCL FOR DATA DICTIONARY DATABASE.

BUFFER SECTION.

```

BUFFER NAME IS      BUFFERA
PAGE CONTAINS      3156 CHARACTERS
BUFFER CONTAINS     5 PAGES.
BUFFER NAME IS      BUFFERB
PAGE CONTAINS      2056 CHARACTERS
BUFFER CONTAINS     3 PAGES.

```

AREA SECTION.

```

COPY DATA-REGION      BUFFER IS BUFFERA.
COPY DATA-INDX-REGION  BUFFER IS BUFFERB.

```

JOURNAL SECTION.

```

JOURNAL BLOCK CONTAINS 2496 CHARACTERS.
FILE CONTAINS 6840 BLOCKS.
FILE NAME IS JOURNAL1      ASSIGN TO DDJOURN1.
FILE NAME IS JOURNAL2      ASSIGN TO DDJOURN2.
ARCHIVAL JOURNAL BLOCK CONTAINS 13028 CHARACTERS.
FILE NAME IS ARCHIVE       ASSIGN TO DDARCH.

```

```

*****
*
*                               SUBSCHEMA DESCRIPTION
*
*****

```

```

ADD SUBSCHEMA NAME IS DATASUBS OF SCHEMA NAME IS DESHEMA
                                VERSION 2
                                DMCL NAME IS DATADMCL OF SCHEMA DDSHEMA.

```

```

ADD AREA DATA-REGION.
ADD AREA DATA-INDX-REGION.
ADD RECORD DDRECA.
ADD RECORD DDRECB.
ADD RECORD DDPROGM.
ADD RECORD DDFILE.
ADD RECORD DDALIAS.
ADD RECORD IXOWNER.
ADD RECORD IXDET.
ADD RECORD IXSUB.
ADD RECORD IXREC.
ADD RECORD IXSEC.
ADD SET DDRECA-DDRECB.
ADD SET DDRECA-DDRECB.
ADD SET DDRECA-FILE.
ADD SET DDRECA-ALIAS.
ADD SET IX-DATA-NAME.
ADD SET IXSET-IXREC.
ADD SET IXSET-IXDET.
ADD SET IXSUB-IXREC.
                                GENERATE.

```

Appendix C

Maps Definition

@DDSO@ @

@
DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

BROWSE TRANSACTION
QU - INQUIRY DATA OBJECT
XR - CROSS REFERENCE DATA OBJECT

ADD & UPDATE TRANSACTION
UD - UPDATE DATA OBJECT

DELETE TRANSACTION
UD - UPDATE DATA OBJECT

@

@

C-1 Map For User-Defined Menu Screen

0DDSO0 0

0
DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

--- QUERY ---

DATA NAME:0			0DATE CREATED:0	0
DESC:0			0DATE CHANGED:0	0
PICTURE:0	0	LEVEL: 0	0REVISED PERSON:0	0
USAGE:0	0	JUSTIFY:0	0	
ALIAS NAME:				
1.0			02.0	0
3.0			04.0	0
USER:				
1.0		02.0	03.0	0
4.0		05.0	06.0	0
PROGRAM USED:				
1.0	0 2.0	0 3.0	0 4.0	0
5.0	0 6.0	0 7.0	0 8.0	0
FILE USED:				
1.0		0 2.0		0
3.0		0 4.0		0

INQUIRY ONLY

C-2 Map For UPDATE Transaction

ADDSD @

DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

--- UPDATE ---

DATA NAME:	@	DATE CREATED:	@	@	
DESC:	@	DATE CHANGED:	@	@	
PICTURE:	@	LEVEL:	@	REVISED PERSON:	@
USAGE:	@	JUSTIFY:	@		
ALIAS NAME:					
	1.		2.		@
	3.		4.		@
USER:					
	1.	2.	3.		@
	4.	5.	6.		@
PROGRAM USED:					
	1.	2.	3.	4.	@
	5.	6.	7.	8.	@
FILE USED:					
	1.		2.		@
	3.		4.		@

C-3 Map For Change Transaction

@DDSC@ @

@
DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

--- DELETE ---

DATA NAME:@			@DATE CREATED:@	@
DESC:@			@DATE CHANGED:@	@
PICTURE:@	@	LEVEL: @	@REVISED PERSON:@	@
USAGE:@	@	JUSTIFY:@	@	
ALIAS NAME:				
1.@			@2.@	@
3.@			@4.@	@
USER:				
1.@		@2.@	@3.@	@
4.@		@5.@	@6.@	@
PROGRAM USED:				
1.@	@ 2.@	@ 3.@	@ 4.@	@
5.@	@ 6.@	@ 7.@	@ 8.@	@
FILE USED:				
1.@		@ 2.@		@
3.@		@ 4.@		@

ARE YOU READY TO DELETE?@ @ (YES/NO)
@ @

C-4 Map for Delete Transaction

Appendix D

Design Screen

SHADOW II TRANSACTION CONTROL SYSTEM

YOU ARE ON-LINE TO SHADOW II, PLEASE ESTABLISHED YOUR
IDENTITY BY SIGN ON:

OPNAME:

PASSWORD:

D-1 SHADOW II Sing-On Screen

```
*-----*  
*  SHADOW II TRANSACTION CONTROL SYSTEM  *  
*                                         *  
*          KANSAS STATE UNIVERSITY      *  
*          COMPUTER SCIENCE DEPARTMENT  *  
*-----*
```

PLEASE ENTER YOUR NEXT TRAN CODE ____

INITIAL KEY = _____

D-2 Transaction Menu Screen

DDSO QU STUDENT-NAME

DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

BROWSE TRANSACTION

QU - INQUIRY DATA OBJECT

XR - CROSS REFERENCE DATA OBJECT

ADD & UPDATE TRANSACTION

UD - UPDATE DATA OBJECT

DELETE TRANSACTION

UD - UPDATE DATA OBJECT

D-3 User-Defined Menu Screen

DDSO QU CUSTOMER-NAME

DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

--- QUERY ---

NAME: CUSTOMER-NAME

DATE CREATED: 11/02/82

DESC: CUSTOMER NAME

DATE CHANGED:

PICTURE: X (30)

LEVEL: INPUT

REVISED PERSON: CHL

USAGE:

JUSTIFY:

ALIAS NAME:

1. CUST-NAME

2.

3.

4.

USER:

1. BETH UNGER

2. TONY LAI

3.

4.

5.

6.

PROGRAM USED:

1. PROG1111

2. PROG2222

3.

4.

5.

6.

7.

8.

FILE USED:

1. MASTER-FILE

2. BILL-FILE

3.

4.

INQUIRY ONLY

D-4 Screen For QUERY Transaction

DDSO UD CUSTOMER-NAME

DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

--- UPDATE ---

NAME: CUSTOMER-NAME		DATE CREATED: 11/02/82
DESC: CUSTOMER NAME		DATE CHANGED: 12/01/82
PICTURE: X (30)	LEVEL: INPUT	REVISED PERSON: CHL
USAGE:	JUSTIFY:	
ALIAS NAME:		
1. CUST-NAME	2.	
3.	4.	
USER:		
1. BETH UNGER	2. TCNY IAI	3.
4.	5.	6.
PROGRAM USED:		
1. PROG1111	2. PROG2222	3.
5.	6.	7.
FILE USED:		8.
1. MASTER-FILE	2. BILL-FILE	
3.	4.	

** SUCCESSFUL UPDATE **

D-5 Screen For Update Transaction

DDSO DD CUSTOMER-NAME

DATA DICTIONARY SYSTEM
KANSAS STATE UNIVERSITY

--- DELETE ---

NAME: CUSTOMER-NAME

DATE CREATED: 11/02/82

DESC: CUSTOMER NAME

DATE CHANGED: 12/01/82

PICTURE: X (30)

LEVEL: INPUT

REVISED PERSON: CHL

USAGE:

JUSTIFY:

ALIAS NAME:

1. CUST-NAME

2.

3.

4.

USER:

1. BETH UNGER

2. TONY LAI

3.

4.

5.

6.

PROGRAM USED:

1. PROG1111

2. PROG2222

3.

4.

5.

6.

7.

8.

FILE USED:

1. MASTER-FILE

2. BILL-FILE

3.

4.

ARE YOU READY TO DELETE? YES (YES/NO)

** DATA NAME HAS BEEN DELETED **

D-6 Screen For Delete Transaction

Appendix E

Punch File Output For Design Screen

COBOL - EMBEDDED OUTPUT DATA STREAM.

LANGUAGE	COBOL
MAPTYPE	BOTH OR OUTPUT
EMBEDDED	OUTPUT OR BOTH

```

01 MCHLMEN.
02 FILLER PIC X(20) VALUE 'C 9DDSO I H ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' 0 AIDATA DICT ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' IONARY SYSTEM BH 8 ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' 0 0 ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' 0 C KANSAS STATE ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' UNIVERSITY C 0 ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' 0 OMCHLMEN ED ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' BROWSE TRANSACTIONS ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' FPQU - INQUIRY DATA ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' OBJECT GXXR - CROSS ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' REFERENCE FOR DATA 0 ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' BJECT DADD & UPDATE ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' TRANSACTIONS .PUD - ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' UPDATE DATA OBJECT ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' (4DELETE TRANSACTION ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' S 1GDD - DELETE DATA ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' OBJECT MA 8 ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' ' . MCHLMEN
02 FILLER PIC X(20) VALUE ' 0 F ' . MCHLMEN
01 MCHLMENP PIC 9(4) COMP VALUE 00420. MCHLMEN

```

COBOL - INPUT STRUCTURE.

```

LANGUAGE      COBOL
MAPTYPE      BOTH
EMBEDDED      BOTH, NONE, INPUT OR OUTPUT

```

01	MCHLMENI.		MCHLMEN
02	MCHLMEN-TRANL	PIC X.	MCHLMENI
02	MCHLMEN-TRANI	PIC X(4).	MCHLMENI
02	MCHLMEN-FUNCL	PIC X.	MCHLMENI
02	MCHLMEN-FUNCI	PIC XX.	MCHLMENI
02	MCHLMEN-KEYL	PIC X.	MCHLMENI
02	MCHLMEN-KEYI	PIC X(30).	MCHLMENI

EXAMPLE 3 - USER-DEFINED MENU SCREEN

COBOL - OUTPUT STRUCTURE.

GENERATED BY:

LANGUAGE
MAPTYPE
EMBEDDED

COBOL
BOTH OR OUTPUT
BOTH, NONE, INPUT OR OUTPUT

01	MCHLMEND.			MCHLMEN
02	MCHLMENW	PIC X.		MCHLMENO
02	FILLER	PIC X(4).		MCHLMENO
02	MCHLMEN-TRANA	PIC X.		MCHLMENO
02	MCHLMEN-TRANO	PIC X(4).		MCHLMENO
02	FILLER	PIC X.		MCHLMENO
02	MCHLMEN-FUNCA	PIC X.		MCHLMENO
02	MCHLMEN-FUNCO	PIC XX.		MCHLMENO
02	FILLER	PIC X.		MCHLMENO
02	MCHLMEN-KEYA	PIC X.		MCHLMENO
02	MCHLMEN-KEYO	PIC X(30).		MCHLMENO
02	FILLER	PIC X(31).		MCHLMENO
02	MCHLMEN-TEST-FLAGA	PIC X.		MCHLMENO
02	MCHLMEN-TEST-FLAGO	PIC X(4).		MCHLMENO
02	FILLER	PIC X.		MCHLMENO
02	MCHLMEN-RDATEA	PIC X.		MCHLMENO
02	MCHLMEN-RDATED	PIC X(8).		MCHLMENO
02	FILLER	PIC X.		MCHLMENO
02	MCHLMEN-RTIMEA	PIC X.		MCHLMENO
02	MCHLMEN-RTIMEO	PIC X(8).		MCHLMENO
02	FILLER	PIC X(32).		MCHLMENO
02	MCHLMEN-CSECTA	PIC X.		MCHLMENO
02	MCHLMEN-CSECTO	PIC X(8).		MCHLMENO
02	FILLER	PIC X.		MCHLMENO
02	MCHLMEN-VER-MODA	PIC X.		MCHLMENO
02	MCHLMEN-VER-MODO	PIC 9.9.		MCHLMENO
02	FILLER	PIC X(203).		MCHLMENO
02	MCHLMEN-MESSA	PIC X.		MCHLMENO
02	MCHLMEN-MESSO	PIC X(62).		MCHLMENO
02	FILLER	PIC X(6).		MCHLMENO

EXAMPLE 4 - USER-DEFINED MENU SCREEN

COBOL - EMBEDDED INPUT CONTROL INFORMATION.

GENERATED BY:

LANGUAGE
MAPTYPE
EMBEDDED

COBOL
BOTH
INPUT OR BOTH

01	MCHLMENC.				MCHLMEN			
02	FILLER	PIC X(19) VALUE	'	A	F	I	'.	MCHLMENC

EXAMPLE 1 - QUERY TRANSACTION

COBOL - EMBEDDED OUTPUT DATA STREAM.

GENERATED BY:

	LANGUAGE	COBOL	
	MAPTYPE	BOTH OR OUTPUT	
	EMBEDDED	OUTPUT OR BOTH	
01 MCHLQUE.			MCHLQUE
02 FILLER	PIC X(20) VALUE 'C 9DDSO I H		MCHLQUE
02 FILLER	PIC X(20) VALUE '		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0 A>DATA DICT		MCHLQUE
02 FILLER	PIC X(20) VALUE 'IONARY SYSTEM BH 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0		MCHLQUE
02 FILLER	PIC X(06) VALUE ' 0 B'		MCHLQUE
02 FILLER	PIC X VALUE QUOTE.		MCHLQUE
02 FILLER	PIC X(20) VALUE 'KANSAS STATE UNIVERS		MCHLQUE
02 FILLER	PIC X(20) VALUE 'ITY C 0		MCHLQUE
02 FILLER	PIC X(20) VALUE ' OMCHLQUE E- 8 E/--		MCHLQUE
02 FILLER	PIC X(20) VALUE '- QUERY --- 0 G-DATA		MCHLQUE
02 FILLER	PIC X(20) VALUE ' NAME: 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0		MCHLQUE
02 FILLER	PIC X(20) VALUE 'HRDATE CREATED: 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' ODESCRIPTION:		MCHLQUE
02 FILLER	PIC X(20) VALUE '8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0 IZDATE CHANGED:		MCHLQUE
02 FILLER	PIC X(20) VALUE '8 OPICTURE:		MCHLQUE
02 FILLER	PIC X(20) VALUE '8 0 ;LEVL		MCHLQUE
02 FILLER	PIC X(20) VALUE 'E: 8 0 7REVIS		MCHLQUE
02 FILLER	PIC X(20) VALUE 'ED PERSON: 8 0 .K		MCHLQUE
02 FILLER	PIC X(20) VALUE 'USAGE: 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0 .>JUSTIFY: 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0 <-ALIAS NAME:		MCHLQUE
02 FILLER	PIC X(20) VALUE '<%1. 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 02.		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0 (23.		MCHLQUE
02 FILLER	PIC X(20) VALUE '8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 04. 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0 IFUSER: <		MCHLQUE
02 FILLER	PIC X(20) VALUE '1. 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 02. 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 03. 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 0 &*4.		MCHLQUE
02 FILLER	PIC X(20) VALUE '8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 05. 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' 06. 8		MCHLQUE
02 FILLER	PIC X(20) VALUE ' OPROGRAM U		MCHLQUE
02 FILLER	PIC X(20) VALUE 'SED: K21. 8		MCHLQUE

02	FILLER	PIC X(20) VALUE ' 02. 8	03'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' . 8	04. 8 '.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 0 M<5. 8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 06. 8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 07. 8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 08. 8	0 N'.	MCHLQUE
02	FILLER	PIC X(20) VALUE 'LFILE USED: 0%1. 8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 0	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE '2. 8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 0 P23. 8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 04. 8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 0	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE '0 3INQUIRY ONLY \$?	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE '8	'.	MCHLQUE
02	FILLER	PIC X(20) VALUE ' 0 F '.	'.	MCHLQUE
01	MCHLQUEP	PIC X(16) VALUE ' 0 F '.		MCHLQUE
		PIC 9(4) COMP VALUE 01123.		MCHLQUE

EXAMPLE 2 - QUERY TRANSACTION

COBOL - INPUT STRUCTURE.

GENERATED BY:

LANGUAGE
MAPTYPE
EMBEDDED

COBOL
BOTH
BOTH, NONE, INPUT OR OUTPUT

01	MCHLQUEI.			MCHLQUE
02	MCHLQUE-TRANL	PIC X.		MCHLQUEI
02	MCHLQUE-TRANI	PIC X(4).		MCHLQUEI
02	MCHLQUE-FUNCL	PIC X.		MCHLQUEI
02	MCHLQUE-FUNCI	PIC XX.		MCHLQUEI
02	MCHLQUE-KEYL	PIC X.		MCHLQUEI
02	MCHLQUE-KEYI	PIC X(30).		MCHLQUEI

EXAMPLE 3 - QUERY TRANSACTION

COBOL - OUTPUT STRUCTURE.

GENERATED BY:

LANGUAGE
MAPTYPE
EMBEDDED

COBOL
BOTH OR OUTPUT
BOTH, NONE, INPUT OR OUTPUT

01	MCHLQUEO.		MCHLQUE
02	MCHLQUEW	PIC X.	MCHLQUEO
02	FILLER	PIC X(4).	MCHLQUEO
02	MCHLQUE-TRANA	PIC X.	MCHLQUEO
02	MCHLQUE-TRANO	PIC X(4).	MCHLQUEO
02	FILLER	PIC X.	MCHLQUEO
02	MCHLQUE-FUNCA	PIC X.	MCHLQUEO
02	MCHLQUE-FUNCO	PIC XX.	MCHLQUEO
02	FILLER	PIC X.	MCHLQUEO
02	MCHLQUE-KEYA	PIC X.	MCHLQUEO
02	MCHLQUE-KEYO	PIC X(30).	MCHLQUEO
02	FILLER	PIC X(31).	MCHLQUEO
02	MCHLQUE-TEST-FLAGA	PIC X.	MCHLQUEO
02	MCHLQUE-TEST-FLAGO	PIC X(4).	MCHLQUEO
02	FILLER	PIC X.	MCHLQUEO
02	MCHLQUE-RDATEA	PIC X.	MCHLQUEO
02	MCHLQUE-RDATEO	PIC X(8).	MCHLQUEO
02	FILLER	PIC X.	MCHLQUEO
02	MCHLQUE-RTIMEA	PIC X.	MCHLQUEO
02	MCHLQUE-RTIMEO	PIC X(8).	MCHLQUEO
02	FILLER	PIC X(32).	MCHLQUEO
02	MCHLQUE-CSECTA	PIC X.	MCHLQUEO
02	MCHLQUE-CSECTO	PIC X(8).	MCHLQUEO
02	FILLER	PIC X.	MCHLQUEO
02	MCHLQUE-VER-MODA	PIC X.	MCHLQUEO
02	MCHLQUE-VER-MODO	PIC 9.9.	MCHLQUEO
02	FILLER	PIC X(46).	MCHLQUEO
02	MCHLQUE-DATA-NAMEA	PIC X.	MCHLQUEO
02	MCHLQUE-DATA-NAMEO	PIC X(29).	MCHLQUEO
02	FILLER	PIC X(19).	MCHLQUEO
02	MCHLQUE-CREATED-DATEA	PIC X.	MCHLQUEO
02	MCHLQUE-CREATED-DATED.		MCHLQUEO
03	MCHLQUE-CREATED-DATE-MMO	PIC XX.	MCHLQUEO
03	MCHLQUE-CREATED-DATE-SLASH-10	PIC X.	MCHLQUEO
03	MCHLQUE-CREATED-DATE-ODO	PIC XX.	MCHLQUEO
03	MCHLQUE-CREATED-DATE-SLASH-20	PIC X.	MCHLQUEO
03	MCHLQUE-CREATED-DATE-YYO	PIC XX.	MCHLQUEO
02	FILLER	PIC X(15).	MCHLQUEO
02	MCHLQUE-DATA-DESCA	PIC X.	MCHLQUEO
02	MCHLQUE-DATA-DESCO	PIC X(40).	MCHLQUEO
02	FILLER	PIC X(19).	MCHLQUEO
02	MCHLQUE-CHANGED-DATEA	PIC X.	MCHLQUEO
02	MCHLQUE-CHANGED-DATED.		MCHLQUEO
03	MCHLQUE-CHANGED-DATE-MMO	PIC XX.	MCHLQUEO
03	MCHLQUE-CHANGED-DATE-SLASH-10	PIC X.	MCHLQUEO
03	MCHLQUE-CHANGED-DATE-ODO	PIC XX.	MCHLQUEO
03	MCHLQUE-CHANGED-DATE-SLASH-20	PIC X.	MCHLQUEO
03	MCHLQUE-CHANGED-DATE-YYO	PIC XX.	MCHLQUEO
02	FILLER	PIC X(11).	MCHLQUEO

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02 MCHLQUE-DATA-PICTUREA
02 MCHLQUE-DATA-PICTURED
02 FILLER
02 MCHLQUE-DATA-LEVELA
02 MCHLQUE-DATA-LEVELD
02 FILLER
02 MCHLQUE-REVISED-PERSONA
02 MCHLQUE-REVISED-PERSOND
02 FILLER
02 MCHLQUE-DATA-USAGEA
02 MCHLQUE-DATA-USAGED
02 FILLER
02 MCHLQUE-DATA-JUSTIFYA
02 MCHLQUE-DATA-JUSTIFYD
02 FILLER
02 MCHLQUE-ALIAS-NAME-1A
02 MCHLQUE-ALIAS-NAME-1D
02 FILLER
02 MCHLQUE-ALIAS-NAME-2A
02 MCHLQUE-ALIAS-NAME-2D
02 FILLER
02 MCHLQUE-ALIAS-NAME-3A
02 MCHLQUE-ALIAS-NAME-3D
02 FILLER
02 MCHLQUE-ALIAS-NAME-4A
02 MCHLQUE-ALIAS-NAME-4D
02 FILLER
02 MCHLQUE-USER-NAME-1A
02 MCHLQUE-USER-NAME-1D
02 FILLER
02 MCHLQUE-USER-NAME-2A
02 MCHLQUE-USER-NAME-2D
02 FILLER
02 MCHLQUE-USER-NAME-3A
02 MCHLQUE-USER-NAME-3D
02 FILLER
02 MCHLQUE-USER-NAME-4A
02 MCHLQUE-USER-NAME-4D
02 FILLER
02 MCHLQUE-USER-NAME-5A
02 MCHLQUE-USER-NAME-5D
02 FILLER
02 MCHLQUE-USER-NAME-6A
02 MCHLQUE-USER-NAME-6D
02 FILLER
02 MCHLQUE-PROGRAM-USED-1A
02 MCHLQUE-PROGRAM-USED-1D
02 FILLER
02 MCHLQUE-PROGRAM-USED-2A
02 MCHLQUE-PROGRAM-USED-2D
02 FILLER
02 MCHLQUE-PROGRAM-USED-3A
02 MCHLQUE-PROGRAM-USED-3D
02 FILLER
02 MCHLQUE-PROGRAM-USED-4A
02 MCHLQUE-PROGRAM-USED-4D

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PIC X. MCHLQUEO
PIC X(10). MCHLQUEO
PIC X(12). MCHLQUEO
PIC X. MCHLQUEO
PIC X(6). MCHLQUEO
PIC X(21). MCHLQUEO
PIC X. MCHLQUEO
PIC XXX. MCHLQUEO
PIC X(12). MCHLQUEO
PIC X. MCHLQUEO
PIC X(15). MCHLQUEO
PIC X(14). MCHLQUEO
PIC X. MCHLQUEO
PIC X(5). MCHLQUEO
PIC X(22). MCHLQUEO
PIC X. MCHLQUEO
PIC X(30). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(30). MCHLQUEO
PIC X(8). MCHLQUEO
PIC X. MCHLQUEO
PIC X(30). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(30). MCHLQUEO
PIC X(16). MCHLQUEO
PIC X. MCHLQUEO
PIC X(20). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(20). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(16). MCHLQUEO
PIC X(8). MCHLQUEO
PIC X. MCHLQUEO
PIC X(20). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(20). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(16). MCHLQUEO
PIC X(21). MCHLQUEO
PIC X. MCHLQUEO
PIC X(10). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(10). MCHLQUEO
PIC X(5). MCHLQUEO
PIC X. MCHLQUEO
PIC X(10). MCHLQUEO

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02 FILLER
02 MCHLQUE-PROGRAM-USED-5A
02 MCHLQUE-PROGRAM-USED-50
02 FILLER
02 MCHLQUE-PROGRAM-USED-6A
02 MCHLQUE-PROGRAM-USED-60
02 FILLER
02 MCHLQUE-PROGRAM-USED-7A
02 MCHLQUE-PROGRAM-USED-70
02 FILLER
02 MCHLQUE-PROGRAM-USED-8A
02 MCHLQUE-PROGRAM-USED-80
02 FILLER
02 MCHLQUE-FILE-USED-1A
02 MCHLQUE-FILE-USED-10
02 FILLER
02 MCHLQUE-FILE-USED-2A
02 MCHLQUE-FILE-USED-20
02 FILLER
02 MCHLQUE-FILE-USED-3A
02 MCHLQUE-FILE-USED-30
02 FILLER
02 MCHLQUE-FILE-USED-4A
02 MCHLQUE-FILE-USED-40
02 FILLER
02 MCHLQUE-MESSAGEA
02 MCHLQUE-MESSAGE0
02 FILLER

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PIC X(8).      MCHLQUE0
PIC X.         MCHLQUE0
PIC X(10).     MCHLQUE0
PIC X(5).      MCHLQUE0
PIC X.         MCHLQUE0
PIC X(10).     MCHLQUE0
PIC X(5).      MCHLQUE0
PIC X.         MCHLQUE0
PIC X(10).     MCHLQUE0
PIC X(5).      MCHLQUE0
PIC X.         MCHLQUE0
PIC X(10).     MCHLQUE0
PIC X(21).     MCHLQUE0
PIC X.         MCHLQUE0
PIC X(20).     MCHLQUE0
PIC X(5).      MCHLQUE0
PIC X.         MCHLQUE0
PIC X(20).     MCHLQUE0
PIC X(8).      MCHLQUE0
PIC X.         MCHLQUE0
PIC X(20).     MCHLQUE0
PIC X(5).      MCHLQUE0
PIC X.         MCHLQUE0
PIC X(20).     MCHLQUE0
PIC X(21).     MCHLQUE0
PIC X.         MCHLQUE0
PIC X(49).     MCHLQUE0
PIC X(6).      MCHLQUE0

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EXAMPLE 4 - QUERY TRANSACTION

COBOL - EMBEDDED INPUT CONTROL INFORMATION.

GENERATED BY:

	LANGUAGE MAPTYPE EMBEDDED	COBOL BOTH INPUT OR BOTH	
01 MCHLQUEC.			
02 FILLER	PIC X(19) VALUE	' A F I '.	MCHLQUE MCHLQUEC

COBOL - EMBEDDED OUTPUT DATA STREAM.

LANGUAGE	COBOL
MAPTYPE	BOTH OR OUTPUT
EMBEDDED	OUTPUT OR BOTH

01	MCHLUPD.		PIC X(20) VALUE 'C	9DDSC I H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '		O A>DATA DICT'	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE 'IONARY SYSTEM BH 8			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O		O	'.	MCHLUPD
02	FILLER	PIC X(06) VALUE ' O B'.			'.	MCHLUPD
02	FILLER	PIC X	VALUE QUOTE.			MCHLUPD
02	FILLER	PIC X(20) VALUE 'KANSAS STATE UNIVERS'			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE 'ITY C O		O	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' OMCHLUPD E- 8 E/-			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '- UPDATE - O G-DAT'			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE 'A NAME: H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '		O	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' HRDATE CREATED: H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' ODESCRIPTION:			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O IZDATE CHANGED:			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' H OPICTURE:			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' H O ;LEV'			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE 'LE: H O TREV'			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE 'SED PERSON: H O			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE 'KUSAGE: H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O .>JUSTIFY: H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O <-ALIAS NAME'			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ': <%1. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '		O	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '2. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O {23'			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' . H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O4. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O IFUSER:			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' <1. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O2. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O3. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O &*4'			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' . H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O5. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' O6. H			'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' OPROGRAM'			'.	MCHLUPD

02	FILLER	PIC X(20) VALUE ' USED: K01. H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 02. H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE '03. H	04. '	MCHLUPD
02	FILLER	PIC X(20) VALUE 'H	0 M<5. H'	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 06. H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 07. H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 08. H	0'	MCHLUPD
02	FILLER	PIC X(20) VALUE ' NLFILE USED: 001. H'	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 02. H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 0 P03. H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 04. '	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE 'H	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 0 \$? 8	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 0 '	'.	MCHLUPD
02	FILLER	PIC X(20) VALUE ' 0 '	'.	MCHLUPD
02	FILLER	PIC X(03) VALUE ' F '.		MCHLUPD
01	MCHLUPDP	PIC 9(4) COMP VALUE 01110.		MCHLUPD

EXAMPLE 2 - UPDATE TRANSACTION

COBOL - INPUT STRUCTURE.

GENERATED BY:

LANGUAGE	COBOL
MAPTYPE	BOTH
EMBEDDED	BOTH, NONE, INPUT OR OUTPUT

01	MCHLUPDI.		MCHLUPD
02	MCHLUPD-TRANL	PIC X.	MCHLUPDI
02	MCHLUPD-TRANI	PIC X(4).	MCHLUPDI
02	MCHLUPD-FUNCL	PIC X.	MCHLUPDI
02	MCHLUPD-FUNCI	PIC XX.	MCHLUPDI
02	MCHLUPD-KEYL	PIC X.	MCHLUPDI
02	MCHLUPD-KEYI	PIC X(30).	MCHLUPDI
02	MCHLUPD-DATA-NAMEL	PIC X.	MCHLUPDI
02	MCHLUPD-DATA-NAMEI	PIC X(29)	MCHLUPDI
02	MCHLUPD-CREATED-DATEL	PIC X.	MCHLUPDI
02	MCHLUPD-CREATED-DATEI.		MCHLUPDI
03	MCHLUPD-CREATED-DATE-MMI	PIC XX.	MCHLUPDI
03	MCHLUPD-CREATED-DATE-SLASH-1I	PIC X.	MCHLUPDI
03	MCHLUPD-CREATED-DATE-DDI	PIC XX.	MCHLUPDI
03	MCHLUPD-CREATED-DATE-SLASH-2I	PIC X.	MCHLUPDI
03	MCHLUPD-CREATED-DATE-YYI	PIC XX.	MCHLUPDI
02	MCHLUPD-DATA-DESL	PIC X.	MCHLUPDI
02	MCHLUPD-DATA-DESCI	PIC X(40).	MCHLUPDI
02	MCHLUPD-CHANGED-DATEL	PIC X.	MCHLUPDI
02	MCHLUPD-CHANGED-DATEI.		MCHLUPDI
03	MCHLUPD-CHANGED-DATE-MMI	PIC XX.	MCHLUPDI
03	MCHLUPD-CHANGED-DATE-SLASH-1I	PIC X.	MCHLUPDI
03	MCHLUPD-CHANGED-DATE-DDI	PIC XX.	MCHLUPDI
03	MCHLUPD-CHANGED-DATE-SLASH-2I	PIC X.	MCHLUPDI
03	MCHLUPD-CHANGED-DATE-YYI	PIC XX.	MCHLUPDI
02	MCHLUPD-DATA-PICTUREL	PIC X.	MCHLUPDI
02	MCHLUPD-DATA-PICTUREI	PIC X(10).	MCHLUPDI
02	MCHLUPD-DATA-LEVELL	PIC X.	MCHLUPDI
02	MCHLUPD-DATA-LEVELI	PIC X(6).	MCHLUPDI
02	MCHLUPD-REVISED-PERSONL	PIC X.	MCHLUPDI
02	MCHLUPD-REVISED-PERSONI	PIC XXX.	MCHLUPDI
02	MCHLUPD-DATA-USAGEL	PIC X.	MCHLUPDI
02	MCHLUPD-DATA-USAGEI	PIC X(15).	MCHLUPDI
02	MCHLUPD-DATA-JUSTIFYL	PIC X.	MCHLUPDI
02	MCHLUPD-DATA-JUSTIFYI	PIC X(6).	MCHLUPDI
02	MCHLUPD-ALIAS-NAME-1L	PIC X.	MCHLUPDI
02	MCHLUPD-ALIAS-NAME-1I	PIC X(30).	MCHLUPDI
02	MCHLUPD-ALIAS-NAME-2L	PIC X.	MCHLUPDI

02	MCHLUPD-ALIAS-NAME-2I	PIC X(30).	MCHLUPDI
02	MCHLUPD-ALIAS-NAME-3L	PIC X.	MCHLUPDI
02	MCHLUPD-ALIAS-NAME-3I	PIC X(30).	MCHLUPDI
02	MCHLUPD-ALIAS-NAME-4L	PIC X.	MCHLUPDI
02	MCHLUPD-ALIAS-NAME-4I	PIC X(30).	MCHLUPDI
02	MCHLUPD-USER-NAME-1L	PIC X.	MCHLUPDI
02	MCHLUPD-USER-NAME-1I	PIC X(20).	MCHLUPDI
02	MCHLUPD-USER-NAME-2L	PIC X.	MCHLUPDI
02	MCHLUPD-USER-NAME-2I	PIC X(20).	MCHLUPDI
02	MCHLUPD-USER-NAME-3L	PIC X.	MCHLUPDI
02	MCHLUPD-USER-NAME-3I	PIC X(16).	MCHLUPDI
02	MCHLUPD-USER-NAME-4L	PIC X.	MCHLUPDI
02	MCHLUPD-USER-NAME-4I	PIC X(20).	MCHLUPDI
02	MCHLUPD-USER-NAME-5L	PIC X.	MCHLUPDI
02	MCHLUPD-USER-NAME-5I	PIC X(20).	MCHLUPDI
02	MCHLUPD-USER-NAME-6L	PIC X.	MCHLUPDI
02	MCHLUPD-USER-NAME-6I	PIC X(16).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-1L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-1I	PIC X(10).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-2L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-2I	PIC X(10).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-3L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-3I	PIC X(10).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-4L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-4I	PIC X(10).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-5L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-5I	PIC X(10).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-6L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-6I	PIC X(10).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-7L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-7I	PIC X(10).	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-8L	PIC X.	MCHLUPDI
02	MCHLUPD-PROGRAM-USED-8I	PIC X(10).	MCHLUPDI
02	MCHLUPD-FILE-USED-1L	PIC X.	MCHLUPDI
02	MCHLUPD-FILE-USED-1I	PIC X(20).	MCHLUPDI
02	MCHLUPD-FILE-USED-2L	PIC X.	MCHLUPDI
02	MCHLUPD-FILE-USED-2I	PIC X(20).	MCHLUPDI
02	MCHLUPD-FILE-USED-3L	PIC X.	MCHLUPDI
02	MCHLUPD-FILE-USED-3I	PIC X(20).	MCHLUPDI
02	MCHLUPD-FILE-USED-4L	PIC X.	MCHLUPDI
02	MCHLUPD-FILE-USED-4I	PIC X(20).	MCHLUPDI

EXAMPLE 3 - UPDATE TRANSACTION

COBOL - OUTPUT STRUCTURE.

GENERATED BY:

LANGUAGE
MAPTYPE
EMBEDDED

COBOL
BOTH OR OUTPUT
BOTH, NONE, INPUT OR OUTPUT

01	MCHLUPDO.		MCHLUPD
02	MCHLUPDW	PIC X.	MCHLUPDO
02	FILLER	PIC X(4).	MCHLUPDO
02	MCHLUPD-TRANA	PIC X.	MCHLUPDO
02	MCHLUPD-TRANO	PIC X(4).	MCHLUPDO
02	FILLER	PIC X.	MCHLUPDO
02	MCHLUPD-FUNCA	PIC X.	MCHLUPDO
02	MCHLUPD-FUNCO	PIC XX.	MCHLUPDO
02	FILLER	PIC X.	MCHLUPDO
02	MCHLUPD-KEYA	PIC X.	MCHLUPDO
02	MCHLUPD-KEYO	PIC X(30).	MCHLUPDO
02	FILLER	PIC X(31).	MCHLUPDO
02	MCHLUPD-TEST-FLAGA	PIC X.	MCHLUPDO
02	MCHLUPD-TEST-FLAGO	PIC X(4).	MCHLUPDO
02	FILLER	PIC X.	MCHLUPDO
02	MCHLUPD-RDATEA	PIC X.	MCHLUPDO
02	MCHLUPD-RDATED	PIC X(8).	MCHLUPDO
02	FILLER	PIC X.	MCHLUPDO
02	MCHLUPD-RTIMEA	PIC X.	MCHLUPDO
02	MCHLUPD-RTIMEO	PIC X(8).	MCHLUPDO
02	FILLER	PIC X(32).	MCHLUPDO
02	MCHLUPD-CSECTA	PIC X.	MCHLUPDO
02	MCHLUPD-CSECTO	PIC X(8).	MCHLUPDO
02	FILLER	PIC X.	MCHLUPDO
02	MCHLUPD-VER-MODA	PIC X.	MCHLUPDO
02	MCHLUPD-VER-MODO	PIC 9.9.	MCHLUPDO
02	FILLER	PIC X(47).	MCHLUPDO
02	MCHLUPD-DATA-NAMEA	PIC X.	MCHLUPDO
02	MCHLUPD-DATA-NAMED	PIC X(29).	MCHLUPDO
02	FILLER	PIC X(19).	MCHLUPDO
02	MCHLUPD-CREATED-DATEA	PIC X.	MCHLUPDO
02	MCHLUPD-CREATED-DATED.		MCHLUPDO
03	MCHLUPD-CREATED-DATE-MMO	PIC XX.	MCHLUPDO
03	MCHLUPD-CREATED-DATE-SLASH-10	PIC X.	MCHLUPDO
03	MCHLUPD-CREATED-DATE-DDO	PIC XX.	MCHLUPDO
03	MCHLUPD-CREATED-DATE-SLASH-20	PIC X.	MCHLUPDO
03	MCHLUPD-CREATED-DATE-YYO	PIC XX.	MCHLUPDO
02	FILLER	PIC X(15).	MCHLUPDO
02	MCHLUPD-DATA-DESCA	PIC X.	MCHLUPDO
02	MCHLUPD-DATA-DESCO	PIC X(40).	MCHLUPDO
02	FILLER	PIC X(19).	MCHLUPDO
02	MCHLUPD-CHANGED-DATEA	PIC X.	MCHLUPDO
02	MCHLUPD-CHANGED-DATED.		MCHLUPDO
03	MCHLUPD-CHANGED-DATE-MMO	PIC XX.	MCHLUPDO
03	MCHLUPD-CHANGED-DATE-SLASH-10	PIC X.	MCHLUPDO
03	MCHLUPD-CHANGED-DATE-DDO	PIC XX.	MCHLUPDO
03	MCHLUPD-CHANGED-DATE-SLASH-20	PIC X.	MCHLUPDO
03	MCHLUPD-CHANGED-DATE-YYO	PIC XX.	MCHLUPDO
02	FILLER	PIC X(11).	MCHLUPDO

02	MCHLUPD-DATA-PICTUREA	PIC X.	MCHLUPDO
02	MCHLUPD-DATA-PICTUREO	PIC X(10).	MCHLUPDO
02	FILLER	PIC X(12).	MCHLUPDO
02	MCHLUPD-DATA-LEVELA	PIC X.	MCHLUPDO
02	MCHLUPD-DATA-LEVELO	PIC X(6).	MCHLUPDO
02	FILLER	PIC X(21).	MCHLUPDO
02	MCHLUPD-REVISED-PERSONA	PIC X.	MCHLUPDO
02	MCHLUPD-REVISED-PERSONO	PIC XXX.	MCHLUPDO
02	FILLER	PIC X(12).	MCHLUPDO
02	MCHLUPD-DATA-USAGEA	PIC X.	MCHLUPDO
02	MCHLUPD-DATA-USAGED	PIC X(15).	MCHLUPDO
02	FILLER	PIC X(14).	MCHLUPDO
02	MCHLUPD-DATA-JUSTIFYA	PIC X.	MCHLUPDO
02	MCHLUPD-DATA-JUSTIFYO	PIC X(6).	MCHLUPDO
02	FILLER	PIC X(22).	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-1A	PIC X.	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-1O	PIC X(30).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-2A	PIC X.	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-2O	PIC X(30).	MCHLUPDO
02	FILLER	PIC X(8).	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-3A	PIC X.	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-3O	PIC X(30).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-4A	PIC X.	MCHLUPDO
02	MCHLUPD-ALIAS-NAME-4O	PIC X(30).	MCHLUPDO
02	FILLER	PIC X(16).	MCHLUPDO
02	MCHLUPD-USER-NAME-1A	PIC X.	MCHLUPDO
02	MCHLUPD-USER-NAME-1O	PIC X(20).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-USER-NAME-2A	PIC X.	MCHLUPDO
02	MCHLUPD-USER-NAME-2O	PIC X(20).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-USER-NAME-3A	PIC X.	MCHLUPDO
02	MCHLUPD-USER-NAME-3O	PIC X(16).	MCHLUPDO
02	FILLER	PIC X(8).	MCHLUPDO
02	MCHLUPD-USER-NAME-4A	PIC X.	MCHLUPDO
02	MCHLUPD-USER-NAME-4O	PIC X(20).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-USER-NAME-5A	PIC X.	MCHLUPDO
02	MCHLUPD-USER-NAME-5O	PIC X(20).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-USER-NAME-6A	PIC X.	MCHLUPDO
02	MCHLUPD-USER-NAME-6O	PIC X(16).	MCHLUPDO
02	FILLER	PIC X(21).	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-1A	PIC X.	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-1O	PIC X(10).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-2A	PIC X.	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-2O	PIC X(10).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-3A	PIC X.	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-3O	PIC X(10).	MCHLUPDO
02	FILLER	PIC X(5).	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-4A	PIC X.	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-4O	PIC X(10).	MCHLUPDO
02	FILLER	PIC X(8).	MCHLUPDO
02	MCHLUPD-PROGRAM-USED-5A	PIC X.	MCHLUPDO

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02 MCHLUPD-PROGRAM-USED-50
02 FILLER
02 MCHLUPD-PROGRAM-USED-6A
02 MCHLUPD-PROGRAM-USED-60
02 FILLER
02 MCHLUPD-PROGRAM-USED-7A
02 MCHLUPD-PROGRAM-USED-70
02 FILLER
02 MCHLUPD-PROGRAM-USED-8A
02 MCHLUPD-PROGRAM-USED-80
02 FILLER
02 MCHLUPD-FILE-USED-1A
02 MCHLUPD-FILE-USED-10
02 FILLER
02 MCHLUPD-FILE-USED-2A
02 MCHLUPD-FILE-USED-20
02 FILLER
02 MCHLUPD-FILE-USED-3A
02 MCHLUPD-FILE-USED-30
02 FILLER
02 MCHLUPD-FILE-USED-4A
02 MCHLUPD-FILE-USED-40
02 FILLER
02 MCHLUPD-MESSAGEA
02 MCHLUPD-MESSAGEO
02 FILLER

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PIC X(10). MCHLUPDO
PIC X(5). MCHLUPDO
PIC X. MCHLUPDO
PIC X(10). MCHLUPDO
PIC X(5). MCHLUPDO
PIC X. MCHLUPDO
PIC X(10). MCHLUPDO
PIC X(5). MCHLUPDO
PIC X. MCHLUPDO
PIC X(10). MCHLUPDO
PIC X(21). MCHLUPDO
PIC X. MCHLUPDO
PIC X(20). MCHLUPDO
PIC X(5). MCHLUPDO
PIC X. MCHLUPDO
PIC X(20). MCHLUPDO
PIC X(8). MCHLUPDO
PIC X. MCHLUPDO
PIC X(20). MCHLUPDO
PIC X(5). MCHLUPDO
PIC X. MCHLUPDO
PIC X(20). MCHLUPDO
PIC X(6). MCHLUPDO
PIC X. MCHLUPDO
PIC X(49). MCHLUPDO
PIC X(6). MCHLUPDO

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EXAMPLE 4 - UPDATE TRANSACTION

COBOL - EMBEDDED INPUT CONTROL INFORMATION.

GENERATED BY:

	LANGUAGE MAPTYPE EMBEDDED	COBOL BOTH INPUT OR BOTH	
01 MCHLUPDC.			MCHLUPD
02 FILLER	PIC X(20) VALUE ' . A F I G'.		MCHLUPD
02 FILLER	PIC X(10) VALUE ', HX H'.		MCHLUPD
02 FILLER	PIC X VALUE QUOTE.		MCHLUPD
02 FILLER	PIC X(20) VALUE ' I7 I V .G'.		MCHLUPD
02 FILLER	PIC X(20) VALUE ' .R .7 <? (J'.		MCHLUPD
02 FILLER	PIC X(20) VALUE ' (* +/ X'.		MCHLUPD
02 FILLER	PIC X(20) VALUE ' " &- &7 J '.		MCHLUPD
02 FILLER	PIC X(20) VALUE ' K" L(L\$ LZ'.		MCHLUPD
02 FILLER	PIC X(20) VALUE ' M M) M, M9'.		MCHLUPD
02 FILLER	PIC X(20) VALUE ' 0? PG P" QP'.		MCHLUPD
02 FILLER	PIC X(03) VALUE ' '.		MCHLUPD

EXAMPLE 1 - DELETE TRANSACTION

COBOL - EMBEDDED OUTPUT DATA STREAM.

GENERATED BY:

	LANGUAGE	COBOL	
	MAPTYPE	BOTH OR OUTPUT	
	EMBEDDED	OUTPUT OR BOTH	
01 MCHLDEL.			MCHLDEL
02 FILLER	PIC X(20) VALUE 'C 9DDSO I H		MCHLDEL
02 FILLER	PIC X(20) VALUE '		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0 A>DATA DICT'		MCHLDEL
02 FILLER	PIC X(20) VALUE 'IGNARY SYSTEM BH 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0 0		MCHLDEL
02 FILLER	PIC X(06) VALUE ' 0 B'		MCHLDEL
02 FILLER	PIC X VALUE QUOTE.		MCHLDEL
02 FILLER	PIC X(20) VALUE 'KANSAS STATE UNIVERS'		MCHLDEL
02 FILLER	PIC X(20) VALUE 'ITY C 0 0		MCHLDEL
02 FILLER	PIC X(20) VALUE ' OMCHLUPD E- 8 E/-		MCHLDEL
02 FILLER	PIC X(20) VALUE '- DELETE --- 0 G-DAT'		MCHLDEL
02 FILLER	PIC X(20) VALUE 'A NAME: 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0		MCHLDEL
02 FILLER	PIC X(20) VALUE 'HQDATE CREATED: 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0 HODESCRIPTIO		MCHLDEL
02 FILLER	PIC X(20) VALUE 'N: 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0 IYDATE CHANGE		MCHLDEL
02 FILLER	PIC X(20) VALUE 'D: 8 0 PIC		MCHLDEL
02 FILLER	PIC X(20) VALUE 'TURE: 8 0		MCHLDEL
02 FILLER	PIC X(20) VALUE ' ;LEVLE: 8 0		MCHLDEL
02 FILLER	PIC X(20) VALUE '6REVISED PERSON: 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0 .KUSAGE: 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0 .>JUSTIF		MCHLDEL
02 FILLER	PIC X(20) VALUE 'Y: 8 0 <-ALIAS		MCHLDEL
02 FILLER	PIC X(20) VALUE 'NAME: <%1. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 02. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0		MCHLDEL
02 FILLER	PIC X(20) VALUE ' {23. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 04		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 0 FUS		MCHLDEL
02 FILLER	PIC X(20) VALUE 'ER: <1. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 02. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 03		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 8 0		MCHLDEL
02 FILLER	PIC X(20) VALUE ' %4. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 05. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 06. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' OPRD		MCHLDEL
02 FILLER	PIC X(20) VALUE 'GRAM USED: K21. 8		MCHLDEL
02 FILLER	PIC X(20) VALUE ' 02. 8		MCHLDEL

02	FILLER	PIC X(20) VALUE ' 03. 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE '04. 8	0 M<'.	MCHLDEL
02	FILLER	PIC X(20) VALUE '5. 8	06. 8'	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 07. 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 08. 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 0 NLFILE USED: 0%	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE '1. 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 02. 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 0 P23. 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 04. 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 0 - 8ARE YU R'	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE 'EADY TO DELETE THIS	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE 'DATA NAME? H 0 \$(	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE '(YES/NO) \$? 8	'.	MCHLDEL
02	FILLER	PIC X(20) VALUE ' 0 F '	'.	MCHLDEL
02	FILLER	PIC X(08) VALUE ' 0 F '	'.	MCHLDEL
01	MCHLDELP	PIC 9(4) COMP VALUE 01175.	'.	MCHLDEL

EXAMPLE 2 - DELETE TRANSACTION

COBOL - INPUT STRUCTURE.

GENERATED BY:

LANGUAGE
MAPTYPE
EMBEDDED

COBOL
BOTH
BOTH, NONE, INPUT OR OUTPUT

01	MCHLDEL I.			MCHLDEL
02	MCHLDEL-TRANL	PIC X.		MCHLDEL I
02	MCHLDEL-TRANI	PIC X(4).		MCHLDEL I
02	MCHLDEL-FUNCL	PIC X.		MCHLDEL I
02	MCHLDEL-FUNCI	PIC XX.		MCHLDEL I
02	MCHLDEL-KEYL	PIC X.		MCHLDEL I
02	MCHLDEL-KEYI	PIC X(30).		MCHLDEL I
02	MCHLDEL-DELETE-FLAGL	PIC X.		MCHLDEL I
02	MCHLDEL-DELETE-FLAGI	PIC XXX.		MCHLDEL I

EXAMPLE 3 - DELETE TRANSACTION

COBOL - OUTPUT STRUCTURE.

GENERATED BY:

LANGUAGE
MAPTYPE
EMBEDDED

COBOL
BOTH OR OUTPUT
BOTH, NONE, INPUT OR OUTPUT

01	MCHLDELO.		MCHLDEL
02	MCHLDELW	PIC X.	MCHLDELO
02	FILLER	PIC X(4).	MCHLDELO
02	MCHLDEL-TRANA	PIC X.	MCHLDELO
02	MCHLDEL-TRANO	PIC X(4).	MCHLDELO
02	FILLER	PIC X.	MCHLDELO
02	MCHLDEL-FUNCA	PIC X.	MCHLDELO
02	MCHLDEL-FUNCO	PIC XX.	MCHLDELO
02	FILLER	PIC X.	MCHLDELO
02	MCHLDEL-KEYA	PIC X.	MCHLDELO
02	MCHLDEL-KEYO	PIC X(30).	MCHLDELO
02	FILLER	PIC X(31).	MCHLDELO
02	MCHLDEL-TEST-FLAGA	PIC X.	MCHLDELO
02	MCHLDEL-TEST-FLAGO	PIC X(4).	MCHLDELO
02	FILLER	PIC X.	MCHLDELO
02	MCHLDEL-RDATEA	PIC X.	MCHLDELO
02	MCHLDEL-RDATEO	PIC X(8).	MCHLDELO
02	FILLER	PIC X.	MCHLDELO
02	MCHLDEL-RTIMEA	PIC X.	MCHLDELO
02	MCHLDEL-RTIMEO	PIC X(8).	MCHLDELO
02	FILLER	PIC X(32).	MCHLDELO
02	MCHLDEL-CSECTA	PIC X.	MCHLDELO
02	MCHLDEL-CSECTO	PIC X(8).	MCHLDELO
02	FILLER	PIC X.	MCHLDELO
02	MCHLDEL-VER-MODA	PIC X.	MCHLDELO
02	MCHLDEL-VER-MODO	PIC 9.9.	MCHLDELO
02	FILLER	PIC X(47).	MCHLDELO
02	MCHLDEL-DATA-NAMEA	PIC X.	MCHLDELO
02	MCHLDEL-DATA-NAMEO	PIC X(28).	MCHLDELO
02	FILLER	PIC X(19).	MCHLDELO
02	MCHLDEL-CREATED-DATEA	PIC X.	MCHLDELO
02	MCHLDEL-CREATED-DATED.		MCHLDELO
03	MCHLDEL-CREATED-DATE-MMO	PIC XX.	MCHLDELO
03	MCHLDEL-CREATED-DATE-SLASH-10	PIC X.	MCHLDELO
03	MCHLDEL-CREATED-DATE-DDO	PIC XX.	MCHLDELO
03	MCHLDEL-CREATED-DATE-SLASH-20	PIC X.	MCHLDELO
03	MCHLDEL-CREATED-DATE-YYO	PIC XX.	MCHLDELO
02	FILLER	PIC X(18).	MCHLDELO
02	MCHLDEL-DATA-DESCA	PIC X.	MCHLDELO
02	MCHLDEL-DATA-DESCO	PIC X(40).	MCHLDELO
02	FILLER	PIC X(19).	MCHLDELO
02	MCHLDEL-CHANGED-DATEA	PIC X.	MCHLDELO
02	MCHLDEL-CHANGED-DATED.		MCHLDELO
03	MCHLDEL-CHANGED-DATE-MMO	PIC XX.	MCHLDELO
03	MCHLDEL-CHANGED-DATE-SLASH-10	PIC X.	MCHLDELO
03	MCHLDEL-CHANGED-DATE-DDO	PIC XX.	MCHLDELO
03	MCHLDEL-CHANGED-DATE-SLASH-20	PIC X.	MCHLDELO
03	MCHLDEL-CHANGED-DATE-YYO	PIC XX.	MCHLDELO
02	FILLER	PIC X(14).	MCHLDELO
02	MCHLDEL-DATA-PICTUREA	PIC X.	MCHLDELO

02 MCHLDEL-DATA-PICTURED
 02 FILLER
 02 MCHLDEL-DATA-LEVEL A
 02 MCHLDEL-DATA-LEVEL O
 02 FILLER
 02 MCHLDEL-REVISED-PERSONA
 02 MCHLDEL-REVISED-PERSONO
 02 FILLER
 02 MCHLDEL-DATA-USAGEA
 02 MCHLDEL-DATA-USAGED
 02 FILLER
 02 MCHLDEL-DATA-JUSTIFYA
 02 MCHLDEL-DATA-JUSTIFYO
 02 FILLER
 02 MCHLDEL-ALIAS-NAME-1A
 02 MCHLDEL-ALIAS-NAME-1O
 02 FILLER
 02 MCHLDEL-ALIAS-NAME-2A
 02 MCHLDEL-ALIAS-NAME-2O
 02 FILLER
 02 MCHLDEL-ALIAS-NAME-3A
 02 MCHLDEL-ALIAS-NAME-3O
 02 FILLER
 02 MCHLDEL-ALIAS-NAME-4A
 02 MCHLDEL-ALIAS-NAME-4O
 02 FILLER
 02 MCHLDEL-USER-NAME-1A
 02 MCHLDEL-USER-NAME-1O
 02 FILLER
 02 MCHLDEL-USER-NAME-2A
 02 MCHLDEL-USER-NAME-2O
 02 FILLER
 02 MCHLDEL-USER-NAME-3A
 02 MCHLDEL-USER-NAME-3O
 02 FILLER
 02 MCHLDEL-USER-NAME-4A
 02 MCHLDEL-USER-NAME-4O
 02 FILLER
 02 MCHLDEL-USER-NAME-5A
 02 MCHLDEL-USER-NAME-5O
 02 FILLER
 02 MCHLDEL-USER-NAME-6A
 02 MCHLDEL-USER-NAME-6O
 02 FILLER
 02 MCHLDEL-PROGRAM-USED-1A
 02 MCHLDEL-PROGRAM-USED-1O
 02 FILLER
 02 MCHLDEL-PROGRAM-USED-2A
 02 MCHLDEL-PROGRAM-USED-2O
 02 FILLER
 02 MCHLDEL-PROGRAM-USED-3A
 02 MCHLDEL-PROGRAM-USED-3O
 02 FILLER
 02 MCHLDEL-PROGRAM-USED-4A
 02 MCHLDEL-PROGRAM-USED-4O
 02 FILLER
 02 MCHLDEL-PROGRAM-USED-5A
 02 MCHLDEL-PROGRAM-USED-5O

PIC X(10). MCHLDELO
 PIC X(12). MCHLDELO
 PIC X. MCHLDELO
 PIC X(6). MCHLDELO
 PIC X(21). MCHLDELO
 PIC X. MCHLDELO
 PIC XXX. MCHLDELO
 PIC X(12). MCHLDELO
 PIC X. MCHLDELO
 PIC X(15). MCHLDELO
 PIC X(14). MCHLDELO
 PIC X. MCHLDELO
 PIC X(5). MCHLDELO
 PIC X(22). MCHLDELO
 PIC X. MCHLDELO
 PIC X(30). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(30). MCHLDELO
 PIC X(8). MCHLDELO
 PIC X. MCHLDELO
 PIC X(30). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(30). MCHLDELO
 PIC X(16). MCHLDELO
 PIC X. MCHLDELO
 PIC X(20). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(20). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(16). MCHLDELO
 PIC X(8). MCHLDELO
 PIC X. MCHLDELO
 PIC X(20). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(20). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(16). MCHLDELO
 PIC X(21). MCHLDELO
 PIC X. MCHLDELO
 PIC X(10). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(10). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(10). MCHLDELO
 PIC X(5). MCHLDELO
 PIC X. MCHLDELO
 PIC X(10). MCHLDELO
 PIC X(8). MCHLDELO
 PIC X. MCHLDELO
 PIC X(10). MCHLDELO

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02 FILLER
02 MCHLDEL-PROGRAM-USED-6A
02 MCHLDEL-PROGRAM-USED-60
02 FILLER
02 MCHLDEL-PROGRAM-USED-7A
02 MCHLDEL-PROGRAM-USED-70
02 FILLER
02 MCHLDEL-PROGRAM-USED-8A
02 MCHLDEL-PROGRAM-USED-80
02 FILLER
02 MCHLDEL-FILE-USED-1A
02 MCHLDEL-FILE-USED-10
02 FILLER
02 MCHLDEL-FILE-USED-2A
02 MCHLDEL-FILE-USED-20
02 FILLER
02 MCHLDEL-FILE-USED-3A
02 MCHLDEL-FILE-USED-30
02 FILLER
02 MCHLDEL-FILE-USED-4A
02 MCHLDEL-FILE-USED-40
02 FILLER
02 MCHLDEL-DELETE-FLAGA
02 MCHLDEL-DELETE-FLAG0
02 FILLER
02 MCHLDEL-MESSAGEA
02 MCHLDEL-MESSAGE0
02 FILLER

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PIC X(5). MCHLDELO
PIC X. MCHLDELO
PIC X(10). MCHLDELO
PIC X(5). MCHLDELO
PIC X. MCHLDELO
PIC X(10). MCHLDELO
PIC X(5). MCHLDELO
PIC X. MCHLDELO
PIC X(10). MCHLDELO
PIC X(21). MCHLDELO
PIC X. MCHLDELO
PIC X(20). MCHLDELO
PIC X(5). MCHLDELO
PIC X. MCHLDELO
PIC X(20). MCHLDELO
PIC X(8). MCHLDELO
PIC X. MCHLDELO
PIC X(20). MCHLDELO
PIC X(5). MCHLDELO
PIC X. MCHLDELO
PIC X(20). MCHLDELO
PIC X(46). MCHLDELO
PIC X. MCHLDELO
PIC XXX. MCHLDELO
PIC X(17). MCHLDELO
PIC X. MCHLDELO
PIC X(49). MCHLDELO
PIC X(6). MCHLDELO

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EXAMPLE 4 - DELETE TRANSACTION

COBOL - EMBEDDED INPUT CONTROL INFORMATION.

GENERATED BY:

	LANGUAGE	COBOL	
	MAPTYPE	BOTH	
	EMBEDDED	INPUT OR BOTH	
01 MCHLDELC.			MCHLDEL
02 FILLER	PIC X(20) VALUE ' A F I \$'.		MCHLDEL
02 FILLER	PIC X(04) VALUE 'H '.		MCHLDEL

COBOL - EMBEDDED OUTPUT DATA STREAM.

LANGUAGE	COBOL
MAPTYPE	BOTH OR OUTPUT
EMBEDDED	OUTPUT OR BOTH

[illegible]

EXAMPLE 2 - CROSS REFERENCE TRANSACTION

COBOL - INPUT STRUCTURE.

GENERATED BY:	LANGUAGE	COBOL
	MAPTYPE	BOTH
	EMBEDDED	BOTH, NONE, INPUT OR OUTPUT

01	MCHLXREI.		MCHLXRE
02	MCHLXRE-TRANL	PIC X.	MCHLXREI
02	MCHLXRE-TRANI	PIC X(4).	MCHLXREI
02	MCHLXRE-FUNCL	PIC X.	MCHLXREI
02	MCHLXRE-FUNCI	PIC XX.	MCHLXREI
02	MCHLXRE-KEYL	PIC X.	MCHLXREI
02	MCHLXRE-KEYI	PIC X(30).	MCHLXREI

EXAMPLE 3 - CROSS REFERENCE TRANSACTION

COBOL - OUTPUT STRUCTURE.

GENERATED BY:	LANGUAGE	COBOL
	MAPTYPE	BOTH OR OUTPUT
	EMBEDDED	BOTH, NONE, INPUT OR OUTPUT

01	MCHLXREO.		MCHLXRE
02	MCHLXREW	PIC X.	MCHLXREO
02	FILLER	PIC X(4).	MCHLXREO
02	MCHLXRE-TRANA	PIC X.	MCHLXREO
02	MCHLXRE-TRANO	PIC X(4).	MCHLXREO
02	FILLER	PIC X.	MCHLXREO
02	MCHLXRE-FUNCA	PIC X.	MCHLXREO
02	MCHLXRE-FUNCO	PIC XX.	MCHLXREO
02	FILLER	PIC X.	MCHLXREO
02	MCHLXRE-KEYA	PIC X.	MCHLXREO
02	MCHLXRE-KEYO	PIC X(30).	MCHLXREO
02	FILLER	PIC X(31).	MCHLXREO
02	MCHLXRE-TEST-FLAGA	PIC X.	MCHLXREO
02	MCHLXRE-TEST-FLAGO	PIC X(4).	MCHLXREO
02	FILLER	PIC X.	MCHLXREO
02	MCHLXRE-RDATEA	PIC X.	MCHLXREO
02	MCHLXRE-RDATEO	PIC X(8).	MCHLXREO
02	FILLER	PIC X.	MCHLXREO
02	MCHLXRE-RTIMEA	PIC X.	MCHLXREO
02	MCHLXRE-RTIMEO	PIC X(8).	MCHLXREO
02	FILLER	PIC X(32).	MCHLXREO
02	MCHLXRE-CSECTA	PIC X.	MCHLXREO
02	MCHLXRE-CSECTO	PIC X(8).	MCHLXREO
02	FILLER	PIC X.	MCHLXREO
02	MCHLXRE-VER-MODA	PIC X.	MCHLXREO
02	MCHLXRE-VER-MODO	PIC 9.9.	MCHLXREO
02	FILLER	PIC X(108).	MCHLXREO
02	MCHLXRE-MATRIXA	PIC X.	MCHLXREO
02	MCHLXRE-MATRIXO	PIC X(1120).	MCHLXREO
02	FILLER	PIC X.	MCHLXREO
02	MCHLXRE-MATRIX-ENDA	PIC X.	MCHLXREO
02	MCHLXRE-MATRIX-ENDO	PIC X.	MCHLXREO
02	FILLER	PIC X(6).	MCHLXREO
02	MCHLXRE-MESSAGEA	PIC X.	MCHLXREO
02	MCHLXRE-MESSAGEO	PIC X(48).	MCHLXREO
02	FILLER	PIC X(27).	MCHLXREO

EXAMPLE 4 - CROSS REFERENCE TRANSACTION

COBOL - EMBEDDED INPUT CONTROL INFORMATION.

GENERATED BY:

	LANGUAGE	COBOL	
	MAPTYPE	BOTH	
	EMBEDDED	INPUT OR BOTH	
01 MCHLXREC.			MCHLXRE
02 FILLER	PIC X(19) VALUE ' A F I '.		MCHLXRE

Appendix F

Source Program

:

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SEQ. NO.	SOURCE STATEMENT	PAGE	2	11/20/82
000150	02 ITRMENTY REDEFINES ITRMSENS			
000160		PIC 9(9)	COMP SYNC.	
000170	02 ITRMVSAM REDEFINES ITRMSENS			
000180	04 ITRMVSMC	PIC X.		
000190	04 ITRMVSEC	PIC XX.		
000200	04 ITRMCBEC REDEFINES ITRMVSEC			
000210		PIC XX.		
000220	04 ITRMVSR	PIC X.		
000230	02 ITRMACRO	PIC X.		
000240	02 ITRMSGON	PIC XXX.		
000250	02 ITRMECBX	PIC 9(9)	COMP SYNC.	
000260	02 ITRMEXTN	PIC 9(9)	COMP SYNC.	
000270	02 ITRMIOAR	PIC 9(9)	COMP SYNC.	
000280	02 ITRMPROG	PIC 9(9)	COMP SYNC.	
000290	02 ITRMREPL	PIC X(4).		
000300	02 ITRMFLGS	PIC 9(4)	COMP SYNC.	
000310	02 ITRMLEN	PIC 9(4)	COMP SYNC.	
000320	02 ITRMSAVE	PIC X(72).		
000330	02 ITRMHAND	PIC X.		
000340	02 ITRMCALP	PIC XXX.		
000350	02 ITRNTRAN	PIC X(4).		
000360	* USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER	PIC X(512).		CHLTWAEX
000040	02 TWA-USER	REDEFINES TWA-C2.		CHLTWAEX
000050	03 TWA-TRAN-CODE	PIC X(4).		CHLTWAEX
000060	03 TWA-CURRENT-PROG-NAME			CHLTWAEX
000070		PIC X(8).		CHLTWAEX
000080	03 TWA-PROGRAM-FLAGS	PIC X(8).		CHLTWAEX
000090	03 TWA-MAP-PTR	PIC X(4).		CHLTWAEX
000100	03 TWA-MAPC-PTR	PIC X(4).		CHLTWAEX
000110	03 TWA-NEXT-PROG-NAME	PIC X(8).		CHLTWAEX
000120	03 TWA-NEXT-TRAN-CODE	PIC X(4).		CHLTWAEX
000130	03 TWA-DBKEY	PIC X(4).		CHLTWAEX
000140	03 TWA-DBKEY-9	REDEFINES TWA-DBKEY		CHLTWAEX
000150		PIC 9(9)	COMP SYNC.	CHLTWAEX
000160	03 TWA-DBKEY-2	PIC X(4).		CHLTWAEX
000170	03 TWA-DBKEY-2-9	REDEFINES TWA-DBKEY-2		CHLTWAEX
000180		PIC 9(9)	COMP SYNC.	CHLTWAEX
000190	03 TWA-DBKEY-3	PIC X(4).		CHLTWAEX
000200	03 TWA-DBKEY-3-9	REDEFINES TWA-DBKEY-3		CHLTWAEX
000210		PIC 9(9)	COMP SYNC.	CHLTWAEX
000220	03 TWA-DISK-DATE.			CHLTWAEX
000230	05 TWA-DISK-ACQUIRED-FLAG			CHLTWAEX
000240		PIC X.		CHLTWAEX
000250	88 TWA-DISK-NOT-ACQUIRED	VALUE LOW-VALUES.		CHLTWAEX
000260	88 TWA-DISK-ACQUIRED	VALUE HIGH-VALUES.		CHLTWAEX
000270	05 TWA-DISK-NO-ACQUIRED			CHLTWAEX
000280		PIC 9(3)	COMP.	CHLTWAEX
000290	03 TWA-TEST-PRODUCTION-FLAG	PIC X.		CHLTWAEX
000300				CHLTWAEX
000310	88 TWA-PRODUCTION-RUN	VALUE LOW-VALUES.		CHLTWAEX
000320	88 TWA-TEST-RUN	VALUE '1'.		CHLTWAEX
000330	03 TWA-SIS-TERM-CODE.			CHLTWAEX
000340	05 TWA-SIS-TERM-SEMESTER			CHLTWAEX
000350		PIC X.		CHLTWAEX
000360	05 TWA-SIS-TERM-YEAR			CHLTWAEX
000370		PIC XX.		CHLTWAEX
000380	03 TWA-SIS-SUBSYSTEM-CODE			CHLTWAEX
000390		PIC X(4).		CHLTWAEX
000400	03 TWA-SEC-ACCESS-CODE	PIC X.		CHLTWAEX
000410	88 TWA-SEC-ACCESS-IS-INQUIRY	VALUE '1'.		CHLTWAEX
000420	88 TWA-SEC-ACCESS-IS-UPDATE	VALUE '0'.		CHLTWAEX
000430	03 TWA-SEC-ACCESS-DEPT	PIC XXX.		CHLTWAEX
000440	03 TWA-ITRMERRP-SAVE	PIC X.		CHLTWAEX
000450	03 FILLER	PIC X(12).		CHLTWAEX
000300	03 TWA-DD-AREA.			
000310	05 TWA-FUNC	PIC XX.		
000320	05 TWA-CATA-NAME	PIC X(30).		
000330	05 FILLER	PIC X(20).		
000340				
000010	01 RELOCATE.			SHDSPTEX
000020	02 FILLER	PIC X(12).		SHDSPTEX
000030	02 RSHDPCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000040	02 FILLER	PIC X(32).		SHDSPTEX
000050	02 RSHDCSA	PIC 9(9)	COMP SYNC.	SHDSPTEX
000060	02 FILLER	PIC X(24).		SHDSPTEX

SEQ. NO.	SOURCE STATEMENT	PAGE	3	11/20/82
000070	02 RSHDCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000080	02 FILLER	PIC X(100).		SHDSPTEX
000090	02 RSHDLOW	PIC 9(9)	COMP SYNC.	SHDSPTEX
000100	02 RSHDHIGH	PIC 9(9)	COMP SYNC.	SHDSPTEX
000110	02 FILLER	PIC X(68).		SHDSPTEX
000120	02 RSHDIVAR	PIC 9(9)	COMP SYNC.	SHDSPTEX
000130	02 FILLER	PIC X(4).		SHDSPTEX
000140	02 RSHDFREE	PIC 9(9)	COMP SYNC.	SHDSPTEX
000150	02 FILLER	PIC X(48).		SHDSPTEX
000160	02 RSHDICT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000170	02 FILLER	PIC X(40).		SHDSPTEX
000180 *	USER AREA STARTS HERE.			SHDSPTEX
000190	02 SPT-REST-OF-SPT.			SHDSPTEX
000200	03 SPT-TEST-PRODUCTION-FLAG	PIC X.		SHDSPTEX
000210				SHDSPTEX
000220	88 SPT-PRODUCTION-RUN		VALUE LOW-VALUES.	SHDSPTEX
000230	88 SPT-TEST-RUN		VALUE 'T'.	SHDSPTEX
000240	03 FILLER	PIC X.		01/22/82
000250	03 FILLER	PIC X(300).		01/22/82
000260	03 FILLER	PIC XX.		01/22/82
000270	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
000280	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
000290	03 FILLER	PIC X(8).		01/22/82
000300	03 SPT-NQ3-ECB	PIC XXXX.		01/22/82
000310	03 SPT-NQ4-ECB	PIC XXXX.		06/02/82
000320	03 SPT-PRT1-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000330				06/08/82
000340	03 SPT-PRT2-BUFFER-POOL-POINTER			06/08/82
000350		PIC S9(9)	COMP SYNC.	06/08/82
000360	03 SPT-PRT3-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000370				06/08/82
000380	03 SPT-PRT4-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000390				06/08/82
000400	03 SPT-PRT5-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000410				06/08/82
000420	03 SPT-PRT6-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000430				06/08/82
000440	03 SPT-PRT7-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000450				06/08/82
000460	03 SPT-PRT8-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000470				SHDSPTEX
000480				
000360				
000010	01 MCHLMENO.			MCHLMEN
000020	02 MCHLMENW	PIC X.		MCHLMENO
000030	02 FILLER	PIC X(4).		MCHLMENO
000040	02 MCHLMEN-TRANA	PIC X.		MCHLMENO
000050	02 MCHLMEN-TRANQ	PIC X(4).		MCHLMENO
000060	02 FILLER	PIC X.		MCHLMENO
000070	02 MCHLMEN-FUNCA	PIC X.		MCHLMENO
000080	02 MCHLMEN-FUNCO	PIC XX.		MCHLMENC
000090	02 FILLER	PIC X.		MCHLMENC
000100	02 MCHLMEN-KEYA	PIC X.		MCHLMENO
000110	02 MCHLMEN-KEYO	PIC X(30).		MCHLMENO
000120	02 FILLER	PIC X(31).		MCHLMENO
000130	02 MCHLMEN-TEST-FLAGA	PIC X.		MCHLMENO
000140	02 MCHLMEN-TEST-FLAGO	PIC X(4).		MCHLMENC
000150	02 FILLER	PIC X.		MCHLMENC
000160	02 MCHLMEN-RDATEA	PIC X.		MCHLMENO
000170	02 MCHLMEN-RDATEO	PIC X(8).		MCHLMENO
000180	02 FILLER	PIC X.		MCHLMENO
000190	02 MCHLMEN-RTIMEA	PIC X.		MCHLMENO
000200	02 MCHLMEN-RTIMEO	PIC X(8).		MCHLMENO
000210	02 FILLER	PIC X(32).		MCHLMENO
000220	02 MCHLMEN-CSECTA	PIC X.		MCHLMENO
000230	02 MCHLMEN-CSECTO	PIC X(8).		MCHLMENO
000240	02 FILLER	PIC X.		MCHLMENO
000250	02 MCHLMEN-VER-MODA	PIC X.		MCHLMENO
000260	02 MCHLMEN-VER-MODO	PIC 9.9.		MCHLMENO
000270	02 FILLER	PIC X(203).		MCHLMENO
000280	02 MCHLMEN-MESSA	PIC X.		MCHLMENO
000290	02 MCHLMEN-MESSC	PIC X(62).		MCHLMENO
000300	02 FILLER	PIC X(6).		MCHLMENO
000380				
000390	PROCEDURE DIVISION USING TC8C, RELOCATE.			
000400				
000410	MOVE CSECT TC TWA-CURRENT-PROG-NAME.			

SEQ. NO.	SOURCE STATEMENT	PAGE	4	11/20/82
000420	MOVE TRAN-CODE TO TWA-TRAN-CODE			
000430	MOVE ROUTING-TRAN-CODE TO TWA-NEXT-TRAN-CODE.			
000440 *	PUT ADDRESS OF MCHLMEN INTO TWA-MAP-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MCHLMEN.			
000450 *	PREPARE MAP MCHLMEN			
000460 *	MAP-PTR IS TWA-MAP-PTR			
000470 *	SIZE IS MCHLMENP. CALL 'ISHDHLMP' USING TWA-MAP-PTR ISHD-XE2 ISHD-H3 MCHLMENP			
	SERVICE RELOAD MCHLMENP.			
000480	MOVE CSECT TO MCHLMEN-CSECTO.			
000490	MOVE VER-MOD TO MCHLMEN-VER-MODO.			
000500	MOVE CURRENT-DATE TO MCHLMEN-RDATEO.			
000510	CALL 'KSRIME' USING MCHLMEN-RTIMEO, H1.			
000520	IF TWA-TEST-RUN			
000530	OR SPT-TEST-RUN			
000540	MOVE 'TEST' TO MCHLMEN-TEST-FLAGO.			
000550 *	ERASE-WRITE MAP MCHLMEN IN BUFFER. CALL 'ISHDHLMP' USING ISHD-X05 MCHLMENO ISHD-XF0 ISHD-X00 ISHD-XD6 ISHD-X00 ISHD-X00.			
000560	MOVE SPACES TO TWA-DO-AREA.			
000570 *	RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CLDE AFTER-READ. CALL 'ISHDHLRT' USING ISHD-XA0 TWA-NEXT-TRAN-CODE.			
000580	GOBACK.			
000590				

SEQ. NO.	SOURCE STATEMENT	PAGE	1	11/22/82
000010	IDENTIFICATION DIVISION.			
000020	PROGRAM-ID.	OLDD0020.		
000030	AUTHOR.	TONY LAI.		
000040	INSTALLATION.	KSU DATA PROCESSING CENTER		
000050		KANSAS STATE UNIVERSITY		
000060		MANHATTAN, KANSAS 66506.		
000070	DATE-WRITTEN.	11/82.		
000080	DATE-COMPILED.	NOVEMBER 22, 1982 AT 1.44 PM.		
000090	REMARKS.			
000100	OLDD0020 - ROUTING MODULE FOR DATA DICTIONARY SYSTEM.			
000110				
000120	MODIFICATIONS AND CORRECTIONS -			
000130	NONE AS OF 11/82.			
000140				
000150	ENVIRONMENT DIVISION.			
000160				
000170	DATA DIVISION.			
000180	WORKING-STORAGE SECTION.			
000190	77 CSECT	PIC X(8)	VALUE 'OLDD0020'.	
000200	77 VER-MOD	PIC 9V9	VALUE	
000210		1.0.		
000220	77 TRAN-CODE	PIC X(4)	VALUE 'DDRT'.	
000230	77 H1	PIC S999	VALUE +1 COMP SYNC.	
000240				
000250				
000010	01 MCHLTOPC.			MCHLTOP
000020	02 FILLER	PIC X(19)	VALUE ' A F I '.	MCHLTOP
000030				
000040	01 MCHLTOP.			MCHLTOP
000050	02 FILLER	PIC X(20)	VALUE 'C 9DDSO I I '.	MCHLTOP
000060	02 FILLER	PIC X(20)	VALUE ' '.	MCHLTOP
000070	02 FILLER	PIC X(20)	VALUE ' 0 CYNCHLTOP '.	MCHLTOP
000080	02 FILLER	PIC X(20)	VALUE 'F '.	MCHLTOP
000090	01 MCHLTOPP	PIC 9(4)	COMP VALUE 00062.	MCHLTOP
000100				
000110	01 MAPERR.			MAPERR
000120	02 FILLER	PIC X(20)	VALUE '8 \$- 8 '.	MAPERR
000130	02 FILLER	PIC X(20)	VALUE '8 0 \$7 8 '.	MAPERR
000140	02 FILLER	PIC X(20)	VALUE ' '.	MAPERR
000150	02 FILLER	PIC X(20)	VALUE ' '.	MAPERR
000160	02 FILLER	PIC X(20)	VALUE '8 '.	MAPERR
000170	02 FILLER	PIC X(20)	VALUE '8 8 '.	MAPERR
000180	02 FILLER	PIC X(20)	VALUE '8 8 '.	MAPERR
000190	02 FILLER	PIC X(20)	VALUE '8 8 '.	MAPERR
000200	02 FILLER	PIC X(20)	VALUE '0 1= 0 1= '.	MAPERR
000210	01 MAPERRP	PIC 9(4)	COMP VALUE 00174.	MAPERR
000220				
000230	01 DFHAID.			DFHAID
000240	**** DFHAID **** -INC KEY3270 ****			DFHAID
000010	03 ENTERK	PIC X	VALUE QUOTE.	KEY3270
000020	03 PF1	PIC X	VALUE '1'.	KEY3270
000030	03 PF2	PIC X	VALUE '2'.	KEY3270
000040	03 PF3	PIC X	VALUE '3'.	KEY3270
000050	03 PF4	PIC X	VALUE '4'.	KEY3270
000060	03 PF5	PIC X	VALUE '5'.	KEY3270
000070	03 PF6	PIC X	VALUE '6'.	KEY3270
000080	03 PF7	PIC X	VALUE '7'.	KEY3270
000090	03 PF8	PIC X	VALUE '8'.	KEY3270
000100	03 PF9	PIC X	VALUE '9'.	KEY3270
000110	03 PF10	PIC X	VALUE '10'.	KEY3270
000120	03 PF11	PIC X	VALUE '11'.	KEY3270
000130	03 PF12	PIC X	VALUE '12'.	KEY3270
000140	03 IMMDECT	PIC X	VALUE '13'.	KEY3270
000150	03 TESTREQ	PIC X	VALUE '14'.	KEY3270
000160	03 CLEAR	PIC X	VALUE '15'.	KEY3270
000170	03 PA1	PIC X	VALUE '16'.	KEY3270
000180	03 PA2	PIC X	VALUE '17'.	KEY3270
000190	03 PA3	PIC X	VALUE '18'.	KEY3270
000200	03 DFHENTER	PIC X	VALUE QUOTE.	DFHAID
000210	03 DFHCLEAR	PIC X	VALUE '19'.	DFHAID
000220	03 DFHPEN	PIC X	VALUE '20'.	DFHAID
000230	03 DFHPA1	PIC X	VALUE '21'.	DFHAID
000240	03 DFHPA2	PIC X	VALUE '22'.	DFHAID
000250	03 DFHPA3	PIC X	VALUE '23'.	DFHAID
000260	03 DFHPF1	PIC X	VALUE '24'.	DFHAID
000270	03 DFHPF2	PIC X	VALUE '25'.	DFHAID
000280	03 DFHPF3	PIC X	VALUE '26'.	DFHAID

SEQ. NO.	SOURCE STATEMENT	PAGE	2	11/22/82
000120	03 DFHPF4	PIC X	VALUE 14.	DFHAID
000130	03 DFHPF5	PIC X	VALUE 15.	DFHAID
000140	03 DFHPF6	PIC X	VALUE 16.	DFHAID
000150	03 DFHPF7	PIC X	VALUE 17.	DFHAID
000160	03 DFHPF8	PIC X	VALUE 18.	DFHAID
000170	03 DFHPF9	PIC X	VALUE 19.	DFHAID
000180	03 DFHPF10	PIC X	VALUE 20.	DFHAID
000190	03 DFHPF11	PIC X	VALUE 21.	DFHAID
000200	03 DFHPF12	PIC X	VALUE 22.	DFHAID
000340	01 ISHD-CONSTANTS.			
	02 ISHD-F0.			
	03 ISHD-H0	PIC X(2)	VALUE LOW-VALUES.	
	03 ISHD-X00	PIC X	VALUE LOW-VALUES.	
	03 FILLER	PIC X	VALUE LOW-VALUES.	
	02 ISHD-H5	PIC 9(4)	COMP SYNC VALUE 5.	
	02 ISHD-H4	PIC 9(4)	COMP SYNC VALUE 4.	
	02 ISHD-H3	PIC 9(4)	COMP SYNC VALUE 3.	
	02 ISHD-X01	PIC X	VALUE 1.	
	02 ISHD-X02	PIC X	VALUE 1.	
	02 ISHD-X80	PIC X	VALUE 1.	
	02 ISHD-XA0	PIC X	VALUE 1.	
	02 ISHD-XD6	PIC X	VALUE 0.	
	02 ISHD-XE2	PIC X	VALUE 0.	
	02 ISHD-XF0	PIC X	VALUE 0.	
	02 ISHD-XF1	PIC X	VALUE 1.	
000350	LINKAGE SECTION.			
000010	*01 TCBD		COPY TCBCOB.	CHLTWAEX
000010	01 TCBD.			
000020	02 ITRMQRID	PIC X(4).		
000030	02 ITRMUCBA	PIC 9(9)	COMP SYNC.	
000040	02 ITRMPCKA	PIC 9(9)	COMP SYNC.	
000050	02 ITRMSIZE	PIC 9(4)	COMP SYNC.	
000060	02 ITRMERRP	PIC X.		
000070	02 ITRMOPCD	PIC X.		
000080	02 ITRMPCKC	PIC X.		
000090	02 ITRMAID	PIC X.		
000100	02 ITRMCADD	PIC XX.		
000110	02 ITRMCADD-B REDEFINES ITRMCADD	PIC 9(4) COMP.		
000120	02 ITRMTYPE	PIC X.		
000130	02 ITRMNAME	PIC XXX.		
000140	02 ITRMSENS	PIC 9(9)	COMP SYNC.	
000150	02 ITRMENTY REDEFINES ITRMSENS	PIC 9(9) COMP SYNC.		
000160	02 ITRMVSAM REDEFINES ITRMSENS.	PIC X.		
000170	04 ITRMVSEC	PIC XX.		
000180	04 ITRMVSEC	PIC XX.		
000190	04 ITRMCBEC REDEFINES ITRMVSEC	PIC XX.		
000200	04 ITRMVSR	PIC X.		
000210	02 ITRMACRO	PIC X.		
000220	02 ITRMSGON	PIC XXX.		
000230	02 ITRMECBX	PIC 9(9)	COMP SYNC.	
000240	02 ITRMEXTN	PIC 9(9)	COMP SYNC.	
000250	02 ITRMIDAR	PIC 9(9)	COMP SYNC.	
000260	02 ITRMPROG	PIC 9(9)	COMP SYNC.	
000270	02 ITRMREPL	PIC X(4).		
000280	02 ITRMFLGS	PIC 9(4)	COMP SYNC.	
000290	02 ITRMFLGS	PIC 9(4)	COMP SYNC.	
000300	02 ITRMLEN	PIC X(72).		
000310	02 ITRMSAVE	PIC X.		
000320	02 ITRMHAND	PIC XXX.		
000330	02 ITRMCALP	PIC X(4).		
000340	02 ITRMTRAN			
000350	* USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER	PIC X(512).		CHLTWAEX
000040	02 TWA-USER	REDEFINES TWA-C2.		CHLTWAEX
000050	03 TWA-TRAN-CODE	PIC X(4).		CHLTWAEX
000060	03 TWA-CURRENT-PROG-NAME			CHLTWAEX
000070	03 TWA-PROGRAM-FLAGS	PIC X(8).		CHLTWAEX
000080	03 TWA-MAP-PTR	PIC X(4).		CHLTWAEX
000090	03 TWA-MAPC-PTR	PIC X(4).		CHLTWAEX
000100	03 TWA-NEXT-PROG-NAME	PIC X(8).		CHLTWAEX
000110	03 TWA-NEXT-TRAN-CODE	PIC X(4).		CHLTWAEX

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000130	03 TWA-DBKEY	PIC X(4).		CHLTWAEX
000140	03 TWA-DBKEY-9	REDEFINES TWA-DBKEY		CHLTWAEX
000150		PIC S9(9)	COMP SYNC.	CHLTWAEX
000160	03 TWA-DBKEY-2	PIC X(4).		CHLTWAEX
000170	03 TWA-DBKEY-2-9	REDEFINES TWA-DBKEY-2		CHLTWAEX
000180		PIC S9(9)	COMP SYNC.	CHLTWAEX
000190	03 TWA-DBKEY-3	PIC X(4).		CHLTWAEX
000200	03 TWA-DBKEY-3-9	REDEFINES TWA-DBKEY-3		CHLTWAEX
000210		PIC S9(9)	COMP SYNC.	CHLTWAEX
000220	03 TWA-DISKD-DATA.			CHLTWAEX
000230	05 TWA-DISKD-ACQUIRED-FLAG	PIC X.		CHLTWAEX
000240				CHLTWAEX
000250	88 TWA-DISKD-NOT-ACQUIRED	VALUE LOW-VALUES.		CHLTWAEX
000260	88 TWA-DISKD-ACQUIRED	VALUE HIGH-VALUES.		CHLTWAEX
000270	05 TWA-DISKD-NO-ACQUIRED			CHLTWAEX
000280		PIC S9(3)	COMP.	CHLTWAEX
000290	03 TWA-TEST-PRODUCTION-FLAG	PIC X.		CHLTWAEX
000300				CHLTWAEX
000310	88 TWA-PRODUCTION-RUN	VALUE LOW-VALUES.		CHLTWAEX
000320	88 TWA-TEST-RUN	VALUE 'T'.		CHLTWAEX
000330	03 TWA-SIS-TERM-CODE.			CHLTWAEX
000340	05 TWA-SIS-TERM-SEMESTER	PIC X.		CHLTWAEX
000350				CHLTWAEX
000360	05 TWA-SIS-TERM-YEAR	PIC XX.		CHLTWAEX
000370				CHLTWAEX
000380	03 TWA-SIS-SUBSYSTEM-CODE	PIC X(4).		CHLTWAEX
000390		PIC X.		CHLTWAEX
000400	03 TWA-SEC-ACCESS-CODE	PIC X.		CHLTWAEX
000410	88 TWA-SEC-ACCESS-IS-INQUIRY	VALUE 'I'.		CHLTWAEX
000420	88 TWA-SEC-ACCESS-IS-UPDATE	VALUE 'U'.		CHLTWAEX
000430	03 TWA-SEC-ACCESS-DEPT	PIC XXX.		CHLTWAEX
000440	03 TWA-ITRMERRP-SAVE	PIC X.		CHLTWAEX
000450	03 FILLER	PIC X(12).		CHLTWAEX
000370	03 TWA-DD-AREA.			
000380	05 TWA-FUNC	PIC XX.		
000390	05 TWA-DATA-NAME	PIC X(30).		
000400	05 FILLER	PIC X(20).		
000410	03 FILLER.			
000420	05 TWA-CLEAR-SW	PIC X(14).		
000430				
000010	01 RELOCATE.			SHDSPTEX
000020	02 FILLER	PIC X(12).		SHDSPTEX
000030	02 RSHDPCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000040	02 FILLER	PIC X(32).		SHDSPTEX
000050	02 RSHDCA	PIC 9(9)	COMP SYNC.	SHDSPTEX
000060	02 FILLER	PIC X(24).		SHDSPTEX
000070	02 RSHDOCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000080	02 FILLER	PIC X(100).		SHDSPTEX
000090	02 RSHDLOWH	PIC 9(9)	COMP SYNC.	SHDSPTEX
000100	02 RSHDHIGH	PIC 9(9)	COMP SYNC.	SHDSPTEX
000110	02 FILLER	PIC X(68).		SHDSPTEX
000120	02 RSHDIVAR	PIC 9(9)	COMP SYNC.	SHDSPTEX
000130	02 FILLER	PIC X(4).		SHDSPTEX
000140	02 RSHDFREE	PIC 9(9)	COMP SYNC.	SHDSPTEX
000150	02 FILLER	PIC X(48).		SHDSPTEX
000160	02 RSHDTCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000170	02 FILLER	PIC X(40).		SHDSPTEX
000180 *	02 USER AREA STARTS HERE.			SHDSPTEX
000190	02 SPT-REST-OF-SPT.			SHDSPTEX
000200	03 SPT-TEST-PRODUCTION-FLAG	PIC X.		SHDSPTEX
000210				SHDSPTEX
000220	88 SPT-PRODUCTION-RUN	VALUE LOW-VALUES.		SHDSPTEX
000230	88 SPT-TEST-RUN	VALUE 'T'.		SHDSPTEX
000240	03 FILLER	PIC X.		01/22/82
000250	03 FILLER	PIC X(300).		01/22/82
000260	03 FILLER	PIC XX.		01/22/82
000270	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
000280	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
000290	03 FILLER	PIC X(8).		01/22/82
000300	03 SPT-NQ3-ECB	PIC XXXX.		01/22/82
000310	03 SPT-NDQ-ECB	PIC XXXX.		06/02/82
000320	03 SPT-PRT1-BUFFER-POOL	-POINTER		06/08/82
000330		PIC S9(9)	COMP SYNC.	06/08/82
000340	03 SPT-PRT2-BUFFER-POOL	-POINTER		06/08/82
000350		PIC S9(9)	COMP SYNC.	06/08/82
000360	03 SPT-PRT3-BUFFER-POOL	-POINTER		06/08/82
000370		PIC S9(9)	COMP SYNC.	06/08/82

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000380	03 SPT-PRT4-BUFFER-POOL-POINTER			06/08/82
000390	PIC S9(9)	COMP SYNC.		06/08/82
000400	03 SPT-PRT5-BUFFER-POOL-POINTER			06/08/82
000410	PIC S9(9)	COMP SYNC.		06/08/82
000420	03 SPT-PRT6-BUFFER-POOL-POINTER			06/08/82
000430	PIC S9(9)	COMP SYNC.		06/08/82
000440	03 SPT-PRT7-BUFFER-POOL-POINTER			06/08/82
000450	PIC S9(9)	COMP SYNC.		06/08/82
000460	03 SPT-PRT8-BUFFER-POOL-POINTER			06/08/82
000470	PIC S9(9)	COMP SYNC.		06/08/82
000480				SHDSPTX
000490	01 TERMINAL-BUFFER	PIC X.		
000500	01 MCHLTOP.			MCHLTOP
000510	02 MCHLTOP-TRANL	PIC X.		MCHLTOP
000520	02 MCHLTOP-TRANI	PIC X(4).		MCHLTOP
000530	02 MCHLTOP-FUNCL	PIC X.		MCHLTOP
000540	02 MCHLTOP-FUNCI	PIC XX.		MCHLTOP
000550	02 MCHLTOP-KEYL	PIC X.		MCHLTOP
000560	02 MCHLTOP-KEYI	PIC X(30).		MCHLTOP
000570	01 MAPERRO.			MAPERRO
000580	02 MAPERRW	PIC X.		MAPERRO
000590	02 FILLER	PIC X(4).		MAPERRO
000600	02 MAPERR-CSECTA	PIC X.		MAPERRO
000610	02 MAPERR-CSECTO	PIC X(8).		MAPERRO
000620	02 FILLER	PIC X.		MAPERRO
000630	02 MAPERR-VER-MODA	PIC X.		MAPERRO
000640	02 MAPERR-VER-MODO	PIC 9.9.		MAPERRO
000650	02 FILLER	PIC X.		MAPERRO
000660	02 MAPERR-TEST-FLAGA	PIC X.		MAPERRO
000670	02 MAPERR-TEST-FLAGO	PIC X(4).		MAPERRO
000680	02 FILLER	PIC X(7).		MAPERRO
000690	02 MAPERR-MSGA	PIC X.		MAPERRO
000700	02 MAPERR-MSGO	PIC X(56).		MAPERRO
000710	02 FILLER	PIC X.		MAPERRO
000720	02 MAPERR-IDMS-ERROR-LITERALA	PIC X.		MAPERRO
000730	02 MAPERR-IDMS-ERROR-LITERALO	PIC X(11).		MAPERRO
000740	02 FILLER	PIC X.		MAPERRO
000750	02 MAPERR-ERROR-STATUSA	PIC X.		MAPERRO
000760	02 MAPERR-ERROR-STATUSO	PIC X(4).		MAPERRO
000770	02 FILLER	PIC X.		MAPERRO
000780	02 MAPERR-ERROR-SETA	PIC X.		MAPERRO
000790	02 MAPERR-ERROR-SETO	PIC X(16).		MAPERRO
000800	02 FILLER	PIC X.		MAPERRO
000810	02 MAPERR-ERROR-RECORDA	PIC X.		MAPERRO
000820	02 MAPERR-ERROR-RECORDO	PIC X(16).		MAPERRO
000830	02 FILLER	PIC X.		MAPERRO
000840	02 MAPERR-ERROR-AREAA	PIC X.		MAPERRO
000850	02 MAPERR-ERROR-AREAO	PIC X(16).		MAPERRO
000860	02 FILLER	PIC X(12).		MAPERRO
000870	PROCEDURE DIVISION USING TCBD, RELOCATE.			
000880	MOVE CSECT TO TWA-CURRENT-PROG-NAME.			
000890	MOVE TRAN-CODE TO TWA-NEXT-TRAN-CODE.			
000900	IF ITRMAID = CLEAR			
000910	IF TWA-CLEAR-SW = 'OLDD0020 CLEAR'			
000920	MOVE SPACES TO TWA-CLEAR-SW			
000930	RETURN TO HANDLER			
000940	* CALL 'ISHDHLRT' USING ISHD-X80			
000950	ELSE			
000960	MOVE 'OLDD0020 CLEAR' TO TWA-CLEAR-SW			
000970	MOVE 'OLDD0010' TO TWA-NEXT-PROG-NAME			
000980	GO TO TRANS-PROG-CONTROL			
000990	ELSE			
001000	MOVE LOW-VALUES TO TWA-CLEAR-SW.			
001010	IF ITRMAID = DFHPF1			
001020	OR DFHPF4			
001030	OR DFHPF5			
001040	MOVE '8' TO ITRMAID			
001050	MOVE 'OLDD0010' TO TWA-NEXT-PROG-NAME			
001060	GO TO TRANS-PROG-CONTROL.			
001070	* BASE TERMINAL-BUFFER ON POINTER ITRMIOAR.			
001080	CALL 'ISHDHLBS' USING ISHD-X01 ISHD-H3 ITRMIOAR			
001090	SERVICE RELOAD TERMINAL-BUFFER.			

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000730 *	PUT ADDRESS OF MCHLTOPC INTO TWA-MAPC-PTR.			
000740 *	CALL 'ISDHHLBS' USING ISHD-X02 TWA-MAPC-PTR MCHLTOPC.			
000750 *	MAP-INPUT FROM TERMINAL-BUFFER NO-RELEASE			
000760 *	TO MAP MCHLTOP			
	MAPC-PTR IS TWA-MAPC-PTR.			
	CALL 'ISDHHLMT' USING TWA-MAPC-PTR TERMINAL-BUFFER ISHD-XF1			
	ISHD-H4			
	SERVICE RELOAD MCHLTOPI.			
000770	CHECK-TRANSACTION.			
000780	IF MCHLTOP-FUNCI = 'QU'			
000790	MOVE 'OLDD0100' TO TWA-NEXT-PROG-NAME			
000800	ELSE			
000810	IF MCHLTOP-FUNCI = 'XR'			
000820	MOVE 'OLDD0110' TO TWA-NEXT-PROG-NAME			
000830	ELSE			
000840	IF MCHLTOP-FUNCI = 'UD'			
000850	IF MCHLTOP-FUNCI = TWA-FUNC			
000860	AND MCHLTOP-KEYI = TWA-DATA-NAME			
000870	MOVE 'OLDD0211' TO TWA-NEXT-PROG-NAME			
000880	ELSE			
000890	MOVE 'OLDD0210' TO TWA-NEXT-PROG-NAME			
000900	ELSE			
000910	IF MCHLTOP-FUNCI = 'DD'			
000920	IF MCHLTOP-FUNCI = TWA-FUNC			
000930	AND MCHLTOP-KEYI = TWA-DATA-NAME			
000940	MOVE 'OLDD0301' TO TWA-NEXT-PROG-NAME			
000950	ELSE			
000960	MOVE 'OLDD0300' TO TWA-NEXT-PROG-NAME			
000970	ELSE			
000980	MOVE LOW-VALUES TO TWA-DATA-NAME			
000990	MOVE 'OLDD0010' TO TWA-NEXT-PROG-NAME.			
001000				
001010 *	TRANS-PROG-CONTROL.			
001020	IF TWA-NEXT-PROG-NAME MUST CONTAIN THE PROGRAM NAME			CPCXCTL
000010 *	TRANSFER PROGRAM CONTROL (XCTL)			11/28/79
000020 *	TRANSFER-CONTROL TO TWA-NEXT-PROG-NAME.			11/28/79
000030 *	CALL 'ISDHHLXC' USING TWA-NEXT-PROG-NAME.			
000040	MOVE ITRMERRP TO TWA-ITRMERRP-SAVE.			CPCXCTL
000010	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR.			02/25/82
000020 *	CALL 'ISDHHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			02/25/82
000030 *	PREPARE MAP MAPERR MAP-PTR IS TWA-MAP-PTR SIZE IS MAPERRP.			XCTLERR
	CALL 'ISDHHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H5 MAPERRP			
	SERVICE RELOAD MAPERRP.			
000040	MOVE CSECT TO MAPERR-CSECTO.			XCTLERR
000050	MOVE VER-MOD TO MAPERR-VER-MODO.			XCTLERR
000060	IF TWA-TEST-RUN			XCTLERR
000070	OR SPT-TEST-RUN			06/19/80
000080	MOVE 'TEST' TO MAPERR-TEST-FLAGO			XCTLERR
000090	ELSE			XCTLERR
000100	IF TWA-PRODUCTION-RUN			XCTLERR
000110	AND SPT-PRODUCTION-RUN			04/22/81
000120	NEXT SENTENCE			XCTLERR
000130	ELSE			XCTLERR
000140	MOVE 'INVL' TO MAPERR-TEST-FLAGO.			XCTLERR
000150	IF TWA-ITRMERRP-SAVE = 'X'			02/25/82
000160	MOVE 'SECURITY VIOLATION WHILE TRANSFERRING TO' TO			01/29/82
000170	MAPERR-MSGO			01/29/82
000180	ELSE			01/07/82
000190	MOVE 'CALL DPC -- TRANSFER CONTROL ERROR WHILE TRANSFERRI			01/07/81
000200 -	ING TO' TO MAPERR-MSGO.			01/01/81
000210	MOVE TWA-ITRMERRP-SAVE TO MAPERR-IDMS-ERROR-LITERAL0.			03/29/82
000220	MOVE TWA-NEXT-PROG-NAME TO MAPERR-ERROR-AREAO.			XCTLERR
000230 *	WRITE MAP MAPERR IN BUFFER.			XCTLERR
	CALL 'ISDHHLMP' USING ISHD-X01 MAPERR0 ISHD-XF0 ISHD-X00			
	ISHD-X06 ISHD-X00 ISHD-X00.			
001050 *	RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CODE AFTER-READ.			
	CALL 'ISDHHLRT' USING ISHD-XAO TWA-NEXT-TRAN-CODE.			
001060	GOBACK.			
001070				

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000330	02 FILLER PIC X(20) VALUE :			MCHLOUE
000340	02 FILLER PIC X(20) VALUE :		0 IFUSER: 1<	MCHLOUE
000350	02 FILLER PIC X(20) VALUE :	1. 8		MCHLOUE
000360	02 FILLER PIC X(20) VALUE :	02. 8		MCHLOUE
000370	02 FILLER PIC X(20) VALUE :	03. 8		MCHLOUE
000380	02 FILLER PIC X(20) VALUE :	0 8*4.		MCHLOUE
000390	02 FILLER PIC X(20) VALUE :	8		MCHLOUE
000400	02 FILLER PIC X(20) VALUE :	05. 8		MCHLOUE
000410	02 FILLER PIC X(20) VALUE :	06. 8		MCHLOUE
000420	02 FILLER PIC X(20) VALUE :	OPROGRAM U		MCHLOUE
000430	02 FILLER PIC X(20) VALUE :	SED: K21. 8		MCHLOUE
000440	02 FILLER PIC X(20) VALUE :	02. 8	03	MCHLOUE
000450	02 FILLER PIC X(20) VALUE :	8	04. 8	MCHLOUE
000460	02 FILLER PIC X(20) VALUE :	0 M<5. 8		MCHLOUE
000470	02 FILLER PIC X(20) VALUE :	06. 8		MCHLOUE
000480	02 FILLER PIC X(20) VALUE :	07. 8		MCHLOUE
000490	02 FILLER PIC X(20) VALUE :	08. 8	0 N	MCHLOUE
000500	02 FILLER PIC X(20) VALUE :	LFILF USED: 021. 8		MCHLOUE
000510	02 FILLER PIC X(20) VALUE :	2. 8	0	MCHLOUE
000520	02 FILLER PIC X(20) VALUE :	0 P23. 8		MCHLOUE
000530	02 FILLER PIC X(20) VALUE :	04. 8		MCHLOUE
000540	02 FILLER PIC X(20) VALUE :	0 1 8	3INQUIRY ONL	MCHLOUE
000550	02 FILLER PIC X(20) VALUE :	Y \$ 0 \$7 8		MCHLOUE
000560	02 FILLER PIC X(20) VALUE :			MCHLOUE
000570	02 FILLER PIC X(20) VALUE :			MCHLOUE
000580	02 FILLER PIC X(20) VALUE :			MCHLOUE
000590	02 FILLER PIC X(20) VALUE :			MCHLOUE
000600	02 FILLER PIC X(06) VALUE :	0 F		MCHLOUE
000610	01 MCHLOUEP PIC 9(4) COMP VALUE 01133.			MCHLOUE
000400				
000010	01 MCHLOUEC.			MCHLOUE
000020	02 FILLER PIC X(19) VALUE :	A F I		MCHLOUP
000420				
000010	01 MAPERR.			MAPERR
000020	02 FILLER PIC X(20) VALUE :	8 \$- 8		MAPERR
000030	02 FILLER PIC X(20) VALUE :	8 0 \$7 8		MAPERR
000040	02 FILLER PIC X(20) VALUE :			MAPERR
000050	02 FILLER PIC X(20) VALUE :			MAPERR
000060	02 FILLER PIC X(20) VALUE :			MAPERR
000070	02 FILLER PIC X(20) VALUE :	8 8		MAPERR
000080	02 FILLER PIC X(20) VALUE :	8 8		MAPERR
000090	02 FILLER PIC X(20) VALUE :	0) 0)		MAPERR
000100	02 FILLER PIC X(14) VALUE :			MAPERR
000110	01 MAPERRP PIC 9(4) COMP VALUE 00174.			MAPERR
000440				
000450	*01 ATR3270 COPY ATR3270.			ATR3270
000002	01 ATR3270.			ATR3270
000010	*			ATR3270
000020	* IN CONSTRUCTING AN ATTRIBUTE YOU MAY MAKE ONE CHOICE			ATR3270
000030	* FRJM EACH OF THE THREE GROUPS BELOW. THE FIELDS DEFINED			ATR3270
000040	* BELOW HAVE BEEN NAMED IN SUCH A MANNER AS TO BE READILY			ATR3270
000050	* UNDERSTOOD ONCE THE KEY IS KNOWN. THE FOURTH, FIFTH, AND			ATR3270
000060	* SIXTH CHARACTERS OF THE NAME ARE FROM GROUPS 1-3 BELOW.			ATR3270
000070	* NOTE THAT SHORT HAND VERSIONS ARE AVAILABLE FOR DEFAULTS			ATR3270
000080	* OF MDT=NO AND REGULAR INTENSITY.			ATR3270
000090	*			ATR3270
000100	* GROUP I FIELD TYPE			ATR3270
000110	*			ATR3270
000120	* PROTECTED = P			ATR3270
000130	* UNPROTECTED, ALPHA NUMERIC = U			ATR3270
000140	* UNPROTECTED, NUMERIC SHIFT = N			ATR3270
000150	* PROTECTED AND CURSOR SKIP = S			ATR3270
000160	*			ATR3270
000170	* GROUP II INTENSITY			ATR3270
000180	*			ATR3270
000190	* REGULAR = R OR BLANK IF MDT=N			ATR3270
000200	* HIGH = H			ATR3270
000210	* OFF(DARK) = O			ATR3270
000220	* LIGHT PEN DETECTABLE = L			ATR3270
000230	*			ATR3270
000240	* GROJP III MODIFIED DATA TAG			ATR3270
000250	*			ATR3270
000260	* ON = Y			ATR3270
000270	* OFF = N OR BLANK			ATR3270
000280	*			ATR3270
000290	*			ATR3270

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000300 *	SKIP	REGULAR INTENSITY		ATB3270
000310 *				ATB3270
000320	03 ATBS	PIC X	VALUE '0'.	ATB3270
000330	03 ATBSR		REDEFINES ATBS	ATB3270
000340			PIC X.	ATB3270
000350	03 ATBSRN		REDEFINES ATBS	ATB3270
000360			PIC X.	ATB3270
000370	03 ATBSRY	PIC X	VALUE '1'.	ATB3270
000380 *				ATB3270
000390 *	SKIP	HIGH INTENSITY		ATB3270
000400 *				ATB3270
000410	03 ATBSH	PIC X	VALUE '8'.	ATB3270
000420	03 ATBSHN		REDEFINES ATBSH	ATB3270
000430			PIC X.	ATB3270
000440	03 ATBSHY	PIC X	VALUE '9'.	ATB3270
000450 *				ATB3270
000460 *	SKIP	OFF (DARK) INTENSITY		ATB3270
000470 *				ATB3270
000480	03 ATBSO	PIC X	VALUE '2'.	ATB3270
000490	03 ATBSON		REDEFINES ATBSO	ATB3270
000500			PIC X.	ATB3270
000510	03 ATBSO		REDEFINES ATBSO	ATB3270
000520			PIC X.	ATB3270
000530	03 ATBSO		REDEFINES ATBSO	ATB3270
000540			PIC X.	ATB3270
000550	03 ATBSOY	PIC X	VALUE QUOTE.	ATB3270
000560	03 ATBSOY		REDEFINES ATBSOY	ATB3270
000570			PIC X.	ATB3270
000580 *				ATB3270
000590 *	SKIP	REGULAR INTENSITY, LIGHT PEN		ATB3270
000600 *				ATB3270
000610	03 ATBSL	PIC X	VALUE '4'.	ATB3270
000620	03 ATBSLN		REDEFINES ATBSL	ATB3270
000630			PIC X.	ATB3270
000640	03 ATBSLY	PIC X	VALUE '5'.	ATB3270
000650 *				ATB3270
000660 *	PROTECT	REGULAR INTENSITY		ATB3270
000670 *				ATB3270
000680	03 ATBP	PIC X	VALUE '1'.	ATB3270
000690	03 ATBPR		REDEFINES ATBP	ATB3270
000700			PIC X.	ATB3270
000710	03 ATBPRN		REDEFINES ATBP	ATB3270
000720			PIC X.	ATB3270
000730	03 ATBPRY	PIC X	VALUE '1'.	ATB3270
000740 *				ATB3270
000750 *	PROTECT	HIGH INTENSITY		ATB3270
000760 *				ATB3270
000770	03 ATBPH	PIC X	VALUE 'Y'.	ATB3270
000780	03 ATBPHN		REDEFINES ATBPH	ATB3270
000790			PIC X.	ATB3270
000800	03 ATBPHY	PIC X	VALUE 'Z'.	ATB3270
000810 *				ATB3270
000820 *	PROTECT	OFF (DARK) INTENSITY		ATB3270
000830 *				ATB3270
000840	03 ATBPO	PIC X	VALUE 'X'.	ATB3270
000850	03 ATBPON		REDEFINES ATBPO	ATB3270
000860			PIC X.	ATB3270
000870	03 ATBPOY	PIC X	VALUE '1'.	ATB3270
000880 *				ATB3270
000890 *	PROTECT	REGULAR INTENSITY, LIGHT PEN		ATB3270
000900 *				ATB3270
000910	03 ATBPL	PIC X	VALUE 'U'.	ATB3270
000920	03 ATBPLN		REDEFINES ATBPL	ATB3270
000930			PIC X.	ATB3270
000940	03 ATBPLY	PIC X	VALUE 'V'.	ATB3270
000950 *				ATB3270
000960 *	UNPROTECTED	REGULAR INTENSITY		ATB3270
000970 *	ALPHA-NUMERIC			ATB3270
000980	03 ATBU	PIC X	VALUE ' '.	ATB3270
000990	03 ATBUR		REDEFINES ATBU	ATB3270
001000			PIC X.	ATB3270
001010	03 ATBURN		REDEFINES ATBU	ATB3270
001020			PIC X.	ATB3270
001030	03 ATBURY	PIC X	VALUE 'A'.	ATB3270
001040 *				ATB3270
001050 *	UNPROTECTED	HIGH INTENSITY		ATB3270
001060 *	ALPHA-NUMERIC			ATB3270

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001070 *				ATB3270
001080	03 ATBUHM PIC X VALUE 'H'.			ATB3270
001090	03 ATBUH REDEFINES ATBUHM			ATB3270
001100	PIC X.			ATB3270
001110	03 ATBUHY PIC X VALUE 'I'.			ATB3270
001120 *				ATB3270
001130 *	UNPROTECTED OFF(DARK) INTENSITY			ATB3270
001140 *	ALPHA-NUMERIC			ATB3270
001150 *				ATB3270
001160	03 ATBUO PIC X VALUE 'K'.			ATB3270
001170	03 ATBUON REDEFINES ATBUO			ATB3270
001180	PIC X.			ATB3270
001190	03 ATBUOY PIC X VALUE 'L'.			ATB3270
001200 *				ATB3270
001210 *	UNPROTECTED REGULAR INTENSITY,LIGHT PEN			ATB3270
001220 *	ALPHA-NUMERIC			ATB3270
001230 *				ATB3270
001240	03 ATBUL PIC X VALUE 'D'.			ATB3270
001250	03 ATBULN REDEFINES ATBUL			ATB3270
001260	PIC X.			ATB3270
001270	03 ATBULY PIC X VALUE 'E'.			ATB3270
001280 *				ATB3270
001290 *	UNPROTECTED REGULAR INTENSITY			ATB3270
001300 *	NUMERIC SHIFT			ATB3270
001310 *				ATB3270
001320	03 ATBN PIC X VALUE 'F'.			ATB3270
001330	03 ATBNR REDEFINES ATBN			ATB3270
001340	PIC X.			ATB3270
001350	03 ATBNRN REDEFINES ATBN			ATB3270
001360	PIC X.			ATB3270
001370	03 ATBNRY PIC X VALUE 'J'.			ATB3270
001380 *				ATB3270
001390 *	UNPROTECTED HIGH INTENSITY			ATB3270
001400 *	NUMERIC SHIFT			ATB3270
001410 *				ATB3270
001420	03 ATBNH PIC X VALUE 'Q'.			ATB3270
001430	03 ATBNHN REDEFINES ATBNH			ATB3270
001440	PIC X.			ATB3270
001450	03 ATBNHY PIC X VALUE 'R'.			ATB3270
001460 *				ATB3270
001470 *	UNPROTECTED OFF(DARK) INTENSITY			ATB3270
001480 *	NUMERIC SHIFT			ATB3270
001490 *				ATB3270
001500	03 ATBNO PIC X VALUE '*'.			ATB3270
001510	03 ATBNON REDEFINES ATBNO			ATB3270
001520	PIC X.			ATB3270
001530	03 ATBNOY PIC X VALUE 'I'.			ATB3270
001540 *				ATB3270
001550 *	UNPROTECTED REGULAR INTENSITY,LIGHT PEN			ATB3270
001560 *	NUMERIC SHIFT			ATB3270
001570 *				ATB3270
001580	03 ATBNL PIC X VALUE 'M'.			ATB3270
001590	03 ATBNLN REDEFINES ATBNL			ATB3270
001600	PIC X.			ATB3270
001610	03 ATBNLY PIC X VALUE 'N'.			ATB3270
001620 *				ATB3270
000460				
000470 *01	KEY3270 COPY KEY3270.			
000010	01 KEY3270.			
000020	02 ENTERK PIC X VALUE QUOTE.			
000030	02 PF1 PIC X VALUE '1'.			
000040	02 PF2 PIC X VALUE '2'.			
000050	02 PF3 PIC X VALUE '3'.			
000060	02 PF4 PIC X VALUE '4'.			
000070	02 PF5 PIC X VALUE '5'.			
000080	02 PF6 PIC X VALUE '6'.			
000090	02 PF7 PIC X VALUE '7'.			
000100	02 PF8 PIC X VALUE '8'.			
000110	02 PF9 PIC X VALUE '9'.			
000120	02 PF10 PIC X VALUE '0'.			
000130	02 PF11 PIC X VALUE '1'.			
000140	02 PF12 PIC X VALUE '2'.			
000150	02 IMMDECT PIC X VALUE '3'.			
000160	02 TESTREQ PIC X VALUE '4'.			
000170	02 CLEAR PIC X VALUE '5'.			
000180	02 PA1 PIC X VALUE '6'.			
000190	02 PA2 PIC X VALUE '7'.			

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000200	02 PA3	PIC X	VALUE ','.	
000480	* C3PY IDMS SUBSCHEMA-NAMES.			
000490	01 SUBSCHEMA-SSNAME	PIC X(8)	VALUE 'DATASUBS'.	
	01 SUBSCHEMA-RECNAMES.			
	03 SR1	PIC X(16)	VALUE 'SR1	'.
	03 SR9995	PIC X(16)	VALUE 'IXSUB	'.
	03 SR9997	PIC X(16)	VALUE 'IXSET	'.
	03 SR9996	PIC X(16)	VALUE 'IXREC	'.
	03 SR9999	PIC X(16)	VALUE 'IXOWNER	'.
	03 SR9998	PIC X(16)	VALUE 'IXDET	'.
	03 SR104	PIC X(16)	VALUE 'DDFILE	'.
	03 SR103	PIC X(16)	VALUE 'DDALIAS	'.
	03 SR102	PIC X(16)	VALUE 'DDPROGRM	'.
	03 SR101	PIC X(16)	VALUE 'DDRECB	'.
	03 SR100	PIC X(16)	VALUE 'DDRECA	'.
	01 SUBSCHEMA-SETNAMES.			
	03 DDRECA-DDRECB	PIC X(16)	VALUE 'DDRECA-DDRECB	'.
	03 DDRECA-PROGRAM	PIC X(16)	VALUE 'DDRECA-PROGRAM	'.
	03 DDRECA-ALIAS	PIC X(16)	VALUE 'DDRECA-ALIAS	'.
	03 DDRECA-FILE	PIC X(16)	VALUE 'DDRECA-FILE	'.
	03 IX-DATA-NAME	PIC X(16)	VALUE 'IX-DATA-NAME	'.
	03 IXSET-IXREC	PIC X(16)	VALUE 'IXSET-IXREC	'.
	03 IXSET-IXDET	PIC X(16)	VALUE 'IXSET-IXDET	'.
	03 IXSUB-IXREC	PIC X(16)	VALUE 'IXSUB-IXREC	'.
	03 CALC	PIC X(16)	VALUE 'CALC	'.
	01 SUBSCHEMA-AREANAMES.			
	03 DATA-INDX-REGION	PIC X(16)	VALUE 'DATA-INDX-REGION'.	
	03 DATA-REGION	PIC X(16)	VALUE 'DATA-REGION	'.
000500	01 ISHD-CONSTANTS.			
	02 ISHD-F0.			
	03 ISHD-H0	PIC X(12)	VALUE LOW-VALUES.	
	03 ISHD-X00	PIC X	VALUE LOW-VALUES.	
	03 FILLER	PIC X	VALUE LOW-VALUES.	
	02 ISHD-H6	PIC 9(4)	COMP SYNC VALUE 6.	
	02 ISHD-H22	PIC 9(4)	COMP SYNC VALUE 22.	
	02 ISHD-H16	PIC 9(4)	COMP SYNC VALUE 16.	
	02 ISHD-H10	PIC 9(4)	COMP SYNC VALUE 10.	
	02 ISHD-H11	PIC 9(4)	COMP SYNC VALUE 11.	
	02 ISHD-H9	PIC 9(4)	COMP SYNC VALUE 9.	
	02 ISHD-H8	PIC 9(4)	COMP SYNC VALUE 8.	
	02 ISHD-H7	PIC 9(4)	COMP SYNC VALUE 7.	
	02 ISHD-H12	PIC 9(4)	COMP SYNC VALUE 12.	
	02 ISHD-H5	PIC 9(4)	COMP SYNC VALUE 5.	
	02 ISHD-H4	PIC 9(4)	COMP SYNC VALUE 4.	
	02 ISHD-H3	PIC 9(4)	COMP SYNC VALUE 3.	
	02 ISHD-X01	PIC X	VALUE 'I'.	
	02 ISHD-X02	PIC X	VALUE 'I'.	
	02 ISHD-X05	PIC X	VALUE 'I'.	
	02 ISHD-X22	PIC X	VALUE 'I'.	
	02 ISHD-XA0	PIC X	VALUE 'I'.	
	02 ISHD-XD6	PIC X	VALUE 'O'.	
	02 ISHD-XE2	PIC X	VALUE 'S'.	

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	02 ISHD-XF0 PIC X VALUE '0'.			
	02 ISHD-XF1 PIC X VALUE '1'.			
	02 ISHD-L1 PIC X(22) VALUE '*** IDMS ERRORS DUMP ***'.			
000510	LINKAGE SECTION.			
000010	*01 TC8D COPY TC8COB.			CHLTWAEX
000010	01 TC8D.			
000020	02 ITRMQRID PIC X(4).			
000030	02 ITRMUCBA PIC 9(9) COMP SYNC.			
000040	02 ITRMPCKA PIC 9(9) COMP SYNC.			
000050	02 ITRMSIZE PIC 9(4) COMP SYNC.			
000060	02 ITRMERRP PIC X.			
000070	02 ITRMOPCD PIC X.			
000080	02 ITRMPCKC PIC X.			
000090	02 ITRMAID PIC X.			
000100	02 ITRMCADD PIC XX.			
000110	02 ITRMCADD-B REDEFINES ITRMCADD PIC 9(4) COMP.			
000120	02 ITRMTYPE PIC X.			
000130	02 ITRMNAME PIC XXX.			
000140	02 ITRMSENS PIC 9(9) COMP SYNC.			
000150	02 ITRMENTY REDEFINES ITRMSENS			
000160	02 ITRMVSAM REDEFINES ITRMSENS. PIC 9(9) COMP SYNC.			
000170	04 ITRMVSMC PIC X.			
000180	04 ITRMVSEC PIC XX.			
000190	04 ITRMCBEC REDEFINES ITRMVSEC			
000200	04 ITRMVSRC PIC XX.			
000210	02 ITRMACRO PIC X.			
000220	02 ITRMSGON PIC XXX.			
000230	02 ITRMECBX PIC 9(9) COMP SYNC.			
000240	02 ITRMEXTN PIC 9(9) COMP SYNC.			
000250	02 ITRMIOAR PIC 9(9) COMP SYNC.			
000260	02 ITRMPROG PIC 9(9) COMP SYNC.			
000270	02 ITRMREPL PIC X(4).			
000280	02 ITRMFLGS PIC 9(4) COMP SYNC.			
000290	02 ITRMRIEN PIC 9(4) COMP SYNC.			
000300	02 ITRMSAVE PIC X(72).			
000310	02 ITRMHAND PIC X.			
000320	02 ITRMCALP PIC XXX.			
000330	02 ITRMTRAN PIC X(4).			
000340	02 ITRMTRAN			
000350	* USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER PIC X(512).			CHLTWAEX
000040	02 TWA-USER REDEFINES TWA-C2.			CHLTWAEX
000050	03 TWA-TRAN-CODE PIC X(4).			CHLTWAEX
000060	03 TWA-CURRENT-PROG-NAME PIC X(8).			CHLTWAEX
000070	03 TWA-PROGRAM-FLAGS PIC X(8).			CHLTWAEX
000080	03 TWA-MAP-PTR PIC X(4).			CHLTWAEX
000090	03 TWA-MAPC-PTR PIC X(4).			CHLTWAEX
000100	03 TWA-NEXT-PROG-NAME PIC X(8).			CHLTWAEX
000110	03 TWA-NEXT-TRAN-CODE PIC X(4).			CHLTWAEX
000120	03 TWA-DBKEY PIC X(4).			CHLTWAEX
000130	03 TWA-DBKEY-9 REDEFINES TWA-DBKEY			CHLTWAEX
000140	03 TWA-DBKEY-2 PIC S9(9) COMP SYNC.			CHLTWAEX
000150	03 TWA-DBKEY-2-9 REDEFINES TWA-DBKEY-2			CHLTWAEX
000160	03 TWA-DBKEY-3 PIC S9(9) COMP SYNC.			CHLTWAEX
000170	03 TWA-DBKEY-3-9 REDEFINES TWA-DBKEY-3			CHLTWAEX
000180	03 TWA-DISKD-DATA. PIC X.			CHLTWAEX
000190	05 TWA-DISKD-ACQUIRED-FLAG			CHLTWAEX
000200	88 TWA-DISKD-NOT-ACQUIRED VALUE LOW-VALUES.			CHLTWAEX
000210	88 TWA-DISKD-ACQUIRED VALUE HIGH-VALUES.			CHLTWAEX
000220	05 TWA-DISKD-NO-ACQUIRED			CHLTWAEX
000230	03 TWA-TEST-PRODUCTION-FLAG PIC S9(3) COMP.			CHLTWAEX
000240	88 TWA-TEST-RUN PIC X.			CHLTWAEX
000250	88 TWA-PRODUCTION-RUN VALUE LOW-VALUES.			CHLTWAEX
000260	03 TWA-SIS-TERM-CODE. VALUE '1'.			CHLTWAEX
000270	05 TWA-SIS-TERM-SEMESTER			CHLTWAEX
000280	PIC X.			CHLTWAEX

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000360	05 TWA-SIS-TERM-YEAR			CHLTWAEX
000370		PIC XX.		CHLTWAEX
000380	03 TWA-SIS-SUBSYSTEM-CODE			CHLTWAEX
000390		PIC X(4).		CHLTWAEX
000400	03 TWA-SEC-ACCESS-CODE			CHLTWAEX
000410	88 TWA-SEC-ACCESS-IS-INQUIRY	VALUE 'I'.		CHLTWAEX
000420	88 TWA-SEC-ACCESS-IS-UPDATE	VALUE 'U'.		CHLTWAEX
000430	03 TWA-SEC-ACCESS-OEPT	PIC XXX.		CHLTWAEX
000440	03 TWA-ITRMERRP-SAVE	PIC X.		CHLTWAEX
000450	03 FILLER	PIC X(12).		CHLTWAEX
000530	03 TWA-DD-AREA.			
000540	05 TWA-FUNC	PIC XX.		
000550	05 TWA-DATA-NAME	PIC X(30).		
000560	05 FILLER	PIC X(20).		
000570	03 TWA-FLAGS-AKAA.			
000580	05 DDRECA-FOUND-FLAG			
000590		PIC X.		
000600	88 DDRECA-FOUND	VALUE 'Y'.		
000610	05 PROGRAM-EOS-FLAG			
000620		PIC X.		
000630	88 END-OF-PROGRAM	VALUE 'Y'.		
000640	05 FILE-EOS-FLAG	PIC X.		
000650	88 END-OF-FILE	VALUE 'Y'.		
000660	05 ALIAS-EOS-FLAG	PIC X.		
000670	88 END-OF-ALIAS	VALUE 'Y'.		
000680				
000010	01 RELOCATE.			SHDSPTEX
000020	02 FILLER	PIC X(12).		SHDSPTEX
000030	02 RSHDPCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000040	02 FILLER	PIC X(32).		SHDSPTEX
000050	02 RSHDOSA	PIC 9(9).	COMP SYNC.	SHDSPTEX
000060	02 FILLER	PIC X(24).		SHDSPTEX
000070	02 RSHDOCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000080	02 FILLER	PIC X(100).		SHDSPTEX
000090	02 RSHDLOW	PIC 9(9).	COMP SYNC.	SHDSPTEX
000100	02 RSHDHIGH	PIC 9(9).	COMP SYNC.	SHDSPTEX
000110	02 FILLER	PIC X(68).		SHDSPTEX
000120	02 RSHDIVAR	PIC 9(9).	COMP SYNC.	SHDSPTEX
000130	02 FILLER	PIC X(4).		SHDSPTEX
000140	02 RSHDFREE	PIC 9(9).	COMP SYNC.	SHDSPTEX
000150	02 FILLER	PIC X(48).		SHDSPTEX
000160	02 RSHDICT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000170	02 FILLER	PIC X(40).		SHDSPTEX
000180	* USER AREA STARTS HERE.			SHDSPTEX
000190	02 SPT-REST-OF-SPT.			SHDSPTEX
000200	03 SPT-TEST-PRODUCTION-FLAG			SHDSPTEX
000210		PIC X.		SHDSPTEX
000220	88 SPT-PRODUCTION-RUN	VALUE LOW-VALUES.		SHDSPTEX
000230	88 SPT-TEST-RUN	VALUE 'I'.		SHDSPTEX
000240	03 FILLER	PIC X.		01/22/82
000250	03 FILLER	PIC X(300).		01/22/82
000260	03 FILLER	PIC XX.		01/22/82
000270	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
000280	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
000290	03 FILLER	PIC X(8).		01/22/82
000300	03 SPT-NQ3-ECB	PIC XXXX.		01/22/82
000310	03 SPT-NQ0-ECB	PIC XXXX.		06/02/82
000320	03 SPT-PRT1-BUFFER-POOL	-POINTER		06/08/82
000330		PIC S9(9)	COMP SYNC.	06/08/82
000340	03 SPT-PRT2-BUFFER-POOL	-POINTER		06/08/82
000350		PIC S9(9)	COMP SYNC.	06/08/82
000360	03 SPT-PRT3-BUFFER-POOL	-POINTER		06/08/82
000370		PIC S9(9)	COMP SYNC.	06/08/82
000380	03 SPT-PRT4-BUFFER-POOL	-POINTER		06/08/82
000390		PIC S9(9)	COMP SYNC.	06/08/82
000400	03 SPT-PRT5-BUFFER-POOL	-POINTER		06/08/82
000410		PIC S9(9)	COMP SYNC.	06/08/82
000420	03 SPT-PRT6-BUFFER-POOL	-POINTER		06/08/82
000430		PIC S9(9)	COMP SYNC.	06/08/82
000440	03 SPT-PRT7-BUFFER-POOL	-POINTER		06/08/82
000450		PIC S9(9)	COMP SYNC.	06/08/82
000460	03 SPT-PRT8-BUFFER-POOL	-POINTER		06/08/82
000470		PIC S9(9)	COMP SYNC.	06/08/82
000480				SHDSPTEX
000700				
000710	01 TERMINAL-BUFFER.			
000720	03 FILLER	PIC XXX.		00000680

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000730				00000680
000010	01 MCHLQUEI-			MCHLQUE
000020	02 MCHLQUE-TRANL	PIC X.		MCHLQUEI
000030	02 MCHLQUE-TRANI	PIC X(4).		MCHLQUEI
000040	02 MCHLQUE-FUNCI	PIC X.		MCHLQUEI
000050	02 MCHLQUE-FUNCI	PIC XX.		MCHLQUEI
000060	02 MCHLQUE-KEYL	PIC X.		MCHLQUEI
000070	02 MCHLQUE-KEYI	PIC X(30).		MCHLQUEI
000750				
000010	01 MCHLQUEO-			MCHLQUE
000020	02 MCHLQUEW	PIC X.		MCHLQUEO
000030	02 FILLER	PIC X(4).		MCHLQUEO
000040	02 MCHLQUE-TRANA	PIC X.		MCHLQUEO
000050	02 MCHLQUE-TRANO	PIC X(4).		MCHLQUEO
000060	02 FILLER	PIC X.		MCHLQUEO
000070	02 MCHLQUE-FUNCA	PIC X.		MCHLQUEO
000080	02 MCHLQUE-FUNCO	PIC XX.		MCHLQUEO
000090	02 FILLER	PIC X.		MCHLQUEO
000100	02 MCHLQUE-KEYA	PIC X.		MCHLQUEO
000110	02 MCHLQUE-KEYO	PIC X(30).		MCHLQUEO
000120	02 FILLER	PIC X(31).		MCHLQUEO
000130	02 MCHLQUE-TEST-FLAGA	PIC X.		MCHLQUEO
000140	02 MCHLQUE-TEST-FLAGO	PIC X(4).		MCHLQUEO
000150	02 FILLER	PIC X.		MCHLQUEO
000160	02 MCHLQUE-RDATEA	PIC X.		MCHLQUEO
000170	02 MCHLQUE-RDATEO	PIC X(8).		MCHLQUEO
000180	02 FILLER	PIC X.		MCHLQUEO
000190	02 MCHLQUE-RTIMEA	PIC X.		MCHLQUEO
000200	02 MCHLQUE-RTIMEO	PIC X(8).		MCHLQUEO
000210	02 FILLER	PIC X(32).		MCHLQUEO
000220	02 MCHLQUE-CSECTA	PIC X.		MCHLQUEO
000230	02 MCHLQUE-CSECTO	PIC X(8).		MCHLQUEO
000240	02 FILLER	PIC X.		MCHLQUEO
000250	02 MCHLQUE-VER-MODA	PIC X.		MCHLQUEO
000260	02 MCHLQUE-VER-MODO	PIC 9.9.		MCHLQUEO
000270	02 FILLER	PIC X(46).		MCHLQUEO
000280	02 MCHLQUE-DATA-NAMEA	PIC X.		MCHLQUEO
000290	02 MCHLQUE-DATA-NAMEO	PIC X(29).		MCHLQUEO
000300	02 FILLER	PIC X(19).		MCHLQUEO
000310	02 MCHLQUE-CREATED-DATEA	PIC X.		MCHLQUEO
000320	02 MCHLQUE-CREATED-DATEO			MCHLQUEO
000330	03 MCHLQUE-CREATED-DATE-MMO	PIC XX.		MCHLQUEO
000340	03 MCHLQUE-CREATED-DATE-SLASH-10	PIC X.		MCHLQUEO
000350	03 MCHLQUE-CREATED-DATE-DDO	PIC XX.		MCHLQUEO
000360	03 MCHLQUE-CREATED-DATE-SLASH-20	PIC X.		MCHLQUEO
000370	03 MCHLQUE-CREATED-DATE-YYO	PIC XX.		MCHLQUEO
000380	02 FILLER	PIC X(15).		MCHLQUEO
000390	02 MCHLQUE-DATA-DESCA	PIC X.		MCHLQUEO
000400	02 MCHLQUE-DATA-DESCO	PIC X(40).		MCHLQUEO
000410	02 FILLER	PIC X(19).		MCHLQUEO
000420	02 MCHLQUE-CHANGED-DATEA	PIC X.		MCHLQUEO
000430	02 MCHLQUE-CHANGED-DATEO			MCHLQUEO
000440	03 MCHLQUE-CHANGED-DATE-MMO	PIC XX.		MCHLQUEO
000450	03 MCHLQUE-CHANGED-DATE-SLASH-10	PIC X.		MCHLQUEO
000460	03 MCHLQUE-CHANGED-DATE-DDO	PIC XX.		MCHLQUEO
000470	03 MCHLQUE-CHANGED-DATE-SLASH-20	PIC X.		MCHLQUEO
000480	03 MCHLQUE-CHANGED-DATE-YYO	PIC XX.		MCHLQUEO
000490	02 FILLER	PIC X(11).		MCHLQUEO
000500	02 MCHLQUE-DATA-PICTUREA	PIC X.		MCHLQUEO
000510	02 MCHLQUE-DATA-PICTUREO	PIC X(10).		MCHLQUEO
000520	02 FILLER	PIC X(12).		MCHLQUEO
000530	02 MCHLQUE-DATA-LEVELA	PIC X.		MCHLQUEO
000540	02 MCHLQUE-DATA-LEVELO	PIC X(6).		MCHLQUEO
000550	02 FILLER	PIC X(21).		MCHLQUEO
000560	02 MCHLQUE-REVISED-PERSONA	PIC X.		MCHLQUEO
000570	02 MCHLQUE-REVISED-PERSONO	PIC XX.		MCHLQUEO
000580	02 FILLER	PIC X(12).		MCHLQUEO
000590	02 MCHLQUE-DATA-USAGEA	PIC X.		MCHLQUEO
000600	02 MCHLQUE-DATA-USAGEO	PIC X(15).		MCHLQUEO
000610	02 FILLER	PIC X(14).		MCHLQUEO
000620	02 MCHLQUE-DATA-JUSTIFYA	PIC X.		MCHLQUEO
000630	02 MCHLQUE-DATA-JUSTIFYO	PIC X(5).		MCHLQUEO
000640	02 FILLER	PIC X(22).		MCHLQUEO
000650	02 MCHLQUE-ALIAS-NAME-1A	PIC X.		MCHLQUEO
000660	02 MCHLQUE-ALIAS-NAME-1O	PIC X(30).		MCHLQUEO
000670	02 FILLER	PIC X(5).		MCHLQUEO
000680	02 MCHLQUE-ALIAS-NAME-2A	PIC X.		MCHLQUEO

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000690	02 MCHLQUE-ALIAS-NAME-20	PIC X(30).		MCHLQUE0
000700	02 FILLER	PIC X(8).		MCHLQUE0
000710	02 MCHLQUE-ALIAS-NAME-3A	PIC X.		MCHLQUE0
000720	02 MCHLQUE-ALIAS-NAME-30	PIC X(30).		MCHLQUE0
000730	02 FILLER	PIC X(5).		MCHLQUE0
000740	02 MCHLQUE-ALIAS-NAME-4A	PIC X.		MCHLQUE0
000750	02 MCHLQUE-ALIAS-NAME-40	PIC X(30).		MCHLQUE0
000760	02 FILLER	PIC X(16).		MCHLQUE0
000770	02 MCHLQUE-USER-NAME-1A	PIC X.		MCHLQUE0
000780	02 MCHLQUE-USER-NAME-10	PIC X(20).		MCHLQUE0
000790	02 FILLER	PIC X(5).		MCHLQUE0
000800	02 MCHLQUE-USER-NAME-2A	PIC X.		MCHLQUE0
000810	02 MCHLQUE-USER-NAME-20	PIC X(20).		MCHLQUE0
000820	02 FILLER	PIC X(5).		MCHLQUE0
000830	02 MCHLQUE-USER-NAME-3A	PIC X.		MCHLQUE0
000840	02 MCHLQUE-USER-NAME-30	PIC X(16).		MCHLQUE0
000850	02 FILLER	PIC X(8).		MCHLQUE0
000860	02 MCHLQUE-USER-NAME-4A	PIC X.		MCHLQUE0
000870	02 MCHLQUE-USER-NAME-40	PIC X(20).		MCHLQUE0
000880	02 FILLER	PIC X(5).		MCHLQUE0
000890	02 MCHLQUE-USER-NAME-5A	PIC X.		MCHLQUE0
000900	02 MCHLQUE-USER-NAME-50	PIC X(20).		MCHLQUE0
000910	02 FILLER	PIC X(5).		MCHLQUE0
000920	02 MCHLQUE-USER-NAME-6A	PIC X.		MCHLQUE0
000930	02 MCHLQUE-USER-NAME-60	PIC X(16).		MCHLQUE0
000940	02 FILLER	PIC X(21).		MCHLQUE0
000950	02 MCHLQUE-PROGRAM-USED-1A	PIC X.		MCHLQUE0
000960	02 MCHLQUE-PROGRAM-USED-10	PIC X(10).		MCHLQUE0
000970	02 FILLER	PIC X(5).		MCHLQUE0
000980	02 MCHLQUE-PROGRAM-USED-2A	PIC X.		MCHLQUE0
000990	02 MCHLQUE-PROGRAM-USED-20	PIC X(10).		MCHLQUE0
001000	02 FILLER	PIC X(5).		MCHLQUE0
001010	02 MCHLQUE-PROGRAM-USED-3A	PIC X.		MCHLQUE0
001020	02 MCHLQUE-PROGRAM-USED-30	PIC X(10).		MCHLQUE0
001030	02 FILLER	PIC X(5).		MCHLQUE0
001040	02 MCHLQUE-PROGRAM-USED-4A	PIC X.		MCHLQUE0
001050	02 MCHLQUE-PROGRAM-USED-40	PIC X(10).		MCHLQUE0
001060	02 FILLER	PIC X(8).		MCHLQUE0
001070	02 MCHLQUE-PROGRAM-USED-5A	PIC X.		MCHLQUE0
001080	02 MCHLQUE-PROGRAM-USED-50	PIC X(10).		MCHLQUE0
001090	02 FILLER	PIC X(5).		MCHLQUE0
001100	02 MCHLQUE-PROGRAM-USED-6A	PIC X.		MCHLQUE0
001110	02 MCHLQUE-PROGRAM-USED-60	PIC X(10).		MCHLQUE0
001120	02 FILLER	PIC X(5).		MCHLQUE0
001130	02 MCHLQUE-PROGRAM-USED-7A	PIC X.		MCHLQUE0
001140	02 MCHLQUE-PROGRAM-USED-70	PIC X(10).		MCHLQUE0
001150	02 FILLER	PIC X(5).		MCHLQUE0
001160	02 MCHLQUE-PROGRAM-USED-8A	PIC X.		MCHLQUE0
001170	02 MCHLQUE-PROGRAM-USED-80	PIC X(10).		MCHLQUE0
001180	02 FILLER	PIC X(21).		MCHLQUE0
001190	02 MCHLQUE-FILE-USED-1A	PIC X.		MCHLQUE0
001200	02 MCHLQUE-FILE-USED-10	PIC X(20).		MCHLQUE0
001210	02 FILLER	PIC X(5).		MCHLQUE0
001220	02 MCHLQUE-FILE-USED-2A	PIC X.		MCHLQUE0
001230	02 MCHLQUE-FILE-USED-20	PIC X(20).		MCHLQUE0
001240	02 FILLER	PIC X(8).		MCHLQUE0
001250	02 MCHLQUE-FILE-USED-3A	PIC X.		MCHLQUE0
001260	02 MCHLQUE-FILE-USED-30	PIC X(20).		MCHLQUE0
001270	02 FILLER	PIC X(5).		MCHLQUE0
001280	02 MCHLQUE-FILE-USED-4A	PIC X.		MCHLQUE0
001290	02 MCHLQUE-FILE-USED-40	PIC X(20).		MCHLQUE0
001300	02 FILLER	PIC X(31).		MCHLQUE0
001310	02 MCHLQUE-MESSAGEA	PIC X.		MCHLQUE0
001320	02 MCHLQUE-MESSAGE0	PIC X(49).		MCHLQUE0
001330	02 FILLER	PIC X(6).		MCHLQUE0
000770				
000780				
000010	01 MAPERRO.			MAPERRO
000020	02 MAPERRH	PIC X.		MAPERRO
000030	02 FILLER	PIC X(4).		MAPERRO
000040	02 MAPERR-CSECTA	PIC X.		MAPERRO
000050	02 MAPERR-CSECT0	PIC X(8).		MAPERRO
000060	02 FILLER	PIC X.		MAPERRO
000070	02 MAPERR-VER-MODA	PIC X.		MAPERRO
000080	02 MAPERR-VER-MODO	PIC 9.9.		MAPERRO
000090	02 FILLER	PIC X.		MAPERRO
000100	02 MAPERR-TEST-FLAGA	PIC X.		MAPERRO

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000110	02 MAPERR-TEST-FLAGO	PIC X(4).		MAPERRRO
000120	02 FILLER	PIC X(7).		MAPERRRO
000130	02 MAPERR-MSGA	PIC X.		MAPERRRO
000140	02 MAPERR-MSGO	PIC X(56).		MAPERRRO
000150	02 FILLER	PIC X.		MAPERRRO
000160	02 MAPERR-IDMS-ERROR-LITERALA	PIC X.		MAPERRRO
000170	02 MAPERR-IDMS-ERROR-LITERAL0	PIC X(11).		MAPERRRO
000180	02 FILLER	PIC X.		MAPERRRO
000190	02 MAPERR-ERROR-STATUSA	PIC X.		MAPERRRO
000200	02 MAPERR-ERROR-STATUS0	PIC X(4).		MAPERRRO
000210	02 FILLER	PIC X.		MAPERRRO
000220	02 MAPERR-ERROR-SETA	PIC X.		MAPERRRO
000230	02 MAPERR-ERROR-SET0	PIC X(16).		MAPERRRO
000240	02 FILLER	PIC X.		MAPERRRO
000250	02 MAPERR-ERROR-RECORDA	PIC X.		MAPERRRO
000260	02 MAPERR-ERROR-RECORD0	PIC X(16).		MAPERRRO
000270	02 FILLER	PIC X.		MAPERRRO
000280	02 MAPERR-ERROR-AREAA	PIC X.		MAPERRRO
000290	02 MAPERR-ERROR-AREAO	PIC X(16).		MAPERRRO
000300	02 FILLER	PIC X(12).		MAPERRRO
000800				
000810 *	COPY IDMS DDRECA.			
01	DDRECA.			
	03 DATA-NAME	PIC X(30).		
	03 DATA-CREATED-DATE.			
	05 DATA-CREATED-YY	PIC XX.		
	05 DATA-CREATED-MM	PIC XX.		
	05 DATA-CREATED-DD	PIC XX.		
	03 DATA-CHANGED-DATE.			
	05 DATA-CHANGED-YY	PIC XX.		
	05 DATA-CHANGED-MM	PIC XX.		
	05 DATA-CHANGED-DD	PIC XX.		
	03 DATA-USER	OCCURS 6.		
	05 DATA-USER-NAME	PIC X(20).		
	03 DATA-REVISED-PERSON	PIC XXX.		
	03 FILLER	PIC XXX.		
000820				
000830 *	COPY IDMS DDRECB.			
01	DDRECB.			
	03 DATA-DESC	PIC X(40).		
	03 DATA-LENGTH	PIC X(10).		
	03 DATA-JUSTIFY	PIC X.		
		88 DATA-JUSTIFY-RIGHT VALUE 'R'.		
		88 DATA-JUSTIFY-LEFT VALUE 'L'.		
	03 DATA-LEVEL	PIC X.		
		88 DATA-INPUT VALUE 'I'.		
		88 DATA-OUTPUT VALUE 'O'.		
		88 DATA-INPUT-OUTPUT VALUE 'B'.		
	03 DATA-USAGE	PIC X(12).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
000840				
000850 *	COPY IDMS DDPROGRM.			
01	DDPROGRM.			
	03 DATA-PROGRAM-USED	PIC X(8).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
000860				
000870 *	COPY IDMS DDALIAS.			
01	DDALIAS.			
	03 DATA-ALIAS-NAME	PIC X(30).		
	03 FILLER	PIC X(6).		
	03 FILLER	PIC X(4).		
000880				
000890 *	COPY IDMS DDFILE.			
01	DDFILE.			
	03 DATA-FILE-USED	PIC X(20).		
	03 FILLER	PIC X(8).		
	03 FILLER	PIC X(4).		
000900				
000910 *	COPY IDMS SUBSCHEMA-CTRL.			

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01	SUBSCHEMA-CTRL.			
03	PROGRAM-NAME	PIC X(8).		
03	ERROR-STATUS	PIC X(4).		
		88 DB-STATUS-OK VALUE '0000'.		
		88 ANY-STATUS		
		VALUE '0000' THRU '9999'.		
		88 ANY-ERROR-STATUS		
		VALUE '0001' THRU '9999'.		
		88 DB-END-OF-SET VALUE '0307'.		
		88 DB-REC-NOT-FOUND VALUE '0326'.		
03	DBKEY	PIC S9(8)		
		USAGE COMP		
		SYNC.		
03	RECORD-NAME	PIC X(16).		
03	RRECORD-NAME	REDEFINES RECORD-NAME.		
	05 SSC-NODN	PIC X(8).		
	05 SSC-DBN	PIC X(8).		
03	AREA-NAME	PIC X(16).		
03	ERROR-SET	PIC X(16).		
03	ERROR-RECORD	PIC X(16).		
03	ERROR-AREA	PIC X(16).		
03	IDBMSCOM-AREA	PIC X(100).		
03	IDBMSCOM	REDEFINES IDBMSCOM-AREA		
		PIC X		
		OCCURS 100.		
03	FILLER	REDEFINES IDBMSCOM-AREA.		
	05 DB-SUB-ADDR	PIC X(4).		
	05 FILLER	PIC X(96).		
03	DIRECT-DBKEY	PIC S9(8)		
		USAGE COMP		
		SYNC.		
03	DIRECT-DBK	REDEFINES DIRECT-DBKEY		
		PIC S9(8)		
		USAGE COMP		
		SYNC.		
03	DATABASE-STATUS.			
	05 DBSTATMENT-CODE	PIC X(2).		
	05 DBSTATUS-CODE	PIC X(5).		
03	FILLER	PIC X.		
03	RECORD-OCCUR	PIC S9(8)		
		USAGE COMP		
		SYNC.		
03	DML-SEQUENCE	PIC S9(8)		
		USAGE COMP		
		SYNC.		
000920				
000930	PROCEDURE DIVISION USING TCBD, RELOCATE.			
000940				
000950	MOVE CSECT TO TWA-CURRENT-PROG-NAME.			
000960	MOVE ALL 'N' TO TWA-FLAGS-AREA.			
000970	PERFORM MAP-INPUT-WCHLQUE.			
000980	PERFORM SET-UP-IOMS.			
000990	PERFORM PROCESS-DISPLAY.			
001000	PERFORM FINISH-IOMS.			
001010	* RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CODE AFTER-READ.			
	CALL 'ISDHLRT' USING ISHD-XAO TWA-NEXT-TRAN-CODE.			
	GOBACK.			
001020				
001030				
001040	PROCESS-DISPLAY.			
001050	PERFORM PREPARE-OUTPUT-MAP.			
001060	PERFORM DISPLAY-DDRECA-DATA.			
001070	IF DDRECA-FOUND			

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001080	PERFORM DISPLAY-ALL-DATA-TO-MAP.			
001090	PERFORM WRITE-OUTPUT-MAP.			
001100				
001110	DISPLAY-DDRECA-DATA.			
001120	MOVE TWA-DATA-NAME TO DATA-NAME.			
001130	PERFORM OBTAIN-CALC-DDRECA.			
001140	IF DDRECA-FOUND			
001150	PERFORM MOVE-DDRECA-DATA-TO-MAP			
001160	PERFORM OBTAIN-NEXT-DDRECB			
001170	IF DB-STATUS-OK			
001180	PERFORM MOVE-DDRECB-DATA-TO-MAP			
001190	ELSE			
001200	NEXT SENTENCE			
001210	ELSE			
001220	MOVE DDRECA-NOT-FOUND-MESS TO MCHLQUE-MESSAGEO.			
001230				
001240				
001250	MOVE-DDRECA-DATA-TO-MAP.			
001260	MOVE DATA-NAME TO MCHLQUE-DATA-NAMED.			
001270	IF DATA-CREATED-DATE NOT = SPACES			
001280	MOVE ALL '/' TO MCHLQUE-CREATED-DATE-SLASH-10.			
001290	MCHLQUE-CREATED-DATE-SLASH-20			
001300	MOVE DATA-CREATED-YY TO MCHLQUE-CREATED-DATE-YYO			
001310	MOVE DATA-CREATED-MM TO MCHLQUE-CREATED-DATE-MMO			
001320	MOVE DATA-CREATED-DD TO MCHLQUE-CREATED-DATE-DDO.			
001330	IF DATA-CHANGED-DATE NOT = SPACES			
001340	MOVE ALL '/' TO MCHLQUE-CHANGED-DATE-SLASH-10.			
001350	MCHLQUE-CHANGED-DATE-SLASH-20			
001360	MOVE DATA-CHANGED-YY TO MCHLQUE-CHANGED-DATE-YYO			
001370	MOVE DATA-CHANGED-MM TO MCHLQUE-CHANGED-DATE-MMO			
001380	MOVE DATA-CHANGED-DD TO MCHLQUE-CHANGED-DATE-DDO.			
001390	MOVE DATA-REVISED-PERSON TO MCHLQUE-REVISED-PERSONO.			
001400	MOVE DATA-USER-NAME (1) TO MCHLQUE-USER-NAME-1O.			
001410	MOVE DATA-USER-NAME (2) TO MCHLQUE-USER-NAME-2O.			
001420	MOVE DATA-USER-NAME (3) TO MCHLQUE-USER-NAME-3O.			
001430	MOVE DATA-USER-NAME (4) TO MCHLQUE-USER-NAME-4O.			
001440	MOVE DATA-USER-NAME (5) TO MCHLQUE-USER-NAME-5O.			
001450	MOVE DATA-USER-NAME (6) TO MCHLQUE-USER-NAME-6O.			
001460				
001470	DISPLAY-ALL-DATA-TO-MAP.			
001480	PERFORM OBTAIN-NEXT-DDRECB.			
001490	IF DB-STATUS-OK			
001500	PERFORM MOVE-DDRECB-DATA-TO-MAP.			
001510	PERFORM OBTAIN-FIRST-PROGRAM.			
001520	IF END-OF-PROGRAM			
001530	NEXT SENTENCE			
001540	ELSE			
001550	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-1O			
001560	PERFORM LOAD-PROGRAM-NAME.			
001570	PERFORM OBTAIN-FIRST-FILE.			
001580	IF END-OF-FILE			
001590	NEXT SENTENCE			
001600	ELSE			
001610	MOVE DATA-FILE-USED TO MCHLQUE-FILE-USED-1O			
001620	PERFORM LOAD-FILE-NAME.			
001630	PERFORM OBTAIN-FIRST-ALIAS.			
001640	IF END-OF-ALIAS			
001650	NEXT SENTENCE			
001660	ELSE			
001670	MOVE DATA-ALIAS-NAME TO MCHLQUE-ALIAS-NAME-1O			
001680	PERFORM LOAD-ALIAS-NAME.			
001690				
001700	MOVE-DDRECB-DATA-TO-MAP.			
001710	MOVE DATA-DESC TO MCHLQUE-DATA-DESCO.			
001720	MOVE DATA-LENGTH TO MCHLQUE-DATA-PICTURED.			
001730	IF DATA-INPUT			
001740	MOVE 'INPUT' TO MCHLQUE-DATA-LEVELO			
001750	ELSE			
001760	IF DATA-OUTPUT			
001770	MOVE 'OUTPUT' TO MCHLQUE-DATA-LEVELO			
001780	ELSE			
001790	IF DATA-INPUT-OUTPUT			
001800	MOVE 'BOTH' TO MCHLQUE-DATA-LEVELO.			
001810	IF DATA-JUSTIFY-RIGHT			
001820	MOVE 'RIGHT' TO MCHLQUE-DATA-JUSTIFYO			
001830	ELSE			
001840	IF DATA-JUSTIFY-LEFT			

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001850	MOVE 'LEFT' TO MCHLQUE-DATA-JUSTIFYD.			
001860	MOVE DATA-USAGE TO MCHLQUE-DATA-USAGED.			
001870				
001880	LOAD-PROGRAM-NAME.			
001890	PERFORM OBTAIN-NEXT-PROGRAM.			
001900	IF DB-END-OF-SET			
001910	NEXT SENTENCE			
001920	ELSE			
001930	IF DB-STATUS-OK			
001940	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-20			
001950	PERFORM OBTAIN-NEXT-PROGRAM.			
001960	IF DB-END-OF-SET			
001970	NEXT SENTENCE			
001980	ELSE			
001990	IF DB-STATUS-OK			
002000	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-30			
002010	PERFORM OBTAIN-NEXT-PROGRAM.			
002020	IF DB-END-OF-SET			
002030	NEXT SENTENCE			
002040	ELSE			
002050	IF DB-STATUS-OK			
002060	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-40			
002070	PERFORM OBTAIN-NEXT-PROGRAM.			
002080	IF DB-END-OF-SET			
002090	NEXT SENTENCE			
002100	ELSE			
002110	IF DB-STATUS-OK			
002120	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-50			
002130	PERFORM OBTAIN-NEXT-PROGRAM.			
002140	IF DB-END-OF-SET			
002150	NEXT SENTENCE			
002160	ELSE			
002170	IF DB-STATUS-OK			
002180	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-60			
002190	PERFORM OBTAIN-NEXT-PROGRAM.			
002200	IF DB-END-OF-SET			
002210	NEXT SENTENCE			
002220	ELSE			
002230	IF DB-STATUS-OK			
002240	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-70			
002250	PERFORM OBTAIN-NEXT-PROGRAM.			
002260	IF DB-END-OF-SET			
002270	NEXT SENTENCE			
002280	ELSE			
002290	IF DB-STATUS-OK			
002300	MOVE DATA-PROGRAM-USED TO MCHLQUE-PROGRAM-USED-80.			
002310				
002320	LOAD-FILE-NAME.			
002330	PERFORM OBTAIN-NEXT-FILE.			
002340	IF DB-END-OF-SET			
002350	NEXT SENTENCE			
002360	ELSE			
002370	IF DB-STATUS-OK			
002380	MOVE DATA-FILE-USED TO MCHLQUE-FILE-USED-20			
002390	PERFORM OBTAIN-NEXT-FILE.			
002400	IF DB-END-OF-SET			
002410	NEXT SENTENCE			
002420	ELSE			
002430	IF DB-STATUS-OK			
002440	MOVE DATA-FILE-USED TO MCHLQUE-FILE-USED-30			
002450	PERFORM OBTAIN-NEXT-FILE.			
002460	IF DB-END-OF-SET			
002470	NEXT SENTENCE			
002480	ELSE			
002490	IF DB-STATUS-OK			
002500	MOVE DATA-FILE-USED TO MCHLQUE-FILE-USED-40.			
002510				
002520	LOAD-ALIAS-NAME.			
002530	PERFORM OBTAIN-NEXT-ALIAS.			
002540	IF DB-END-OF-SET			
002550	NEXT SENTENCE			
002560	ELSE			
002570	IF DB-STATUS-OK			
002580	MOVE DATA-ALIAS-NAME TO MCHLQUE-ALIAS-NAME-20			
002590	PERFORM OBTAIN-NEXT-ALIAS.			
002600	IF DB-END-OF-SET			
002610	NEXT SENTENCE			

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002620	ELSE			
002630	IF DB-STATUS-OK			
002640	MOVE DATA-ALIAS-NAME TO MCHLQUE-ALIAS-NAME-30			
002650	PERFORM OBTAIN-NEXT-ALIAS.			
002660	IF DB-END-OF-SET			
002670	NEXT SENTENCE			
002680	ELSE			
002690	IF DB-STATUS-OK			
002700	MOVE DATA-ALIAS-NAME TO MCHLQUE-ALIAS-NAME-40.			
002710	MAP-INPUT-MCHLQUE.			
002720	BASE TERMINAL-BUFFER ON POINTER ITRMIOAR.			
002730 *	CALL 'ISHDHLBS' USING ISHD-X01 ISHD-H3 ITRMIOAR			
002740 *	SERVICE RELOAD TERMINAL-BUFFER. PUT ADDRESS OF MCHLQUEC INTO TWA-MAPC-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAPC-PTR MCHLQUEC.			
002750 *	MAP-INPUT FROM TERMINAL-BUFFER NO-RELEASE			
002760 *	TO MAP MCHLQUE			
002770 *	MAPC-PTR IS TWA-MAPC-PTR. CALL 'ISHDHLM1' USING TWA-MAPC-PTR TERMINAL-BUFFER ISHD-XF1 ISHD-H4			
002780	SERVICE RELOAD MCHLQUEI.			
002790	PREPARE-OUTPUT-MAP.			
002800 *	PUT ADDRESS OF MCHLQUE INTO TWA-MAP-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MCHLQUE.			
002810 *	PREPARE MAP MCHLQUE			
002820 *	MAP-PTR IS TWA-MAP-PTR			
002830 *	SIZE IS MCHLQUE. CALL 'ISHDHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H5 MCHLQUEP			
002840	SERVICE RELOAD MCHLQUEO.			
002850	MOVE CSECT TO MCHLQUE-CSECTO.			
002860	MOVE VER-MOD TO MCHLQUE-VER-MODO.			
002870	MOVE CURRENT-DATE TO MCHLQUE-RDATED.			
002880	CALL 'KSRTIME' USING MCHLQUE-RTIMEO, H1.			
002890	IF TWA-TEST-RUN			
002900	OR SPT-TEST-RUN			
002910	MOVE 'TEST' TO MCHLQUE-TEST-FLAGO.			
002920	MOVE MCHLQUE-TRANI TO MCHLQUE-TRANO.			
002930	MOVE MCHLQUE-FUNCI TO MCHLQUE-FUNCO, TWA-FUNC.			
002940	MOVE MCHLQUE-KEYI TO MCHLQUE-KEYO, TWA-DATA-NAME.			
002950	WRITE-OUTPUT-MAP.			
002960 *	ERASE-WRITE MAP MCHLQUE IN BUFFER. CALL 'ISHDHLMF' USING ISHD-X05 MCHLQUEO ISHD-XF0 ISHD-X00 ISHD-X06 ISHD-X00 ISHD-X00.			
002970	OBTAIN-CALC-DDRECA.			
002980	OBTAIN CALC DDRECA.			
002990 *	MOVE 0001 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0001
	IDBMSCCM (32)			
	SR100			
	IDBMSCOM (43).			
003000	IF DB-REC-NOT-FOUND			
003010	MOVE 'N' TO DDRECA-FOUND-FLAG			
003020	ELSE			
003030	PERFORM IDMS-STATUS			
003040	MOVE 'Y' TO DDRECA-FOUND-FLAG.			
003050	OBTAIN-NEXT-DDRECB.			
003060 *	OBTAIN FIRST DDRECB WITHIN DDRECA-DDRECB. MOVE 0002 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0002
	IDBMSCOM (18)			
	SR101			
	DDRECA-DDRECB			
	IDBMSCOM (43).			
003080	IF DB-END-OF-SET			
003090	NEXT SENTENCE			
003100	ELSE			
003110	PERFORM IDMS-STATUS.			
003120				

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003130	OBTAIN-FIRST-PROGRAM.			
003140 *	OBTAIN FIRST DDPROGRAM WITHIN DDRECA-PROGRAM. MOVE 0003 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (18) SR102 DDRECA-PROGRAM IDBMSCOM (43).			DMLC0003
003150	IF DB-END-OF-SET			
003160	MOVE 'Y' TO PROGRAM-EOS-FLAG			
003170	ELSE			
003180	PERFORM IDMS-STATUS			
003190	MOVE 'N' TO PROGRAM-EOS-FLAG.			
003200				
003210	OBTAIN-NEXT-PROGRAM.			
003220 *	OBTAIN NEXT DDPROGRAM WITHIN DDRECA-PROGRAM. MOVE 0004 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR102 DDRECA-PROGRAM IDBMSCOM (43).			DMLC0004
003230	IF DB-END-OF-SET			
003240	NEXT SENTENCE			
003250	ELSE			
003260	PERFORM IDMS-STATUS.			
003270				
003280	OBTAIN-FIRST-FILE.			
003290 *	OBTAIN FIRST DDFILE WITHIN DDRECA-FILE. MOVE 0005 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (18) SR104 DDRECA-FILE IDBMSCOM (43).			DMLC0005
003300	IF DB-END-OF-SET			
003310	MOVE 'Y' TO FILE-EOS-FLAG			
003320	ELSE			
003330	PERFORM IDMS-STATUS			
003340	MOVE 'N' TO FILE-EOS-FLAG.			
003350				
003360	OBTAIN-NEXT-FILE.			
003370 *	OBTAIN NEXT DDFILE WITHIN DDRECA-FILE. MOVE 0006 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR104 DDRECA-FILE IDBMSCOM (43).			DMLC0006
003380	IF DB-END-OF-SET			
003390	NEXT SENTENCE			
003400	ELSE			
003410	PERFORM IDMS-STATUS.			
003420				
003430	OBTAIN-FIRST-ALIAS.			
003440 *	OBTAIN FIRST DDALIAS WITHIN DDRECA-ALIAS. MOVE 0007 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (18) SR103 DDRECA-ALIAS IDBMSCOM (43).			DMLC0007
003450	IF DB-END-OF-SET			
003460	MOVE 'Y' TO ALIAS-EOS-FLAG			
003470	ELSE			
003480	PERFORM IDMS-STATUS			
003490	MOVE 'N' TO ALIAS-EOS-FLAG.			
003500				
003510	OBTAIN-NEXT-ALIAS.			
003520 *	OBTAIN NEXT DDALIAS WITHIN DDRECA-ALIAS. MOVE 0008 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR103 DDRECA-ALIAS IDBMSCOM (43).			DMLC0008

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003530	IF DB-END-OF-SET			
003540	NEXT SENTENCE			
003550	ELSE			
003560	PERFORM IDMS-STATUS.			
003570				
003580	SET-UP-IDMS.			
003590 *	ACQUIRE VARIABLE BUFFER FOR SUBSCHEMA-CTRL			
003600 *	SIZE IS BUFFER-SIZE-CTRL.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-CTRL ISHD-H12 ISHD-XFO			
	ISHD-FO			
	SERVICE RELOAD SUBSCHEMA-CTRL.			
003610	MOVE CSECT TO PROGRAM-NAME.			
000010	IF TWA-PRODUCTION-RUN			OLB INDRN
000020	AND SPT-PRODUCTION-RUN			OLB INDRN
000030 *	BIND RUN-UNIT			OLB INDRN
	MOVE 0009 TO DML-SEQUENCE			DMLC0009
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (59)			
	SUBSCHEMA-CTRL			
	SUBSCHEMA-SSNAME;			
000040	ELSE			OLB INDRN
000050	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			OLB INDRN
000060	IDBMSCOM (59)			OLB INDRN
000070	SUBSCHEMA-CTRL			OLB INDRN
000080	TEST-SUBSCHEMA-SSNAME.			OLB INDRN
003630	PERFORM IDMS-STATUS.			
003640 *	READY DATA-REGION USAGE-MODE IS RETRIEVAL.			
	MOVE 0010 TO DML-SEQUENCE			DMLC0010
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (37)			
	DATA-REGION.			
003650	PERFORM IDMS-STATUS.			
003660 *	READY DATA-INDEX-REGION USAGE-MODE IS RETRIEVAL.			
	MOVE 0011 TO DML-SEQUENCE			DMLC0011
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (37)			
	DATA-INDEX-REGION.			
003670	PERFORM IDMS-STATUS.			
003680 *	ACQUIRE VARIABLE BUFFER FOR DORECA			
003690 *	SIZE IS BUFFER-SIZE-DORECA.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DORECA ISHD-H7 ISHD-XFO			
	ISHD-FO			
	SERVICE RELOAD DORECA.			
003700 *	BIND DORECA.			
	MOVE 0012 TO DML-SEQUENCE			DMLC0012
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (48)			
	SR100			
	DORECA.			
003710	PERFORM IDMS-STATUS.			
003720 *	ACQUIRE VARIABLE BUFFER FOR DDRECB			
003730 *	SIZE IS BUFFER-SIZE-DDRECB.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECB ISHD-H8 ISHD-XFO			
	ISHD-FO			
	SERVICE RELOAD DDRECB.			
003740 *	BIND DDRECB.			
	MOVE 0013 TO DML-SEQUENCE			DMLC0013
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (48)			
	SR101			
	DDRECB.			
003750 *	ACQUIRE VARIABLE BUFFER FOR DDPROGRM.			
003760 *	SIZE IS BUFFER-SIZE-DDPROGRM.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDPROGRM ISHD-H9 ISHD-XFO			
	ISHD-FO			
	SERVICE RELOAD DDPROGRM.			
003770 *	BIND DDPROGRM.			
	MOVE 0014 TO DML-SEQUENCE			DMLC0014
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (48)			
	SR102			
	DDPROGRM.			
003780 *	ACQUIRE VARIABLE BUFFER FOR DDFILE			
003790 *	SIZE IS BUFFER-SIZE-DDFILE.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDFILE ISHD-H11 ISHD-XFO			
	ISHD-FO			

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003800 *	SERVICE RELOAD DDFILE. BIND DDFILE. MOVE 0015 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (48) SR104 DDFILE.			DMLC0015
003810 *	ACQUIRE VARIABLE BUFFER FOR DDALIAS			
003820 *	SIZE IS BUFFER-SIZE-DDALIAS. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDALIAS ISHD-H10 ISHD-XFO ISHD-FO			
003830 *	SERVICE RELOAD DDALIAS. BIND DDALIAS. MOVE 0016 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (48) SR103 DDALIAS.			DMLC0016
003840				
003850	FINISH-IDMS.			
003860 *	FINISH. MOVE 0017 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (02).			DMLC0017
003870	PERFORM IDMS-STATUS.			
003880 *	RELEASE BUFFER SUBSCHEMA-CTRL. CALL 'ISHDHLPB' USING SUBSCHEMA-CTRL.			
003890 *	RELEASE BUFFER DORECA. CALL 'ISHDHLPB' USING DORECA.			
003900 *	RELEASE BUFFER DORECB. CALL 'ISHDHLPB' USING DORECB.			
003910 *	RELEASE BUFFER DDPROGRM. CALL 'ISHDHLPB' USING DDPROGRM.			
003920 *	RELEASE BUFFER DDFILE. CALL 'ISHDHLPB' USING DDFILE.			
003930 *	RELEASE BUFFER DDALIAS. CALL 'ISHDHLPB' USING DDALIAS.			
003940				
000010	IDMS-STATUS.			IDMSERR
000020	IF DB-STATUS-OK			IDMSERR
000030	NEXT SENTENCE			IDMSERR
000040	ELSE			IDMSERR
000050	PERFORM IDMS-ERROR-EXIT.			IDMSERR
000060				IDMSERR
000070	IDMS-ERROR-EXIT.			IDMSERR
000080	IF ERROR-STATUS NOT = '1469'			IDMSERR
000090 *	DUMP FROM CSECT SIZE IS 16			IDMSERR
000100 *	AND TWA AND RESOURCES			IDMSERR
000110 *	ID IS '** IDMS ERRORS DUMP **'. CALL 'ISHDHLPM' USING ISHD-XD6 CSECT ISHD-H16 ISHD-X22 ISHD-L1 ISHD-H22.			IDMSERR
000120 *	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			IDMSERR
000130 *	PREPARE MAP MAPERR			IDMSERR
000140 *	MAP-PTR IS TWA-MAP-PTR			IDMSERR
000150 *	SIZE IS MAPERRP. CALL 'ISHDHLNR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H6 MAPERRP SERVICE RELOAD MAPERRP. MOVE CSECT TO MAPERR-CSECT.			IDMSERR
000160				IDMSERR
000170	MOVE VER-MOD TO MAPERR-VER-MODO.			IDMSERR
000180	IF TWA-TEST-RUN			IDMSERR
000190	OR SPT-TEST-RUN			IDMSERR
000200	MOVE 'TEST' TO MAPERR-TEST-FLAGO			IDMSERR
000210	ELSE			IDMSERR
000220	IF TWA-PRODUCTION-RUN			IDMSERR
000230	AND SPT-PRODUCTION-RUN			IDMSERR
000240	NEXT SENTENCE			IDMSERR
000250	ELSE			IDMSERR
000260	MOVE 'INVL' TO MAPERR-TEST-FLAGO.			IDMSERR
000270	MOVE 'IDMS ERRORS' TO MAPERR-IDMS-ERROR-LITERAL0.			IDMSERR
000280	MOVE ERROR-STATUS TO MAPERR-ERROR-STATUS0.			IDMSERR
000290	MOVE ERROR-SET TO MAPERR-ERROR-SET0.			IDMSERR
000300	MOVE ERROR-RECORD TO MAPERR-ERROR-RECORD0.			IDMSERR
000310	MOVE ERROR-AREA TO MAPERR-ERROR-AREAO.			IDMSERR
000320 *	ROLLBACK.			IDMSERR

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	MOVE 0018 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (67).		DMLC0018
000330	IF NOT DB-STATUS-OK		IDMSERR
000340	MOVE 'ROLLBACK FAILED' TO MAPERR-MSGO.		IDMSERR
000350 *	WRITE MAP MAPERR IN BUFFER. CALL 'ISHDHLMP' USING ISHD-X01 MAPERR0 ISHD-XF0 ISHD-X00 ISHD-XD6 ISHD-X00 ISHD-X00.		IDMSERR
000360			IDMSERR
003960 *	RETURN TO NEXT-TRAN SIGNON-TRAN AFTER-READ. CALL 'ISHDHLRT' USING ISHD-XA0 SIGNON-TRAN. GOBACK.		
003970			
003980			
003990	MAP-ERROR-EXIT.		
000010 *	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.		MAPRERR
000020 *	PREPARE MAP MAPERR		MAPRERR
000030 *	MAP-PTR IS TWA-MAP-PTR		MAPRERR
000040 *	SIZE IS MAPERRP. CALL 'ISHDHLMP' USING TWA-MAP-PTR ISHD-XE2 ISHD-H6 MAPERRP SERVICE RELOAD MAPERRP.		MAPRERR
000050	MOVE CSECT TO MAPERR-CSECTO.		MAPRERR
000060	MOVE VER-MOD TO MAPERR-VER-MODO.		MAPRERR
000070	IF TWA-TEST-RUN		MAPRERR
000080	OR SPT-TEST-RUN		MAPRERR
000090	MOVE 'TEST' TO MAPERR-TEST-FLAGO.		MAPRERR
000100	MOVE 'CALL DPC -- ERROR IN PROGRAM MAP' TO MAPERR-MSGO.		MAPRERR
000110 *	WRITE MAP MAPERR IN BUFFER. CALL 'ISHDHLMP' USING ISHD-X01 MAPERR0 ISHD-XF0 ISHD-X00 ISHD-XD6 ISHD-X00 ISHD-X00.		MAPRERR
004010 *	RETURN TO NEXT-TRAN SIGNON-TRAN AFTER-READ. CALL 'ISHDHLRT' USING ISHD-XA0 SIGNON-TRAN. GOBACK.		
004020			
004030			

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000010	IDENTIFICATION DIVISION.			
000020	PROGRAM-ID.	0LDD0110.		
000030	AUTHOR.	TONY LAI.		
000040	INSTALLATION.	KSU DATA PROCESSING CENTER		
000050		KANSAS STATE UNIVERSITY		
000060		MANHATTAN, KANSAS 66506.		
000070	DATE-WRITTEN.	11/82.		
000080	DATE-COMPILED.	NOVEMBER 24, 1982 AT 4.30 PM.		
000090	REMARKS.			
000100	0LDD0110 - CROSS REFERENCE FOR DATA ITEM.			
000110				
000120	MODIFICATIONS & CORRECTIONS -			
000130	NONE.			
000140				
000150				
000160	ENVIRONMENT DIVISION.			
000170	*IDMS-CONTROL SECTION.			
000180	*PROTOCOL.			
000190	* MODE IS SHADOW DEBUG	IDMS-RECORDS MANUAL.		
000200				
000210	DATA DIVISION.			
000220	*SCHEMA SECTION.			
000230	*DB DATASUBS	WITHIN DDSHEMA.		
000240				
000250	WORKING-STORAGE SECTION.			
000260	77 CSECT	PIC X(8)	VALUE '0LDD0110'.	
000270	77 VER-MOD	PIC 9V9	VALUE	
000280		1-0.		
000290	77 FUNC-CODE	PIC XX	VALUE 'XR'.	
000010	77 BUFFER-SIZE-CTRL	PIC S9(4)	COMP SYNC VALUE +220.	CHLSUBSZ
000020	77 BUFFER-SIZE-DDRECA	PIC S9(4)	COMP SYNC VALUE +168.	CHLSUBSZ
000030	77 BUFFER-SIZE-DDRECB	PIC S9(4)	COMP SYNC VALUE +72.	CHLSUBSZ
000040	77 BUFFER-SIZE-DDPROGRM	PIC S9(4)	COMP SYNC VALUE +16.	CHLSUBSZ
000050	77 BUFFER-SIZE-DCFILE	PIC S9(4)	COMP SYNC VALUE +32.	CHLSUBSZ
000060	77 BUFFER-SIZE-DDALIAS	PIC S9(4)	COMP SYNC VALUE +40.	CHLSUBSZ
000070	77 TEST-SUBSCHEMA-SSNAME	PIC X(8)	VALUE 'XATASUBS'.	CHLSUBSZ
000310	77 H1	VALUE +1	PIC S999	COMP SYNC.
000320	77 MAP-SUB-MAX	VALUE +14	PIC S999	COMP SYNC.
000330	77 SIGNON-TRAN		PIC X(4)	VALUE 'DDSO'.
000340				
000010	01 MCHLXRE.			MCHLXRE
000020	02 FILLER	PIC X(19)	VALUE ' A F I '.	MCHLXRE
000360				
000010	01 MCHLXRE.			MCHLXRE
000020	02 FILLER	PIC X(20)	VALUE ' 9DDSO I I '.	MCHLXRE
000030	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000040	02 FILLER	PIC X(20)	VALUE ' 0 A?DATA DICT '.	MCHLXRE
000050	02 FILLER	PIC X(20)	VALUE 'IGNARY SYSTEM BH 8 '.	MCHLXRE
000060	02 FILLER	PIC X(20)	VALUE ' 0 '.	MCHLXRE
000070	02 FILLER	PIC X(20)	VALUE ' 0 B=KANSAS STATE '.	MCHLXRE
000080	02 FILLER	PIC X(20)	VALUE 'UNIVERSITY C 0 '.	MCHLXRE
000090	02 FILLER	PIC X(20)	VALUE ' 0 OMCHLXRE E '.	MCHLXRE
000100	02 FILLER	PIC X(20)	VALUE ' CROSS REFERENCE FOR '.	MCHLXRE
000110	02 FILLER	PIC X(20)	VALUE ' DATA NAME GJDATE G '.	MCHLXRE
000120	02 FILLER	PIC X(20)	VALUE 'DATE GUDATA NAME HFD '.	MCHLXRE
000130	02 FILLER	PIC X(20)	VALUE 'ATA DESCRIPTION H-CR '.	MCHLXRE
000140	02 FILLER	PIC X(20)	VALUE 'EATED HYCHANGED 8 '.	MCHLXRE
000150	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000160	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000170	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000180	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000190	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000200	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000210	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000220	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000230	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000240	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000250	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000260	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000270	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000280	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000290	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000300	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000310	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000320	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE
000330	02 FILLER	PIC X(20)	VALUE ' '.	MCHLXRE

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000340	02 FILLER	PIC X(20) VALUE		MCHLXRE
000350	02 FILLER	PIC X(20) VALUE		MCHLXRE
000360	02 FILLER	PIC X(20) VALUE		MCHLXRE
000370	02 FILLER	PIC X(20) VALUE		MCHLXRE
000380	02 FILLER	PIC X(20) VALUE		MCHLXRE
000390	02 FILLER	PIC X(20) VALUE		MCHLXRE
000400	02 FILLER	PIC X(20) VALUE		MCHLXRE
000410	02 FILLER	PIC X(20) VALUE		MCHLXRE
000420	02 FILLER	PIC X(20) VALUE		MCHLXRE
000430	02 FILLER	PIC X(20) VALUE		MCHLXRE
000440	02 FILLER	PIC X(20) VALUE		MCHLXRE
000450	02 FILLER	PIC X(20) VALUE		MCHLXRE
000460	02 FILLER	PIC X(20) VALUE		MCHLXRE
000470	02 FILLER	PIC X(20) VALUE		MCHLXRE
000480	02 FILLER	PIC X(20) VALUE		MCHLXRE
000490	02 FILLER	PIC X(20) VALUE		MCHLXRE
000500	02 FILLER	PIC X(20) VALUE		MCHLXRE
000510	02 FILLER	PIC X(20) VALUE		MCHLXRE
000520	02 FILLER	PIC X(20) VALUE		MCHLXRE
000530	02 FILLER	PIC X(20) VALUE		MCHLXRE
000540	02 FILLER	PIC X(20) VALUE		MCHLXRE
000550	02 FILLER	PIC X(20) VALUE		MCHLXRE
000560	02 FILLER	PIC X(20) VALUE		MCHLXRE
000570	02 FILLER	PIC X(20) VALUE		MCHLXRE
000580	02 FILLER	PIC X(20) VALUE		MCHLXRE
000590	02 FILLER	PIC X(20) VALUE		MCHLXRE
000600	02 FILLER	PIC X(20) VALUE		MCHLXRE
000610	02 FILLER	PIC X(20) VALUE		MCHLXRE
000620	02 FILLER	PIC X(20) VALUE		MCHLXRE
000630	02 FILLER	PIC X(20) VALUE		MCHLXRE
000640	02 FILLER	PIC X(20) VALUE		MCHLXRE
000650	02 FILLER	PIC X(20) VALUE		MCHLXRE
000660	02 FILLER	PIC X(20) VALUE		MCHLXRE
000670	02 FILLER	PIC X(20) VALUE		MCHLXRE
000680	02 FILLER	PIC X(20) VALUE		MCHLXRE
000690	02 FILLER	PIC X(20) VALUE		MCHLXRE
000700	02 FILLER	PIC X(20) VALUE	0	MCHLXRE
000710	02 FILLER	PIC X(20) VALUE	0 \$ 8	MCHLXRE
000720	02 FILLER	PIC X(20) VALUE		MCHLXRE
000730	02 FILLER	PIC X(20) VALUE		MCHLXRE
000740	02 FILLER	PIC X(20) VALUE	PF3 - ROLL FORWARD	MCHLXRE
000750	02 FILLER	PIC X(20) VALUE		MCHLXRE
000760	01 MCHLXREP	PIC 9(4) COMP VALUE 01462.		MCHLXRE
000380				
000010	01 MAPERR.			MAPERR
000020	02 FILLER	PIC X(20) VALUE	8 \$ 8	MAPERR
000030	02 FILLER	PIC X(20) VALUE	8 0 \$ 8	MAPERR
000040	02 FILLER	PIC X(20) VALUE		MAPERR
000050	02 FILLER	PIC X(20) VALUE		MAPERR
000060	02 FILLER	PIC X(20) VALUE	8	MAPERR
000070	02 FILLER	PIC X(20) VALUE	8	MAPERR
000080	02 FILLER	PIC X(20) VALUE	8	MAPERR
000090	02 FILLER	PIC X(20) VALUE	8	MAPERR
000100	02 FILLER	PIC X(14) VALUE	0) 0)	MAPERR
000110	01 MAPERRP	PIC 9(4) COMP VALUE 00174.		MAPERR
000400				
000410	* COPY IDMS SUBSCHEMA-NAMES.	PIC X(8) VALUE 'DATASUBS'.		
01	SUBSCHEMA-SSNAME			
01	SUBSCHEMA-RECNAME.			
	03 SR1	PIC X(16)		
		VALUE 'SR1		
	03 SR9995	PIC X(16)		
		VALUE 'IXSUB		
	03 SR9997	PIC X(16)		
		VALUE 'IXSET		
	03 SR9996	PIC X(16)		
		VALUE 'IXREC		
	03 SR9999	PIC X(16)		
		VALUE 'IXOWNER		
	03 SR9998	PIC X(16)		
		VALUE 'IXDET		
	03 SR104	PIC X(16)		
		VALUE 'DDFILE		
	03 SR103	PIC X(16)		
		VALUE 'DDALIAS		
	03 SR102	PIC X(16)		

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	03 SR101	VALUE 'DDPROGRAM	'.	
	03 SR100	PIC X(16)		
		VALUE 'DDRECB	'.	
		PIC X(16)		
01	SUBSCHEMA-SETNAMES.	VALUE 'CDRECA	'.	
	03 DDRECA-DDRECB	PIC X(16)		
		VALUE 'DDRECA-DDRECB	'.	
	03 DDRECA-PROGRAM	PIC X(16)		
		VALUE 'CDRECA-PROGRAM	'.	
	03 DDRECA-ALIAS	PIC X(16)		
		VALUE 'DDRECA-ALIAS	'.	
	03 DDRECA-FILE	PIC X(16)		
		VALUE 'DDRECA-FILE	'.	
	03 IX-DATA-NAME	PIC X(16)		
		VALUE 'IX-DATA-NAME	'.	
	03 IXSET-IXREC	PIC X(16)		
		VALUE 'IXSET-IXREC	'.	
	03 IXSET-IXDET	PIC X(16)		
		VALUE 'IXSET-IXDET	'.	
	03 IXSUB-IXREC	PIC X(16)		
		VALUE 'IXSUB-IXREC	'.	
	03 CALC	PIC X(16)		
		VALUE 'CALC	'.	
01	SUBSCHEMA-AREANAMES.			
	03 DATA-INDX-REGION	PIC X(16)		
		VALUE 'DATA-INDX-REGION'	'.	
	03 DATA-REGION	PIC X(16)		
		VALUE 'DATA-REGION	'.	
000420	01 DFHAID.			
000430	03 ENTERK	PIC X	VALUE QUOTE.	KEY3270
000010	03 PF1	PIC X	VALUE '1'.	KEY3270
000020	03 PF2	PIC X	VALUE '2'.	KEY3270
000030	03 PF3	PIC X	VALUE '3'.	KEY3270
000040	03 PF4	PIC X	VALUE '4'.	KEY3270
000050	03 PF5	PIC X	VALUE '5'.	KEY3270
000060	03 PF6	PIC X	VALUE '6'.	KEY3270
000070	03 PF7	PIC X	VALUE '7'.	KEY3270
000080	03 PF8	PIC X	VALUE '8'.	KEY3270
000090	03 PF9	PIC X	VALUE '9'.	KEY3270
000100	03 PF10	PIC X	VALUE '0'.	KEY3270
000110	03 PF11	PIC X	VALUE '1'.	KEY3270
000120	03 PF12	PIC X	VALUE '2'.	KEY3270
000130	03 IMMDECT	PIC X	VALUE '0'.	KEY3270
000140	03 TESTREQ	PIC X	VALUE '0'.	KEY3270
000150	03 CLEAR	PIC X	VALUE '1'.	KEY3270
000160	03 PA1	PIC X	VALUE '1'.	KEY3270
000170	03 PA2	PIC X	VALUE '2'.	KEY3270
000180	03 PA3	PIC X	VALUE '3'.	KEY3270
000190				
000450	01 DFHBMSCA.			
000460	**** DFHBMSCA **** -INC ATB3270 ****			DFHBMSCA
000010	* IN CONSTRUCTING AN ATTRIBUTE YOU MAY MAKE ONE CHOICE			ATB3270
000020	* FROM EACH OF THE THREE GROUPS BELOW. THE FIELDS DEFINED			ATB3270
000030	* BELOW HAVE BEEN NAMED IN SUCH A MANNER AS TO BE READILY			ATB3270
000040	* UNDERSTOOD ONCE THE KEY IS KNOWN. THE FOURTH, FIFTH, AND			ATB3270
000050	* SIXTH CHARACTERS OF THE NAME ARE FROM GROUPS 1-3 BELOW.			ATB3270
000060	* NOTE THAT SHORT HAND VERSIONS ARE AVAILABLE FOR DEFAULTS			ATB3270
000070	* OF MDT=NO AND REGULAR INTENSITY.			ATB3270
000080	* GROUP I FIELD TYPE			ATB3270
000090	* PROTECTED = P			ATB3270
000100	* UNPROTECTED, ALPHA NUMERIC = U			ATB3270
000110	* UNPROTECTED, NUMERIC SHIFT = N			ATB3270
000120	* PROTECTED AND CURSOR SKIP = S			ATB3270
000130	* GROUP II INTENSITY			ATB3270
000140	* REGULAR = R OR BLANK IF MDT=N			ATB3270
000150	* HIGH = H			ATB3270
000160	* OFF(DARK) = O			ATB3270
000170	* LIGHT PEN DETECTABLE = L			ATB3270
000180				
000190				
000200				
000210				
000220				

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000230 *				ATB3270
000240 *	GROUP III MODIFIED DATA TAG			ATB3270
000250 *				ATB3270
000260 *	ON = Y			ATB3270
000270 *	OFF = N OR BLANK			ATB3270
000280 *				ATB3270
000290 *				ATB3270
000300 *	SKIP REGULAR INTENSITY			ATB3270
000310 *				ATB3270
000320 *	03 ATBS PIC X VALUE '0'.			ATB3270
000330 *	03 ATBSR REDEFINES ATBS			ATB3270
000340 *	PIC X.			ATB3270
000350 *	03 ATBSRN REDEFINES ATBS			ATB3270
000360 *	PIC X.			ATB3270
000370 *	03 ATBSRY PIC X VALUE '1'.			ATB3270
000380 *				ATB3270
000390 *	SKIP HIGH INTENSITY			ATB3270
000400 *				ATB3270
000410 *	03 ATBSH PIC X VALUE '8'.			ATB3270
000420 *	03 ATBSHN REDEFINES ATBSH			ATB3270
000430 *	PIC X.			ATB3270
000440 *	03 ATBSHY PIC X VALUE '9'.			ATB3270
000450 *				ATB3270
000460 *	SKIP OFF (DARK) INTENSITY			ATB3270
000470 *				ATB3270
000480 *	03 ATBSO PIC X VALUE '3'.			ATB3270
000490 *	03 ATBSON REDEFINES ATBSO			ATB3270
000500 *	PIC X.			ATB3270
000510 *	03 ATBSO REDEFINES ATBSO			ATB3270
000520 *	PIC X.			ATB3270
000530 *	03 ATBSON REDEFINES ATBSO			ATB3270
000540 *	PIC X.			ATB3270
000550 *	03 ATBSOY PIC X VALUE QUOTE.			ATB3270
000560 *	03 ATBSOY REDEFINES ATBSOY			ATB3270
000570 *	PIC X.			ATB3270
000580 *				ATB3270
000590 *	SKIP REGULAR INTENSITY, LIGHT PEN			ATB3270
000600 *				ATB3270
000610 *	03 ATBSL PIC X VALUE '4'.			ATB3270
000620 *	03 ATBSLN REDEFINES ATBSL			ATB3270
000630 *	PIC X.			ATB3270
000640 *	03 ATBSLY PIC X VALUE '5'.			ATB3270
000650 *				ATB3270
000660 *	PROTECT REGULAR INTENSITY			ATB3270
000670 *				ATB3270
000680 *	03 ATBP PIC X VALUE '1'.			ATB3270
000690 *	03 ATBPR REDEFINES ATBP			ATB3270
000700 *	PIC X.			ATB3270
000710 *	03 ATBPRN REDEFINES ATBP			ATB3270
000720 *	PIC X.			ATB3270
000730 *	03 ATBPRY PIC X VALUE '1'.			ATB3270
000740 *				ATB3270
000750 *	PROTECT HIGH INTENSITY			ATB3270
000760 *				ATB3270
000770 *	03 ATBPH PIC X VALUE 'Y'.			ATB3270
000780 *	03 ATBPHN REDEFINES ATBPH			ATB3270
000790 *	PIC X.			ATB3270
000800 *	03 ATBPHY PIC X VALUE 'Z'.			ATB3270
000810 *				ATB3270
000820 *	PROTECT OFF (DARK) INTENSITY			ATB3270
000830 *				ATB3270
000840 *	03 ATBPO PIC X VALUE 'X'.			ATB3270
000850 *	03 ATBPON REDEFINES ATBPO			ATB3270
000860 *	PIC X.			ATB3270
000870 *	03 ATBPOY PIC X VALUE '1'.			ATB3270
000880 *				ATB3270
000890 *	PROTECT REGULAR INTENSITY, LIGHT PEN			ATB3270
000900 *				ATB3270
000910 *	03 ATBPL PIC X VALUE 'U'.			ATB3270
000920 *	03 ATBPLN REDEFINES ATBPL			ATB3270
000930 *	PIC X.			ATB3270
000940 *	03 ATBPLY PIC X VALUE 'V'.			ATB3270
000950 *				ATB3270
000960 *	UNPROTECTED REGULAR INTENSITY			ATB3270
000970 *	ALPHA-NUMERIC			ATB3270
000980 *	03 ATBU PIC X VALUE 'I'.			ATB3270
000990 *	03 ATBUR REDEFINES ATBU			ATB3270

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001000				ATB3270
001010	03 ATBURN	PIC X	REDEFINES ATBU	ATB3270
001020		PIC X		ATB3270
001030	03 ATBURY	PIC X	VALUE 'A'.	ATB3270
001040 *				ATB3270
001050 *	UNPROTECTED	HIGH INTENSITY		ATB3270
001060 *	ALPHA-NUMERIC			ATB3270
001070 *				ATB3270
001080	03 ATBUHN	PIC X	VALUE 'H'.	ATB3270
001090	03 ATBUH		REDEFINES ATBUHN	ATB3270
001100		PIC X		ATB3270
001110	03 ATBUHY	PIC X	VALUE 'I'.	ATB3270
001120 *				ATB3270
001130 *	UNPROTECTED	OFF(DARK) INTENSITY		ATB3270
001140 *	ALPHA-NUMERIC			ATB3270
001150 *				ATB3270
001160	03 ATBUO	PIC X	VALUE 'O'.	ATB3270
001170	03 ATBUON		REDEFINES ATBUO	ATB3270
001180		PIC X		ATB3270
001190	03 ATBUOY	PIC X	VALUE 'I'.	ATB3270
001200 *				ATB3270
001210 *	UNPROTECTED	REGULAR INTENSITY, LIGHT PEN		ATB3270
001220 *	ALPHA-NUMERIC			ATB3270
001230 *				ATB3270
001240	03 ATBUL	PIC X	VALUE 'O'.	ATB3270
001250	03 ATBULN		REDEFINES ATBUL	ATB3270
001260		PIC X		ATB3270
001270	03 ATBULY	PIC X	VALUE 'E'.	ATB3270
001280 *				ATB3270
001290 *	UNPROTECTED	REGULAR INTENSITY		ATB3270
001300 *	NUMERIC SHIFT			ATB3270
001310 *				ATB3270
001320	03 ATBN	PIC X	VALUE 'G'.	ATB3270
001330	03 ATBNR		REDEFINES ATBN	ATB3270
001340		PIC X		ATB3270
001350	03 ATBNRN		REDEFINES ATBN	ATB3270
001360		PIC X		ATB3270
001370	03 ATBNRY	PIC X	VALUE 'J'.	ATB3270
001380 *				ATB3270
001390 *	UNPROTECTED	HIGH INTENSITY		ATB3270
001400 *	NUMERIC SHIFT			ATB3270
001410 *				ATB3270
001420	03 ATBNH	PIC X	VALUE 'Q'.	ATB3270
001430	03 ATBNHN		REDEFINES ATBNH	ATB3270
001440		PIC X		ATB3270
001450	03 ATBNHY	PIC X	VALUE 'R'.	ATB3270
001460 *				ATB3270
001470 *	UNPROTECTED	OFF(DARK) INTENSITY		ATB3270
001480 *	NUMERIC SHIFT			ATB3270
001490 *				ATB3270
001500	03 ATBNO	PIC X	VALUE 'S'.	ATB3270
001510	03 ATBNON		REDEFINES ATBNO	ATB3270
001520		PIC X		ATB3270
001530	03 ATBNQY	PIC X	VALUE 'J'.	ATB3270
001540 *				ATB3270
001550 *	UNPROTECTED	REGULAR INTENSITY, LIGHT PEN		ATB3270
001560 *	NUMERIC SHIFT			ATB3270
001570 *				ATB3270
001580	03 ATBNL	PIC X	VALUE 'M'.	ATB3270
001590	03 ATBNLN		REDEFINES ATBNL	ATB3270
001600		PIC X		ATB3270
001610	03 ATBNLY	PIC X	VALUE 'N'.	ATB3270
000030 *				DFHBMSCA
000040 *	ASK - ASKIP			DFHBMSCA
000050		03 DFHBMASK	PIC X VALUE 'O'.	DFHBMSCA
000060 *				DFHBMSCA
000070 *	ASF - ASKIP, FSET	03 DFHBMASF	PIC X VALUE 'I'.	DFHBMSCA
000080				DFHBMSCA
000090 *				DFHBMSCA
000100 *	ASB - ASKIP, BRIGHT	03 DFHBMASB	PIC X VALUE 'B'.	DFHBMSCA
000110				DFHBMSCA
000120 *				DFHBMSCA
000130 *	ASD - ASKIP, DARK	03 DFHBMASD	PIC X VALUE 'A'.	DFHBMSCA
000140				DFHBMSCA
000150 *				DFHBMSCA
000160 *	AFB - ASKIP, FSET, BRIGHT			DFHBMSCA

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000170	03 DFHBMAFB PIC X VALUE '9'.	DFHBMSCA		
000180	* AFD - ASKIP, FSET, DARK	DFHBMSCA		
000190	03 DFHBMAFD PIC X VALUE QUOTE.	DFHBMSCA		
000200		DFHBMSCA		
000210	* BRY - BRIGHT	DFHBMSCA		
000220	03 DFHBMBRY PIC X VALUE 'H'.	DFHBMSCA		
000230		DFHBMSCA		
000240	* BRN - BRIGHT, NUMERIC	DFHBMSCA		
000250	03 DFHBMBRN PIC X VALUE 'Q'.	DFHBMSCA		
000260		DFHBMSCA		
000270	* DAR - DARK	DFHBMSCA		
000280	03 DFHBMDAR PIC X VALUE '<'.	DFHBMSCA		
000290		DFHBMSCA		
000300	* FSE - FSET	DFHBMSCA		
000310	03 DFHBMFSE PIC X VALUE 'A'.	DFHBMSCA		
000320		DFHBMSCA		
000330	* FSB - FSET, BRIGHT	DFHBMSCA		
000340	03 DFHBMFSB PIC X VALUE 'I'.	DFHBMSCA		
000350		DFHBMSCA		
000360	* FSD - FSET, DARK	DFHBMSCA		
000370	03 DFHBMFSU PIC X VALUE 'I'.	DFHBMSCA		
000380		DFHBMSCA		
000390	* FSN - FSET, NUMERIC	DFHBMSCA		
000400	03 DFHBMFSN PIC X VALUE 'J'.	DFHBMSCA		
000410		DFHBMSCA		
000420	* FBN - FSET, BRIGHT, NUMERIC	DFHBMSCA		
000430	03 DFHBMBFN PIC X VALUE 'R'.	DFHBMSCA		
000440		DFHBMSCA		
000450	* PRO - PROTECTED	DFHBMSCA		
000460	03 DFHBMPRO PIC X VALUE '-I'.	DFHBMSCA		
000470		DFHBMSCA		
000480	* PRF - PROTECTED, FSET	DFHBMSCA		
000490	03 DFHBMPRF PIC X VALUE 'I'.	DFHBMSCA		
000500		DFHBMSCA		
000510	* UNP - UNPROTECTED	DFHBMSCA		
000520	03 DFHBMUNP PIC X VALUE SPACE.	DFHBMSCA		
000530		DFHBMSCA		
000540	* UNN - UNPROTECTED, NUMERIC	DFHBMSCA		
000550	03 DFHBMUNN PIC X VALUE '&'.	DFHBMSCA		
000560		DFHBMSCA		
000570		DFHBMSCA		
000480	01 ISHD-CONSTANTS.			
02	ISHD-F0.			
03	ISHD-H0 PIC X(2) VALUE LOW-VALUES.			
03	ISHD-X00 PIC X VALUE LOW-VALUES.			
02	03 FILLER PIC X VALUE LOW-VALUES.			
02	ISHD-H7 PIC 9(4) COMP SYNC VALUE 7.			
02	ISHD-H22 PIC 9(4) COMP SYNC VALUE 22.			
02	ISHD-H16 PIC 9(4) COMP SYNC VALUE 16.			
02	ISHD-H10 PIC 9(4) COMP SYNC VALUE 10.			
02	ISHD-H9 PIC 9(4) COMP SYNC VALUE 9.			
02	ISHD-H8 PIC 9(4) COMP SYNC VALUE 8.			
02	ISHD-H2 PIC 9(4) COMP SYNC VALUE 2.			
02	ISHD-H6 PIC 9(4) COMP SYNC VALUE 6.			
02	ISHD-H5 PIC 9(4) COMP SYNC VALUE 5.			
02	ISHD-H4 PIC 9(4) COMP SYNC VALUE 4.			
02	ISHD-X01 PIC X VALUE 'I'.			
02	ISHD-X02 PIC X VALUE 'I'.			
02	ISHD-X05 PIC X VALUE 'I'.			
02	ISHD-X22 PIC X VALUE 'I'.			
02	ISHD-XA0 PIC X VALUE 'I'.			
02	ISHD-XD6 PIC X VALUE 'I'.			
02	ISHD-XE2 PIC X VALUE 'S'.			
02	ISHD-XF0 PIC X VALUE 'O'.			
02	ISHD-XF1 PIC X VALUE 'I'.			
02	ISHD-L1 PIC X(22) VALUE '*** IDMS ERRORS DUMP ***'.			
000490	LINKAGE SECTION.			
000500				
000010	*01 TCBD COPY TCBCOB.			CHLTWAEX
000010	01 TCBD.			
000020	02 ITRMQRID PIC X(4).			
000030	02 ITRMOCBA PIC 9(9) COMP SYNC.			
000040	02 ITRMPCKA PIC 9(9) COMP SYNC.			
000050	02 ITRMSIZE PIC 9(4) COMP SYNC.			
000060	02 ITRMERRP PIC X.			

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000070	02 ITRMOPCD	PIC X.		
000080	02 ITRMPCKC	PIC X.		
000090	02 ITRMAID	PIC X.		
000100	02 ITRMCADD	PIC XX.		
000110	02 ITRMCADD-B REDEFINES ITRMCADD PIC 9(4) COMP.			
000120	02 ITRMTYPE	PIC X.		
000130	02 ITRMNAME	PIC XXX.		
000140	02 ITRMSENS	PIC 9(9) COMP SYNC.		
000150	02 ITRMENTY REDEFINES ITRMSENS			
000160		PIC 9(9) COMP SYNC.		
000170	02 ITRMVSAM REDEFINES ITRMSENS.			
000180	04 ITRMVSMC	PIC X.		
000190	04 ITRMVSEC	PIC XX.		
000200	04 ITRMCBEC REDEFINES ITRMVSEC			
000210		PIC XX.		
000220	04 ITRMVSR	PIC X.		
000230	02 ITRMACRO	PIC X.		
000240	02 ITRMSGON	PIC XXX.		
000250	02 ITRMECBX	PIC 9(9) COMP SYNC.		
000260	02 ITRMEXTN	PIC 9(9) COMP SYNC.		
000270	02 ITRMIOAR	PIC 9(9) COMP SYNC.		
000280	02 ITRMPROG	PIC 9(9) COMP SYNC.		
000290	02 ITRMREPL	PIC X(4).		
000300	02 ITRMFLGS	PIC 9(4) COMP SYNC.		
000310	02 ITRMRLN	PIC 9(4) COMP SYNC.		
000320	02 ITRMSAVE	PIC X(12).		
000330	02 ITRMHAND	PIC X.		
000340	02 ITRMCALP	PIC XXX.		
000350	02 ITRMTRAN	PIC X(4).		
000360 *	USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER	PIC X(512).		CHLTWAEX
000040	02 TWA-USER	REDEFINES TWA-C2.		CHLTWAEX
000050	03 TWA-TRAN-CODE	PIC X(4).		CHLTWAEX
000060	03 TWA-CURRENT-PROG-NAME			CHLTWAEX
000070		PIC X(8).		CHLTWAEX
000080	03 TWA-PROGRAM-FLAGS	PIC X(8).		CHLTWAEX
000090	03 TWA-MAP-PTR	PIC X(4).		CHLTWAEX
000100	03 TWA-MAPC-PTR	PIC X(4).		CHLTWAEX
000110	03 TWA-NEXT-PROG-NAME	PIC X(8).		CHLTWAEX
000120	03 TWA-NEXT-TRAN-CODE	PIC X(4).		CHLTWAEX
000130	03 TWA-DBKEY	PIC X(4).		CHLTWAEX
000140	03 TWA-DBKEY-9	REDEFINES TWA-DBKEY		CHLTWAEX
000150		PIC S9(9) COMP SYNC.		CHLTWAEX
000160	03 TWA-DBKEY-2	PIC X(4).		CHLTWAEX
000170	03 TWA-DBKEY-2-9	REDEFINES TWA-DBKEY-2		CHLTWAEX
000180		PIC S9(9) COMP SYNC.		CHLTWAEX
000190	03 TWA-DBKEY-3	PIC X(4).		CHLTWAEX
000200	03 TWA-DBKEY-3-9	REDEFINES TWA-DBKEY-3		CHLTWAEX
000210		PIC S9(9) COMP SYNC.		CHLTWAEX
000220	03 TWA-DISKD-DATA.			CHLTWAEX
000230	05 TWA-DISKD-ACQUIRED-FLAG	PIC X.		CHLTWAEX
000240				CHLTWAEX
000250	88 TWA-DISKD-NOT-ACQUIRED	VALUE LOW-VALUES.		CHLTWAEX
000260	88 TWA-DISKD-ACQUIRED	VALUE HIGH-VALUES.		CHLTWAEX
000270	05 TWA-DISKD-NO-ACQUIRED			CHLTWAEX
000280		PIC S9(3) COMP.		CHLTWAEX
000290	03 TWA-TEST-PRODUCTION-FLAG			CHLTWAEX
000300		PIC X.		CHLTWAEX
000310	88 TWA-PRODUCTION-RUN	VALUE LOW-VALUES.		CHLTWAEX
000320	88 TWA-TEST-RUN	VALUE 'I'.		CHLTWAEX
000330	03 TWA-SIS-TERM-CODE.			CHLTWAEX
000340	05 TWA-SIS-TERM-SEMESTER			CHLTWAEX
000350		PIC X.		CHLTWAEX
000360	05 TWA-SIS-TERM-YEAR			CHLTWAEX
000370		PIC XX.		CHLTWAEX
000380	03 TWA-SIS-SUBSYSTEM-CODE			CHLTWAEX
000390		PIC X(4).		CHLTWAEX
000400	03 TWA-SEC-ACCESS-CODE	PIC X.		CHLTWAEX
000410	88 TWA-SEC-ACCESS-IS-INQUIRY	VALUE 'I'.		CHLTWAEX
000420	88 TWA-SEC-ACCESS-IS-UPDATE	VALUE 'U'.		CHLTWAEX
000430	03 TWA-SEC-ACCESS-DEPT	PIC XXX.		CHLTWAEX
000440	03 TWA-ITRMERRP-SAVE	PIC X.		CHLTWAEX
000450	03 FILLER	PIC X(12).		CHLTWAEX
000520				

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000530	03 TWA-DD-AREA			
000540	05 TWA-FUNC	PIC XX.		
000550	05 TWA-DATA-NAME	PIC X(30).		
000560	05 FILLER	PIC X(20).		
000570	03 TWA-XR-DBKEY	PIC S9(8)	COMP SYNC.	
000580	03 MAP-END-ADDR	PIC S9(9)	COMP SYNC.	
000590	03 MATRIX-END-ADDR	PIC S9(9)	COMP SYNC.	
000600	03 MAP-SUB	PIC S999	COMP SYNC.	
000610	03 I	PIC S999	COMP SYNC.	
000620	03 TWA-XR-NAME	PIC X(30).		
000630				
000640	*****			
000650	* THE FOLLOWING MATRIX MUST MATCH MAP MATRIX *			
000660	*****			
000670				
000680	01 MAP-AREA.			
000690	03 FILLER OCCURS 14 TIMES.			
000700	05 MAP-DATA-NAME	PIC X(30).		
000710	05 FILLER	PIC X.		
000720	05 MAP-DATA-DESC	PIC X(30).		
000730	05 FILLER	PIC X.		
000740	05 MAP-CREATED-DATE.			
000750	07 MAP-CREATED-MM	PIC XX.		
000760	07 MAP-CREATED-SLASH-1	PIC X.		
000770	07 MAP-CREATED-DD	PIC XX.		
000780	07 MAP-CREATED-SLASH-2	PIC X.		
000790	07 MAP-CREATED-YY	PIC XX.		
000800	05 FILLER	PIC X.		
000810	05 MAP-CHANGED-DATE.			
000820	07 MAP-CHANGED-MM	PIC XX.		
000830	07 MAP-CHANGED-SLASH-1	PIC X.		
000840	07 MAP-CHANGED-DD	PIC XX.		
000850	07 MAP-CHANGED-SLASH-2	PIC X.		
000860	07 MAP-CHANGED-YY	PIC XX.		
000870	05 FILLER	PIC X.		
000880	03 FILLER	PIC X.		
000890	03 MAP-END	PIC X.		
000900	01 RELOCATE.			SHDSPTEX
000910	02 FILLER	PIC X(12).		SHDSPTEX
000920	02 RSHDPCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000930	02 FILLER	PIC X(32).		SHDSPTEX
000940	02 RSHDCSA	PIC 9(9)	COMP SYNC.	SHDSPTEX
000950	02 FILLER	PIC X(24).		SHDSPTEX
000960	02 RSHDOCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000970	02 FILLER	PIC X(100).		SHDSPTEX
000980	02 RSHDLOW	PIC 9(9)	COMP SYNC.	SHDSPTEX
000990	02 RSHDHIGH	PIC 9(9)	COMP SYNC.	SHDSPTEX
001000	02 FILLER	PIC X(68).		SHDSPTEX
001010	02 RSHDIVAR	PIC 9(9)	COMP SYNC.	SHDSPTEX
001020	02 FILLER	PIC X(4).		SHDSPTEX
001030	02 RSHDFREE	PIC 9(9)	COMP SYNC.	SHDSPTEX
001040	02 FILLER	PIC X(48).		SHDSPTEX
001050	02 RSHDTCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
001060	02 FILLER	PIC X(40).		SHDSPTEX
001070	* USER AREA STARTS HERE.			SHDSPTEX
001080	02 SPT-REST-OF-SPT.			SHDSPTEX
001090	03 SPT-TEST-PRODUCTION-FLAG			SHDSPTEX
001100		PIC X.		SHDSPTEX
001110	88 SPT-PRODUCTION-RUN		VALUE LOW-VALUES.	SHDSPTEX
001120	88 SPT-TEST-RUN		VALUE 'T'.	SHDSPTEX
001130	03 FILLER	PIC X.		01/22/82
001140	03 FILLER	PIC X(300).		01/22/82
001150	03 FILLER	PIC XX.		01/22/82
001160	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
001170	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
001180	03 FILLER	PIC X(8).		01/22/82
001190	03 SPT-NQ3-ECB	PIC XXXX.		01/22/82
001200	03 SPT-NDQ-ECB	PIC XXXX.		06/02/82
001210	03 SPT-PRT1-BUFFER-POOL-POINTER			06/08/82
001220		PIC S9(9)	COMP SYNC.	06/08/82
001230	03 SPT-PRT2-BUFFER-POOL-POINTER			06/08/82
001240		PIC S9(9)	COMP SYNC.	06/08/82
001250	03 SPT-PRT3-BUFFER-POOL-POINTER			06/08/82

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000370	PIC S9(9)	COMP SYNC.		06/08/82
000380	03 SPT-PRT4-BUFFER-POOL-POINTER	COMP SYNC.		06/08/82
000390	PIC S9(9)	COMP SYNC.		06/08/82
000400	03 SPT-PRT5-BUFFER-POOL-POINTER	COMP SYNC.		06/08/82
000410	PIC S9(9)	COMP SYNC.		06/08/82
000420	03 SPT-PRT6-BUFFER-POOL-POINTER	COMP SYNC.		06/08/82
000430	PIC S9(9)	COMP SYNC.		06/08/82
000440	03 SPT-PRT7-BUFFER-POOL-POINTER	COMP SYNC.		06/08/82
000450	PIC S9(9)	COMP SYNC.		06/08/82
000460	03 SPT-PRT8-BUFFER-POOL-POINTER	COMP SYNC.		06/08/82
000470	PIC S9(9)	COMP SYNC.		06/08/82
000480				SHDSPTEX
000920	01 TERMINAL-BUFFER.			
000930	02 FILLER	PIC XXX.		
000940				
000010	01 MCHLXREI.			MCHLXRE
000020	02 MCHLXRE-TRANL	PIC X.		MCHLXREI
000030	02 MCHLXRE-TRANI	PIC X(4).		MCHLXREI
000040	02 MCHLXRE-FUNCL	PIC X.		MCHLXREI
000050	02 MCHLXRE-FUNCI	PIC XX.		MCHLXREI
000060	02 MCHLXRE-KEYL	PIC X.		MCHLXREI
000070	02 MCHLXRE-KEYI	PIC X(30).		MCHLXREI
000960				
000010	01 MCHLXRED.			MCHLXRE
000020	02 MCHLXRE-KEYM	PIC X.		MCHLXRED
000030	02 FILLER	PIC X(4).		MCHLXRED
000040	02 MCHLXRE-TRANA	PIC X.		MCHLXRED
000050	02 MCHLXRE-TRANO	PIC X(4).		MCHLXRED
000060	02 FILLER	PIC X.		MCHLXRED
000070	02 MCHLXRE-FUNCA	PIC X.		MCHLXRED
000080	02 MCHLXRE-FUNCO	PIC XX.		MCHLXRED
000090	02 FILLER	PIC X.		MCHLXRED
000100	02 MCHLXRE-KEYA	PIC X.		MCHLXRED
000110	02 MCHLXRE-KEYO	PIC X(30).		MCHLXRED
000120	02 FILLER	PIC X(31).		MCHLXRED
000130	02 MCHLXRE-TEST-FLAGA	PIC X.		MCHLXRED
000140	02 MCHLXRE-TEST-FLAGO	PIC X(4).		MCHLXRED
000150	02 FILLER	PIC X.		MCHLXRED
000160	02 MCHLXRE-RDATEA	PIC X.		MCHLXRED
000170	02 MCHLXRE-RDATEO	PIC X(8).		MCHLXRED
000180	02 FILLER	PIC X.		MCHLXRED
000190	02 MCHLXRE-RTIMEA	PIC X.		MCHLXRED
000200	02 MCHLXRE-RTIMEO	PIC X(8).		MCHLXRED
000210	02 FILLER	PIC X(32).		MCHLXRED
000220	02 MCHLXRE-CSECTA	PIC X.		MCHLXRED
000230	02 MCHLXRE-CSECTO	PIC X(8).		MCHLXRED
000240	02 FILLER	PIC X.		MCHLXRED
000250	02 MCHLXRE-VER-MODA	PIC X.		MCHLXRED
000260	02 MCHLXRE-VER-MODO	PIC 9.9.		MCHLXRED
000270	02 FILLER	PIC X(108).		MCHLXRED
000280	02 MCHLXRE-MATRIXA	PIC X.		MCHLXRED
000290	02 MCHLXRE-MATRIXO	PIC X(1120).		MCHLXRED
000300	02 FILLER	PIC X.		MCHLXRED
000310	02 MCHLXRE-MATRIX-ENDA	PIC X.		MCHLXRED
000320	02 MCHLXRE-MATRIX-ENDO	PIC X.		MCHLXRED
000330	02 FILLER	PIC X(6).		MCHLXRED
000340	02 MCHLXRE-MESSAGEA	PIC X.		MCHLXRED
000350	02 MCHLXRE-MESSAGEO	PIC X(48).		MCHLXRED
000360	02 FILLER	PIC X(27).		MCHLXRED
000980				
000010	01 MAPERRO.			MAPERRO
000020	02 MAPERRW	PIC X.		MAPERRO
000030	02 FILLER	PIC X(4).		MAPERRO
000040	02 MAPERR-CSECTA	PIC X.		MAPERRO
000050	02 MAPERR-CSECTO	PIC X(8).		MAPERRO
000060	02 FILLER	PIC X.		MAPERRO
000070	02 MAPERR-VER-MODA	PIC X.		MAPERRO
000080	02 MAPERR-VER-MODO	PIC 9.9.		MAPERRO
000090	02 FILLER	PIC X.		MAPERRO
000100	02 MAPERR-TEST-FLAGA	PIC X.		MAPERRO
000110	02 MAPERR-TEST-FLAGO	PIC X(4).		MAPERRO
000120	02 FILLER	PIC X(77).		MAPERRO
000130	02 MAPERR-MSGA	PIC X.		MAPERRO
000140	02 MAPERR-MSGO	PIC X(56).		MAPERRO
000150	02 FILLER	PIC X.		MAPERRO

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000160	02 MAPERR-IDMS-ERROR-LITERAL	PIC X.	MAPERRO	
000170	02 MAPERR-IDMS-ERROR-LITERAL	PIC X(11).	MAPERRO	
000180	02 FILLER	PIC X.	MAPERRO	
000190	02 MAPERR-ERROR-STATUSA	PIC X.	MAPERRO	
000200	02 MAPERR-ERROR-STATUSO	PIC X(4).	MAPERRO	
000210	02 FILLER	PIC X.	MAPERRO	
000220	02 MAPERR-ERROR-SETA	PIC X.	MAPERRO	
000230	02 MAPERR-ERROR-SETO	PIC X(16).	MAPERRO	
000240	02 FILLER	PIC X.	MAPERRO	
000250	02 MAPERR-ERROR-RECORDA	PIC X.	MAPERRO	
000260	02 MAPERR-ERROR-RECORDO	PIC X(16).	MAPERRO	
000270	02 FILLER	PIC X.	MAPERRO	
000280	02 MAPERR-ERROR-AREAA	PIC X.	MAPERRO	
000290	02 MAPERR-ERROR-AREAO	PIC X(16).	MAPERRO	
000300	02 FILLER	PIC X(12).	MAPERRO	
C01000				
001010 *	COPY IDMS SUBSCHEMA-CTRL.			
01	SUBSCHEMA-CTRL.			
03	PROGRAM-NAME	PIC X(8).		
03	ERROR-STATUS	PIC X(4).		
88	DB-STATUS-OK VALUE '0000'.			
88	ANY-STATUS			
88	VALUE '0000' THRU '9999'.			
88	ANY-ERROR-STATUS			
88	VALUE '0001' THRU '9999'.			
88	DB-END-OF-SET VALUE '0307'.			
03	DBKEY	88 DB-REC-NOT-FOUND VALUE '0326'.		
		PIC S9(8)		
		USAGE CCMP		
		SYNC.		
03	RECORD-NAME	PIC X(16).		
03	RRECORD-NAME	REDEFINES RECORD-NAME.		
05	SSC-MCDN	PIC X(8).		
05	SSC-DBN	PIC X(8).		
03	AREA-NAME	PIC X(16).		
03	ERROR-SET	PIC X(16).		
03	ERROR-RECORD	PIC X(16).		
03	ERROR-AREA	PIC X(16).		
03	IDBMSCOM-AREA	PIC X(100).		
03	IDBMSCOM	REDEFINES IDBMSCOM-AREA		
		PIC X		
		OCCURS 100.		
03	FILLER	REDEFINES IDBMSCOM-AREA.		
05	DB-SUB-ADDR	PIC X(4).		
05	FILLER	PIC X(96).		
03	DIRECT-DBKEY	PIC S9(8)		
		USAGE CCMP		
		SYNC.		
03	DIRECT-DBK	REDEFINES DIRECT-DBKEY		
		PIC S9(8)		
		USAGE CCMP		
		SYNC.		
03	DATABASE-STATUS.			
05	DBSTATMENT-CODE	PIC X(2).		
05	DBSTATUS-CODE	PIC X(5).		
03	FILLER	PIC X.		
03	RECORD-CCUR	PIC S9(8)		
		USAGE COMP		
		SYNC.		
03	DML-SEQUENCE	PIC S9(8)		
		USAGE CCMP		
		SYNC.		
001020				
001030 *	COPY IDMS DDRECA.			
01	DDRECA.			
03	DATA-NAME	PIC X(30).		

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	03 DATA-CREATED-DATE.			
	05 DATA-CREATED-YY	PIC XX.		
	05 DATA-CREATED-MM	PIC XX.		
	05 DATA-CREATED-DD	PIC XX.		
	03 DATA-CHANGED-DATE.			
	05 DATA-CHANGED-YY	PIC XX.		
	05 DATA-CHANGED-MM	PIC XX.		
	05 DATA-CHANGED-DD	PIC XX.		
	03 DATA-USER	OCCURS 6.		
	05 DATA-USER-NAME	PIC X(20).		
	03 DATA-REVISED-PERSON	PIC XXX.		
	03 FILLER	PIC XXX.		
001040				
001050 *	01 COPY IDMS DDRECB.			
	03 DATA-DESC	PIC X(40).		
	03 DATA-LENGTH	PIC X(10).		
	03 DATA-JUSTIFY	PIC X.		
		88 DATA-JUSTIFY-RIGHT VALUE 'R'.		
		88 DATA-JUSTIFY-LEFT VALUE 'L'.		
	03 DATA-LEVEL	PIC X.		
		88 DATA-INPUT VALUE 'I'.		
		88 DATA-OUTPUT VALUE 'O'.		
		88 DATA-INPUT-OUTPUT VALUE 'B'.		
	03 DATA-USAGE	PIC X(12).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
001060				
001070				
001080	PROCEDURE DIVISION USING TCBD, RELOCATE.			
001090	MOVE CSECT TO TWA-CURRENT-PROG-NAME.			
001100	PERFORM MAP-INPUT-MCHLXRE.			
001110	PERFORM PREPARE-MAP-MCHLXRE.			
001120	PERFORM MOVE-TOP-LINES-OF-MAP.			
001130	PERFORM OPEN-IDMS.			
001140	PERFORM PROCESS-DISPLAY.			
001150	PERFORM WRITE-OUTPUT-MAP.			
001160	PERFORM FINISH-IDMS.			
001170 *	RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CCDE AFTER-READ.			
	CALL 'ISHDHLRT' USING ISHD-XAO TWA-NEXT-TRAN-CODE.			
001180	GOBACK.			
001190				
001200	PROCESS-DISPLAY.			
001210	IF ITRMAID = PF3			
001220	AND TWA-DBKEY NOT = LOW-VALUES			
001230	PERFORM GET-LAST-FROM-PREV-SCREEN			
001240	ELSE			
001250	PERFORM GET-DDRECA-BY-NAME			
001260	IF DB-REC-NOT-FOUND			
001270	PERFORM OBTAIN-NEXT-DDRECA			
001280	IF DB-END-OF-SET			
001290	MOVE '**NO MORE**' TO MCHLXRE-MESSAGEO			
001300	MOVE LOW-VALUES TO TWA-DBKEY			
001310	ELSE			
001320	MOVE '** MORE **' TO MCHLXRE-MESSAGEO			
001330	PERFORM LOAD-PRIOR-DDRECA			
001340	PERFORM LOAD-MAP-MATRIX			
001350	ELSE			
001360	MOVE 1 TO I			
001370	MOVE '** MORE **' TO MCHLXRE-MESSAGEO			
001380	PERFORM LOAD-MAP-MATRIX.			
001390				
001400	GET-LAST-FROM-PREV-SCREEN.			
001410	PERFORM GET-DDRECA-BY-DBKEY.			
001420	IF DB-REC-NOT-FOUND			
001430	PERFORM OBTAIN-NEXT-DDRECA			
001440	IF DB-END-OF-SET			
001450	MOVE '**NO MORE**' TO MCHLXRE-MESSAGEO			
001460	MOVE LOW-VALUES TO TWA-DBKEY			
001470	ELSE			
001480	MOVE '** MORE **' TO MCHLXRE-MESSAGEO			
001490	MOVE 1 TO I			
001500	PERFORM LOAD-MAP-MATRIX			
001510	ELSE			
001520	MOVE '** MORE **' TO MCHLXRE-MESSAGEO			
001530	MOVE 1 TO I			

SEQ. NO.	SOURCE STATEMENT	PAGE	12	11/24/82
001540	PERFORM LOAD-MAP-MATRIX.			
001550	LOAD-PRIOR-DDRECA.			
001560	MOVE 1 TO MAP-SUB.			
001570	ACCEPT TWA-XR-DBKEY FROM DDRECA CURRENCY.			
001580 *	MOVE 0001 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0001
	IDBMSCOM (55) SR100 TWA-XR-DBKEY.			
001590	PERFORM OBTAIN-PRIOR-DDRECA.			
001600	IF DB-END-OF-SET			
001610	NEXT SENTENCE			
001620	ELSE			
001630	PERFORM LOAD-PRIOR-DDRECA-TO-MATRIX			
001640	VARYING MAP-SUB FROM 1 BY 1			
001650	UNTIL MAP-SUB > 4			
001660	OR DB-END-OF-SET.			
001670	MOVE MAP-SUB TO 1.			
001680	PERFORM OBTAIN-DDRECA-BY-TWA-XR-DBKEY.			
001690	IF DB-REC-NOT-FOUND			
001700	PERFORM OBTAIN-NEXT-DDRECA.			
001710				
001720	LOAD-MAP-MATRIX.			
001730	PERFORM LOOP-MAP-MATRIX			
001740	VARYING MAP-SUB FROM 1 BY 1			
001750	UNTIL MAP-SUB GREATER THAN MAP-SUB-MAX			
001760	OR DB-END-OF-SET.			
001770	IF DB-END-OF-SET			
001780	MOVE '***NO MORE***' TO MCHLXRE-MESSAGEO			
001790	MOVE LOW-VALUES TO TWA-DBKEY			
001800	ELSE			
001810 *	ACCEPT TWA-DBKEY FROM DDRECA CURRENCY MOVE 0002 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0002
	IDBMSCOM (55) SR100 TWA-DBKEY;			
001820	MOVE DATA-NAME TO TWA-XR-NAME.			
001830	LOAD-PRIOR-DDRECA-TO-MATRIX.			
001840	PERFORM MOVE-DDRECA-DATA-TO-MATRIX.			
001850	PERFORM OBTAIN-NEXT-DDRECA.			
001860	MOVE DATA-DESC TO MAP-DATA-DESC (MAP-SUB).			
001870	PERFORM OBTAIN-PRIOR-DDRECA.			
001880				
001890	LOOP-MAP-MATRIX.			
001900	PERFORM MOVE-DDRECA-DATA-TO-MATRIX.			
001910	PERFORM OBTAIN-NEXT-DDRECA.			
001920	MOVE DATA-DESC TO MAP-DATA-DESC (MAP-SUB).			
001930	PERFORM OBTAIN-NEXT-DDRECA.			
001940				
001950	MOVE-DDRECA-DATA-TO-MATRIX.			
001960	MOVE DATA-NAME TO MAP-DATA-NAME (MAP-SUB).			
001970	IF DATA-CREATED-DATE NOT = SPACES			
001980	MOVE '/' TO MAP-CREATED-SLASH-1 (MAP-SUB), MAP-CREATED-SLASH-2 (MAP-SUB)			
001990	MOVE DATA-CREATED-YY TO MAP-CREATED-YY (MAP-SUB)			
002000	MOVE DATA-CREATED-MM TO MAP-CREATED-MM (MAP-SUB)			
002010	MOVE DATA-CREATED-DD TO MAP-CREATED-DD (MAP-SUB).			
002020	IF DATA-CHANGED-DATE NOT = SPACES			
002030	MOVE '/' TO MAP-CHANGED-SLASH-1 (MAP-SUB), MAP-CHANGED-SLASH-2 (MAP-SUB)			
002040	MOVE DATA-CHANGED-YY TO MAP-CHANGED-YY (MAP-SUB)			
002050	MOVE DATA-CHANGED-MM TO MAP-CHANGED-MM (MAP-SUB)			
002060	MOVE DATA-CHANGED-DD TO MAP-CHANGED-DD (MAP-SUB).			
002070				
002080				
002090				
002100	OBTAIN-PRIOR-DDRECA.			
002110	OBTAIN PRIOR DDRECA WITHIN IX-DATA-NAME.			
002120 *	MOVE 0003 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0003
	IDBMSCOM (12) SR100 IX-DATA-NAME IDBMSCOM (43).			

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002130	IF DB-END-OF-SET			
002140	NEXT SENTENCE			
002150	ELSE			
002160	PERFORM IDMS-STATUS.			
002170				
002180	OBTAIN-NEXT-DDRECA.			
002190 *	OBTAIN NEXT DDRECA WITHIN IX-DATA-NAME. MOVE 0004 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (10) SR100 IX-DATA-NAME IDBMSCOM (43).			DMLC0004
002200	IF DB-END-OF-SET			
002210	NEXT SENTENCE			
002220	ELSE			
002230	PERFORM IDMS-STATUS.			
002240				
002250	OBTAIN-NEXT-DDRECB.			
002260 *	OBTAIN NEXT DDRECB WITHIN DDRECA-DDRECB. MOVE 0005 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (10) SR101 DDRECA-DDRECB IDBMSCOM (43).			DMLC0005
002270	IF DB-END-OF-SET			
002280	NEXT SENTENCE			
002290	ELSE			
002300	PERFORM IDMS-STATUS.			
002310				
002320	GET-DDRECA-BY-NAME.			
002330 *	OBTAIN DDRECA WITHIN IX-DATA-NAME USING TWA-XR-NAME. MOVE 0006 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (33) SR100 IX-DATA-NAME TWA-XR-NAME IDBMSCOM (43).			DMLC0006
002340	IF DB-END-OF-SET OR DB-REC-NOT-FOUND			
002350	NEXT SENTENCE			
002360	ELSE			
002370	PERFORM IDMS-STATUS.			
002380				
002390	OBTAIN-DDRECA-BY-TWA-XR-DBKEY.			
002400 *	OBTAIN DDRECA DB-KEY IS TWA-XR-DBKEY. MOVE 0007 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (06) SR100 TWA-XR-DBKEY IDBMSCOM (43).			DMLC0007
002410	IF DB-END-OF-SET OR DB-REC-NOT-FOUND			
002420	NEXT SENTENCE			
002430	ELSE			
002440	PERFORM IDMS-STATUS.			
002450				
002460	GET-DDRECA-BY-DBKEY.			
002470 *	OBTAIN DDRECA DB-KEY IS TWA-DBKEY. MOVE 0008 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (06) SR100 TWA-DBKEY IDBMSCOM (43).			DMLC0008
002480	IF DB-END-OF-SET OR DB-REC-NOT-FOUND			
002490	NEXT SENTENCE			
002500	ELSE			
002510	PERFORM IDMS-STATUS.			
002520				
002530	MAP-INPUT-MCHLXRE.			
002540 *	BASE TERMINAL-BUFFER ON POINTER ITRMIOAR. CALL 'ISHDHLBS' USING ISHO-X01 ISHO-H4 ITRMIOAR			
002550 *	SERVICE RELOAD TERMINAL-BUFFER. PUT ADDRESS OF MCHLXREC INTO TWA-MAPC-PTR.			

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002560 *	CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAPC-PTR MCHLXREC.			
002570 *	MAP-INPUT FROM TERMINAL-BUFFER NO-RELEASE			
002580 *	TO MAP MCHLXRE MAPC-PTR IS TWA-MAPC-PTR. CALL 'ISHDHLMT' USING TWA-MAPC-PTR TERMINAL-BUFFER ISHD-XF1 ISHD-H5			
002590	SERVICE RELOAD MCHLXREI.			
002600	PREPARE-MAP-MCHLXRE.			
002610 *	PUT ADDRESS OF MCHLXRE INTO TWA-MAP-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MCHLXRE.			
002620 *	PREPARE MAP MCHLXRE MAP-PTR IS TWA-MAP-PTR			
002630 *	SIZE IS MCHLXREP. CALL 'ISHDHLMT' USING TWA-MAP-PTR ISHD-XE2 ISHD-H6 MCHLXREP SERVICE RELOAD MCHLXREC.			
002640				
002650	MOVE-TOP-LINES-OF-MAP.			
002660	MOVE CURRENT-DATE TO MCHLXRE-ROATED.			
002670	CALL 'KSRTIME' USING MCHLXRE-RTIME0, H1.			
002680	MOVE CSECT TO MCHLXRE-CSECT0.			
002690	MOVE VER-MOD TO MCHLXRE-VER-MOD0.			
002700	IF TWA-TEST-RUN			
002710	OR SPT-TEST-RUN			
002720	MOVE 'TEST' TO MCHLXRE-TEST-FLAG0.			
002730	MOVE MCHLXRE-TRANI TO MCHLXRE-TRAN0.			
002740	MOVE MCHLXRE-FUNCI TO MCHLXRE-FUNC0, TWA-FUNC.			
002750	MOVE MCHLXRE-KEYI TO MCHLXRE-KEY0, TWA-DATA-NAME,			
002760	TWA-XR-NAME.			
002770 *	BASE MAP-AREA ON ADDRESS OF MCHLXRE-MATRIX0. CALL 'ISHDHLBS' USING ISHD-X00 ISHD-H2 MCHLXRE-MATRIX0 SERVICE RELOAD MAP-AREA.			
002780 *	PUT ADDRESS OF MCHLXRE-MATRIX-END0 INTO MAP-END-ACDR. CALL 'ISHDHLBS' USING ISHD-X02 MAP-END-ACDR MCHLXRE-MATRIX-END0.			
002790 *	PUT ADDRESS OF MAP-END INTO MATRIX-END-ACDR. CALL 'ISHDHLBS' USING ISHD-X02 MATRIX-END-ACDR MAP-END.			
002800	IF MATRIX-END-ACDR > MAP-END-ACDR			
002810	PERFORM MAP-ERROR-EXIT.			
002820				
002830	OPEN-IDMS.			
002840 *	ACQUIRE VARIABLE BUFFER FOR SUBSCHEMA-CTRL			
002850 *	SIZE IS BUFFER-SIZE-CTRL. CALL 'ISHDHLGV' USING BUFFER-SIZE-CTRL ISHD-H8 ISHD-XF0 ISHD-F0			
002860 *	SERVICE RELOAD SUBSCHEMA-CTRL.			
002870 *	ACQUIRE VARIABLE BUFFER FOR DDRECA SIZE IS BUFFER-SIZE-DDRECA. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECA ISHD-H9 ISHD-XF0 ISHD-F0			
002880 *	SERVICE RELOAD DDRECA.			
002890 *	ACQUIRE VARIABLE BUFFER FOR DDRECB SIZE IS BUFFER-SIZE-DDRECB. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECB ISHD-H10 ISHD-XF0 ISHD-F0			
002900	SERVICE RELOAD DDRECB.			
000010	MOVE CSECT TO PROGRAM-NAME.			
000020	IF TWA-PRODUCTION-RUN			OLBINDRN
000030 *	AND SPT-PRODUCTION-RUN			OLBINDRN
	BIND RUN-UNIT			OLBINDRN
	MOVE 0009 TO DML-SEQUENCE			DMLC0009
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (59)			
	SUBSCHEMA-CTRL			
	SUBSCHEMA-SSNAME;			
000040	ELSE			OLBINDRN
000050	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			OLBINDRN
000060	IDBMSCCM (59)			OLBINDRN
000070	SUBSCHEMA-CTRL			OLBINDRN
000080	TEST-SUBSCHEMA-SSNAME.			OLBINDRN
000010	IF NOT DB-STATUS-OK			IDMSSTAT
000020	GO TO IDMS-ERROR-EXIT.			IDMSSTAT
002930 *	READY DATA-INDX-REGION USAGE-MODE IS RETRIEVAL.			
	MOVE 0010 TO DML-SEQUENCE			DMLC0010
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (37)			
	DATA-INDX-REGION.			
002940	PERFORM IDMS-STATUS.			00003020

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002950 *	READY DATA-REGION USAGE-MODE IS RETRIEVAL. MOVE 0011 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (37) DATA-REGION.			DMLC0011
002960	PERFORM IDMS-STATUS.			00003040
002970 *	BIND DDRECA. MOVE 0012 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR100 DDRECA.			DMLC0012
002980	PERFORM IDMS-STATUS.			00002980
002990 *	BIND DDRECB. MOVE 0013 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR101 DDRECB.			DMLC0013
003000	PERFORM IDMS-STATUS.			00003000
003010				
003020	WRITE-OUTPUT-MAP.			
003030 *	ERASE-WRITE MAP MCHLXRE IN BUFFER. CALL 'ISHDHLMP' USING ISHD-X05 MCHLXREQ ISHD-XF0 ISHD-X00 ISHD-X06 ISHD-X00 ISHD-X00.			
003040				
003050	FINISH-IDMS.			
003060 *	FINISH. MOVE 0014 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (02).			DMLC0014
003070	PERFORM IDMS-STATUS.			
003080 *	RELEASE BUFFER SUBSCHEMA-CTRL. CALL 'ISHDHLBP' USING SUBSCHEMA-CTRL.			
003090 *	RELEASE BUFFER DDRECA. CALL 'ISHDHLBP' USING DDRECA.			
003100 *	RELEASE BUFFER DDRECB. CALL 'ISHDHLBP' USING DDRECB.			
003110	IDMS-STATUS.			IDMSERR
000010				
000020	IF DB-STATUS-OK			IDMSERR
000030	NEXT SENTENCE			IDMSERR
000040	ELSE			IDMSERR
000050	PERFORM IDMS-ERROR-EXIT.			IDMSERR
000060	IDMS-ERROR-EXIT.			IDMSERR
000070	IF ERROR-STATUS NOT = '1469'			IDMSERR
000080	DUMP FROM CSECT SIZE IS 16			IDMSERR
000090 *	AND T-W-A AND RESOURCES			IDMSERR
000100 *	ID IS '** IDMS ERRORS DUMP **'			IDMSERR
000110 *	CALL 'ISHDHLMP' USING ISHD-X06 CSECT ISHD-H16 ISHD-X22 ISHD-L1 ISHD-H22.			
000120 *	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			IDMSERR
000130 *	PREPARE MAP MAPERR			IDMSERR
000140 *	MAP-PTR IS TWA-MAP-PTR			IDMSERR
000150 *	SIZE IS MAPERRP. CALL 'ISHDHLMP' USING TWA-MAP-PTR ISHD-XE2 ISHD-H7 MAPERRP SERVICE RELOAD MAPERRP.			
000160	MOVE CSECT TO MAPERR-CSECTO.			IDMSERR
000170	MOVE VER-MOD TO MAPERR-VER-MODU.			IDMSERR
000180	IF TWA-TEST-RUN			IDMSERR
000190	OR SPT-TEST-RUN			IDMSERR
000200	MOVE 'TEST' TO MAPERR-TEST-FLAGC			IDMSERR
000210	ELSE			IDMSERR
000220	IF TWA-PRODUCTION-RUN			IDMSERR
000230	AND SPT-PRODUCTION-RUN			IDMSERR
000240	NEXT SENTENCE			IDMSERR
000250	ELSE			IDMSERR
000260	MOVE 'INVL' TO MAPERR-TEST-FLAGC.			IDMSERR
000270	MOVE 'IDMS ERRORS' TO MAPERR-IDMS-ERROR-LITERAL0.			IDMSERR
000280	MOVE ERROR-STATUS TO MAPERR-ERROR-STATUS0.			IDMSERR
000290	MOVE ERROR-SET TO MAPERR-ERROR-SET0.			IDMSERR
000300	MOVE ERROR-RECORD TO MAPERR-ERROR-RECORD0.			IDMSERR
000310	MOVE ERROR-AREA TO MAPERR-ERROR-AREA0.			IDMSERR
000320 *	ROLLBACK.			IDMSERR

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	MOVE 0015 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (67).			DMLC0015
000330	IF NOT DB-STATUS-OK			IDMSERR
000340	MOVE 'ROLLBACK FAILED' TO MAPERR-MSGO.			IDMSERR
000350 *	WRITE MAP MAPERR IN BUFFER. CALL 'ISHDHLMP' USING ISHD-X01 MAPERR ISHD-XF0 ISHD-X00 ISHD-XD6 ISHD-X00 ISHD-X00.			IDMSERR
000360				IDMSERR
003130 *	RETURN TO NEXT-TRAN SIGNON-TRAN AFTER-READ. CALL 'ISHDHLRT' USING ISHD-XA0 SIGNON-TRAN. GOBACK.			
003140				
003150				
003160	MAP-ERROR-EXIT.			
000010 *	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR. CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			MAPRERR
000020 *	PREPARE MAP MAPERR			MAPRERR
000030 *	MAP-PTR IS TWA-MAP-PTR			MAPRERR
000040 *	SIZE IS MAPERRP. CALL 'ISHDHLMP' USING TWA-MAP-PTR ISHD-XE2 ISHD-H7 MAPERRP SERVICE RELOAD MAPERRP.			MAPRERR
000050	MOVE CSECT TO MAPERR-CSECTO.			MAPRERR
000060	MOVE VER-MOD TO MAPERR-VER-MODO.			MAPRERR
000070	IF TWA-TEST-RUN			MAPRERR
000080	OR SPT-TEST-RUN			MAPRERR
000090	MOVE 'TEST' TO MAPERR-TEST-FLAGO.			MAPRERR
000100	MOVE 'CALL DPC -- ERROR IN PROGRAM MAP' TO MAPERR-MSGO.			MAPRERR
000110 *	WRITE MAP MAPERR IN BUFFER. CALL 'ISHDHLMP' USING ISHD-X01 MAPERR ISHD-XF0 ISHD-X00 ISHD-XD6 ISHD-X00 ISHD-X00.			MAPRERR
003180 *	RETURN TO NEXT-TRAN SIGNCN-TRAN AFTER-READ. CALL 'ISHDHLRT' USING ISHD-XA0 SIGNCN-TRAN. GOBACK.			
003190				
003200				

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000010	IDENTIFICATION DIVISION.			
000020	PROGRAM-ID.	OLDD00210-		
000030	AUTHOR.	TONY LAI.		
000040	INSTALLATION.	KSU DATA PROCESSING CENTER		
000050		KANSAS STATE UNIVERSITY		
000060		MANHATTAN, KANSAS 66506.		
000070	DATE-WRITTEN.	11/82.		
000080	DATE-COMPILED.	NOVEMBER 30, 1982 AT 6.22 PM.		
000090	REMARKS.			
000100	OLDD00210 - DISPLAY DATA ITEM FOR UPDATE.			
000110				
000120	MODIFICATIONS AND CORRECTIONS -			
000130	NONE AS OF 11/82.			
000140				
000150	ENVIRONMENT DIVISION.			
000160	*IOMS-CONTROL SECTION.			
000170	*PROTOCOL.	MODE IS SHACON DEBUG		
000180	*	IOMS-RECORDS MANUAL.		
000190				
000200	DATA DIVISION.			
000210	*SCHEMA SECTION.			
000220	*DB DATASUBS	WITHIN DDSHEMA.		
000230				
000240	WORKING-STORAGE SECTION.			
000250	77 CSECT	PIC X(8) VALUE 'OLDD00210'.		
000260	77 VER-MOD	PIC 9V9 VALUE		
000270		1.0.		
000280	77 FUNC-CODE	PIC XX VALUE 'UD'.		
000290	77 HI	PIC S999 VALUE +1 COMP SYNC.		
000300	77 SIGNON-TRAN	PIC X(4) VALUE 'DDSO'.		
000010	77 BUFFER-SIZE-CTRL	PIC S9(4) COMP SYNC VALUE +220.	CHLSUBSZ	
000020	77 BUFFER-SIZE-DDRECA	PIC S9(4) COMP SYNC VALUE +168.	CHLSUBSZ	
000030	77 BUFFER-SIZE-DDRECB	PIC S9(4) COMP SYNC VALUE +72.	CHLSUBSZ	
000040	77 BUFFER-SIZE-DDPROGRM	PIC S9(4) COMP SYNC VALUE +16.	CHLSUBSZ	
000050	77 BUFFER-SIZE-DCFILE	PIC S9(4) COMP SYNC VALUE +32.	CHLSUBSZ	
000060	77 BUFFER-SIZE-DDALIAS	PIC S9(4) COMP SYNC VALUE +40.	CHLSUBSZ	
000070	77 TEST-SUBSCHEMA-SSNAME	PIC X(8) VALUE 'XATASUBS'.	CHLSUBSZ	
000320				
000330	01 MESSAGES.			
000340	03 DDRECA-NOT-FOUND-MESS			
000350		PIC X(23) VALUE		
000360		'READY FOR ADD'.		
000370	03 DDRECA-FOUND-MESS	PIC X(26) VALUE		
000380		'READY FOR UPDATE'.		
000390				
000010	01 MCHLUPD.			MCHLUPD
000020	02 FILLER	PIC X(20) VALUE 'C 9DDSO I I		MCHLUPD
000030	02 FILLER	PIC X(20) VALUE		MCHLUPD
000040	02 FILLER	PIC X(20) VALUE '0 A>DATA DICT		MCHLUPD
000050	02 FILLER	PIC X(20) VALUE 'IGNARY SYSTEM 8H 8		MCHLUPD
000060	02 FILLER	PIC X(20) VALUE '0 0		MCHLUPD
000070	02 FILLER	PIC X(06) VALUE '0 B'.		MCHLUPD
000080	02 FILLER	PIC X(20) VALUE QUOTE-		MCHLUPD
000090	02 FILLER	PIC X(20) VALUE 'KANSAS STATE UNIVER'		MCHLUPD
000100	02 FILLER	PIC X(20) VALUE 'ITY C 0		MCHLUPD
000110	02 FILLER	PIC X(20) VALUE '0MCHLUPD E- 8 E/-		MCHLUPD
000120	02 FILLER	PIC X(20) VALUE '- UPDATE - 0 G-DAT		MCHLUPD
000130	02 FILLER	PIC X(20) VALUE 'A NAME: H		MCHLUPD
000140	02 FILLER	PIC X(20) VALUE '0		MCHLUPD
000150	02 FILLER	PIC X(20) VALUE 'HRDATE CREATED: H		MCHLUPD
000160	02 FILLER	PIC X(20) VALUE 'ODESCRIPTION:		MCHLUPD
000170	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000180	02 FILLER	PIC X(20) VALUE		MCHLUPD
000190	02 FILLER	PIC X(20) VALUE '0 IZDATE CHANGED:		MCHLUPD
000200	02 FILLER	PIC X(20) VALUE 'H OPICTURE:		MCHLUPD
000210	02 FILLER	PIC X(20) VALUE 'H 0 -LEV		MCHLUPD
000220	02 FILLER	PIC X(20) VALUE 'EL: H 0 7REVI		MCHLUPD
000230	02 FILLER	PIC X(20) VALUE 'SED PERSON: H 0		MCHLUPD
000240	02 FILLER	PIC X(20) VALUE 'KUSAGE: H		MCHLUPD
000250	02 FILLER	PIC X(20) VALUE '0 0>JUSTIFY: H		MCHLUPD
000260	02 FILLER	PIC X(20) VALUE '0 <-ALIAS NAME		MCHLUPD
000270	02 FILLER	PIC X(20) VALUE ': <31. H		MCHLUPD
000280	02 FILLER	PIC X(20) VALUE '0		MCHLUPD
000290	02 FILLER	PIC X(20) VALUE '2- H		MCHLUPD
000300	02 FILLER	PIC X(20) VALUE '0 (23		MCHLUPD
000310	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD

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000320	02 FILLER PIC X(20) VALUE :		04. H	MCHLUPD
000330	02 FILLER PIC X(20) VALUE :			MCHLUPD
000340	02 FILLER PIC X(20) VALUE :		0 IFUSER:	MCHLUPD
000350	02 FILLER PIC X(20) VALUE :		<1. H	MCHLUPD
000360	02 FILLER PIC X(20) VALUE :		02. H	MCHLUPD
000370	02 FILLER PIC X(20) VALUE :		03. H	MCHLUPD
000380	02 FILLER PIC X(20) VALUE :		0 &*4	MCHLUPD
000390	02 FILLER PIC X(20) VALUE :		H	MCHLUPD
000400	02 FILLER PIC X(20) VALUE :		05. H	MCHLUPD
000410	02 FILLER PIC X(20) VALUE :		06. H	MCHLUPD
000420	02 FILLER PIC X(20) VALUE :		OPROGRAM	MCHLUPD
000430	02 FILLER PIC X(20) VALUE :		USED: K21. H	MCHLUPD
000440	02 FILLER PIC X(20) VALUE :		02. H	MCHLUPD
000450	02 FILLER PIC X(20) VALUE :		03. H	MCHLUPD
000460	02 FILLER PIC X(20) VALUE :		H	MCHLUPD
000470	02 FILLER PIC X(20) VALUE :		0 M<5. H	MCHLUPD
000480	02 FILLER PIC X(20) VALUE :		06. H	MCHLUPD
000490	02 FILLER PIC X(20) VALUE :		07. H	MCHLUPD
000500	02 FILLER PIC X(20) VALUE :		08. H	MCHLUPD
000510	02 FILLER PIC X(20) VALUE :		NLFIE USED: Q21. H	MCHLUPD
000520	02 FILLER PIC X(20) VALUE :		02. H	MCHLUPD
000530	02 FILLER PIC X(20) VALUE :		0 P23. H	MCHLUPD
000540	02 FILLER PIC X(20) VALUE :		H	MCHLUPD
000550	02 FILLER PIC X(20) VALUE :		0 \$7 8	MCHLUPD
000560	02 FILLER PIC X(20) VALUE :			MCHLUPD
000570	02 FILLER PIC X(20) VALUE :			MCHLUPD
000580	02 FILLER PIC X(20) VALUE :			MCHLUPD
000590	02 FILLER PIC X(03) VALUE :		F	MCHLUPD
000600	01 MCHLUPD PIC 9(4) COMP VALUE 01110.			MCHLUPD
000610	01 MCHLTOP.			MCHLTOP
000620	02 FILLER PIC X(20) VALUE :		C 9DDSO I I	MCHLTOP
000630	02 FILLER PIC X(20) VALUE :			MCHLTOP
000640	02 FILLER PIC X(20) VALUE :		0 CYNCHLTOP	MCHLTOP
000650	02 FILLER PIC X(02) VALUE :		F	MCHLTOP
000660	01 MCHLTOP PIC 9(4) COMP VALUE 00062.			MCHLTOP
000670	01 MCHLTOPC.			MCHLTOP
000680	02 FILLER PIC X(19) VALUE :		A F I	MCHLTOP
000690	01 MAPERR.			MAPERR
000700	02 FILLER PIC X(20) VALUE :		8 \$- 8	MAPERR
000710	02 FILLER PIC X(20) VALUE :		8 0 \$7 8	MAPERR
000720	02 FILLER PIC X(20) VALUE :			MAPERR
000730	02 FILLER PIC X(20) VALUE :			MAPERR
000740	02 FILLER PIC X(20) VALUE :		8	MAPERR
000750	02 FILLER PIC X(20) VALUE :		8	MAPERR
000760	02 FILLER PIC X(20) VALUE :		8	MAPERR
000770	02 FILLER PIC X(20) VALUE :		8	MAPERR
000780	02 FILLER PIC X(14) VALUE :		0)= 0)=	MAPERR
000790	01 MAPERR PIC 9(4) COMP VALUE 00174.			MAPERR
000800	*01 AT83270 COPY AT83270.			AT83270
000810	*01 AT83270.			AT83270
000820	* IN CONSTRUCTING AN ATTRIBUTE YOU MAY MAKE ONE CHOICE			AT83270
000830	* FROM EACH OF THE THREE GROUPS BELOW. THE FIELDS DEFINED			AT83270
000840	* BELOW HAVE BEEN NAMED IN SUCH A MANNER AS TO BE READILY			AT83270
000850	* UNDERSTOOD ONCE THE KEY IS KNOWN. THE FOURTH, FIFTH, AND			AT83270
000860	* SIXTH CHARACTERS OF THE NAME ARE FROM GROUPS 1-3 BELOW.			AT83270
000870	* NOTE THAT SHORT HAND VERSIONS ARE AVAILABLE FOR DEFAULTS			AT83270
000880	* OF MDT=NO AND REGULAR INTENSITY.			AT83270
000890	* GROUP I FIELD TYPE			AT83270
000900	* PROTECTED = P			AT83270
000910	* UNPROTECTED, ALPHA NUMERIC = U			AT83270
000920	* UNPROTECTED, NUMERIC SHIFT = N			AT83270
000930	* PROTECTED AND CURSOR SKIP = S			AT83270
000940	* GROUP II INTENSITY			AT83270
000950	* REGULAR = R OR BLANK IF MDT=N			AT83270
000960	* HIGH = H			AT83270
000970	* OFF(DARK) = O			AT83270
000980	* LIGHT PEN DETECTABLE = L			AT83270

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000230 *				ATB3270
000240 *	GROUP III			ATB3270
000250 *	MODIFIED DATA TAG			ATB3270
000260 *	ON		= Y	ATB3270
000270 *	OFF		= N OR BLANK	ATB3270
000280 *				ATB3270
000290 *				ATB3270
000300 *	SKIP		REGULAR INTENSITY	ATB3270
000310 *				ATB3270
000320	03 ATBS	PIC X	VALUE '0'.	ATB3270
000330	03 ATBSR		REDEFINES ATBS	ATB3270
000340		PIC X		ATB3270
000350	03 ATBSRN		REDEFINES ATBS	ATB3270
000360		PIC X		ATB3270
000370	03 ATBSRY	PIC X	VALUE '1'.	ATB3270
000380 *				ATB3270
000390 *	SKIP		HIGH INTENSITY	ATB3270
000400 *				ATB3270
000410	03 ATBSH	PIC X	VALUE '8'.	ATB3270
000420	03 ATBSHM		REDEFINES ATBSH	ATB3270
000430		PIC X		ATB3270
000440	03 ATBSHY	PIC X	VALUE '9'.	ATB3270
000450 *				ATB3270
000460 *	SKIP		OFF (DARK) INTENSITY	ATB3270
000470 *				ATB3270
000480	03 ATBSO	PIC X	VALUE '2'.	ATB3270
000490	03 ATBSOM		REDEFINES ATBSO	ATB3270
000500		PIC X		ATB3270
000510	03 ATBSO		REDEFINES ATBSO	ATB3270
000520		PIC X		ATB3270
000530	03 ATBSOM		REDEFINES ATBSO	ATB3270
000540		PIC X		ATB3270
000550	03 ATBSOY	PIC X	VALUE QUOTE.	ATB3270
000560	03 ATBSOY		REDEFINES ATBSOY	ATB3270
000570		PIC X		ATB3270
000580 *				ATB3270
000590 *	SKIP		REGULAR INTENSITY, LIGHT PEN	ATB3270
000600 *				ATB3270
000610	03 ATBSL	PIC X	VALUE '4'.	ATB3270
000620	03 ATBSLN		REDEFINES ATBSL	ATB3270
000630		PIC X		ATB3270
000640	03 ATBSLY	PIC X	VALUE '5'.	ATB3270
000650 *				ATB3270
000660 *	PROTECT		REGULAR INTENSITY	ATB3270
000670 *				ATB3270
000680	03 ATBP	PIC X	VALUE '1'.	ATB3270
000690	03 ATBPR		REDEFINES ATBP	ATB3270
000700		PIC X		ATB3270
000710	03 ATBPRN		REDEFINES ATBP	ATB3270
000720		PIC X		ATB3270
000730	03 ATBPRY	PIC X	VALUE '1'.	ATB3270
000740 *				ATB3270
000750 *	PROTECT		HIGH INTENSITY	ATB3270
000760 *				ATB3270
000770	03 ATBPH	PIC X	VALUE 'Y'.	ATB3270
000780	03 ATBPHN		REDEFINES ATBPH	ATB3270
000790		PIC X		ATB3270
000800	03 ATBPHY	PIC X	VALUE 'Z'.	ATB3270
000810 *				ATB3270
000820 *	PROTECT		OFF (DARK) INTENSITY	ATB3270
000830 *				ATB3270
000840	03 ATBPO	PIC X	VALUE 'X'.	ATB3270
000850	03 ATBPON		REDEFINES ATBPO	ATB3270
000860		PIC X		ATB3270
000870	03 ATBPQY	PIC X	VALUE '1'.	ATB3270
000880 *				ATB3270
000890 *	PROTECT		REGULAR INTENSITY, LIGHT PEN	ATB3270
000900 *				ATB3270
000910	03 ATBPL	PIC X	VALUE 'U'.	ATB3270
000920	03 ATBPLN		REDEFINES ATBPL	ATB3270
000930		PIC X		ATB3270
000940	03 ATBPLY	PIC X	VALUE 'V'.	ATB3270
000950 *				ATB3270
000960 *	UNPROTECTED		REGULAR INTENSITY	ATB3270
000970 *	ALPHA-NUMERIC			ATB3270
000980	03 ATBU	PIC X	VALUE ' '.	ATB3270
000990	03 ATBUR		REDEFINES ATBU	ATB3270

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001000				ATB3270
001010	03 ATBURN	PIC X.	REDEFINES ATBU	ATB3270
001020		PIC X.		ATB3270
001030	03 ATBURY	PIC X	VALUE 'A'.	ATB3270
001040 *				ATB3270
001050 *	UNPROTECTED		HIGH INTENSITY	ATB3270
001060 *	ALPHA-NUMERIC			ATB3270
001070 *				ATB3270
001080	03 ATBUHN	PIC X	VALUE 'H'.	ATB3270
001090	03 ATBUH		REDEFINES ATBUHN	ATB3270
001100		PIC X.		ATB3270
001110	03 ATBUHY	PIC X	VALUE 'I'.	ATBTS UO
001120 *				ATB3270
001130 *	UNPROTECTED		OFF(DARK) INTENSITY	ATB3270
001140 *	ALPHA-NUMERIC			ATB3270
001150 *				ATB3270
001160	03 ATBUO	PIC X	VALUE '<'.	ATB3270
001170	03 ATBUON		REDEFINES ATBUO	ATB3270
001180		PIC X.		ATB3270
001190	03 ATBUOY	PIC X	VALUE '!'.	ATB3270
001200 *				ATB3270
001210 *	UNPROTECTED		REGULAR INTENSITY, LIGHT PEN	ATB3270
001220 *	ALPHA-NUMERIC			ATB3270
001230 *				ATB3270
001240	03 ATBUL	PIC X	VALUE 'D'.	ATB3270
001250	03 ATBULN		REDEFINES ATBUL	ATB3270
001260		PIC X.		ATB3270
001270	03 ATBULY	PIC X	VALUE 'E'.	ATB3270
001280 *				ATB3270
001290 *	UNPROTECTED		REGULAR INTENSITY	ATB3270
001300 *	NUMERIC SHIFT			ATB3270
001310 *				ATB3270
001320	03 ATBN	PIC X	VALUE '&'.	ATB3270
001330	03 ATBNR		REDEFINES ATBN	ATB3270
001340		PIC X.		ATB3270
001350	03 ATBNRN		REDEFINES ATBN	ATB3270
001360		PIC X.		ATB3270
001370	03 ATBNRY	PIC X	VALUE 'J'.	ATB3270
001380 *				ATB3270
001390 *	UNPROTECTED		HIGH INTENSITY	ATB3270
001400 *	NUMERIC SHIFT			ATB3270
001410 *				ATB3270
001420	03 ATBNH	PIC X	VALUE 'Q'.	ATB3270
001430	03 ATBNHN		REDEFINES ATBNH	ATB3270
001440		PIC X.		ATB3270
001450	03 ATBNHY	PIC X	VALUE 'R'.	ATB3270
001460 *				ATB3270
001470 *	UNPROTECTED		OFF(DARK) INTENSITY	ATB3270
001480 *	NUMERIC SHIFT			ATB3270
001490 *				ATB3270
001500	03 ATBNO	PIC X	VALUE '***'.	ATB3270
001510	03 ATBNON		REDEFINES ATBNO	ATB3270
001520		PIC X.		ATB3270
001530	03 ATBNOY	PIC X	VALUE ']'.	ATB3270
001540 *				ATB3270
001550 *	UNPROTECTED		REGULAR INTENSITY, LIGHT PEN	ATB3270
001560 *	NUMERIC SHIFT			ATB3270
001570 *				ATB3270
001580	03 ATBNL	PIC X	VALUE 'M'.	ATB3270
001590	03 ATBNLN		REDEFINES ATBNL	ATB3270
001600		PIC X.		ATB3270
001610	03 ATBNLY	PIC X	VALUE 'N'.	ATB3270
001620 *				ATB3270
COC490				
000500	*01 KEY3270		COPY KEY3270.	
000010	01 KEY3270.			
000020	02 ENTERK	PIC X	VALUE QUOTE.	
000030	02 PF1	PIC X	VALUE '1'.	
000040	02 PF2	PIC X	VALUE '2'.	
000050	02 PF3	PIC X	VALUE '3'.	
000060	02 PF4	PIC X	VALUE '4'.	
000070	02 PF5	PIC X	VALUE '5'.	
000080	02 PF6	PIC X	VALUE '6'.	
000090	02 PF7	PIC X	VALUE '7'.	
000100	02 PF8	PIC X	VALUE '8'.	
000110	02 PF9	PIC X	VALUE '9'.	
000120	02 PF10	PIC X	VALUE '10'.	

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000130	02 PF11	PIC X	VALUE '11'	
000140	02 PF12	PIC X	VALUE '12'	
000150	02 IMMDECT	PIC X	VALUE '13'	
000160	02 TESTREQ	PIC X	VALUE '10'	
000170	02 CLEAR	PIC X	VALUE '11'	
000180	02 PA1	PIC X	VALUE '12'	
000190	02 PA2	PIC X	VALUE '13'	
000200	02 PA3	PIC X	VALUE '14'	
000510				
000520	* COPY TDMS SUBSCHEMA-NAMES.			
01	SUBSCHEMA-SSNAME	PIC X(8)	VALUE 'DATASUBS'.	
01	SUBSCHEMA-RECNAMES.			
	03 SR1	PIC X(16)	VALUE 'SR1	'.
	03 SR9995	PIC X(16)	VALUE 'IXSUB	'.
	03 SR9997	PIC X(16)	VALUE 'IXSET	'.
	03 SR9996	PIC X(16)	VALUE 'IXREC	'.
	03 SR9999	PIC X(16)	VALUE 'IXCOWNER	'.
	03 SR9998	PIC X(16)	VALUE 'IXDET	'.
	03 SR104	PIC X(16)		
		VALUE 'DDFILE		'.
	03 SR103	PIC X(16)		
		VALUE 'DDALIAS		'.
	03 SR102	PIC X(16)		
		VALUE 'DDPROGRAM		'.
	03 SR101	PIC X(16)		
		VALUE 'DDRECB		'.
	03 SR100	PIC X(16)		
		VALUE 'DDRECA		'.
01	SUBSCHEMA-SETNAMES.			
	03 DDRECA-DDRECB	PIC X(16)	VALUE 'DDRECA-DDRECB	'.
	03 DDRECA-PROGRAM	PIC X(16)	VALUE 'DDRECA-PROGRAM	'.
	03 DDRECA-ALIAS	PIC X(16)	VALUE 'DDRECA-ALIAS	'.
	03 DDRECA-FILE	PIC X(16)	VALUE 'DDRECA-FILE	'.
	03 IX-DATA-NAME	PIC X(16)	VALUE 'IX-DATA-NAME	'.
	03 IXSET-IXREC	PIC X(16)	VALUE 'IXSET-IXREC	'.
	03 IXSET-IXDET	PIC X(16)	VALUE 'IXSET-IXDET	'.
	03 IXSUB-IXREC	PIC X(16)	VALUE 'IXSUB-IXREC	'.
	03 CALC	PIC X(16)	VALUE 'CALC	'.
01	SUBSCHEMA-AREANAMES.			
	03 DATA-INDX-REGION	PIC X(16)	VALUE 'DATA-INDX-REGION'.	
	03 DATA-REGION	PIC X(16)	VALUE 'DATA-REGION	'.
000530				
01	ISHD-CONSTANTS.			
02	ISHD-F0.			
03	ISHD-H0	PIC X(2)	VALUE LOW-VALUES.	
03	ISHD-X00	PIC X	VALUE LOW-VALUES.	
	03 FILLER	PIC X	VALUE LOW-VALUES.	
02	ISHD-H5	PIC 9(4)	COMP SYNC VALUE 5.	
02	ISHD-H22	PIC 9(4)	COMP SYNC VALUE 22.	
02	ISHD-H16	PIC 9(4)	COMP SYNC VALUE 16.	
02	ISHD-H9	PIC 9(4)	COMP SYNC VALUE 9.	
02	ISHD-H10	PIC 9(4)	COMP SYNC VALUE 10.	
02	ISHD-H8	PIC 9(4)	COMP SYNC VALUE 8.	
02	ISHD-H7	PIC 9(4)	COMP SYNC VALUE 7.	
02	ISHD-H6	PIC 9(4)	COMP SYNC VALUE 6.	
02	ISHD-H11	PIC 9(4)	COMP SYNC VALUE 11.	

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02	ISHD-H4	PIC 9(4)	COMP SYNC	VALUE 4.
02	ISHD-H3	PIC 9(4)	COMP SYNC	VALUE 3.
02	ISHD-X01	PIC X	VALUE	1.
02	ISHD-X02	PIC X	VALUE	1.
02	ISHD-X05	PIC X	VALUE	1.
02	ISHD-X22	PIC X	VALUE	1.
02	ISHD-XA0	PIC X	VALUE	1.
02	ISHD-XD6	PIC X	VALUE	10.
02	ISHD-XE2	PIC X	VALUE	15.
02	ISHD-XF0	PIC X	VALUE	10.
02	ISHD-XF2	PIC X	VALUE	12.
02	ISHD-L1	PIC X(22)	VALUE	*** IOMS ERRORS DUMP ***.
000540	LINKAGE SECTION.			
000010	*01 TCBD		COPY TCBCOB.	CHLTWAEX
000010	01 TCBD.			
000020	02 ITRMORID	PIC X(4).		
000030	02 ITRMUCBA	PIC 9(9)	COMP SYNC.	
000040	02 ITRMPCKA	PIC 9(9)	COMP SYNC.	
000050	02 ITRMSIZE	PIC 9(4)	COMP SYNC.	
000060	02 ITRMERRP	PIC X.		
000070	02 ITRMOPCD	PIC X.		
000080	02 ITRMPCKC	PIC X.		
000090	02 ITRMAID	PIC X.		
000100	02 ITRMCADD	PIC XX.		
000110	02 ITRMCADD-B REDEFINES ITRMCADD	PIC 9(4)	COMP.	
000120	02 ITRMTYPE	PIC X.		
000130	02 ITRMNAME	PIC XXX.		
000140	02 ITRMSENS	PIC 9(9)	COMP SYNC.	
000150	02 ITRMENTY REDEFINES ITRMSENS	PIC 9(9)	COMP SYNC.	
000160				
000170	02 ITRMVSAM REDEFINES ITRMSENS	PIC X.		
000180	04 ITRMVSMC	PIC XX.		
000190	04 ITRMVSEC	PIC XX.		
000200	04 ITRMCBEC REDEFINES ITRMVSEC	PIC X.		
000210		PIC XX.		
000220	04 ITRMVSRC	PIC X.		
000230	02 ITRMACRO	PIC XXX.		
000240	02 ITRMSGON	PIC 9(9)	COMP SYNC.	
000250	02 ITRMECBX	PIC 9(9)	COMP SYNC.	
000260	02 ITRMEXTN	PIC 9(9)	COMP SYNC.	
000270	02 ITRMTUAR	PIC 9(9)	COMP SYNC.	
000280	02 ITRMPROG	PIC 9(9)	COMP SYNC.	
000290	02 ITRMREPL	PIC X(4).		
000300	02 ITRMFLGS	PIC 9(4)	COMP SYNC.	
000310	02 ITRMRLN	PIC 9(4)	COMP SYNC.	
000320	02 ITRMSAVE	PIC X(12).		
000330	02 ITRMHAND	PIC X.		
000340	02 ITRMCALP	PIC XXX.		
000350	02 ITRMTRAN	PIC X(4).		
000360	* USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER	PIC X(512).		CHLTWAEX
000040	02 TWA-USER	REDEFINES TWA-C2.		CHLTWAEX
000050	03 TWA-TRAN-CODE	PIC X(4).		CHLTWAEX
000060	03 TWA-CURRENT-PROG-NAME	PIC X(8).		CHLTWAEX
000070		PIC X(8).		CHLTWAEX
000080	03 TWA-PROGRAM-FLAGS	PIC X(4).		CHLTWAEX
000090	03 TWA-MAP-PTR	PIC X(4).		CHLTWAEX
000100	03 TWA-MAPC-PTR	PIC X(4).		CHLTWAEX
000110	03 TWA-NEXT-PROG-NAME	PIC X(8).		CHLTWAEX
000120	03 TWA-NEXT-TRAN-CODE	PIC X(4).		CHLTWAEX
000130	03 TWA-DBKEY	PIC X(4).		CHLTWAEX
000140	03 TWA-DBKEY-9	REDEFINES TWA-DBKEY		CHLTWAEX
000150		PIC S9(9)	COMP SYNC.	CHLTWAEX
000160	03 TWA-DBKEY-2	PIC X(4).		CHLTWAEX
000170	03 TWA-DBKEY-2-9	REDEFINES TWA-DBKEY-2		CHLTWAEX
000180		PIC S9(9)	COMP SYNC.	CHLTWAEX
000190	03 TWA-DBKEY-3	PIC X(4).		CHLTWAEX
000200	03 TWA-DBKEY-3-9	REDEFINES TWA-DBKEY-3		CHLTWAEX
000210		PIC S9(9)	COMP SYNC.	CHLTWAEX
000220	03 TWA-DISK-DATA.			CHLTWAEX
000230	05 TWA-DISK-ACQUIRED-FLAG	PIC X.		CHLTWAEX
000240				CHLTWAEX
000250	88 TWA-DISK-NOT-ACQUIRED	VALUE LOW-VALUES.		CHLTWAEX
000260	88 TWA-DISK-ACQUIRED	VALUE HIGH-VALUES.		CHLTWAEX

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000270	05 TWA-DISK-NO-ACQUIRED			CHLTWAEX
000280		PIC S9(3)	COMP.	CHLTWAEX
000290	03 TWA-TEST-PRODUCTION-FLAG	PIC X.		CHLTWAEX
000300	88 TWA-PRODUCTION-RUN		VALUE LOW-VALUES.	CHLTWAEX
000310	88 TWA-TEST-RUN		VALUE 'I'.	CHLTWAEX
000320	03 TWA-SIS-TERM-CODE			CHLTWAEX
000330	05 TWA-SIS-TERM-SEMESTER	PIC X.		CHLTWAEX
000340		PIC XX.		CHLTWAEX
000350	05 TWA-SIS-TERM-YEAR	PIC X(4).		CHLTWAEX
000360	03 TWA-SIS-SUBSYSTEM-CODE	PIC X.		CHLTWAEX
000370		PIC X(12).		CHLTWAEX
000380	03 TWA-SEC-ACCESS-CODE	PIC X.		CHLTWAEX
000390	88 TWA-SEC-ACCESS-IS-INQUIRY		VALUE 'I'.	CHLTWAEX
000400	88 TWA-SEC-ACCESS-IS-UPDATE		VALUE 'U'.	CHLTWAEX
000410	03 TWA-SEC-ACCESS-DEPT	PIC XXX.		CHLTWAEX
000420	03 TWA-TERMERRP-SAVE	PIC X.		CHLTWAEX
000430	03 FILLER	PIC X(12).		CHLTWAEX
000440	03 TWA-DD-AREA	PIC XX.		CHLTWAEX
000450	05 TWA-FUNC	PIC X(30).		CHLTWAEX
000460	05 TWA-DATA-NAME	PIC X(20).		CHLTWAEX
000470	05 FILLER	PIC X(14).		CHLTWAEX
000480	03 FILLER			CHLTWAEX
000490	03 TWA-DBKEY-AREA			CHLTWAEX
000500	05 TWA-PROGRAM-DBKEY		OCCURS 8 TIMES	
000630		PIC S9(9)	COMP SYNC.	
000640	05 TWA-FILE-DBKEY		OCCURS 4 TIMES	
000650		PIC S9(9)	COMP SYNC.	
000660	05 TWA-ALIAS-DBKEY		OCCURS 4 TIMES	
000670		PIC S9(9)	COMP SYNC.	
000680	03 TWA-FLAGS-AREA			
000690	05 DDRECA-FOUND-FLAG	PIC X.		
000700	88 DDRECA-FOUND		VALUE 'Y'.	
000710	05 PROGRAM-EQS-FLAG	PIC X.		
000720	88 END-OF-PROGRAM		VALUE 'Y'.	
000730	05 FILE-EQS-FLAG	PIC X.		
000740	88 END-OF-FILE		VALUE 'Y'.	
000750	05 ALIAS-EQS-FLAG	PIC X.		
000760	88 END-OF-ALIAS		VALUE 'Y'.	
000770	03 I	PIC S9(3)	COMP SYNC.	
000780				
000790				
000800	01 RELOCATE.			SHDSPTEX
000010	02 FILLER	PIC X(12).		SHDSPTEX
000020	02 RSHDPCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000030	02 FILLER	PIC X(32).		SHDSPTEX
000040	02 RSHDCSA	PIC 9(9)	COMP SYNC.	SHDSPTEX
000050	02 FILLER	PIC X(24).		SHDSPTEX
000060	02 RSHDOCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000070	02 FILLER	PIC X(100).		SHDSPTEX
000080	02 RSHDLOWH	PIC 9(9)	COMP SYNC.	SHDSPTEX
000090	02 RSHDHIGH	PIC 9(9)	COMP SYNC.	SHDSPTEX
000100	02 FILLER	PIC X(68).		SHDSPTEX
000110	02 RSHDIVAR	PIC 9(9)	COMP SYNC.	SHDSPTEX
000120	02 FILLER	PIC X(4).		SHDSPTEX
000130	02 RSHDFREE	PIC 9(9)	COMP SYNC.	SHDSPTEX
000140	02 FILLER	PIC X(48).		SHDSPTEX
000150	02 RSHDTCT	PIC 9(9)	COMP SYNC.	SHDSPTEX
000160	02 FILLER	PIC X(40).		SHDSPTEX
000170	02 USER AREA STARTS HERE.			SHDSPTEX
000180	02 SPT-REST-OF-SPT.			SHDSPTEX
000190	03 SPT-TEST-PRODUCTION-FLAG	PIC X.		SHDSPTEX
000200	88 SPT-PRODUCTION-RUN		VALUE LOW-VALUES.	SHDSPTEX
000210	88 SPT-TEST-RUN		VALUE 'I'.	SHDSPTEX
000220	03 FILLER	PIC X.		01/22/82
000230	03 FILLER	PIC X(300).		01/22/82
000240	03 FILLER	PIC XX.		01/22/82
000250	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
000260	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
000270				
000280				

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000490	02 FILLER	PIC X(11).	MCHLUPDO	
000500	02 MCHLUPD-DATA-PICTUREA	PIC X.	MCHLUPDO	
000510	02 MCHLUPD-DATA-PICTUREO	PIC X(10).	MCHLUPDO	
000520	02 FILLER	PIC X(12).	MCHLUPDO	
000530	02 MCHLUPD-DATA-LEVELA	PIC X.	MCHLUPDO	
000540	02 MCHLUPD-DATA-LEVELQ	PIC X(6).	MCHLUPDO	
000550	02 FILLER	PIC X(21).	MCHLUPDO	
000560	02 MCHLUPD-REVISED-PERSCNA	PIC X.	MCHLUPDO	
000570	02 MCHLUPD-REVISED-PERSONO	PIC XXX.	MCHLUPDO	
000580	02 FILLER	PIC X(12).	MCHLUPDO	
000590	02 MCHLUPD-DATA-USAGEA	PIC X.	MCHLUPDO	
000600	02 MCHLUPD-DATA-USAGEO	PIC X(15).	MCHLUPDO	
000610	02 FILLER	PIC X(14).	MCHLUPDO	
000620	02 MCHLUPD-DATA-JUSTIFYA	PIC X.	MCHLUPDO	
000630	02 MCHLUPD-DATA-JUSTIFYO	PIC X(6).	MCHLUPDO	
000640	02 FILLER	PIC X(22).	MCHLUPDO	
000650	02 MCHLUPD-ALIAS-NAME-1A	PIC X.	MCHLUPDO	
000660	02 MCHLUPD-ALIAS-NAME-1O	PIC X(30).	MCHLUPDO	
000670	02 FILLER	PIC X(5).	MCHLUPDO	
000680	02 MCHLUPD-ALIAS-NAME-2A	PIC X.	MCHLUPDO	
000690	02 MCHLUPD-ALIAS-NAME-2O	PIC X(30).	MCHLUPDO	
000700	02 FILLER	PIC X(8).	MCHLUPDO	
000710	02 MCHLUPD-ALIAS-NAME-3A	PIC X.	MCHLUPDO	
000720	02 MCHLUPD-ALIAS-NAME-3O	PIC X(30).	MCHLUPDO	
000730	02 FILLER	PIC X(5).	MCHLUPDO	
000740	02 MCHLUPD-ALIAS-NAME-4A	PIC X.	MCHLUPDO	
000750	02 MCHLUPD-ALIAS-NAME-4O	PIC X(30).	MCHLUPDO	
000760	02 FILLER	PIC X(16).	MCHLUPDO	
000770	02 MCHLUPD-USER-NAME-1A	PIC X.	MCHLUPDO	
000780	02 MCHLUPD-USER-NAME-1O	PIC X(20).	MCHLUPDO	
000790	02 FILLER	PIC X(5).	MCHLUPDO	
000800	02 MCHLUPD-USER-NAME-2A	PIC X.	MCHLUPDO	
000810	02 MCHLUPD-USER-NAME-2O	PIC X(20).	MCHLUPDO	
000820	02 FILLER	PIC X(5).	MCHLUPDO	
000830	02 MCHLUPD-USER-NAME-3A	PIC X.	MCHLUPDO	
000840	02 MCHLUPD-USER-NAME-3O	PIC X(16).	MCHLUPDO	
000850	02 FILLER	PIC X(8).	MCHLUPDO	
000860	02 MCHLUPD-USER-NAME-4A	PIC X.	MCHLUPDO	
000870	02 MCHLUPD-USER-NAME-4O	PIC X(20).	MCHLUPDO	
000880	02 FILLER	PIC X(5).	MCHLUPDO	
000890	02 MCHLUPD-USER-NAME-5A	PIC X.	MCHLUPDO	
000900	02 MCHLUPD-USER-NAME-5O	PIC X(20).	MCHLUPDO	
000910	02 FILLER	PIC X(5).	MCHLUPDO	
000920	02 MCHLUPD-USER-NAME-6A	PIC X.	MCHLUPDO	
000930	02 MCHLUPD-USER-NAME-6O	PIC X(16).	MCHLUPDO	
000940	02 FILLER	PIC X(21).	MCHLUPDO	
000950	02 MCHLUPD-PROGRAM-USED-1A	PIC X.	MCHLUPDO	
000960	02 MCHLUPD-PROGRAM-USED-1O	PIC X(10).	MCHLUPDO	
000970	02 FILLER	PIC X(5).	MCHLUPDO	
000980	02 MCHLUPD-PROGRAM-USED-2A	PIC X.	MCHLUPDO	
000990	02 MCHLUPD-PROGRAM-USED-2O	PIC X(10).	MCHLUPDO	
001000	02 FILLER	PIC X(5).	MCHLUPDO	
001010	02 MCHLUPD-PROGRAM-USED-3A	PIC X.	MCHLUPDO	
001020	02 MCHLUPD-PROGRAM-USED-3O	PIC X(10).	MCHLUPDO	
001030	02 FILLER	PIC X(5).	MCHLUPDO	
001040	02 MCHLUPD-PROGRAM-USED-4A	PIC X.	MCHLUPDO	
001050	02 MCHLUPD-PROGRAM-USED-4O	PIC X(10).	MCHLUPDO	
001060	02 FILLER	PIC X(8).	MCHLUPDO	
001070	02 MCHLUPD-PROGRAM-USED-5A	PIC X.	MCHLUPDO	
001080	02 MCHLUPD-PROGRAM-USED-5O	PIC X(10).	MCHLUPDO	
001090	02 FILLER	PIC X(5).	MCHLUPDO	
001100	02 MCHLUPD-PROGRAM-USED-6A	PIC X.	MCHLUPDO	
001110	02 MCHLUPD-PROGRAM-USED-6O	PIC X(10).	MCHLUPDO	
001120	02 FILLER	PIC X(5).	MCHLUPDO	
001130	02 MCHLUPD-PROGRAM-USED-7A	PIC X.	MCHLUPDO	
001140	02 MCHLUPD-PROGRAM-USED-7O	PIC X(10).	MCHLUPDO	
001150	02 FILLER	PIC X(5).	MCHLUPDO	
001160	02 MCHLUPD-PROGRAM-USED-8A	PIC X.	MCHLUPDO	
001170	02 MCHLUPD-PROGRAM-USED-8O	PIC X(10).	MCHLUPDO	
001180	02 FILLER	PIC X(21).	MCHLUPDO	
001190	02 MCHLUPD-FILE-USED-1A	PIC X.	MCHLUPDO	
001200	02 MCHLUPD-FILE-USED-1O	PIC X(20).	MCHLUPDO	
001210	02 FILLER	PIC X(5).	MCHLUPDO	
001220	02 MCHLUPD-FILE-USED-2A	PIC X.	MCHLUPDO	
001230	02 MCHLUPD-FILE-USED-2O	PIC X(20).	MCHLUPDO	
001240	02 FILLER	PIC X(8).	MCHLUPDO	
001250	02 MCHLUPD-FILE-USED-3A	PIC X.	MCHLUPDO	

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001260	02 MCHLUPD-FILE-USED-30	PIC X(20).		MCHLUPDO
001270	02 FILLER	PIC X(5).		MCHLUPDO
001280	02 MCHLUPD-FILE-USED-4A	PIC X.		MCHLUPDO
001290	02 MCHLUPD-FILE-USED-40	PIC X(20).		MCHLUPDO
001300	02 FILLER	PIC X(6).		MCHLUPDO
001310	02 MCHLUPD-MESSAGEA	PIC X.		MCHLUPDO
001320	02 MCHLUPD-MESSAGEO	PIC X(49).		MCHLUPDO
001330	02 FILLER	PIC X(6).		MCHLUPDO
000860				
000870				
000010	01 MAPERRO.			MAPERRO
000020	02 MAPERRW	PIC X.		MAPERRO
000030	02 FILLER	PIC X(4).		MAPERRO
000040	02 MAPERR-CSECTA	PIC X.		MAPERRO
000050	02 MAPERR-CSECTO	PIC X(8).		MAPERRO
000060	02 FILLER	PIC X.		MAPERRO
000070	02 MAPERR-VER-MODA	PIC X.		MAPERRO
000080	02 MAPERR-VER-MODO	PIC 9.9.		MAPERRO
000090	02 FILLER	PIC X.		MAPERRO
000100	02 MAPERR-TEST-FLAGA	PIC X.		MAPERRO
000110	02 MAPERR-TEST-FLAGO	PIC X(4).		MAPERRO
000120	02 FILLER	PIC X(7).		MAPERRO
000130	02 MAPERR-MSGA	PIC X.		MAPERRO
000140	02 MAPERR-MSGO	PIC X(56).		MAPERRO
000150	02 FILLER	PIC X.		MAPERRO
000160	02 MAPERR-IDMS-ERROR-LITERALA	PIC X.		MAPERRO
000170	02 MAPERR-IDMS-ERROR-LITERALO	PIC X(11).		MAPERRO
000180	02 FILLER	PIC X.		MAPERRO
000190	02 MAPERR-ERROR-STATUSA	PIC X.		MAPERRO
000200	02 MAPERR-ERROR-STATUSO	PIC X(4).		MAPERRO
000210	02 FILLER	PIC X.		MAPERRO
000220	02 MAPERR-ERROR-SETA	PIC X.		MAPERRO
000230	02 MAPERR-ERROR-SETO	PIC X(16).		MAPERRO
000240	02 FILLER	PIC X.		MAPERRO
000250	02 MAPERR-ERROR-RECORDA	PIC X.		MAPERRO
000260	02 MAPERR-ERROR-RECORDO	PIC X(16).		MAPERRO
000270	02 FILLER	PIC X.		MAPERRO
000280	02 MAPERR-ERROR-AREAA	PIC X.		MAPERRO
000290	02 MAPERR-ERROR-AREAO	PIC X(16).		MAPERRO
000300	02 FILLER	PIC X(12).		MAPERRO
000890				
000900 *	COPY IDMS DDRECA.			
	01 DDRECA.			
	03 DATA-NAME	PIC X(30).		
	03 DATA-CREATED-DATE.			
	05 DATA-CREATED-YY.	PIC XX.		
	05 DATA-CREATED-MM.	PIC XX.		
	05 DATA-CREATED-DD.	PIC XX.		
	03 DATA-CHANGED-DATE.			
	05 DATA-CHANGED-YY.	PIC XX.		
	05 DATA-CHANGED-MM.	PIC XX.		
	05 DATA-CHANGED-DD.	PIC XX.		
	03 DATA-USER	OCCURS 6.		
	05 DATA-USER-NAME	PIC X(20).		
	03 DATA-REVISED-PERSON	PIC XXX.		
	03 FILLER	PIC XXX.		
000910				
000920 *	COPY IDMS DDRECB.			
	01 DDRECB.			
	03 DATA-DESC	PIC X(40).		
	03 DATA-LENGTH	PIC X(10).		
	03 DATA-JUSTIFY	PIC X.		
		88 DATA-JUSTIFY-RIGHT VALUE 'R'.		
		88 DATA-JUSTIFY-LEFT VALUE 'L'.		
	03 DATA-LEVEL	PIC X.		
		88 DATA-INPUT VALUE 'I'.		
		88 DATA-OUTPUT VALUE 'O'.		
		88 DATA-INPUT-OUTPUT VALUE 'B'.		
	03 DATA-USAGE	PIC X(12).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
000930				
000940 *	COPY IDMS DDPROGRAM.			
	01 DDPROGRAM.			

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	03 DATA-PROGRAM-USED	PIC X(8).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
000950 000960	* 01 COPY IDMS DDALIAS. DDALIAS.			
	03 DATA-ALIAS-NAME	PIC X(30).		
	03 FILLER	PIC X(6).		
	03 FILLER	PIC X(4).		
000970 000980	* 01 COPY IDMS DDFILE. DDFILE.			
	03 DATA-FILE-USED	PIC X(20).		
	03 FILLER	PIC X(8).		
	03 FILLER	PIC X(4).		
000990 001000	* 01 COPY IDMS SUBSCHEMA-CTRL. SUBSCHEMA-CTRL.			
	03 PROGRAM-NAME	PIC X(8).		
	03 ERROR-STATUS	PIC X(4).		
		88 DB-STATUS-OK VALUE '0000'.		
		88 ANY-STATUS		
		VALUE '0000' THRU '9999'.		
		88 ANY-ERROR-STATUS		
		VALUE '0001' THRU '9999'.		
		88 DB-END-OF-SET VALUE '0307'.		
	03 DBKEY	88 DB-REC-NOT-FOUND VALUE '0326'.		
		PIC S9(8)		
		USAGE CCMP		
		SYNC.		
	03 RECORD-NAME	PIC X(16).		
	03 RRECORD-NAME	REDEFINES RECORD-NAME.		
	05 SSC-NODN	PIC X(8).		
	05 SSC-DBN	PIC X(8).		
	03 AREA-NAME	PIC X(16).		
	03 ERROR-SET	PIC X(16).		
	03 ERROR-RECORD	PIC X(16).		
	03 ERROR-AREA	PIC X(16).		
	03 IDBMSCOM-AREA	PIC X(100).		
	03 IDBMSCOM	REDEFINES IDBMSCOM-AREA		
		PIC X		
		OCCURS 100.		
	03 FILLER	REDEFINES IDBMSCOM-AREA.		
	05 DB-SUB-ADDR	PIC X(4).		
	05 FILLER	PIC X(96).		
	03 DIRECT-DBKEY	PIC S9(8)		
		USAGE CCMP		
		SYNC.		
	03 DIRECT-DBK	REDEFINES DIRECT-DBKEY		
		PIC S9(8)		
		USAGE CCMP		
		SYNC.		
	03 DATABASE-STATUS.			

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	05 DBSTATEMENT-CODE	PIC X(2).		
	05 DBSTATUS-CODE	PIC X(5).		
	03 FILLER	PIC X.		
	03 RECORD-OCCUR	PIC S9(8)		
		USAGE COMP		
		SYNC.		
	03 DML-SEQUENCE	PIC S9(8)		
		USAGE COMP		
		SYNC.		
001010				
001020	PROCEDURE DIVISION USING TC8C, RELOCATE.			
001030				
001040	MOVE CSECT TO TWA-CURRENT-PROG-NAME.			
001050	MOVE ALL 'N' TO TWA-FLAGS-AREA.			
001060	PERFORM MOVE-ZERO-TO-TWA-DBKEY-AREA.			
001070	PERFORM MAP-INPUT-MCHLTOP.			
001080	PERFORM SET-UP-IDMS.			
001090	PERFORM PROCESS-DISPLAY.			
001100	PERFORM FINISH-IDMS.			
001110	* RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CODE AFTER-READ.			
	CALL 'ISHOHLRT' USING ISHD-XAO TWA-NEXT-TRAN-CODE.			
	GOBACK.			
001120				
001130				
001140	MOVE-ZERO-TO-TWA-DBKEY-AREA.			
001150	PERFORM ZERO-TWA-PROGRAM-DBKEY			
001160	VARYING I FROM 1 BY 1			
001170	UNTIL I GREATER THAN 8.			
001180	PERFORM ZERO-TWA-FILE-ALIAS-DBKEY			
001190	VARYING I FROM 1 BY 1			
001200	UNTIL I GREATER THAN 4.			
001210				
001220	ZERO-TWA-PROGRAM-DBKEY.			
001230	MOVE ZERO TO TWA-PROGRAM-DBKEY (I).			
001240				
001250	ZERO-TWA-FILE-ALIAS-DBKEY.			
001260	MOVE ZERO TO TWA-FILE-DBKEY (I), TWA-ALIAS-DBKEY (I).			
001270				
001280	PROCESS-DISPLAY.			
001290	PERFORM PREPARE-OUTPUT-MAP.			
001300	MOVE TWA-DATA-NAME TO DATA-NAME.			
001310	PERFORM OBTAIN-CALC-DDRECA.			
001320	IF DDRECA-FOUND			
001330	MOVE DDRECA-FOUND-MESS TO MCHLUPD-MESSAGEO			
001340	PERFORM MOVE-DDRECA-DATA-TO-MAP			
001350	PERFORM DISPLAY-ALL-DATA-TO-MAP			
001360	ELSE			
001370	MOVE DDRECA-NOT-FOUND-MESS TO MCHLUPD-MESSAGEO.			
001380	PERFORM WRITE-OUTPUT-MAP.			
001390				
001400	MOVE-DDRECA-DATA-TO-MAP.			
001410	MOVE DATA-NAME TO MCHLUPD-DATA-NAMEC.			
001420	IF DATA-CREATED-DATE NOT = SPACES			
001430	MOVE ALL '/' TO MCHLUPD-CREATED-DATE-SLASH-10,			
001440	MCHLUPD-CREATED-DATE-SLASH-20.			
001450	MOVE DATA-CREATED-YY TO MCHLUPD-CREATED-DATE-YYO			
001460	MOVE DATA-CREATED-MM TO MCHLUPD-CREATED-DATE-MMO			
001470	MOVE DATA-CREATED-DD TO MCHLUPD-CREATED-DATE-DDO.			
001480	IF DATA-CHANGED-DATE NOT = SPACES			
001490	MOVE ALL '/' TO MCHLUPD-CHANGED-DATE-SLASH-10,			
001500	MCHLUPD-CHANGED-DATE-SLASH-20.			
001510	MOVE DATA-CHANGED-YY TO MCHLUPD-CHANGED-DATE-YYO			
001520	MOVE DATA-CHANGED-MM TO MCHLUPD-CHANGED-DATE-MMO			
001530	MOVE DATA-CHANGED-DD TO MCHLUPD-CHANGED-DATE-DDO.			
001540	MOVE DATA-USER-NAME (1) TO MCHLUPD-USER-NAME-10.			
001550	MOVE DATA-USER-NAME (2) TO MCHLUPD-USER-NAME-20.			
001560	MOVE DATA-USER-NAME (3) TO MCHLUPD-USER-NAME-30.			
001570	MOVE DATA-USER-NAME (4) TO MCHLUPD-USER-NAME-40.			
001580	MOVE DATA-USER-NAME (5) TO MCHLUPD-USER-NAME-50.			
001590	MOVE DATA-USER-NAME (6) TO MCHLUPD-USER-NAME-60.			
001600	MOVE DATA-REVISED-PERSON TO MCHLUPD-REVISED-PERSONO.			
001610				
001620	DISPLAY-ALL-DATA-TO-MAP.			

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001630	PERFORM OBTAIN-NEXT-DDRECB.			
001640	IF DB-STATUS-OK			
001650	PERFORM MOVE-DDRECB-DATA-TO-MAP.			
001660	PERFORM OBTAIN-FIRST-DDPROGRAM.			
001670	IF END-OF-PROGRAM			
001680	NEXT SENTENCE			
001690	ELSE			
001700	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-10			
001710 *	ACCEPT TWA-PROGRAM-DBKEY (1) FROM DDPROGRAM CURRENCY MOVE 0001 TO DML-SEQUENCE CALL 'ISHOHLID' USING SUBSCHEMA-CTRL			DMLC0001
	IDBMSCOM (55) SR102 TWA-PROGRAM-DBKEY (1);			
001720	PERFORM LOAD-PROGRAM-NAME.			
001730	PERFORM OBTAIN-FIRST-FILE.			
001740	IF END-OF-FILE			
001750	NEXT SENTENCE			
001760	ELSE			
001770	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-10			
001780 *	ACCEPT TWA-FILE-DBKEY (1) FROM DDFILE CURRENCY MOVE 0002 TO DML-SEQUENCE CALL 'ISHOHLID' USING SUBSCHEMA-CTRL			DMLC0002
	IDBMSCOM (55) SR104 TWA-FILE-DBKEY (1);			
001790	PERFORM LOAD-FILE-NAME.			
001800	PERFORM OBTAIN-FIRST-ALIAS.			
001810	IF END-OF-ALIAS			
001820	NEXT SENTENCE			
001830	ELSE			
001840	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-10			
001850 *	ACCEPT TWA-ALIAS-DBKEY (1) FROM DDALIAS CURRENCY MOVE 0003 TO DML-SEQUENCE CALL 'ISHOHLID' USING SUBSCHEMA-CTRL			DMLC0003
	IDBMSCOM (55) SR103 TWA-ALIAS-DBKEY (1);			
001860	PERFORM LOAD-ALIAS-NAME.			
001870	MOVE-DDRECB-DATA-TO-MAP.			
001880	MOVE DATA-DESC TO MCHLUPD-DATA-DESCC.			
001890	MOVE DATA-LENGTH TO MCHLUPD-DATA-PICTURED.			
001900	IF DATA-JUSTIFY-RIGHT			
001910	MOVE 'RIGHT' TO MCHLUPD-DATA-JUSTIFYO			
001920	ELSE			
001930	IF DATA-JUSTIFY-LEFT			
001940	MOVE 'LEFT' TO MCHLUPD-DATA-JUSTIFYO.			
001950	ELSE			
001960	IF DATA-INPUT			
001970	MOVE 'INPUT' TO MCHLUPD-DATA-LEVELO			
001980	ELSE			
001990	IF DATA-OUTPUT			
002000	MOVE 'OUTPUT' TO MCHLUPD-DATA-LEVELO			
002010	ELSE			
002020	IF DATA-INPUT-OUTPUT			
002030	MOVE 'BOTH' TO MCHLUPD-DATA-LEVELO.			
002040	MOVE DATA-USAGE TO MCHLUPD-DATA-USAGEO.			
002050	LOAD-PROGRAM-NAME.			
002060	PERFORM OBTAIN-NEXT-DDPROGRAM.			
002070	IF DB-END-OF-SET			
002080	NEXT SENTENCE			
002090	ELSE			
002100	IF DB-STATUS-OK			
002110	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-20			
002120	ACCEPT TWA-PROGRAM-DBKEY (2) FROM DDPROGRAM CURRENCY			
002130 *	MOVE 0004 TO DML-SEQUENCE CALL 'ISHOHLID' USING SUBSCHEMA-CTRL			DMLC0004
	IDBMSCOM (55) SR102 TWA-PROGRAM-DBKEY (2);			
002140	PERFORM OBTAIN-NEXT-DDPROGRAM.			

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002150	IF DB-END-OF-SET			
002160	NEXT SENTENCE			
002170	ELSE			
002180	IF DB-STATUS-OK			
002190	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-30			
002200 *	ACCEPT TWA-PROGRAM-DBKEY (3) FROM DDPROGRM CURRENCY MOVE 0005 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (55) SRI02 TWA-PROGRAM-DBKEY (3);			DMLC0005
002210	PERFORM OBTAIN-NEXT-DDPROGRM.			
002220	IF DB-END-OF-SET			
002230	NEXT SENTENCE			
002240	ELSE			
002250	IF DB-STATUS-OK			
002260	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-40			
002270 *	ACCEPT TWA-PROGRAM-DBKEY (4) FROM DDPROGRM CURRENCY MOVE 0006 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (55) SRI02 TWA-PROGRAM-DBKEY (4);			DMLC0006
002280	PERFORM OBTAIN-NEXT-DDPROGRM.			
002290	IF DB-END-OF-SET			
002300	NEXT SENTENCE			
002310	ELSE			
002320	IF DB-STATUS-OK			
002330	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-50			
002340 *	ACCEPT TWA-PROGRAM-DBKEY (5) FROM DDPROGRM CURRENCY MOVE 0007 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (55) SRI02 TWA-PROGRAM-DBKEY (5);			DMLC0007
002350	PERFORM OBTAIN-NEXT-DDPROGRM.			
002360	IF DB-END-OF-SET			
002370	NEXT SENTENCE			
002380	ELSE			
002390	IF DB-STATUS-OK			
002400	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-60			
002410 *	ACCEPT TWA-PROGRAM-DBKEY (6) FROM DDPROGRM CURRENCY MOVE 0008 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (55) SRI02 TWA-PROGRAM-DBKEY (6);			DMLC0008
002420	PERFORM OBTAIN-NEXT-DDPROGRM.			
002430	IF DB-END-OF-SET			
002440	NEXT SENTENCE			
002450	ELSE			
002460	IF DB-STATUS-OK			
002470	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-70			
002480 *	ACCEPT TWA-PROGRAM-DBKEY (7) FROM DDPROGRM CURRENCY MOVE 0009 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (55) SRI02 TWA-PROGRAM-DBKEY (7);			DMLC0009
002490	PERFORM OBTAIN-NEXT-DDPROGRM.			
002500	IF DB-END-OF-SET			
002510	NEXT SENTENCE			
002520	ELSE			
002530	IF DB-STATUS-OK			
002540	MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-80			
002550 *	ACCEPT TWA-PROGRAM-DBKEY (8) FROM DDPROGRM CURRENCY. MOVE 0010 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (55) SRI02 TWA-PROGRAM-DBKEY (8).			DMLC0010
002560	LOAD-FILE-NAME.			
002570	PERFORM OBTAIN-NEXT-FILE.			
002580	IF DB-END-OF-SET			
002590	NEXT SENTENCE			
002600	ELSE			
002610				

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002620	IF DB-STATUS-OK			
002630	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-20			
002640 *	ACCEPT TWA-FILE-DBKEY (2) FROM DDFILE CURRENCY			DMLC0011
	MOVE 0011 TO DML-SEQUENCE			
	CALL 'ISHDHLD' USING SUBSCHEMA-CTRL			
	IDBMSCCM (55)			
	SR104			
	TWA-FILE-DBKEY (2);			
002650	PERFORM OBTAIN-NEXT-FILE.			
002660	IF DB-END-OF-SET			
002670	NEXT SENTENCE			
002680	ELSE			
002690	IF DB-STATUS-OK			
002700	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-30			
002710 *	ACCEPT TWA-FILE-DBKEY (3) FROM DDFILE CURRENCY			DMLC0012
	MOVE 0012 TO DML-SEQUENCE			
	CALL 'ISHDHLD' USING SUBSCHEMA-CTRL			
	IDBMSCCM (55)			
	SR104			
	TWA-FILE-DBKEY (3);			
002720	PERFORM OBTAIN-NEXT-FILE.			
002730	IF DB-END-OF-SET			
002740	NEXT SENTENCE			
002750	ELSE			
002760	IF DB-STATUS-OK			
002770	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-40			
002780 *	ACCEPT TWA-FILE-DBKEY (4) FROM DDFILE CURRENCY.			DMLC0013
	MOVE 0013 TO DML-SEQUENCE			
	CALL 'ISHDHLD' USING SUBSCHEMA-CTRL			
	IDBMSCCM (55)			
	SR104			
	TWA-FILE-DBKEY (4).			
002790	LOAD-ALIAS-NAME.			
002800	PERFORM OBTAIN-NEXT-ALIAS.			
002810	IF DB-END-OF-SET			
002820	NEXT SENTENCE			
002830	ELSE			
002840	IF DB-STATUS-OK			
002850	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-20			
002860 *	ACCEPT TWA-ALIAS-DBKEY (2) FROM DDALIAS CURRENCY			DMLC0014
	MOVE 0014 TO DML-SEQUENCE			
	CALL 'ISHDHLD' USING SUBSCHEMA-CTRL			
	IDBMSCCM (55)			
	SR103			
	TWA-ALIAS-DBKEY (2);			
002880	PERFORM OBTAIN-NEXT-ALIAS.			
002890	IF DB-END-OF-SET			
002900	NEXT SENTENCE			
002910	ELSE			
002920	IF DB-STATUS-OK			
002930	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-30			
002940 *	ACCEPT TWA-ALIAS-DBKEY (3) FROM DDALIAS CURRENCY			DMLC0015
	MOVE 0015 TO DML-SEQUENCE			
	CALL 'ISHDHLD' USING SUBSCHEMA-CTRL			
	IDBMSCCM (55)			
	SR103			
	TWA-ALIAS-DBKEY (3);			
002950	PERFORM OBTAIN-NEXT-ALIAS.			
002960	IF DB-END-OF-SET			
002970	NEXT SENTENCE			
002980	ELSE			
002990	IF DB-STATUS-OK			
003000	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-40			
003010 *	ACCEPT TWA-ALIAS-DBKEY (4) FROM DDALIAS CURRENCY.			DMLC0016
	MOVE 0016 TO DML-SEQUENCE			
	CALL 'ISHDHLD' USING SUBSCHEMA-CTRL			
	IDBMSCCM (55)			
	SR103			
	TWA-ALIAS-DBKEY (4).			
003020	MAP-INPUT-MCHLTOP.			
003030	PUT ADDRESS OF MCHLTOPC INTO TWA-MAPC-PTR.			
003040 *	CALL 'ISHDHLS' USING ISHD-X02 TWA-MAPC-PTR MCHLTOPC.			
	MAP-INPUT TO MAP MCHLTOP MAPC-PTR IS TWA-MAPC-PTR.			
003050 *	CALL 'ISHDHLM' USING TWA-MAPC-PTR ISHD-X00 ISHD-XF2 ISHD-H3			
	SERVICE RELOAD MCHLTOP.			

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003060	PREPARE-OUTPUT-MAP.			
003070 *	PUT ADDRESS OF MCHLUPD INTO TWA-MAP-PTR.			
003080 *	CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MCHLUPD.			
003090 *	PREPARE MAP MCHLUPD			
003100 *	MAP-PTR IS TWA-MAP-PTR			
003110 *	SIZE IS MCHLUPDP.			
	CALL 'ISHDHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H4 MCHLUPDP			
	SERVICE RELOAD MCHLUPDP.			
003120	MOVE CSECT TO MCHLUPD-CSECTO.			
003130	MOVE VER-MOD TO MCHLUPD-VER-MODO.			
003140	MOVE CURRENT-DATE TO MCHLUPD-RDATEO.			
003150	CALL 'KSRTIME' USING MCHLUPD-RTIMEO, H1.			
003160	IF TWA-TEST-RUN			
003170	OR SPT-TEST-RUN			
003180	MOVE 'TEST' TO MCHLUPD-TEST-FLAGO.			
003190	MOVE MCHLTOP-TRANI TO MCHLUPD-TRANO.			
003200	MOVE MCHLTOP-FUNCT TO MCHLUPD-FUNCO, TWA-FUNC.			
003210	MOVE MCHLTOP-KEYI TO MCHLUPD-KEYO, TWA-DATA-NAME.			
003220				
003230	WRITE-OUTPUT-MAP.			
003240 *	ERASE-WRITE MAP MCHLUPD IN BUFFER.			
	CALL 'ISHDHLMR' USING ISHD-X05 MCHLUPDP ISHD-XF0 ISHD-X00			
	ISHD-XD6 ISHD-X00 ISHD-X00.			
003250				
003260	OBTAIN-CALC-DDRECA.			
003270 *	OBTAIN CALC DDRECA.			
	MOVE 0017 TO DML-SEQUENCE			DMLC0017
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (32)			
	SR100			
	IDBMSCOM (43).			
003280	IF DB-REC-NOT-FOUND			
003290	MOVE 'N' TO DDRECA-FOUND-FLAG			
003300	ELSE			
003310	PERFORM IDMS-STATUS			
003320	MOVE 'Y' TO DDRECA-FOUND-FLAG.			
003330				
003340	OBTAIN-NEXT-DDRECB.			
003350 *	OBTAIN FIRST DDRECB WITHIN DDRECA-DDRECB.			
	MOVE 0018 TO DML-SEQUENCE			DMLC0018
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (18)			
	SR101			
	DDRECA-DDRECB			
	IDBMSCOM (43).			
003360	IF DB-END-OF-SET			
003370	NEXT SENTENCE			
003380	ELSE			
003390	PERFORM IDMS-STATUS.			
003400				
003410	OBTAIN-FIRST-DDPROGRAM.			
003420 *	OBTAIN FIRST DDPROGRAM WITHIN DDRECA-PROGRAM.			
	MOVE 0019 TO DML-SEQUENCE			DMLC0019
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (18)			
	SR102			
	DDRECA-PROGRAM			
	IDBMSCOM (43).			
003430	IF DB-END-OF-SET			
003440	MOVE 'Y' TO PROGRAM-EOS-FLAG			
003450	ELSE			
003460	PERFORM IDMS-STATUS			
003470	MOVE 'N' TO PROGRAM-EOS-FLAG.			
003480				
003490	OBTAIN-NEXT-DDPROGRAM.			
003500 *	OBTAIN NEXT DDPROGRAM WITHIN DDRECA-PROGRAM.			
	MOVE 0020 TO DML-SEQUENCE			DMLC0020
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (10)			
	SR102			
	DDRECA-PROGRAM			
	IDBMSCOM (43).			
003510	IF DB-END-OF-SET			
003520	NEXT SENTENCE			
003530	ELSE			

SEQ. NO.	SOURCE STATEMENT	PAGE	17	11/30/82
003540	PERFORM IDMS-STATUS.			
003550	OBTAI-N-FIRST-FILE.			
003560	* OBTAIN FIRST DOFILE WITHIN DDRECA-FILE.			
003570	MOVE 0021 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (18) SR104 DDRECA-FILE IDBMSCOM (43).			DMLC0021
003580	IF DB-END-OF-SET			
003590	MOVE 'Y' TO FILE-EOS-FLAG			
003600	ELSE			
003610	PERFORM IDMS-STATUS			
003620	MOVE 'N' TO FILE-EOS-FLAG.			
003630				
003640	OBTAI-N-NEXT-FILE.			
003650	* OBTAIN NEXT DOFILE WITHIN DDRECA-FILE. MOVE 0022 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR104 DDRECA-FILE IDBMSCOM (43).			DMLC0022
003660	IF DB-END-OF-SET			
003670	NEXT SENTENCE			
003680	ELSE			
003690	PERFORM IDMS-STATUS.			
003700				
003710	OBTAI-N-FIRST-ALIAS.			
003720	* OBTAIN FIRST DOALIAS WITHIN DDRECA-ALIAS. MOVE 0023 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (18) SR103 DDRECA-ALIAS IDBMSCOM (43).			DMLC0023
003730	IF DB-END-OF-SET			
003740	MOVE 'Y' TO ALIAS-EOS-FLAG			
003750	ELSE			
003760	PERFORM IDMS-STATUS			
003770	MOVE 'N' TO ALIAS-EOS-FLAG.			
003780				
003790	OBTAI-N-NEXT-ALIAS.			
003800	* OBTAIN NEXT DOALIAS WITHIN DDRECA-ALIAS. MOVE 0024 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR103 DDRECA-ALIAS IDBMSCOM (43).			DMLC0024
003810	IF DB-END-OF-SET			
003820	NEXT SENTENCE			
003830	ELSE			
003840	PERFORM IDMS-STATUS.			
003850				
003860	SET-UP-IDMS.			
003870	* ACQUIRE VARIABLE BUFFER FOR SUBSCHEMA-CTRL			
003880	* SIZE IS BUFFER-SIZE-CTRL. CALL 'ISHDHLGV' USING BUFFER-SIZE-CTRL ISHD-H11 ISHD-XFO ISHD-FO			
003890	SERVICE RELOAD SUBSCHEMA-CTRL.			
000010	MOVE CSECT TO PROGRAM-NAME.			
000020	IF TWA-PRODUCTION-RUN			OLBINDRN
000030	* AND SPT-PRODUCTION-RUN BIND RUN-UNIT			OLBINDRN
000040	MOVE 0025 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (59) SUBSCHEMA-CTRL SUBSCHEMA-SSNAME;			DMLC0025
000050	ELSE			OLBINDRN
000060	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (59)			OLBINDRN
000070	SUBSCHEMA-CTRL			OLBINDRN
000080	TEST-SUBSCHEMA-SSNAME.			OLBINDRN

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003910	PERFORM IDMS-STATUS.			
003920 *	READY DATA-REGION USAGE-MODE IS RETRIEVAL. MOVE 0026 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (37) DATA-REGION.			DMLC0026
003930	PERFORM IDMS-STATUS.			
003940 *	READY DATA-INDEX-REGION USAGE-MODE IS RETRIEVAL. MOVE 0027 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (37) DATA-INDEX-REGION.			DMLC0027
003950	PERFORM IDMS-STATUS.			
003960 *	ACQUIRE VARIABLE BUFFER FOR DDRECA SIZE IS BUFFER-SIZE-DDRECA.			
003970 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECA ISHD-H6 ISHD-XFO ISHD-F0			
003980 *	SERVICE RELOAD DDRECA. BIND DDRECA. MOVE 0028 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR100 DDRECA.			DMLC0028
003990	PERFORM IDMS-STATUS.			
004000 *	ACQUIRE VARIABLE BUFFER FOR DDRECB SIZE IS BUFFER-SIZE-DDRECB.			
004010 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECB ISHD-H7 ISHD-XFO ISHD-F0			
004020 *	SERVICE RELOAD DDRECB. BIND DDRECB. MOVE 0029 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR101 DDRECB.			DMLC0029
004030 *	ACQUIRE VARIABLE BUFFER FOR DDPROGRM SIZE IS BUFFER-SIZE-DDPROGRM.			
004040 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDPROGRM ISHD-H8 ISHD-XFO ISHD-F0			
004050 *	SERVICE RELOAD DDPROGRM. BIND DDPROGRM. MOVE 0030 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR102 DDPROGRM.			DMLC0030
004060 *	ACQUIRE VARIABLE BUFFER FOR DDFILE SIZE IS BUFFER-SIZE-DDFILE.			
004070 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDFILE ISHD-H10 ISHD-XFO ISHD-F0			
004080 *	SERVICE RELOAD DDFILE. BIND DDFILE. MOVE 0031 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR104 DDFILE.			DMLC0031
004090 *	ACQUIRE VARIABLE BUFFER FOR DDALIAS SIZE IS BUFFER-SIZE-DDALIAS.			
004100 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDALIAS ISHD-H9 ISHD-XFO ISHD-F0			
004110 *	SERVICE RELOAD DDALIAS. BIND DDALIAS. MOVE 0032 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR103 DDALIAS.			DMLC0032
004120	FINISH-IDMS.			
004130	FINISH.			
004140 *	MOVE 0033 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (02).			DMLC0033
004150	PERFORM IDMS-STATUS.			
004160 *	RELEASE BUFFER SUBSCHEMA-CTRL.			

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004170 *	CALL 'ISHDHLPR' USING SUBSCHEMA-CTRL.			
004180 *	RELEASE BUFFER DDRECA.			
004190 *	CALL 'ISHDHLPB' USING DDRECA.			
004200 *	RELEASE BUFFER DDRECB.			
004210 *	CALL 'ISHDHLPB' USING DDRECB.			
004220	RELEASE BUFFER DDPROGRM.			
000010	CALL 'ISHOHLPB' USING DDPROGRM.			
	RELEASE BUFFER DDFILE.			
	CALL 'ISHDHLPB' USING DDFILE.			
	RELEASE BUFFER DDALIAS.			
	CALL 'ISHDHLPB' USING DDALIAS.			
000020	IDMS-STATUS.			IDMSERR
000030	IF DB-STATUS-OK			IDMSERR
000040	NEXT SENTENCE			IDMSERR
000050	ELSE			IDMSERR
000060	PERFORM IDMS-ERROR-EXIT.			IDMSERR
000070	IDMS-ERROR-EXIT.			IDMSERR
000080	IF ERROR-STATUS NOT = '1469'			IDMSERR
000090 *	DUMP FROM CSECT SIZE IS 16			IDMSERR
000100 *	AND T-W-A AND RESOURCES			IDMSERR
000110 *	ID IS '** IDMS ERRORS DUMP **'			IDMSERR
000120 *	CALL 'ISHDHLPM' USING ISHD-X06 CSECT ISHD-H16 ISHD-X22			IDMSERR
	ISHD-L1 ISHD-H22.			
	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR.			
000130 *	CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			IDMSERR
000140 *	PREPARE MAP MAPERR			IDMSERR
000150 *	MAP-PTR IS TWA-MAP-PTR			IDMSERR
	SIZE IS MAPERRP.			IDMSERR
	CALL 'ISHDHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H5 MAPERRP			
000160	SERVICE RELOAD MAPERRR.			IDMSERR
000170	MOVE CSECT TO MAPERR-CSECTO.			IDMSERR
000180	MOVE VER-MOD TO MAPERR-VER-MODD.			IDMSERR
000190	IF TWA-TEST-RUN			IDMSERR
000200	OR SPT-TEST-RUN			IDMSERR
000210	MOVE 'TEST' TO MAPERR-TEST-FLAGO			IDMSERR
000220	ELSE			IDMSERR
000230	IF TWA-PRODUCTION-RUN			IDMSERR
000240	AND SPT-PRODUCTION-RUN			IDMSERR
000250	NEXT SENTENCE			IDMSERR
000260	ELSE			IDMSERR
000270	MOVE 'INVL' TO MAPERR-TEST-FLAGC.			IDMSERR
000280	MOVE 'IDMS ERRORS' TO MAPERR-IDMS-ERROR-LITERAL0.			IDMSERR
000290	MOVE ERROR-STATUS TO MAPERR-ERROR-STATUS0.			IDMSERR
000300	MOVE ERROR-SET TO MAPERR-ERROR-SET0.			IDMSERR
000310	MOVE ERROR-RECORD TO MAPERR-ERROR-RECORD0.			IDMSERR
000320 *	MOVE ERROR-AREA TO MAPERR-ERROR-AREA0.			IDMSERR
	ROLLBACK.			IDMSERR
	MOVE 0034 TO DML-SEQUENCE			OMLC0034
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (67).			
000330	IF NOT DB-STATUS-OK			IDMSERR
000340	MOVE 'ROLLBACK FAILED' TO MAPERR-MSG0.			IDMSERR
000350 *	WRITE MAP MAPERR IN BUFFER.			IDMSERR
000360	CALL 'ISHDHLMP' USING ISHD-X01 MAPERRR ISHD-XF0 ISHD-X00			IDMSERR
	ISHD-X06 ISHD-X00 ISHD-X00.			
004240 *	RETURN TO NEXT-TRAN SIGNON-TRAN AFTER-READ.			IDMSERR
004250	CALL 'ISHDHLRT' USING ISHD-XA0 SIGNON-TRAN.			
004260	GOBACK.			
004270	MAP-ERROR-EXIT.			
000010 *	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR.			MAPERRR
000020 *	CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			MAPERRR
000030 *	PREPARE MAP MAPERR			MAPERRR
000040 *	MAP-PTR IS TWA-MAP-PTR			MAPERRR
	SIZE IS MAPERRP.			
	CALL 'ISHDHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H5 MAPERRP			MAPERRR
	SERVICE RELOAD MAPERRR.			MAPERRR
000050	MOVE CSECT TO MAPERR-CSECTO.			MAPERRR
000060	MOVE VER-MOD TO MAPERR-VER-MODD.			MAPERRR
000070	IF TWA-TEST-RUN			MAPERRR
000080	OR SPT-TEST-RUN			MAPERRR
000090	MOVE 'TEST' TO MAPERR-TEST-FLAGO.			MAPERRR

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000100	MOVE 'CALL OPC -- ERROR IN PROGRAM MAP' TO MAPERR-MSGO.			MAPRERR
000110 *	WRITE MAP MAPERR IN BUFFER.			MAPRERR
	CALL 'ISHDHLMP' USING ISHD-X01 MAPERR0 ISHD-XF0 ISHD-X00			
	ISHD-X06 ISHD-X00 ISHD-X00.			
004290 *	RETURN TO NEXT-TRAN SIGNCN-TRAN AFTER-READ.			
	CALL 'ISHDHLRT' USING ISHD-XA0 SIGNCN-TRAN.			
004300	GOBACK.			
004310				

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000010	IDENTIFICATION DIVISION.			
000020	PROGRAM-ID.	OLDD0211.		
000030	AUTHOR.	TONY LAI.		
000040	INSTALATION.	KSU DATA PROCESSING CENTER		
000050		KANSAS STATE UNIVERSITY		
000060		MANHATTAN, KANSAS 66506.		
000070	DATE-WRITTEN.	11/82.		
000080	DATE-COMPOILED.			
000090	REMARKS.			
000100	OLDD0211 - UPDATE DATA ITEM IN DICTIONARY DATABASE.			
000110	MODIFICATIONS AND CORRECTIONS -			
000120	NONE AS OF 11/82.			
000130				
000140	ENVIRONMENT DIVISION.			
000150	*IDMS-CONTROL SECTION.			
000160	*PROTOCOL.	MODE IS SHACOM DEBUG		
000170	*	IDMS-RECORDS MANUAL.		
000180				
000190				
000200	DATA DIVISION.			
000210	*SCHEMA SECTION.			
000220	*DB DATASUBS	WITHIN DCSHEMA.		
000230				
000240	WORKING-STORAGE SECTION.			
000250	77 CSECT	PIC X(8) VALUE 'OLDD0211'.		
000260	77 VER-MOD	PIC 9V9 VALUE		
000270		1-0.		
000280	77 FUNC-CODE	PIC XX VALUE 'UD'.		
000290	77 H1	PIC S999 VALUE +1 COMP SYNC.		
000300	77 SIGNON-TRAN	PIC X(4) VALUE 'ODSO'.		
000010	77 BUFFER-SIZE-CTRL	PIC S9(4) COMP SYNC VALUE +220.	CHLSUBSZ	
000020	77 BUFFER-SIZE-DDRECA	PIC S9(4) COMP SYNC VALUE +168.	CHLSUBSZ	
000030	77 BUFFER-SIZE-DDRECB	PIC S9(4) COMP SYNC VALUE +72.	CHLSUBSZ	
000040	77 BUFFER-SIZE-DDPROGRM	PIC S9(4) COMP SYNC VALUE +16.	CHLSUBSZ	
000050	77 BUFFER-SIZE-DDFILE	PIC S9(4) COMP SYNC VALUE +32.	CHLSUBSZ	
000060	77 BUFFER-SIZE-DDALIAS	PIC S9(4) COMP SYNC VALUE +40.	CHLSUBSZ	
000070	77 TEST-SUBSCHEMA-SSNAME	PIC X(8) VALUE 'XATASUBS'.	CHLSUBSZ	
000320	01 MCHLUPD.			MCHLUPD
000010	02 FILLER	PIC X(20) VALUE 'C 9DDSO I I		MCHLUPD
000020	02 FILLER	PIC X(20) VALUE 'O AS DATA DICT		MCHLUPD
000030	02 FILLER	PIC X(20) VALUE 'IONARY SYSTEM BH 8		MCHLUPD
000040	02 FILLER	PIC X(20) VALUE 'O B		MCHLUPD
000050	02 FILLER	PIC X(20) VALUE 'O B		MCHLUPD
000060	02 FILLER	PIC X(20) VALUE 'KANSAS STATE UNIVERS		MCHLUPD
000070	02 FILLER	PIC X(20) VALUE 'ITY C 0		MCHLUPD
000080	02 FILLER	PIC X(20) VALUE 'OMCHLUPD E- 8 E/		MCHLUPD
000090	02 FILLER	PIC X(20) VALUE 'UPDATE 0 G-DAT		MCHLUPD
000100	02 FILLER	PIC X(20) VALUE 'A NAME: H		MCHLUPD
000110	02 FILLER	PIC X(20) VALUE 'HRDATE CREATED: H		MCHLUPD
000120	02 FILLER	PIC X(20) VALUE 'ODESCRIPTION:		MCHLUPD
000130	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000140	02 FILLER	PIC X(20) VALUE 'O IZDATE CHANGED:		MCHLUPD
000150	02 FILLER	PIC X(20) VALUE 'H OPICTURE:		MCHLUPD
000160	02 FILLER	PIC X(20) VALUE 'F 0 -LEV		MCHLUPD
000170	02 FILLER	PIC X(20) VALUE 'EL: H 0 7REVI		MCHLUPD
000180	02 FILLER	PIC X(20) VALUE 'SED PERSON: H 0		MCHLUPD
000190	02 FILLER	PIC X(20) VALUE 'RUSAGE: H		MCHLUPD
000200	02 FILLER	PIC X(20) VALUE '0 .>JUSTIFY: H		MCHLUPD
000210	02 FILLER	PIC X(20) VALUE '0 <-ALIAS NAME		MCHLUPD
000220	02 FILLER	PIC X(20) VALUE 'H <31. H		MCHLUPD
000230	02 FILLER	PIC X(20) VALUE '2. H		MCHLUPD
000240	02 FILLER	PIC X(20) VALUE 'H 0 123		MCHLUPD
000250	02 FILLER	PIC X(20) VALUE 'H 04. H		MCHLUPD
000260	02 FILLER	PIC X(20) VALUE 'H 0 1FUSER:		MCHLUPD
000270	02 FILLER	PIC X(20) VALUE 'H <1. H		MCHLUPD
000280	02 FILLER	PIC X(20) VALUE 'H 02. H		MCHLUPD
000290	02 FILLER	PIC X(20) VALUE 'H 03. H		MCHLUPD
000300	02 FILLER	PIC X(20) VALUE 'H 0 4		MCHLUPD
000310	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000320	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000330	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000340	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000350	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000360	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000370	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000380	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD
000390	02 FILLER	PIC X(20) VALUE 'H		MCHLUPD

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000400	02 FILLER PIC X(20) VALUE : 05. H			MCHLUPD
000410	02 FILLER PIC X(20) VALUE : 06. H			MCHLUPD
000420	02 FILLER PIC X(20) VALUE : 07. H			MCHLUPD
000430	02 FILLER PIC X(20) VALUE : USED: K&1. H			MCHLUPD
000440	02 FILLER PIC X(20) VALUE : 02. H			MCHLUPD
000450	02 FILLER PIC X(20) VALUE : 03. H			MCHLUPD
000460	02 FILLER PIC X(20) VALUE : 04. H			MCHLUPD
000470	02 FILLER PIC X(20) VALUE : 05. H			MCHLUPD
000480	02 FILLER PIC X(20) VALUE : 06. H			MCHLUPD
000490	02 FILLER PIC X(20) VALUE : 07. H			MCHLUPD
000500	02 FILLER PIC X(20) VALUE : 08. H			MCHLUPD
000510	02 FILLER PIC X(20) VALUE : NLFILE USED: 0&1. H			MCHLUPD
000520	02 FILLER PIC X(20) VALUE : 02. H			MCHLUPD
000530	02 FILLER PIC X(20) VALUE : 03. H			MCHLUPD
000540	02 FILLER PIC X(20) VALUE : 04. H			MCHLUPD
000550	02 FILLER PIC X(20) VALUE : 05. H			MCHLUPD
000560	02 FILLER PIC X(20) VALUE : 06. H			MCHLUPD
000570	02 FILLER PIC X(20) VALUE : 07. H			MCHLUPD
000580	02 FILLER PIC X(20) VALUE : 08. H			MCHLUPD
000590	02 FILLER PIC X(20) VALUE : F			MCHLUPD
000600	01 MCHLUPDP PIC 9(4) COMP VALUE 0110.			MCHLUPD
000340	01 MCHLUPDC			MCHLUPD
000010	02 FILLER PIC X(20) VALUE : . A F I G			MCHLUPD
000020	02 FILLER PIC X(10) VALUE : HX H			MCHLUPD
000030	02 FILLER PIC X(20) VALUE : QUOTE			MCHLUPD
000040	02 FILLER PIC X(20) VALUE : I7 I X G			MCHLUPD
000050	02 FILLER PIC X(20) VALUE : .R .7 <? J			MCHLUPD
000060	02 FILLER PIC X(20) VALUE : (M +/ X			MCHLUPD
000070	02 FILLER PIC X(20) VALUE : IM 6- 67 J			MCHLUPD
000080	02 FILLER PIC X(20) VALUE : KM LI L\$ L2			MCHLUPD
000090	02 FILLER PIC X(20) VALUE : MI M) M, M9			MCHLUPD
000100	02 FILLER PIC X(20) VALUE : 0? PG P# QP			MCHLUPD
000110	02 FILLER PIC X(03) VALUE : I			MCHLUPD
000360	01 MAPERR			MAPERR
000010	02 FILLER PIC X(20) VALUE : 8 \$- 8 8			MAPERR
000020	02 FILLER PIC X(20) VALUE : 8 0 \$7 8			MAPERR
000030	02 FILLER PIC X(20) VALUE :			MAPERR
000040	02 FILLER PIC X(20) VALUE :			MAPERR
000050	02 FILLER PIC X(20) VALUE :			MAPERR
000060	02 FILLER PIC X(20) VALUE :			MAPERR
000070	02 FILLER PIC X(20) VALUE : 8 8			MAPERR
000080	02 FILLER PIC X(20) VALUE : 8 8			MAPERR
000090	02 FILLER PIC X(20) VALUE : 8 8			MAPERR
000100	02 FILLER PIC X(14) VALUE : 0)= 0)=			MAPERR
000110	01 MAPERRP PIC 9(4) COMP VALUE 00174.			MAPERR
000380	*01 ATB3270			ATB3270
000390	*01 ATB3270.			ATB3270
000002	*01 ATB3270.			ATB3270
000010	* IN CONSTRUCTING AN ATTRIBUTE YOU MAY MAKE ONE CHOICE			ATB3270
000020	* FROM EACH OF THE THREE GROUPS BELOW. THE FIELDS DEFINED			ATB3270
000030	* BELOW HAVE BEEN NAMED IN SUCH A MANNER AS TO BE READILY			ATB3270
000040	* UNDERSTOOD ONCE THE KEY IS KNOWN. THE FOURTH, FIFTH, AND			ATB3270
000050	* SIXTH CHARACTERS OF THE NAME ARE FROM GROUPS 1-3 BELOW.			ATB3270
000060	* NOTE THAT SHORT HAND VERSIONS ARE AVAILABLE FOR DEFAULTS			ATB3270
000070	* OF MDT=NO AND REGULAR INTENSITY.			ATB3270
000080	* GROUP I FIELD TYPE			ATB3270
000090	* PROTECTED = P			ATB3270
000100	* UNPROTECTED, ALPHA NUMERIC = U			ATB3270
000110	* UNPROTECTED, NUMERIC SHIFT = N			ATB3270
000120	* PROTECTED AND CURSOR SKIP = S			ATB3270
000130	* GROUP II INTENSITY			ATB3270
000140	* REGULAR = R OR BLANK IF MDT=N			ATB3270
000150	* HIGH = H			ATB3270
000160	* OFF(DARK) = U			ATB3270
000170	* LIGHT PEN DETECTABLE = L			ATB3270
000180	* GROUP III MODIFIED DATA TAG			ATB3270
000190	* ON = Y			ATB3270
000200	* OFF = N OR BLANK			ATB3270
000210	*			ATB3270
000220	*			ATB3270
000230	*			ATB3270
000240	*			ATB3270
000250	*			ATB3270
000260	*			ATB3270
000270	*			ATB3270
000280	*			ATB3270

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000290 *				ATB3270
000300 *	SKIP		REGULAR INTENSITY	ATB3270
000310 *				ATB3270
000320	03 ATBS	PIC X	VALUE '0'.	ATB3270
000330	03 ATBSR		REDEFINES ATBS	ATB3270
000340			PIC X.	ATB3270
000350	03 ATBSRM		REDEFINES ATBS	ATB3270
000360			PIC X.	ATB3270
000370	03 ATBSRY	PIC X	VALUE '1'.	ATB3270
000380 *				ATB3270
000390 *	SKIP		HIGH INTENSITY	ATB3270
000400 *				ATB3270
000410	03 ATBSH	PIC X	VALUE '8'.	ATB3270
000420	03 ATBSHN		REDEFINES ATBSH	ATB3270
000430			PIC X.	ATB3270
000440	03 ATBSHY	PIC X	VALUE '9'.	ATB3270
000450 *				ATB3270
000460 *	SKIP		OFF (DARK) INTENSITY	ATB3270
000470 *				ATB3270
000480	03 ATBSO	PIC X	VALUE '0'.	ATB3270
000490	03 ATBSON		REDEFINES ATBSO	ATB3270
000500			PIC X.	ATB3270
000510	03 ATBSO		REDEFINES ATBSO	ATB3270
000520			PIC X.	ATB3270
000530	03 ATBSOM		REDEFINES ATBSO	ATB3270
000540			PIC X.	ATB3270
000550	03 ATBSOY	PIC X	VALUE QUOTE.	ATB3270
000560	03 ATBSOY		REDEFINES ATBSOY	ATB3270
000570			PIC X.	ATB3270
000580 *				ATB3270
000590 *	SKIP		REGULAR INTENSITY, LIGHT PEN	ATB3270
000600 *				ATB3270
000610	03 ATBSL	PIC X	VALUE '4'.	ATB3270
000620	03 ATBSLN		REDEFINES ATBSL	ATB3270
000630			PIC X.	ATB3270
000640	03 ATBSLY	PIC X	VALUE '5'.	ATB3270
000650 *				ATB3270
000660 *	PROTECT		REGULAR INTENSITY	ATB3270
000670 *				ATB3270
000680	03 ATBP	PIC X	VALUE '1'.	ATB3270
000690	03 ATBPR		REDEFINES ATBP	ATB3270
000700			PIC X.	ATB3270
000710	03 ATBPRN		REDEFINES ATBP	ATB3270
000720			PIC X.	ATB3270
000730	03 ATBPRY	PIC X	VALUE '1'.	ATB3270
000740 *				ATB3270
000750 *	PROTECT		HIGH INTENSITY	ATB3270
000760 *				ATB3270
000770	03 ATBPH	PIC X	VALUE 'Y'.	ATB3270
000780	03 ATBPHN		REDEFINES ATBPH	ATB3270
000790			PIC X.	ATB3270
000800	03 ATBPHY	PIC X	VALUE 'Z'.	ATB3270
000810 *				ATB3270
000820 *	PROTECT		OFF (DARK) INTENSITY	ATB3270
000830 *				ATB3270
000840	03 ATBPO	PIC X	VALUE 'X'.	ATB3270
000850	03 ATBPON		REDEFINES ATBPO	ATB3270
000860			PIC X.	ATB3270
000870	03 ATBPOY	PIC X	VALUE 'X'.	ATB3270
000880 *				ATB3270
000890 *	PROTECT		REGULAR INTENSITY, LIGHT PEN	ATB3270
000900 *				ATB3270
000910	03 ATBPL	PIC X	VALUE 'U'.	ATB3270
000920	03 ATBPLN		REDEFINES ATBPL	ATB3270
000930			PIC X.	ATB3270
000940	03 ATBPLY	PIC X	VALUE 'V'.	ATB3270
000950 *				ATB3270

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000960 *	UNPROTECTED REGULAR INTENSITY			ATB3270
000970 *	ALPHA-NUMERIC			ATB3270
000980	03 ATBU PIC X VALUE ' '.			ATB3270
000990	03 ATBUR REDEFINES ATBU			ATB3270
001000	PIC X.			ATB3270
001010	03 ATBURN REDEFINES ATBU			ATB3270
001020	PIC X.			ATB3270
001030	03 ATBURY PIC X VALUE 'A'.			ATB3270
001040 *				ATB3270
001050 *	UNPROTECTED HIGH INTENSITY			ATB3270
001060 *	ALPHA-NUMERIC			ATB3270
001070 *				ATB3270
001080	03 ATBUHN PIC X VALUE 'H'.			ATB3270
001090	03 ATBUH REDEFINES ATBUHN			ATB3270
001100	PIC X.			ATB3270
001110	03 ATBUHY PIC X VALUE 'I'.			ATBTS UO
001120 *				ATB3270
001130 *	UNPROTECTED OFF(DARK) INTENSITY			ATB3270
001140 *	ALPHA-NUMERIC			ATB3270
001150 *				ATB3270
001160	03 ATBUO PIC X VALUE '<'.			ATB3270
001170	03 ATBUON REDEFINES ATBUO			ATB3270
001180	PIC X.			ATB3270
001190	03 ATBUOY PIC X VALUE 'I'.			ATB3270
001200 *				ATB3270
001210 *	UNPROTECTED REGULAR INTENSITY, LIGHT PEN			ATB3270
001220 *	ALPHA-NUMERIC			ATB3270
001230 *				ATB3270
001240	03 ATBUL PIC X VALUE 'D'.			ATB3270
001250	03 ATBULN REDEFINES ATBUL			ATB3270
001260	PIC X.			ATB3270
001270	03 ATBULY PIC X VALUE 'E'.			ATB3270
001280 *				ATB3270
001290 *	UNPROTECTED REGULAR INTENSITY			ATB3270
001300 *	NUMERIC SHIFT			ATB3270
001310 *				ATB3270
001320	03 ATBN PIC X VALUE 'G'.			ATB3270
001330	03 ATBNR REDEFINES ATBN			ATB3270
001340	PIC X.			ATB3270
001350	03 ATBNRN REDEFINES ATBN			ATB3270
001360	PIC X.			ATB3270
001370	03 ATBNRY PIC X VALUE 'J'.			ATB3270
001380 *				ATB3270
001390 *	UNPROTECTED HIGH INTENSITY			ATB3270
001400 *	NUMERIC SHIFT			ATB3270
001410 *				ATB3270
001420	03 ATBNH PIC X VALUE 'Q'.			ATB3270
001430	03 ATBNHN REDEFINES ATBNH			ATB3270
001440	PIC X.			ATB3270
001450	03 ATBNHY PIC X VALUE 'R'.			ATB3270
001460 *				ATB3270
001470 *	UNPROTECTED OFF(DARK) INTENSITY			ATB3270
001480 *	NUMERIC SHIFT			ATB3270
001490 *				ATB3270
001500	03 ATBNO PIC X VALUE 'S'.			ATB3270
001510	03 ATBNON REDEFINES ATBNO			ATB3270
001520	PIC X.			ATB3270
001530	03 ATBNOY PIC X VALUE 'T'.			ATB3270
001540 *				ATB3270
001550 *	UNPROTECTED REGULAR INTENSITY, LIGHT PEN			ATB3270
001560 *	NUMERIC SHIFT			ATB3270
001570 *				ATB3270
001580	03 ATBNL PIC X VALUE 'M'.			ATB3270
001590	03 ATBNLN REDEFINES ATBNL			ATB3270
001600	PIC X.			ATB3270
001610	03 ATBNLY PIC X VALUE 'N'.			ATB3270
001620 *				ATB3270
000400				
000410 *01	KEY3270 COPY KEY3270.			
000010	01 KEY3270.			
000020	02 ENTERK PIC X VALUE QUOTE.			
000030	02 PF1 PIC X VALUE '1'.			
000040	02 PF2 PIC X VALUE '2'.			
000050	02 PF3 PIC X VALUE '3'.			
000060	02 PF4 PIC X VALUE '4'.			
000070	02 PF5 PIC X VALUE '5'.			
000080	02 PF6 PIC X VALUE '6'.			

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000090	02 PF7	PIC X	VALUE '7'	
000100	02 PF8	PIC X	VALUE '8'	
000110	02 PF9	PIC X	VALUE '9'	
000120	02 PF10	PIC X	VALUE '10'	
000130	02 PF11	PIC X	VALUE '11'	
000140	02 PF12	PIC X	VALUE '12'	
000150	02 IMMDECT	PIC X	VALUE '1'	
000160	02 TESTREQ	PIC X	VALUE '0'	
000170	02 CLEAR	PIC X	VALUE '1'	
000180	02 PA1	PIC X	VALUE '2'	
000190	02 PA2	PIC X	VALUE '3'	
000200	02 PA3	PIC X	VALUE '4'	
000430	* COPY IDMS SUBSCHEMA-NAMES.			
01	SUBSCHEMA-SSNAME	PIC X(8)	VALUE 'DATASUBS'.	
01	SUBSCHEMA-RECNAME.			
03	SR1	PIC X(16)	VALUE 'SR1	'.
03	SR9995	PIC X(16)	VALUE 'IXSUB	'.
03	SR9997	PIC X(16)	VALUE 'IXSET	'.
03	SR9996	PIC X(16)	VALUE 'IXREC	'.
03	SR9999	PIC X(16)	VALUE 'IXOWNER	'.
03	SR9998	PIC X(16)	VALUE 'IXDET	'.
03	SR104	PIC X(16)	VALUE 'CDFILE	'.
03	SR103	PIC X(16)	VALUE 'CDALIAS	'.
03	SR102	PIC X(16)	VALUE 'DDPROGRAM	'.
03	SR101	PIC X(16)	VALUE 'DDRECB	'.
03	SR100	PIC X(16)	VALUE 'CDRECA	'.
01	SUBSCHEMA-SETNAMES.			
03	DDRECA-DDRECB	PIC X(16)	VALUE 'CDRECA-DDRECB	'.
03	DDRECA-PROGRAM	PIC X(16)	VALUE 'DDRECA-PROGRAM	'.
03	DDRECA-ALIAS	PIC X(16)	VALUE 'DDRECA-ALIAS	'.
03	DDRECA-FILE	PIC X(16)	VALUE 'DDRECA-FILE	'.
03	IX-DATA-NAME	PIC X(16)	VALUE 'IX-DATA-NAME	'.
03	IXSET-IXREC	PIC X(16)	VALUE 'IXSET-IXREC	'.
03	IXSET-IXDET	PIC X(16)	VALUE 'IXSET-IXDET	'.
03	IXSUB-IXREC	PIC X(16)	VALUE 'IXSUB-IXREC	'.
03	CALC	PIC X(16)	VALUE 'CALC	'.
01	SUBSCHEMA-AREANAMES.			
03	DATA-INDX-REGION	PIC X(16)	VALUE 'DATA-INDX-REGION'.	
03	DATA-REGION	PIC X(16)	VALUE 'DATA-REGION	'.
000440	01 ISHD-CONSTANTS.			
02	ISHD-F0.			
03	ISHD-H0	PIC X(12)	VALUE LOW-VALUES.	
03	ISHD-X00	PIC X	VALUE LOW-VALUES.	
03	FILLER	PIC X	VALUE LOW-VALUES.	
02	ISHD-H5	PIC 9(4)	COMP SYNC VALUE 5.	
02	ISHD-H22	PIC 9(4)	COMP SYNC VALUE 22.	
02	ISHD-H16	PIC 9(4)	COMP SYNC VALUE 16.	
02	ISHD-H10	PIC 9(4)	COMP SYNC VALUE 10.	
02	ISHD-H9	PIC 9(4)	COMP SYNC VALUE 9.	
02	ISHD-H8	PIC 9(4)	COMP SYNC VALUE 8.	
02	ISHD-H7	PIC 9(4)	COMP SYNC VALUE 7.	
02	ISHD-H6	PIC 9(4)	COMP SYNC VALUE 6.	

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	02 ISHD-H11 PIC 9(4) COMP SYNC VALUE 11.			
	02 ISHD-H4 PIC 9(4) COMP SYNC VALUE 4.			
	02 ISHD-H3 PIC 9(4) COMP SYNC VALUE 3.			
	02 ISHD-X01 PIC X VALUE ' '.			
	02 ISHD-X02 PIC X VALUE ' '.			
	02 ISHD-X05 PIC X VALUE ' '.			
	02 ISHD-X22 PIC X VALUE ' '.			
	02 ISHD-XA0 PIC X VALUE ' '.			
	02 ISHD-XD6 PIC X VALUE '0'.			
	02 ISHD-XE2 PIC X VALUE '5'.			
	02 ISHD-XF0 PIC X VALUE '0'.			
	02 ISHD-XF2 PIC X VALUE '2'.			
	02 ISHD-L1 PIC X(22) VALUE '** IDMS ERRORS DUMP **'.			
000450	LINKAGE SECTION.			
000010	*01 TCBO			
000010	01 TCBO.			
			COPY TCBCOB.	CHLTWAEX
000020	02 ITRMORID PIC X(4).			
000030	02 ITRMUCBA PIC 9(9) COMP SYNC.			
000040	02 ITRMPCKA PIC 9(9) COMP SYNC.			
000050	02 ITRMSIZE PIC 9(4) COMP SYNC.			
000060	02 ITRMERRP PIC X.			
000070	02 ITRMOPCD PIC X.			
000080	02 ITRMPCKC PIC X.			
000090	02 ITRMAID PIC X.			
000100	02 ITRMCADD PIC XX.			
000110	02 ITRMCADD-8 REDEFINES ITRMCADD PIC 9(4) COMP.			
000120	02 ITRMTYPE PIC X.			
000130	02 ITRMNAME PIC XXX.			
000140	02 ITRMSENS PIC 9(9) COMP SYNC.			
000150	02 ITRMENTY REDEFINES ITRMSENS			
000160			PIC 9(9) COMP SYNC.	
000170	02 ITRMVSAM REDEFINES ITRMSENS.			
000180	04 ITRMVSMC PIC X.			
000190	04 ITRMVSEC PIC XX.			
000200	04 ITRMCBEC REDEFINES ITRMVSEC			
000210			PIC XX.	
000220	04 ITRMVSRM PIC X.			
000230	02 ITRMACRO PIC X.			
000240	02 ITRMSGON PIC XXX.			
000250	02 ITRMECBX PIC 9(9) COMP SYNC.			
000260	02 ITRMEXTN PIC 9(9) COMP SYNC.			
000270	02 ITRMIDAR PIC 9(9) COMP SYNC.			
000280	02 ITRMPROG PIC 9(9) COMP SYNC.			
000290	02 ITRMREPL PIC X(4).			
000300	02 ITRMFLGS PIC 9(4) COMP SYNC.			
000310	02 ITRMRLN PIC 9(4) COMP SYNC.			
000320	02 ITRMSAVE PIC X(72).			
000330	02 ITRMHAND PIC X.			
000340	02 ITRMCALP PIC XXX.			
000350	02 ITRMTRAN PIC X(4).			
000360	* USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER PIC X(512).			CHLTWAEX
000040	02 TWA-USER REDEFINES TWA-C2.			CHLTWAEX
000050	03 TWA-TRAN-CODE PIC X(4).			CHLTWAEX
000060	03 TWA-CURRENT-PROG-NAME			CHLTWAEX
000070			PIC X(8).	CHLTWAEX
000080	03 TWA-PROGRAM-FLAGS PIC X(8).			CHLTWAEX
000090	03 TWA-MAP-PTR PIC X(4).			CHLTWAEX
000100	03 TWA-MAPC-PTR PIC X(4).			CHLTWAEX
000110	03 TWA-NEXT-PROG-NAME PIC X(8).			CHLTWAEX
000120	03 TWA-NEXT-TRAN-CODE PIC X(4).			CHLTWAEX
000130	03 TWA-DBKEY PIC X(4).			CHLTWAEX
000140	03 TWA-DBKEY-9 REDEFINES TWA-DBKEY			CHLTWAEX
000150			PIC S9(9) COMP SYNC.	CHLTWAEX
000160	03 TWA-DBKEY-2 PIC X(4).			CHLTWAEX
000170	03 TWA-DBKEY-2-9 REDEFINES TWA-DBKEY-2			CHLTWAEX
000180			PIC S9(9) COMP SYNC.	CHLTWAEX
000190	03 TWA-DBKEY-3 PIC X(4).			CHLTWAEX

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000200	03 TWA-DBKEY-3-9 REDEFINES TWA-DBKEY-3			CHLTWAEX
000210		PIC S9(9)	COMP SYNC.	CHLTWAEX
000220	03 TWA-DISK-DATA.			CHLTWAEX
000230	05 TWA-DISK-ACQUIRED-FLAG			CHLTWAEX
000240		PIC X.		CHLTWAEX
000250	88 TWA-DISK-NO-ACQUIRED		VALUE LOW-VALUES.	CHLTWAEX
000260	88 TWA-DISK-ACQUIRED		VALUE HIGH-VALUES.	CHLTWAEX
000270	05 TWA-DISK-NO-ACQUIRED			CHLTWAEX
000280		PIC S9(3)	COMP.	CHLTWAEX
000290	03 TWA-TEST-PRODUCTION-FLAG			CHLTWAEX
000300		PIC X.		CHLTWAEX
000310	88 TWA-PRODUCTION-RUN		VALUE LOW-VALUES.	CHLTWAEX
000320	88 TWA-TEST-RUN		VALUE 'T'.	CHLTWAEX
000330	03 TWA-SIS-TERM-CODE.			CHLTWAEX
000340	05 TWA-SIS-TERM-SEMESTER			CHLTWAEX
000350		PIC X.		CHLTWAEX
000360	05 TWA-SIS-TERM-YEAR			CHLTWAEX
000370		PIC XX.		CHLTWAEX
000380	03 TWA-SIS-SUBSYSTEM-CODE			CHLTWAEX
000390		PIC X(4).		CHLTWAEX
000400	03 TWA-SEC-ACCESS-CODE			CHLTWAEX
000410	88 TWA-SEC-ACCESS-IS-INQUIRY		VALUE 'I'.	CHLTWAEX
000420	88 TWA-SEC-ACCESS-IS-UPDATE		VALUE 'U'.	CHLTWAEX
000430	03 TWA-SEC-ACCESS-DEPT		PIC XXX.	CHLTWAEX
000440	03 TWA-ITRMERRP-SAVE		PIC X.	CHLTWAEX
000450	03 FILLER		PIC X(12).	CHLTWAEX
000470	03 TWA-OD-AREA.			
000480	05 TWA-FUNC		PIC XX.	
000490	05 TWA-DATA-NAME		PIC X(30).	
000500	05 FILLER		PIC X(20).	
000510	03 FILLER		PIC X(14).	
000520	03 TWA-DBKEY-AREA.			
000530	05 TWA-PROGRAM-DBKEY		OCCURS 8 TIMES	
000540		PIC S9(9)	COMP SYNC.	
000550	05 TWA-FILE-DBKEY		OCCURS 4 TIMES	
000560		PIC S9(9)	COMP SYNC.	
000570	05 TWA-ALIAS-DBKEY		OCCURS 4 TIMES	
000580		PIC S9(9)	COMP SYNC.	
000590	03 TWA-FLAGS-AREA.			
000600	05 DDRECA-FOUND-FLAG			
000610		PIC X.		
000620	88 DDRECA-FOUND		VALUE 'Y'.	
000630	05 TWA-PROGRAM-UPDATE-FLAG			
000640		PIC X	OCCURS 8 TIMES.	
000650	05 TWA-FILE-UPDATE-FLAG			
000660		PIC X	OCCURS 4 TIMES.	
000670	05 TWA-ALIAS-UPDATE-FLAG			
000680		PIC X	OCCURS 4 TIMES.	
000690	05 TWA-NEW-DDRECA-FLAG			
000700		PIC X.		
000710	88 TWA-NEW-DDRECA		VALUE 'Y'.	
000720	05 TWA-DDRECA-MODIFY-FLAG			
000730		PIC X.		
000740	88 TWA-DDRECA-MODIFY		VALUE 'Y'.	
000750	05 TWA-DDRECB-MODIFY-FLAG			
000760		PIC X.		
000770	88 TWA-DDRECB-MODIFY		VALUE 'Y'.	
000780	03 I	PIC S9(3)	COMP SYNC.	
000790	03 TWA-CURRENT-DATE.			
000800	05 TWA-CURRENT-MM		PIC XX.	
000810	05 FILLER		PIC X.	
000820	05 TWA-CURRENT-DD		PIC XX.	

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000830	05 FILLER	PIC X.		
000840	05 TWA-CURRENT-YY	PIC XX.		
000850	03 TWA-TEST-DATE.			
000860	05 TWA-TEST-MM	PIC XX.		
000870	05 FILLER	PIC X.		
000880	05 TWA-TEST-DD	PIC XX.		
000890	05 FILLER	PIC X.		
000900	05 TWA-TEST-YY	PIC XX.		
000910				
000010	01 RELOCATE.			SHDSPTEX
000020	02 FILLER	PIC X(12).		SHDSPTEX
000030	02 RSHDPCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000040	02 FILLER	PIC X(32).		SHDSPTEX
000050	02 RSHDCSA	PIC 9(9).	COMP SYNC.	SHDSPTEX
000060	02 FILLER	PIC X(24).		SHDSPTEX
000070	02 RSHDOCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000080	02 FILLER	PIC X(100).		SHDSPTEX
000090	02 RSHDLOW	PIC 9(9).	COMP SYNC.	SHDSPTEX
000100	02 RSHDHIGH	PIC 9(9).	COMP SYNC.	SHDSPTEX
000110	02 FILLER	PIC X(68).		SHDSPTEX
000120	02 RSHDIVAR	PIC 9(9).	COMP SYNC.	SHDSPTEX
000130	02 FILLER	PIC X(4).		SHDSPTEX
000140	02 RSHDFREE	PIC 9(9).	COMP SYNC.	SHDSPTEX
000150	02 FILLER	PIC X(48).		SHDSPTEX
000160	02 RSHDTCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000170	02 FILLER	PIC X(40).		SHDSPTEX
000180	* USER AREA STARTS HERE.			SHDSPTEX
000190	02 SPT-REST-OF-SPT.			SHDSPTEX
000200	03 SPT-TEST-PRODUCTION-FLAG			SHDSPTEX
000210		PIC X.		SHDSPTEX
000220	88 SPT-PRODUCTION-RUN		VALUE LOW-VALUES.	SHDSPTEX
000230	88 SPT-TEST-RUN		VALUE 'T'.	SHDSPTEX
000240	03 FILLER	PIC X.		01/22/82
000250	03 FILLER	PIC X(300).		01/22/82
000260	03 FILLER	PIC XX.		01/22/82
000270	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
000280	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
000290	03 FILLER	PIC X(8).		01/22/82
000300	03 SPT-NQ3-ECB	PIC XXXX.		01/22/82
000310	03 SPT-NQ4-ECB	PIC XXXX.		06/02/82
000320	03 SPT-PRT1-BUFFER-POOL-POINTER			06/08/82
000330		PIC S9(9)	COMP SYNC.	06/08/82
000340	03 SPT-PRT2-BUFFER-POOL-POINTER			06/08/82
000350		PIC S9(9)	COMP SYNC.	06/08/82
000360	03 SPT-PRT3-BUFFER-POOL-POINTER			06/08/82
000370		PIC S9(9)	COMP SYNC.	06/08/82
000380	03 SPT-PRT4-BUFFER-POOL-POINTER			06/08/82
000390		PIC S9(9)	COMP SYNC.	06/08/82
000400	03 SPT-PRT5-BUFFER-POOL-POINTER			06/08/82
000410		PIC S9(9)	COMP SYNC.	06/08/82
000420	03 SPT-PRT6-BUFFER-POOL-POINTER			06/08/82
000430		PIC S9(9)	COMP SYNC.	06/08/82
000440	03 SPT-PRT7-BUFFER-POOL-POINTER			06/08/82
000450		PIC S9(9)	COMP SYNC.	06/08/82
000460	03 SPT-PRT8-BUFFER-POOL-POINTER			06/08/82
000470		PIC S9(9)	COMP SYNC.	06/08/82
000480				SHDSPTEX
000930				
000010	01 MCHLUPDI.			MCHLUPDI
000020	02 MCHLUPD-TRANL	PIC X.		MCHLUPDI
000030	02 MCHLUPD-TRANI	PIC X(4).		MCHLUPDI
000040	02 MCHLUPD-FUNCL	PIC X.		MCHLUPDI
000050	02 MCHLUPD-FUNCI	PIC XX.		MCHLUPDI
000060	02 MCHLUPD-KEYL	PIC X.		MCHLUPDI
000070	02 MCHLUPD-KEYI	PIC X(30).		MCHLUPDI
000080	02 MCHLUPD-DATA-NAMEI	PIC X.		MCHLUPDI
000090	02 MCHLUPD-DATA-NAMEI	PIC X(29).		MCHLUPDI
000100	02 MCHLUPD-CREATED-DATEI	PIC X.		MCHLUPDI
000110	02 MCHLUPD-CREATED-DATEI.			MCHLUPDI
000120	03 MCHLUPD-CREATED-DATE-MM	PIC XX.		MCHLUPDI
000130	03 MCHLUPD-CREATED-DATE-SLASH-11	PIC X.		MCHLUPDI
000140	03 MCHLUPD-CREATED-DATE-ODI	PIC XX.		MCHLUPDI
000150	03 MCHLUPD-CREATED-DATE-SLASH-21	PIC X.		MCHLUPDI
000160	03 MCHLUPD-CREATED-DATE-YYI	PIC XX.		MCHLUPDI
000170	02 MCHLUPD-DATA-DESCI	PIC X.		MCHLUPDI
000180	02 MCHLUPD-DATA-DESCI	PIC X(40).		MCHLUPDI
000190	02 MCHLUPD-CHANGED-DATEI	PIC X.		MCHLUPDI

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000200	02 MCHLUPD-CHANGED-DATE-I			MCHLUPDI
000210	03 MCHLUPD-CHANGED-DATE-MMI	PIC XX.		MCHLUPDI
000220	03 MCHLUPD-CHANGED-DATE-SLASH-1I	PIC X.		MCHLUPDI
000230	03 MCHLUPD-CHANGED-DATE-DDI	PIC XX.		MCHLUPDI
000240	03 MCHLUPD-CHANGED-DATE-SLASH-2I	PIC X.		MCHLUPDI
000250	03 MCHLUPD-CHANGED-DATE-VYI	PIC XX.		MCHLUPDI
000260	02 MCHLUPD-DATA-PICTUREI	PIC X.		MCHLUPDI
000270	02 MCHLUPD-DATA-PICTUREI	PIC X(10).		MCHLUPDI
000280	02 MCHLUPD-DATA-LEVELI	PIC X.		MCHLUPDI
000290	02 MCHLUPD-DATA-LEVELI	PIC X(6).		MCHLUPDI
000300	02 MCHLUPD-REVISED-PERSONI	PIC X.		MCHLUPDI
000310	02 MCHLUPD-REVISED-PERSONI	PIC XXX.		MCHLUPDI
000320	02 MCHLUPD-DATA-USAGEI	PIC X.		MCHLUPDI
000330	02 MCHLUPD-DATA-USAGEI	PIC X(15).		MCHLUPDI
000340	02 MCHLUPD-DATA-JUSTIFYI	PIC X.		MCHLUPDI
000350	02 MCHLUPD-DATA-JUSTIFYI	PIC X(6).		MCHLUPDI
000360	02 MCHLUPD-ALIAS-NAME-1I	PIC X.		MCHLUPDI
000370	02 MCHLUPD-ALIAS-NAME-1I	PIC X(30).		MCHLUPDI
000380	02 MCHLUPD-ALIAS-NAME-2I	PIC X.		MCHLUPDI
000390	02 MCHLUPD-ALIAS-NAME-2I	PIC X(30).		MCHLUPDI
000400	02 MCHLUPD-ALIAS-NAME-3I	PIC X.		MCHLUPDI
000410	02 MCHLUPD-ALIAS-NAME-3I	PIC X(30).		MCHLUPDI
000420	02 MCHLUPD-ALIAS-NAME-4I	PIC X.		MCHLUPDI
000430	02 MCHLUPD-ALIAS-NAME-4I	PIC X(30).		MCHLUPDI
000440	02 MCHLUPD-USER-NAME-1I	PIC X.		MCHLUPDI
000450	02 MCHLUPD-USER-NAME-1I	PIC X(20).		MCHLUPDI
000460	02 MCHLUPD-USER-NAME-2I	PIC X.		MCHLUPDI
000470	02 MCHLUPD-USER-NAME-2I	PIC X(20).		MCHLUPDI
000480	02 MCHLUPD-USER-NAME-3I	PIC X.		MCHLUPDI
000490	02 MCHLUPD-USER-NAME-3I	PIC X(16).		MCHLUPDI
000500	02 MCHLUPD-USER-NAME-4I	PIC X.		MCHLUPDI
000510	02 MCHLUPD-USER-NAME-4I	PIC X(20).		MCHLUPDI
000520	02 MCHLUPD-USER-NAME-5I	PIC X.		MCHLUPDI
000530	02 MCHLUPD-USER-NAME-5I	PIC X(20).		MCHLUPDI
000540	02 MCHLUPD-USER-NAME-6I	PIC X.		MCHLUPDI
000550	02 MCHLUPD-USER-NAME-6I	PIC X(16).		MCHLUPDI
000560	02 MCHLUPD-PROGRAM-USED-1I	PIC X.		MCHLUPDI
000570	02 MCHLUPD-PROGRAM-USED-1I	PIC X(10).		MCHLUPDI
000580	02 MCHLUPD-PROGRAM-USED-2I	PIC X.		MCHLUPDI
000590	02 MCHLUPD-PROGRAM-USED-2I	PIC X(10).		MCHLUPDI
000600	02 MCHLUPD-PROGRAM-USED-3I	PIC X.		MCHLUPDI
000610	02 MCHLUPD-PROGRAM-USED-3I	PIC X(10).		MCHLUPDI
000620	02 MCHLUPD-PROGRAM-USED-4I	PIC X.		MCHLUPDI
000630	02 MCHLUPD-PROGRAM-USED-4I	PIC X(10).		MCHLUPDI
000640	02 MCHLUPD-PROGRAM-USED-5I	PIC X.		MCHLUPDI
000650	02 MCHLUPD-PROGRAM-USED-5I	PIC X(10).		MCHLUPDI
000660	02 MCHLUPD-PROGRAM-USED-6I	PIC X.		MCHLUPDI
000670	02 MCHLUPD-PROGRAM-USED-6I	PIC X(10).		MCHLUPDI
000680	02 MCHLUPD-PROGRAM-USED-7I	PIC X.		MCHLUPDI
000690	02 MCHLUPD-PROGRAM-USED-7I	PIC X(10).		MCHLUPDI
000700	02 MCHLUPD-PROGRAM-USED-8I	PIC X.		MCHLUPDI
000710	02 MCHLUPD-PROGRAM-USED-8I	PIC X(10).		MCHLUPDI
000720	02 MCHLUPD-FILE-USED-1I	PIC X.		MCHLUPDI
000730	02 MCHLUPD-FILE-USED-1I	PIC X(20).		MCHLUPDI
000740	02 MCHLUPD-FILE-USED-2I	PIC X.		MCHLUPDI
000750	02 MCHLUPD-FILE-USED-2I	PIC X(20).		MCHLUPDI
000760	02 MCHLUPD-FILE-USED-3I	PIC X.		MCHLUPDI
000770	02 MCHLUPD-FILE-USED-3I	PIC X(20).		MCHLUPDI
000780	02 MCHLUPD-FILE-USED-4I	PIC X.		MCHLUPDI
000790	02 MCHLUPD-FILE-USED-4I	PIC X(20).		MCHLUPDI
000950	01 MCHLUPD.			MCHLUPD
000010	02 MCHLUPDW	PIC X.		MCHLUPD
000020	02 FILLER	PIC X(4).		MCHLUPD
000030	02 FILLER	PIC X.		MCHLUPD
000040	02 MCHLUPD-TRANA	PIC X.		MCHLUPD
000050	02 MCHLUPD-TRANO	PIC X(4).		MCHLUPD
000060	02 FILLER	PIC X.		MCHLUPD
000070	02 MCHLUPD-FUNCA	PIC X.		MCHLUPD
000080	02 MCHLUPD-FUNCO	PIC XX.		MCHLUPD
000090	02 FILLER	PIC X.		MCHLUPD
000100	02 MCHLUPD-KEYA	PIC X.		MCHLUPD
000110	02 MCHLUPD-KEYO	PIC X(30).		MCHLUPD
000120	02 FILLER	PIC X(31).		MCHLUPD
000130	02 MCHLUPD-TEST-FLAGA	PIC X.		MCHLUPD
000140	02 MCHLUPD-TEST-FLAGO	PIC X(4).		MCHLUPD
000150	02 FILLER	PIC X.		MCHLUPD
000160	02 MCHLUPD-RDATEA	PIC X.		MCHLUPD

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000170	02 MCHLUPD-RDATED	PIC X(8).	MCHLUPDQ	
000180	02 FILLER	PIC X.	MCHLUPDQ	
000190	02 MCHLUPD-RTIMEA	PIC X.	MCHLUPDQ	
000200	02 MCHLUPD-RTIMEO	PIC X(8).	MCHLUPDQ	
000210	02 FILLER	PIC X(32).	MCHLUPDQ	
000220	02 MCHLUPD-CSECTA	PIC X.	MCHLUPDQ	
000230	02 MCHLUPD-CSECTO	PIC X(8).	MCHLUPDQ	
000240	02 FILLER	PIC X.	MCHLUPDQ	
000250	02 MCHLUPD-VER-MODA	PIC X.	MCHLUPDQ	
000260	02 MCHLUPD-VER-MODO	PIC 9.9.	MCHLUPDQ	
000270	02 FILLER	PIC X(47).	MCHLUPDQ	
000280	02 MCHLUPD-DATA-NAMEA	PIC X.	MCHLUPDQ	
000290	02 MCHLUPD-DATA-NAMEO	PIC X(29).	MCHLUPDQ	
000300	02 FILLER	PIC X(19).	MCHLUPDQ	
000310	02 MCHLUPD-CREATED-DATEA	PIC X.	MCHLUPDQ	
000320	02 MCHLUPD-CREATED-DATEO	PIC X.	MCHLUPDQ	
000330	03 MCHLUPD-CREATED-DATE-MMO	PIC XX.	MCHLUPDQ	
000340	03 MCHLUPD-CREATED-DATE-SLASH-10	PIC X.	MCHLUPDQ	
000350	03 MCHLUPD-CREATED-DATE-DDO	PIC XX.	MCHLUPDQ	
000360	03 MCHLUPD-CREATED-DATE-SLASH-20	PIC X.	MCHLUPDQ	
000370	03 MCHLUPD-CREATED-DATE-YYO	PIC XX.	MCHLUPDQ	
000380	02 FILLER	PIC X(15).	MCHLUPDQ	
000390	02 MCHLUPD-DATA-DESCA	PIC X.	MCHLUPDQ	
000400	02 MCHLUPD-DATA-DESCO	PIC X(40).	MCHLUPDQ	
000410	02 FILLER	PIC X(19).	MCHLUPDQ	
000420	02 MCHLUPD-CHANGED-DATEA	PIC X.	MCHLUPDQ	
000430	02 MCHLUPD-CHANGED-DATEO	PIC X.	MCHLUPDQ	
000440	03 MCHLUPD-CHANGED-DATE-MMO	PIC XX.	MCHLUPDQ	
000450	03 MCHLUPD-CHANGED-DATE-SLASH-10	PIC X.	MCHLUPDQ	
000460	03 MCHLUPD-CHANGED-DATE-DDO	PIC XX.	MCHLUPDQ	
000470	03 MCHLUPD-CHANGED-DATE-SLASH-20	PIC X.	MCHLUPDQ	
000480	03 MCHLUPD-CHANGED-DATE-YYO	PIC XX.	MCHLUPDQ	
000490	02 FILLER	PIC X(11).	MCHLUPDQ	
000500	02 MCHLUPD-DATA-PICTUREA	PIC X.	MCHLUPDQ	
000510	02 MCHLUPD-DATA-PICTUREO	PIC X(10).	MCHLUPDQ	
000520	02 FILLER	PIC X(12).	MCHLUPDQ	
000530	02 MCHLUPD-DATA-LEVELA	PIC X.	MCHLUPDQ	
000540	02 MCHLUPD-DATA-LEVELO	PIC X(6).	MCHLUPDQ	
000550	02 FILLER	PIC X(21).	MCHLUPDQ	
000560	02 MCHLUPD-REVISED-PERSONA	PIC X.	MCHLUPDQ	
000570	02 MCHLUPD-REVISED-PERSONO	PIC XXX.	MCHLUPDQ	
000580	02 FILLER	PIC X(12).	MCHLUPDQ	
000590	02 MCHLUPD-DATA-USAGEA	PIC X.	MCHLUPDQ	
000600	02 MCHLUPD-DATA-USAGEO	PIC X(15).	MCHLUPDQ	
000610	02 FILLER	PIC X(14).	MCHLUPDQ	
000620	02 MCHLUPD-DATA-JUSTIFYA	PIC X.	MCHLUPDQ	
000630	02 MCHLUPD-DATA-JUSTIFYO	PIC X(6).	MCHLUPDQ	
000640	02 FILLER	PIC X(22).	MCHLUPDQ	
000650	02 MCHLUPD-ALIAS-NAME-1A	PIC X.	MCHLUPDQ	
000660	02 MCHLUPD-ALIAS-NAME-1O	PIC X(30).	MCHLUPDQ	
000670	02 FILLER	PIC X(5).	MCHLUPDQ	
000680	02 MCHLUPD-ALIAS-NAME-2A	PIC X.	MCHLUPDQ	
000690	02 MCHLUPD-ALIAS-NAME-2O	PIC X(30).	MCHLUPDQ	
000700	02 FILLER	PIC X(8).	MCHLUPDQ	
000710	02 MCHLUPD-ALIAS-NAME-3A	PIC X.	MCHLUPDQ	
000720	02 MCHLUPD-ALIAS-NAME-3O	PIC X(30).	MCHLUPDQ	
000730	02 FILLER	PIC X(5).	MCHLUPDQ	
000740	02 MCHLUPD-ALIAS-NAME-4A	PIC X.	MCHLUPDQ	
000750	02 MCHLUPD-ALIAS-NAME-4O	PIC X(30).	MCHLUPDQ	
000760	02 FILLER	PIC X(16).	MCHLUPDQ	
000770	02 MCHLUPD-USER-NAME-1A	PIC X.	MCHLUPDQ	
000780	02 MCHLUPD-USER-NAME-1O	PIC X(20).	MCHLUPDQ	
000790	02 FILLER	PIC X(5).	MCHLUPDQ	
000800	02 MCHLUPD-USER-NAME-2A	PIC X.	MCHLUPDQ	
000810	02 MCHLUPD-USER-NAME-2O	PIC X(20).	MCHLUPDQ	
000820	02 FILLER	PIC X(5).	MCHLUPDQ	
000830	02 MCHLUPD-USER-NAME-3A	PIC X.	MCHLUPDQ	
000840	02 MCHLUPD-USER-NAME-3O	PIC X(16).	MCHLUPDQ	
000850	02 FILLER	PIC X(8).	MCHLUPDQ	
000860	02 MCHLUPD-USER-NAME-4A	PIC X.	MCHLUPDQ	
000870	02 MCHLUPD-USER-NAME-4O	PIC X(20).	MCHLUPDQ	
000880	02 FILLER	PIC X(5).	MCHLUPDQ	
000890	02 MCHLUPD-USER-NAME-5A	PIC X.	MCHLUPDQ	
000900	02 MCHLUPD-USER-NAME-5O	PIC X(20).	MCHLUPDQ	
000910	02 FILLER	PIC X(5).	MCHLUPDQ	
000920	02 MCHLUPD-USER-NAME-6A	PIC X.	MCHLUPDQ	
000930	02 MCHLUPD-USER-NAME-6O	PIC X(16).	MCHLUPDQ	

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000940	02 FILLER	PIC X(21).		MCHLUPDO
000950	02 MCHLUPD-PROGRAM-USED-1A	PIC X.		MCHLUPDO
000960	02 MCHLUPD-PROGRAM-USED-10	PIC X(10).		MCHLUPDO
000970	02 FILLER	PIC X(5).		MCHLUPDO
000980	02 MCHLUPD-PROGRAM-USED-2A	PIC X.		MCHLUPDO
000990	02 MCHLUPD-PROGRAM-USED-20	PIC X(10).		MCHLUPDO
001000	02 FILLER	PIC X(5).		MCHLUPDO
001010	02 MCHLUPD-PROGRAM-USED-3A	PIC X.		MCHLUPDO
001020	02 MCHLUPD-PROGRAM-USED-30	PIC X(10).		MCHLUPDO
001030	02 FILLER	PIC X(5).		MCHLUPDO
001040	02 MCHLUPD-PROGRAM-USED-4A	PIC X.		MCHLUPDO
001050	02 MCHLUPD-PROGRAM-USED-40	PIC X(10).		MCHLUPDO
001060	02 FILLER	PIC X(8).		MCHLUPDO
001070	02 MCHLUPD-PROGRAM-USED-5A	PIC X.		MCHLUPDO
001080	02 MCHLUPD-PROGRAM-USED-50	PIC X(10).		MCHLUPDO
001090	02 FILLER	PIC X(5).		MCHLUPDO
001100	02 MCHLUPD-PROGRAM-USED-6A	PIC X.		MCHLUPDO
001110	02 MCHLUPD-PROGRAM-USED-60	PIC X(10).		MCHLUPDO
001120	02 FILLER	PIC X(5).		MCHLUPDO
001130	02 MCHLUPD-PROGRAM-USED-7A	PIC X.		MCHLUPDO
001140	02 MCHLUPD-PROGRAM-USED-70	PIC X(10).		MCHLUPDO
001150	02 FILLER	PIC X(5).		MCHLUPDO
001160	02 MCHLUPD-PROGRAM-USED-8A	PIC X.		MCHLUPDO
001170	02 MCHLUPD-PROGRAM-USED-80	PIC X(10).		MCHLUPDO
001180	02 FILLER	PIC X(21).		MCHLUPDO
001190	02 MCHLUPD-FILE-USED-1A	PIC X.		MCHLUPDO
001200	02 MCHLUPD-FILE-USED-10	PIC X(20).		MCHLUPDO
001210	02 FILLER	PIC X(5).		MCHLUPDO
001220	02 MCHLUPD-FILE-USED-2A	PIC X.		MCHLUPDO
001230	02 MCHLUPD-FILE-USED-20	PIC X(20).		MCHLUPDO
001240	02 FILLER	PIC X(8).		MCHLUPDO
001250	02 MCHLUPD-FILE-USED-3A	PIC X.		MCHLUPDO
001260	02 MCHLUPD-FILE-USED-30	PIC X(20).		MCHLUPDO
001270	02 FILLER	PIC X(5).		MCHLUPDO
001280	02 MCHLUPD-FILE-USED-4A	PIC X.		MCHLUPDO
001290	02 MCHLUPD-FILE-USED-40	PIC X(20).		MCHLUPDO
001300	02 FILLER	PIC X(6).		MCHLUPDO
001310	02 MCHLUPD-MESSAGEA	PIC X.		MCHLUPDO
001320	02 MCHLUPD-MESSAGEO	PIC X(49).		MCHLUPDO
001330	02 FILLER	PIC X(6).		MCHLUPDO
000970				
000010	01 MAPERRR.			MAPERRR
000020	02 MAPERRR	PIC X.		MAPERRR
000030	02 FILLER	PIC X(4).		MAPERRR
000040	02 MAPERR-CSECTA	PIC X.		MAPERRR
000050	02 MAPERR-CSECTO	PIC X(8).		MAPERRR
000060	02 FILLER	PIC X.		MAPERRR
000070	02 MAPERR-VER-MQDA	PIC X.		MAPERRR
000080	02 MAPERR-VER-MQDO	PIC 9.9.		MAPERRR
000090	02 FILLER	PIC X.		MAPERRR
000100	02 MAPERR-TEST-FLAGA	PIC X.		MAPERRR
000110	02 MAPERR-TEST-FLAGO	PIC X(4).		MAPERRR
000120	02 FILLER	PIC X(7).		MAPERRR
000130	02 MAPERR-MSGA	PIC X.		MAPERRR
000140	02 MAPERR-MSGO	PIC X(56).		MAPERRR
000150	02 FILLER	PIC X.		MAPERRR
000160	02 MAPERR-IDMS-ERROR-LITERALA	PIC X.		MAPERRR
000170	02 MAPERR-IDMS-ERROR-LITERALO	PIC X(11).		MAPERRR
000180	02 FILLER	PIC X.		MAPERRR
000190	02 MAPERR-ERROR-STATUSA	PIC X.		MAPERRR
000200	02 MAPERR-ERROR-STATUSO	PIC X(4).		MAPERRR
000210	02 FILLER	PIC X.		MAPERRR
000220	02 MAPERR-ERROR-SETA	PIC X.		MAPERRR
000230	02 MAPERR-ERROR-SETO	PIC X(16).		MAPERRR
000240	02 FILLER	PIC X.		MAPERRR
000250	02 MAPERR-ERROR-RECORDA	PIC X.		MAPERRR
000260	02 MAPERR-ERROR-RECORDO	PIC X(16).		MAPERRR
000270	02 FILLER	PIC X.		MAPERRR
000280	02 MAPERR-ERROR-AREAA	PIC X.		MAPERRR
000290	02 MAPERR-ERROR-AREAO	PIC X(16).		MAPERRR
000300	02 FILLER	PIC X(12).		MAPERRR
000990				
001000	* COPY IDMS DDRECA.			
01	DDRECA.			
	03 DATA-NAME	PIC X(30).		

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	03 DATA-CREATED-DATE.			
	05 DATA-CREATED-YY	PIC XX.		
	05 DATA-CREATED-MM	PIC XX.		
	05 DATA-CREATED-DD	PIC XX.		
	03 DATA-CHANGED-DATE.			
	05 DATA-CHANGED-YY	PIC XX.		
	05 DATA-CHANGED-MM	PIC XX.		
	05 DATA-CHANGED-DD	PIC XX.		
	03 DATA-USER	OCCURS 6.		
	05 DATA-USER-NAME	PIC X(20).		
	03 DATA-REVISED-PERSON	PIC XXX.		
	03 FILLER	PIC XXX.		
001010				
001020 *	01 COPY IDMS DDRECB.			
	03 DATA-DESC	PIC X(40).		
	03 DATA-LENGTH	PIC X(10).		
	03 DATA-JUSTIFY	PIC X.		
	88 DATA-JUSTIFY-RIGHT VALUE 'R'.			
	88 DATA-JUSTIFY-LEFT VALUE 'L'.			
	03 DATA-LEVEL	PIC X.		
	88 DATA-INPUT VALUE 'I'.			
	88 DATA-OUTPUT VALUE 'O'.			
	88 DATA-INPUT-OUTPUT VALUE 'B'.			
	03 DATA-USAGE	PIC X(12).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
001030				
001040 *	01 COPY IDMS DDPROGRM.			
	03 DATA-PROGRAM-USED	PIC X(8).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
001050				
001060 *	01 COPY IDMS DDFILE.			
	03 DATA-FILE-USED	PIC X(20).		
	03 FILLER	PIC X(8).		
	03 FILLER	PIC X(4).		
001070				
001080 *	01 COPY IDMS DDALIAS.			
	03 DATA-ALIAS-NAME	PIC X(30).		
	03 FILLER	PIC X(6).		
	03 FILLER	PIC X(4).		
001090				
001100 *	01 COPY IDMS SUBSCHEMA-CTRL.			
	03 PROGRAM-NAME	PIC X(8).		
	03 ERROR-STATUS	PIC X(4).		
	88 DB-STATUS-OK VALUE '0000'.			


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      88 ANY-STATUS
      88 VALUE '0000' THRU '9999'.
      88 ANY-ERROR-STATUS
      88 VALUE '0001' THRU '9999'.
      88 DB-END-OF-SET VALUE '0307'.
      88 DB-REC-NOT-FOUND VALUE '0326'.
03 DBKEY
      88 PIC S9(8)
      88 USAGE CCMP
      88 SYNC.
03 RECORD-NAME
03 RRECORD-NAME
05 SSC-NCDN
05 SSC-DBN
03 AREA-NAME
03 ERROR-SET
03 ERROR-RECORD
03 ERROR-AREA
03 IOBMSCOM-AREA
03 IOBMSCOM
      88 PIC X(16).
      88 REDEFINES RECORD-NAME.
      88 PIC X(8).
      88 PIC X(8).
      88 PIC X(16).
      88 PIC X(16).
      88 PIC X(16).
      88 PIC X(16).
      88 PIC X(100).
      88 REDEFINES IOBMSCOM-AREA

      88 PIC X
      88 OCCURS 100.
      88 REDEFINES IOBMSCOM-AREA.
03 FILLER
05 DB-SUB-ADDR
05 FILLER
03 DIRECT-DBKEY
      88 PIC X(4).
      88 PIC X(96).
      88 PIC S9(8)
      88 USAGE CCMP
      88 SYNC.
03 DIRECT-DBK
      88 REDEFINES DIRECT-DBKEY
      88 PIC S9(8)
      88 USAGE CCMP
      88 SYNC.
03 DATABASE-STATUS.
05 DBSTATEMENT-CODE
05 DBSTATUS-CODE
03 FILLER
03 RECORD-COCCUR
      88 PIC X(2).
      88 PIC X(5).
      88 PIC X.
      88 PIC S9(8)
      88 USAGE CCMP
      88 SYNC.
03 DML-SEQUENCE
      88 PIC S9(8)

      88 USAGE CCMP
      88 SYNC.
001110
001120 PROCEDURE DIVISION USING TCBD, RELOCATE.
001130
001140 MOVE CSECT TC TWA-CURRENT-PROG-NAME.
001150 PERFORM INIT-ALL-TWA-FLAG.
001160 PERFORM SET-UP-IDMS.
001170 PERFORM READ-INPUT-MAP.
001180 PERFORM PREPARE-OUTPUT-MAP.
001190 MOVE TWA-DATA-NAME TO DATA-NAME.
001200 PERFORM OBTAIN-CALC-DDRECA.
001210 IF DDRECA-FOUND
001220 MOVE 'N' TO TWA-NEW-DDRECA-FLAG
001230 ELSE
001240 PERFORM INIT-DDRECA
001250 MOVE 'Y' TO TWA-NEW-DDRECA-FLAG.
001260 PERFORM PROCESS-INPUT.
001270 PERFORM WRITE-OUTPUT-MAP.
001280 PERFORM FINISH-IDMS.
001290 * RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CODE AFTER-READ.
001300 CALL 'ISHDHLRT' USING ISHD-XAO TWA-NEXT-TRAN-CODE.
001310 GOBACK.
001320
001330 INIT-ALL-TWA-FLAG.
001340 MOVE 'N' TO TWA-DDRECA-MODIFY-FLAG,
001350 TWA-NEW-DDRECA-FLAG,
001360 TWA-DDRECB-MODIFY-FLAG,

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001370	DDRECA-FOUND-FLAG.			
001380	PERFORM INIT-ALL-PROGRAM-FLAG			
001390	VARYING I FROM 1 BY 1			
001400	UNTIL I > 8.			
001410	PERFORM INIT-ALL-FILE-ALIAS-FLAG			
001420	VARYING I FROM 1 BY 1			
001430	UNTIL I > 4.			
001440				
001450	INIT-ALL-PROGRAM-FLAG.			
001460	MOVE 'N' TO TWA-PROGRAM-UPDATE-FLAG (I).			
001470				
001480	INIT-ALL-FILE-ALIAS-FLAG.			
001490	MOVE 'N' TO TWA-FILE-UPDATE-FLAG (I).			
001500	TWA-ALIAS-UPDATE-FLAG (I).			
001510				
001520	PROCESS-INPUT.			
001530	PERFORM MOVE-DATA-TO-MAP.			
001540	PERFORM PROCESS-EDITING-FIELDS.			
001550	MOVE LOW-VALUES TO TWA-FUNC.			
001560	MOVE 'SUCCESSFUL UPDATE' TO MCHLUPD-MESSAGEO.			
001570	PERFORM STORE-MODIFY-DDRECA-DDRECB.			
001580	PERFORM STORE-MODIFY-MEMBER-RECORDS.			
001590				
001600	INIT-DDRECA.			
001610	MOVE SPACES TO DDRECA.			
001620	MOVE TWA-DATA-NAME TO DATA-NAME.			
001630	MOVE CURRENT-DATE TO TWA-CURRENT-DATE.			
001640	MOVE TWA-CURRENT-YY TO DATA-CREATED-YY.			
001650	MOVE TWA-CURRENT-MM TO DATA-CREATED-MM.			
001660	MOVE TWA-CURRENT-DD TO DATA-CREATED-DD.			
001670				
001680	PROCESS-EDITING-FIELDS.			
001690	IF MCHLUPD-DATA-NAMEI = LOW-VALUES			
001700	MOVE ATBS TO MCHLUPD-DATA-NAMEA			
001710	ELSE			
001720	MOVE MCHLUPD-DATA-NAMEI TO MCHLUPD-DATA-NAMEO			
001730	MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG			
001740	MOVE ATBSRY TO MCHLUPD-DATA-NAMEA.			
001750	IF MCHLUPD-CREATED-DATEI = LOW-VALUES			
001760	MOVE ATBS TO MCHLUPD-CREATED-DATEA			
001770	ELSE			
001780	MOVE MCHLUPD-CREATED-DATEI TO MCHLUPD-CREATED-DATEO			
001790	MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG			
001800	MOVE ATBSRY TO MCHLUPD-CREATED-DATEA.			
001810	IF MCHLUPD-CHANGED-DATEI = LOW-VALUES			
001820	MOVE ATBS TO MCHLUPD-CHANGED-DATEA			
001830	ELSE			
001840	MOVE MCHLUPD-CHANGED-DATEI TO MCHLUPD-CHANGED-DATEO			
001850	MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG			
001860	MOVE ATBSRY TO MCHLUPD-CHANGED-DATEA			
001870	MOVE CURRENT-DATE TO TWA-CURRENT-DATE			
001880	IF MCHLUPD-CHANGED-DATEI NOT = TWA-CURRENT-DATE			
001890	MOVE CURRENT-DATE TO MCHLUPD-CHANGED-DATEO.			
001900	IF MCHLUPD-REVISED-PERSONI = LOW-VALUES			
001910	MOVE ATBS TO MCHLUPD-REVISED-PERSONA			
001920	ELSE			
001930	MOVE MCHLUPD-REVISED-PERSONI TO MCHLUPD-REVISED-PERSONO			
001940	DATA-REVISED-PERSON			
001950	MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG			
001960	MOVE ATBSRY TO MCHLUPD-REVISED-PERSONA.			
001970	IF MCHLUPD-USER-NAME-1I = LOW-VALUES			
001980	MOVE ATBS TO MCHLUPD-USER-NAME-1A			
001990	ELSE			
002000	MOVE MCHLUPD-USER-NAME-1I TO MCHLUPD-USER-NAME-1O			
002010	DATA-USER-NAME (1)			
002020	MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG			
002030	MOVE ATBSRY TO MCHLUPD-USER-NAME-1A.			
002040	IF MCHLUPD-USER-NAME-2I = LOW-VALUES			
002050	MOVE ATBS TO MCHLUPD-USER-NAME-2A			
002060	ELSE			
002070	MOVE MCHLUPD-USER-NAME-2I TO MCHLUPD-USER-NAME-2O			
002080	DATA-USER-NAME (2)			
002090	MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG			
002100	MOVE ATBSRY TO MCHLUPD-USER-NAME-2A.			
002110	IF MCHLUPD-USER-NAME-3I = LOW-VALUES			
002120	MOVE ATBS TO MCHLUPD-USER-NAME-3A			
002130	ELSE			

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002140      MOVE MCHLUPD-USER-NAME-3I TO MCHLUPD-USER-NAME-3O
002150      DATA-USER-NAME (3)
002160      MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG
002170      MOVE ATBSRY TO MCHLUPD-USER-NAME-3A.
002180      IF MCHLUPD-USER-NAME-4L = LOW-VALUES
002190      MOVE ATBS TO MCHLUPD-USER-NAME-4A
002200      ELSE
002210      MOVE MCHLUPD-USER-NAME-4I TO MCHLUPD-USER-NAME-4O
002220      DATA-USER-NAME (4)
002230      MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG
002240      MOVE ATBSRY TO MCHLUPD-USER-NAME-4A.
002250      IF MCHLUPD-USER-NAME-5L = LOW-VALUES
002260      MOVE ATBS TO MCHLUPD-USER-NAME-5A
002270      ELSE
002280      MOVE MCHLUPD-USER-NAME-5I TO MCHLUPD-USER-NAME-5O
002290      DATA-USER-NAME (5)
002300      MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG
002310      MOVE ATBSRY TO MCHLUPD-USER-NAME-5A.
002320      IF MCHLUPD-USER-NAME-6L = LOW-VALUES
002330      MOVE ATBS TO MCHLUPC-USER-NAME-6A
002340      ELSE
002350      MOVE MCHLUPD-USER-NAME-6I TO MCHLUPD-USER-NAME-6O
002360      DATA-USER-NAME (6)
002370      MOVE 'Y' TO TWA-DDRECA-MODIFY-FLAG
002380      MOVE ATBSRY TO MCHLUPD-USER-NAME-6A.
002390      IF MCHLUPD-DATA-DESCI = LOW-VALUES
002400      MOVE ATBS TO MCHLUPD-DATA-DESCA
002410      ELSE
002420      MOVE MCHLUPD-DATA-DESCI TO MCHLUPD-DATA-DESCO
002430      DATA-DESC
002440      MOVE 'Y' TO TWA-DDRECB-MODIFY-FLAG
002450      MOVE ATBSRY TO MCHLUPD-DATA-DESCA.
002460      IF MCHLUPD-DATA-PICTUREI = LOW-VALUES
002470      MOVE ATBS TO MCHLUPD-DATA-PICTUREA
002480      ELSE
002490      MOVE MCHLUPD-DATA-PICTUREI TO MCHLUPD-DATA-PICTURED
002500      DATA-LENGTH
002510      MOVE 'Y' TO TWA-DDRECB-MODIFY-FLAG
002520      MOVE ATBSRY TO MCHLUPD-DATA-PICTUREA.
002530      IF MCHLUPD-DATA-LEVELL = LOW-VALUES
002540      MOVE ATBS TO MCHLUPD-DATA-LEVELA
002550      ELSE
002560      MOVE MCHLUPD-DATA-LEVELI TO MCHLUPD-DATA-LEVELO
002570      DATA-LEVEL
002580      MOVE 'Y' TO TWA-DDRECB-MODIFY-FLAG
002590      MOVE ATBSRY TO MCHLUPD-DATA-LEVELA.
002600      IF MCHLUPD-DATA-USAGEL = LOW-VALUES
002610      MOVE ATBS TO MCHLUPD-DATA-USAGEA
002620      ELSE
002630      MOVE MCHLUPD-DATA-USAGEI TO MCHLUPD-DATA-USAGED
002640      DATA-USAGE
002650      MOVE 'Y' TO TWA-DDRECB-MODIFY-FLAG
002660      MOVE ATBSRY TO MCHLUPD-DATA-USAGEA.
002670      IF MCHLUPD-DATA-JUSTIFYL = LOW-VALUES
002680      MOVE ATBS TO MCHLUPD-DATA-JUSTIFYA
002690      ELSE
002700      MOVE MCHLUPD-DATA-JUSTIFYI TO MCHLUPD-DATA-JUSTIFYO
002710      DATA-JUSTIFY
002720      MOVE 'Y' TO TWA-DDRECB-MODIFY-FLAG
002730      MOVE ATBSRY TO MCHLUPD-DATA-JUSTIFYA.
002740      IF MCHLUPD-ALIAS-NAME-1L = LOW-VALUES
002750      MOVE ATBS TO MCHLUPD-ALIAS-NAME-1A
002760      ELSE
002770      MOVE MCHLUPD-ALIAS-NAME-1I TO MCHLUPD-ALIAS-NAME-1O
002780      MOVE 'Y' TO TWA-ALIAS-UPDATE-FLAG (1)
002790      MOVE ATBSRY TO MCHLUPD-ALIAS-NAME-1A.
002800      IF MCHLUPD-ALIAS-NAME-2L = LOW-VALUES
002810      MOVE ATBS TO MCHLUPD-ALIAS-NAME-2A
002820      ELSE
002830      MOVE MCHLUPD-ALIAS-NAME-2I TO MCHLUPD-ALIAS-NAME-2O
002840      MOVE 'Y' TO TWA-ALIAS-UPDATE-FLAG (2)
002850      MOVE ATBSRY TO MCHLUPD-ALIAS-NAME-2A.
002860      IF MCHLUPD-ALIAS-NAME-3L = LOW-VALUES
002870      MOVE ATBS TO MCHLUPD-ALIAS-NAME-3A
002880      ELSE
002890      MOVE MCHLUPD-ALIAS-NAME-3I TO MCHLUPD-ALIAS-NAME-3O
002900      MOVE 'Y' TO TWA-ALIAS-UPDATE-FLAG (3)

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002910      MOVE ATBSRY TO MCHLUPD-ALIAS-NAME-3A.
002920      IF MCHLUPD-ALIAS-NAME-4L = LOW-VALUES
002930      MOVE ATBS TO MCHLUPD-ALIAS-NAME-4A
002940      ELSE
002950      MOVE MCHLUPD-ALIAS-NAME-4I TO MCHLUPD-ALIAS-NAME-4O
002960      MOVE 'Y' TO TWA-ALIAS-UPDATE-FLAG (4)
002970      MOVE ATBSRY TO MCHLUPD-ALIAS-NAME-4A.
002980      IF MCHLUPD-FILE-USED-1L = LOW-VALUES
002990      MOVE ATBS TO MCHLUPD-FILE-USED-1A
003000      ELSE
003010      MOVE MCHLUPD-FILE-USED-1I TO MCHLUPD-FILE-USED-1O
003020      MOVE 'Y' TO TWA-FILE-UPDATE-FLAG (1)
003030      MOVE ATBSRY TO MCHLUPD-FILE-USED-1A.
003040      IF MCHLUPD-FILE-USED-2L = LOW-VALUES
003050      MOVE ATBS TO MCHLUPD-FILE-USED-2A
003060      ELSE
003070      MOVE MCHLUPD-FILE-USED-2I TO MCHLUPD-FILE-USED-2O
003080      MOVE 'Y' TO TWA-FILE-UPDATE-FLAG (2)
003090      MOVE ATBSRY TO MCHLUPD-FILE-USED-2A.
003100      IF MCHLUPD-FILE-USED-3L = LOW-VALUES
003110      MOVE ATBS TO MCHLUPD-FILE-USED-3A
003120      ELSE
003130      MOVE MCHLUPD-FILE-USED-3I TO MCHLUPD-FILE-USED-3O
003140      MOVE 'Y' TO TWA-FILE-UPDATE-FLAG (3)
003150      MOVE ATBSRY TO MCHLUPD-FILE-USED-3A.
003160      IF MCHLUPD-FILE-USED-4L = LOW-VALUES
003170      MOVE ATBS TO MCHLUPD-FILE-USED-4A
003180      ELSE
003190      MOVE MCHLUPD-FILE-USED-4I TO MCHLUPD-FILE-USED-4O
003200      MOVE 'Y' TO TWA-FILE-UPDATE-FLAG (4)
003210      MOVE ATBSRY TO MCHLUPD-FILE-USED-4A.
003220      IF MCHLUPD-PROGRAM-USED-1L = LOW-VALUES
003230      MOVE ATBS TO MCHLUPD-PROGRAM-USED-1A
003240      ELSE
003250      MOVE MCHLUPD-PROGRAM-USED-1I TO MCHLUPD-PROGRAM-USED-1O
003260      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (1)
003270      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-1A.
003280      IF MCHLUPD-PROGRAM-USED-2L = LOW-VALUES
003290      MOVE ATBS TO MCHLUPD-PROGRAM-USED-2A
003300      ELSE
003310      MOVE MCHLUPD-PROGRAM-USED-2I TO MCHLUPD-PROGRAM-USED-2O
003320      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (2)
003330      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-2A.
003340      IF MCHLUPD-PROGRAM-USED-3L = LOW-VALUES
003350      MOVE ATBS TO MCHLUPD-PROGRAM-USED-3A
003360      ELSE
003370      MOVE MCHLUPD-PROGRAM-USED-3I TO MCHLUPD-PROGRAM-USED-3O
003380      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (3)
003390      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-3A.
003400      IF MCHLUPD-PROGRAM-USED-4L = LOW-VALUES
003410      MOVE ATBS TO MCHLUPD-PROGRAM-USED-4A
003420      ELSE
003430      MOVE MCHLUPD-PROGRAM-USED-4I TO MCHLUPD-PROGRAM-USED-4O
003440      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (4)
003450      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-4A.
003460      IF MCHLUPD-PROGRAM-USED-5L = LOW-VALUES
003470      MOVE ATBS TO MCHLUPD-PROGRAM-USED-5A
003480      ELSE
003490      MOVE MCHLUPD-PROGRAM-USED-5I TO MCHLUPD-PROGRAM-USED-5O
003500      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (5)
003510      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-5A.
003520      IF MCHLUPD-PROGRAM-USED-6L = LOW-VALUES
003530      MOVE ATBS TO MCHLUPD-PROGRAM-USED-6A
003540      ELSE
003550      MOVE MCHLUPD-PROGRAM-USED-6I TO MCHLUPD-PROGRAM-USED-6O
003560      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (6)
003570      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-6A.
003580      IF MCHLUPD-PROGRAM-USED-7L = LOW-VALUES
003590      MOVE ATBS TO MCHLUPD-PROGRAM-USED-7A
003600      ELSE
003610      MOVE MCHLUPD-PROGRAM-USED-7I TO MCHLUPD-PROGRAM-USED-7O
003620      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (7)
003630      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-7A.
003640      IF MCHLUPD-PROGRAM-USED-8L = LOW-VALUES
003650      MOVE ATBS TO MCHLUPD-PROGRAM-USED-8A
003660      ELSE
003670      MOVE MCHLUPD-PROGRAM-USED-8I TO MCHLUPD-PROGRAM-USED-8O

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003680      MOVE 'Y' TO TWA-PROGRAM-UPDATE-FLAG (8)
003690      MOVE ATBSRY TO MCHLUPD-PROGRAM-USED-8A.
003700
003710      MOVE DATA-TO-MAP.
003720      MOVE DATA-NAME TO MCHLUPD-DATA-NAMEO.
003730      MOVE 'XX/XX/XX' TO TWA-TEST-DATE.
003740      IF DATA-CREATED-DATE NOT = SPACES
003750          MOVE DATA-CREATED-YY TO TWA-TEST-YY
003760          MOVE DATA-CREATED-MM TO TWA-TEST-MM
003770          MOVE DATA-CREATED-DD TO TWA-TEST-DD
003780          MOVE TWA-TEST-DATE TO MCHLUPD-CREATED-DATED.
003790      IF DATA-CHANGED-DATE NOT = SPACES
003800          MOVE DATA-CHANGED-YY TO TWA-TEST-YY
003810          MOVE DATA-CHANGED-MM TO TWA-TEST-MM
003820          MOVE DATA-CHANGED-DD TO TWA-TEST-DD
003830          MOVE TWA-TEST-DATE TO MCHLUPD-CHANGED-DATED.
003840      MOVE DATA-USER-NAME (1) TO MCHLUPD-USER-NAME-10.
003850      MOVE DATA-USER-NAME (2) TO MCHLUPD-USER-NAME-20.
003860      MOVE DATA-USER-NAME (3) TO MCHLUPD-USER-NAME-30.
003870      MOVE DATA-USER-NAME (4) TO MCHLUPD-USER-NAME-40.
003880      MOVE DATA-USER-NAME (5) TO MCHLUPD-USER-NAME-50.
003890      MOVE DATA-USER-NAME (6) TO MCHLUPD-USER-NAME-60.
003900      MOVE DATA-REVISED-PERSON TO MCHLUPD-REVISED-PERSONO.
003910      IF TWA-NEW-DDRECA
003920          MOVE SPACES TO DDRECB
003930      ELSE
003940          PERFORM OBTAIN-NEXT-DDRECB.
003950      MOVE DATA-DESC TO MCHLUPD-DATA-DESCO.
003960      MOVE DATA-LENGTH TO MCHLUPD-DATA-PICTURED.
003970      MOVE DATA-USAGE TO MCHLUPD-DATA-USAGEO.
003980      IF DATA-INPUT
003990          MOVE 'INPUT' TO MCHLUPD-DATA-LEVELO
004000      ELSE
004010          IF DATA-OUTPUT
004020              MOVE 'OUTPUT' TO MCHLUPD-DATA-LEVELO
004030          ELSE
004040              IF DATA-INPUT-OUTPUT
004050                  MOVE 'BOTH' TO MCHLUPD-DATA-LEVELO.
004060              IF DATA-JUSTIFY-RIGHT
004070                  MOVE 'RIGHT' TO MCHLUPD-DATA-JUSTIFYO
004080              ELSE
004090                  IF DATA-JUSTIFY-LEFT
004100                      MOVE 'LEFT' TO MCHLUPD-DATA-JUSTIFYO.
004110              IF TWA-PROGRAM-DBKEY (1) NOT = ZERO
004120                  MOVE TWA-PROGRAM-DBKEY (1) TO TWA-DBKEY-9
004130                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004140                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-10.
004150              IF TWA-PROGRAM-DBKEY (2) NOT = ZERO
004160                  MOVE TWA-PROGRAM-DBKEY (2) TO TWA-DBKEY-9
004170                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004180                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-20.
004190              IF TWA-PROGRAM-DBKEY (3) NOT = ZERO
004200                  MOVE TWA-PROGRAM-DBKEY (3) TO TWA-DBKEY-9
004210                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004220                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-30.
004230              IF TWA-PROGRAM-DBKEY (4) NOT = ZERO
004240                  MOVE TWA-PROGRAM-DBKEY (4) TO TWA-DBKEY-9
004250                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004260                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-40.
004270              IF TWA-PROGRAM-DBKEY (5) NOT = ZERO
004280                  MOVE TWA-PROGRAM-DBKEY (5) TO TWA-DBKEY-9
004290                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004300                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-50.
004310              IF TWA-PROGRAM-DBKEY (6) NOT = ZERO
004320                  MOVE TWA-PROGRAM-DBKEY (6) TO TWA-DBKEY-9
004330                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004340                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-60.
004350              IF TWA-PROGRAM-DBKEY (7) NOT = ZERO
004360                  MOVE TWA-PROGRAM-DBKEY (7) TO TWA-DBKEY-9
004370                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004380                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-70.
004390              IF TWA-PROGRAM-DBKEY (8) NOT = ZERO
004400                  MOVE TWA-PROGRAM-DBKEY (8) TO TWA-DBKEY-9
004410                  PERFORM OBTAIN-DDPROGRAM-BY-DBKEY
004420                  MOVE DATA-PROGRAM-USED TO MCHLUPD-PROGRAM-USED-80.
004430              IF TWA-FILE-DBKEY (1) NOT = ZERO
004440                  MOVE TWA-FILE-DBKEY (1) TO TWA-DBKEY-9

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SEQ. NO.	SOURCE STATEMENT	PAGE	18	11/30/82
004450	PERFORM OBTAIN-DDFILE-BY-DBKEY			
004460	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-10.			
004470	IF TWA-FILE-DBKEY (2) NOT = ZERO			
004480	MOVE TWA-FILE-DBKEY (2) TO TWA-CBKEY-9			
004490	PERFORM OBTAIN-DDFILE-BY-DBKEY			
004500	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-20.			
004510	IF TWA-FILE-DBKEY (3) NOT = ZERO			
004520	MOVE TWA-FILE-DBKEY (3) TO TWA-CBKEY-9			
004530	PERFORM OBTAIN-DDFILE-BY-DBKEY			
004540	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-30.			
004550	IF TWA-FILE-DBKEY (4) NOT = ZERO			
004560	MOVE TWA-FILE-DBKEY (4) TO TWA-DBKEY-9			
004570	PERFORM OBTAIN-DDFILE-BY-DBKEY			
004580	MOVE DATA-FILE-USED TO MCHLUPD-FILE-USED-40.			
004590	IF TWA-ALIAS-DBKEY (1) NOT = ZERO			
004600	MOVE TWA-ALIAS-DBKEY (1) TO TWA-DBKEY-9			
004610	PERFORM OBTAIN-DDALIAS-BY-DBKEY			
004620	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-10.			
004630	IF TWA-ALIAS-DBKEY (2) NOT = ZERO			
004640	MOVE TWA-ALIAS-DBKEY (2) TO TWA-DBKEY-9			
004650	PERFORM OBTAIN-DDALIAS-BY-DBKEY			
004660	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-20.			
004670	IF TWA-ALIAS-DBKEY (3) NOT = ZERO			
004680	MOVE TWA-ALIAS-DBKEY (3) TO TWA-DBKEY-9			
004690	PERFORM OBTAIN-DDALIAS-BY-DBKEY			
004700	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-30.			
004710	IF TWA-ALIAS-DBKEY (4) NOT = ZERO			
004720	MOVE TWA-ALIAS-DBKEY (4) TO TWA-DBKEY-9			
004730	PERFORM OBTAIN-DDALIAS-BY-DBKEY			
004740	MOVE DATA-ALIAS-NAME TO MCHLUPD-ALIAS-NAME-40.			
004750				
004760	STORE-MODIFY-DDRECA-DDRECB.			
004770	IF TWA-NEW-DDRECA			
004780	MOVE SPACES TO DATA-CHANGED-DATE			
004790	PERFORM STORE-DDRECA			
004800	PERFORM STORE-DDRECB			
004810	ELSE			
004820	PERFORM MOVE-CURRENT-DATE-TO-DDRECA			
004830	PERFORM FIND-CURRENT-DDRECA			
004840	PERFORM MODIFY-DDRECA			
004850	IF TWA-DDRECB-MODIFY			
004860	PERFORM FIND-CURRENT-DDRECB			
004870	PERFORM MODIFY-DDRECB.			
004880				
004890	STORE-MODIFY-MEMBER-RECORDS.			
004900	IF TWA-NEW-DDRECA			
004910	PERFORM FIND-CURRENT-DDRECA			
004920	PERFORM STORE-DDPROGRAM-ROUTINE			
004930	PERFORM STORE-DDFILE-ROUTINE			
004940	PERFORM STORE-DDALIAS-ROUTINE			
004950	ELSE			
004960	PERFORM CHECK-MODIFY-MEMBER-RECORD.			
004970				
004980	MOVE-CURRENT-DATE-TO-DDRECA.			
004990	IF MCHLUPD-CHANGED-DATE1 = LOW-VALUES			
005000	MOVE CURRENT-DATE TO TWA-CURRENT-DATE,			
005010	MCHLUPD-CHANGED-DATE0			
005020	MOVE TWA-CURRENT-YY TO DATA-CHANGED-YY			
005030	MOVE TWA-CURRENT-MM TO DATA-CHANGED-MM			
005040	MOVE TWA-CURRENT-DD TO DATA-CHANGED-DD.			
005050				
005060	CHECK-MODIFY-MEMBER-RECORD.			
005070	PERFORM FIND-CURRENT-DDRECA.			
005080	PERFORM CHECK-MODIFY-DDPROGRAM.			
005090	PERFORM CHECK-MODIFY-DDFILE.			
005100	PERFORM CHECK-MODIFY-DDALIAS.			
005110				
005120	CHECK-MODIFY-DDPROGRAM.			
005130	IF TWA-PROGRAM-UPDATE-FLAG (1) = 'Y'			
005140	IF TWA-PROGRAM-DBKEY (1) NOT = ZERO			
005150	MOVE TWA-PROGRAM-DBKEY (1) TO TWA-DBKEY-9			
005160	PERFORM OBTAIN-DDPROGRAM-BY-CBKEY			
005170	MOVE MCHLUPD-PROGRAM-USED-11 TO DATA-PROGRAM-USED			
005180	PERFORM MODIFY-DDPROGRAM			
005190	ELSE			
005200	MOVE SPACES TO DDPROGRAM			
005210	MOVE MCHLUPD-PROGRAM-USED-11 TO DATA-PROGRAM-USED			

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005220      PERFORM STORE-DDPROGRAM.
005230      IF TWA-PROGRAM-UPDATE-FLAG (2) = 'Y'
005240          IF TWA-PROGRAM-DBKEY (2) NOT = ZERO
005250              MOVE TWA-PROGRAM-DBKEY (2) TO TWA-DBKEY-9
005260              PERFORM OBTAIN-DDPROGRAM-BY-CBKEY
005270              MOVE MCHLUPD-PROGRAM-USED-2I TO DATA-PROGRAM-USED
005280              PERFORM MODIFY-DCPROGRAM
005290      ELSE
005300          MOVE SPACES TO DDPROGRAM
005310          MOVE MCHLUPD-PROGRAM-USED-2I TO DATA-PROGRAM-USED
005320          PERFORM STORE-DDPROGRAM.
005330      IF TWA-PROGRAM-UPDATE-FLAG (3) = 'Y'
005340          IF TWA-PROGRAM-DBKEY (3) NOT = ZERO
005350              MOVE TWA-PROGRAM-DBKEY (3) TO TWA-DBKEY-9
005360              PERFORM OBTAIN-DDPROGRAM-BY-CBKEY
005370              MOVE MCHLUPD-PROGRAM-USED-3I TO DATA-PROGRAM-USED
005380              PERFORM MODIFY-DCPROGRAM
005390      ELSE
005400          MOVE SPACES TO DDPROGRAM
005410          MOVE MCHLUPD-PROGRAM-USED-3I TO DATA-PROGRAM-USED
005420          PERFORM STORE-DDPROGRAM.
005430      IF TWA-PROGRAM-UPDATE-FLAG (4) = 'Y'
005440          IF TWA-PROGRAM-DBKEY (4) NOT = ZERO
005450              MOVE TWA-PROGRAM-DBKEY (4) TO TWA-DBKEY-9
005460              PERFORM OBTAIN-DDPROGRAM-BY-CBKEY
005470              MOVE MCHLUPD-PROGRAM-USED-4I TO DATA-PROGRAM-USED
005480              PERFORM MODIFY-DCPROGRAM
005490      ELSE
005500          MOVE SPACES TO DDPROGRAM
005510          MOVE MCHLUPD-PROGRAM-USED-4I TO DATA-PROGRAM-USED
005520          PERFORM STORE-DDPROGRAM.
005530      IF TWA-PROGRAM-UPDATE-FLAG (5) = 'Y'
005540          IF TWA-PROGRAM-DBKEY (5) NOT = ZERO
005550              MOVE TWA-PROGRAM-DBKEY (5) TO TWA-DBKEY-9
005560              PERFORM OBTAIN-DDPROGRAM-BY-CBKEY
005570              MOVE MCHLUPD-PROGRAM-USED-5I TO DATA-PROGRAM-USED
005580              PERFORM MODIFY-DCPROGRAM
005590      ELSE
005600          MOVE SPACES TO DDPROGRAM
005610          MOVE MCHLUPD-PROGRAM-USED-5I TO DATA-PROGRAM-USED
005620          PERFORM STORE-DDPROGRAM.
005630      IF TWA-PROGRAM-UPDATE-FLAG (6) = 'Y'
005640          IF TWA-PROGRAM-DBKEY (6) NOT = ZERO
005650              MOVE TWA-PROGRAM-DBKEY (6) TO TWA-DBKEY-9
005660              PERFORM OBTAIN-DDPROGRAM-BY-CBKEY
005670              MOVE MCHLUPD-PROGRAM-USED-6I TO DATA-PROGRAM-USED
005680              PERFORM MODIFY-DCPROGRAM
005690      ELSE
005700          MOVE SPACES TO DDPROGRAM
005710          MOVE MCHLUPD-PROGRAM-USED-6I TO DATA-PROGRAM-USED
005720          PERFORM STORE-DDPROGRAM.
005730      IF TWA-PROGRAM-UPDATE-FLAG (7) = 'Y'
005740          IF TWA-PROGRAM-DBKEY (7) NOT = ZERO
005750              MOVE TWA-PROGRAM-DBKEY (7) TO TWA-DBKEY-9
005760              PERFORM OBTAIN-DDPROGRAM-BY-CBKEY
005770              MOVE MCHLUPD-PROGRAM-USED-7I TO DATA-PROGRAM-USED
005780              PERFORM MODIFY-DCPROGRAM
005790      ELSE
005800          MOVE SPACES TO DDPROGRAM
005810          MOVE MCHLUPD-PROGRAM-USED-7I TO DATA-PROGRAM-USED
005820          PERFORM STORE-DDPROGRAM.
005830      IF TWA-PROGRAM-UPDATE-FLAG (8) = 'Y'
005840          IF TWA-PROGRAM-DBKEY (8) NOT = ZERO
005850              MOVE TWA-PROGRAM-DBKEY (8) TO TWA-DBKEY-9
005860              PERFORM OBTAIN-DDPROGRAM-BY-CBKEY
005870              MOVE MCHLUPD-PROGRAM-USED-8I TO DATA-PROGRAM-USED
005880              PERFORM MODIFY-DCPROGRAM
005890      ELSE
005900          MOVE SPACES TO DDPROGRAM
005910          MOVE MCHLUPD-PROGRAM-USED-8I TO DATA-PROGRAM-USED
005920          PERFORM STORE-DDPROGRAM.
005930      CHECK-MODIFY-DDALIAS.
005940      IF TWA-ALIAS-UPDATE-FLAG (1) = 'Y'
005950          IF TWA-ALIAS-DBKEY (1) NOT = ZERO
005960              MOVE TWA-ALIAS-DBKEY (1) TO TWA-DBKEY-9
005970              PERFORM OBTAIN-DDALIAS-BY-DBKEY
005980

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SEQ. NO.	SOURCE STATEMENT	PAGE	20	11/30/82
005990	MOVE MCHLUPD-ALIAS-NAME-1I TO DATA-ALIAS-NAME			
006000	PERFORM MODIFY-DDALIAS			
006010	ELSE			
006020	MOVE SPACES TO DDALIAS			
006030	MOVE MCHLUPD-ALIAS-NAME-1I TO DATA-ALIAS-NAME			
006040	PERFORM STORE-DDALIAS.			
006050	IF TWA-ALIAS-UPDATE-FLAG (2) = 'Y'			
006060	IF TWA-ALIAS-DBKEY (2) NOT = ZERO			
006070	MOVE TWA-ALIAS-DBKEY (2) TO TWA-DBKEY-9			
006080	PERFORM OBTAIN-DDALIAS-BY-DBKEY			
006090	MOVE MCHLUPD-ALIAS-NAME-2I TO DATA-ALIAS-NAME			
006100	PERFORM MODIFY-DDALIAS			
006110	ELSE			
006120	MOVE SPACES TO DDALIAS			
006130	MOVE MCHLUPD-ALIAS-NAME-2I TO DATA-ALIAS-NAME			
006140	PERFORM STORE-DDALIAS.			
006150	IF TWA-ALIAS-UPDATE-FLAG (3) = 'Y'			
006160	IF TWA-ALIAS-DBKEY (3) NOT = ZERO			
006170	MOVE TWA-ALIAS-DBKEY (3) TO TWA-DBKEY-9			
006180	PERFORM OBTAIN-DDALIAS-BY-DBKEY			
006190	MOVE MCHLUPD-ALIAS-NAME-3I TO DATA-ALIAS-NAME			
006200	PERFORM MODIFY-DDALIAS			
006210	ELSE			
006220	MOVE SPACES TO DDALIAS			
006230	MOVE MCHLUPD-ALIAS-NAME-3I TO DATA-ALIAS-NAME			
006240	PERFORM STORE-DDALIAS.			
006250	IF TWA-ALIAS-UPDATE-FLAG (4) = 'Y'			
006260	IF TWA-ALIAS-DBKEY (4) NOT = ZERO			
006270	MOVE TWA-ALIAS-DBKEY (4) TO TWA-DBKEY-9			
006280	PERFORM OBTAIN-DDALIAS-BY-DBKEY			
006290	MOVE MCHLUPD-ALIAS-NAME-4I TO DATA-ALIAS-NAME			
006300	PERFORM MODIFY-DDALIAS			
006310	ELSE			
006320	MOVE SPACES TO DDALIAS			
006330	MOVE MCHLUPD-ALIAS-NAME-4I TO DATA-ALIAS-NAME			
006340	PERFORM STORE-DDALIAS.			
006350	CHECK-MODIFY-DDFILE.			
006360	IF TWA-FILE-UPDATE-FLAG (1) = 'Y'			
006370	IF TWA-FILE-DBKEY (1) NOT = ZERO			
006380	MOVE TWA-FILE-DBKEY (1) TO TWA-DBKEY-9			
006390	PERFORM OBTAIN-DDFILE-BY-DBKEY			
006400	MOVE MCHLUPD-FILE-USED-1I TO DATA-FILE-USED			
006410	PERFORM MODIFY-DDFILE			
006420	ELSE			
006430	MOVE SPACES TO DDFILE			
006440	MOVE MCHLUPD-FILE-USED-1I TO DATA-FILE-USED			
006450	PERFORM STORE-DDFILE.			
006460	IF TWA-FILE-UPDATE-FLAG (2) = 'Y'			
006470	IF TWA-FILE-DBKEY (2) NOT = ZERO			
006480	MOVE TWA-FILE-DBKEY (2) TO TWA-DBKEY-9			
006490	PERFORM OBTAIN-DDFILE-BY-DBKEY			
006500	MOVE MCHLUPD-FILE-USED-2I TO DATA-FILE-USED			
006510	PERFORM MODIFY-DDFILE			
006520	ELSE			
006530	MOVE SPACES TO DDFILE			
006540	MOVE MCHLUPD-FILE-USED-2I TO DATA-FILE-USED			
006550	PERFORM STORE-DDFILE.			
006560	IF TWA-FILE-UPDATE-FLAG (3) = 'Y'			
006570	IF TWA-FILE-DBKEY (3) NOT = ZERO			
006580	MOVE TWA-FILE-DBKEY (3) TO TWA-DBKEY-9			
006590	PERFORM OBTAIN-DDFILE-BY-DBKEY			
006600	MOVE MCHLUPD-FILE-USED-3I TO DATA-FILE-USED			
006610	PERFORM MODIFY-DDFILE			
006620	ELSE			
006630	MOVE SPACES TO DDFILE			
006640	MOVE MCHLUPD-FILE-USED-3I TO DATA-FILE-USED			
006650	PERFORM STORE-DDFILE.			
006660	IF TWA-FILE-UPDATE-FLAG (4) = 'Y'			
006670	IF TWA-FILE-DBKEY (4) NOT = ZERO			
006680	MOVE TWA-FILE-DBKEY (4) TO TWA-DBKEY-9			
006690	PERFORM OBTAIN-DDFILE-BY-DBKEY			
006700	MOVE MCHLUPD-FILE-USED-4I TO DATA-FILE-USED			
006710	PERFORM MODIFY-DDFILE			
006720	ELSE			
006730	MOVE SPACES TO DATA-FILE-USED			
006740	MOVE MCHLUPD-FILE-USED-4I TO DATA-FILE-USED			
006750				


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006760      PERFORM STORE-DDFILE.
006770
006780      STORE-DDPROGRAM-ROUTINE.
006790      IF MCHLUPD-PROGRAM-USED-1L NOT = LOW-VALUES
006800          MOVE SPACES TO DDPROGRAM
006810          MOVE MCHLUPD-PROGRAM-USED-1I TO DATA-PROGRAM-USED
006820          PERFORM STORE-DDPROGRAM.
006830      IF MCHLUPD-PROGRAM-USED-2L NOT = LOW-VALUES
006840          MOVE SPACES TO DDPROGRAM
006850          MOVE MCHLUPD-PROGRAM-USED-2I TO DATA-PROGRAM-USED
006860          PERFORM STORE-DDPROGRAM.
006870      IF MCHLUPD-PROGRAM-USED-3L NOT = LOW-VALUES
006880          MOVE SPACES TO DDPROGRAM
006890          MOVE MCHLUPD-PROGRAM-USED-3I TO DATA-PROGRAM-USED
006900          PERFORM STORE-DDPROGRAM.
006910      IF MCHLUPD-PROGRAM-USED-4L NOT = LOW-VALUES
006920          MOVE SPACES TO DDPROGRAM
006930          MOVE MCHLUPD-PROGRAM-USED-4I TO DATA-PROGRAM-USED
006940          PERFORM STORE-DDPROGRAM.
006950      IF MCHLUPD-PROGRAM-USED-5L NOT = LOW-VALUES
006960          MOVE SPACES TO DDPROGRAM
006970          MOVE MCHLUPD-PROGRAM-USED-5I TO DATA-PROGRAM-USED
006980          PERFORM STORE-DDPROGRAM.
006990      IF MCHLUPD-PROGRAM-USED-6L NOT = LOW-VALUES
007000          MOVE SPACES TO DDPROGRAM
007010          MOVE MCHLUPD-PROGRAM-USED-6I TO DATA-PROGRAM-USED
007020          PERFORM STORE-DDPROGRAM.
007030      IF MCHLUPD-PROGRAM-USED-7L NOT = LOW-VALUES
007040          MOVE SPACES TO DDPROGRAM
007050          MOVE MCHLUPD-PROGRAM-USED-7I TO DATA-PROGRAM-USED
007060          PERFORM STORE-DDPROGRAM.
007070      IF MCHLUPD-PROGRAM-USED-8L NOT = LOW-VALUES
007080          MOVE SPACES TO DDPROGRAM
007090          MOVE MCHLUPD-PROGRAM-USED-8I TO DATA-PROGRAM-USED
007100          PERFORM STORE-DDPROGRAM.
007110
007120      STORE-DDFILE-ROUTINE.
007130      IF MCHLUPD-FILE-USED-1L NOT = LOW-VALUES
007140          MOVE SPACES TO DDFILE.
007150          MOVE MCHLUPD-FILE-USED-1I TO DATA-FILE-USED
007160          PERFORM STORE-DDFILE.
007170      IF MCHLUPD-FILE-USED-2L NOT = LOW-VALUES
007180          MOVE SPACES TO DDFILE.
007190          MOVE MCHLUPD-FILE-USED-2I TO DATA-FILE-USED
007200          PERFORM STORE-DDFILE.
007210      IF MCHLUPD-FILE-USED-3L NOT = LOW-VALUES
007220          MOVE SPACES TO DDFILE.
007230          MOVE MCHLUPD-FILE-USED-3I TO DATA-FILE-USED
007240          PERFORM STORE-DDFILE.
007250      IF MCHLUPD-FILE-USED-4L NOT = LOW-VALUES
007260          MOVE SPACES TO DDFILE.
007270          MOVE MCHLUPD-FILE-USED-4I TO DATA-FILE-USED
007280          PERFORM STORE-DDFILE.
007290
007300      STORE-DDALIAS-ROUTINE.
007310      IF MCHLUPD-ALIAS-NAME-1L NOT = LOW-VALUES
007320          MOVE SPACES TO DDALIAS.
007330          MOVE MCHLUPD-ALIAS-NAME-1I TO DATA-ALIAS-NAME
007340          PERFORM STORE-DDALIAS.
007350      IF MCHLUPD-ALIAS-NAME-2L NOT = LOW-VALUES
007360          MOVE SPACES TO DDALIAS.
007370          MOVE MCHLUPD-ALIAS-NAME-2I TO DATA-ALIAS-NAME
007380          PERFORM STORE-DDALIAS.
007390      IF MCHLUPD-ALIAS-NAME-3L NOT = LOW-VALUES
007400          MOVE SPACES TO DDALIAS.
007410          MOVE MCHLUPD-ALIAS-NAME-3I TO DATA-ALIAS-NAME
007420          PERFORM STORE-DDALIAS.
007430      IF MCHLUPD-ALIAS-NAME-4L NOT = LOW-VALUES
007440          MOVE SPACES TO DDALIAS.
007450          MOVE MCHLUPD-ALIAS-NAME-4I TO DATA-ALIAS-NAME
007460          PERFORM STORE-DDALIAS.
007470
007480      READ-INPUT-MAP.
007490 *      PUT ADDRESS OF MCHLUPDC INTO TWA-MAPC-PTR.
007500 *      CALL 'ISHOHLBS' USING ISHD-X02 TWA-MAPC-PTR MCHLUPDC.
007510 *      MAP-INPUT TO MAP MCHLUPD
007510 *      MAPC-PTR IS TWA-MAPC-PTR.

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SEQ. NO.	SOURCE STATEMENT	PAGE	22	11/30/82
	CALL 'ISHDHLMI' USING TWA-MAPC-PTR ISHD-X00 ISHD-XE2 ISHD-H3 SERVICE RELOAD MCHLUPDI.			
007520	PREPARE-OUTPUT-MAP.			
007530	PUT ADDRESS OF MCHLUPD INTO TWA-MAP-PTR.			
007540 *	CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MCHLUPD.			
007550 *	PREPARE MAP MCHLUPD			
007560 *	MAP-PTR IS TWA-MAP-PTR			
007570 *	SIZE IS MCHLUPDP.			
	CALL 'ISHDHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H4 MCHLUPDP SERVICE RELOAD MCHLUPDD.			
007580	MOVE CSECT TO MCHLUPD-CSECTO.			
007590	MOVE VER-MOD TO MCHLUPD-VER-MODD.			
007600	MOVE CURRENT-DATE TO MCHLUPD-ROATED.			
007610	CALL 'KSRTIME' USING MCHLUPD-RTIMEO, H1.			
007620	IF TWA-TEST-RUN			
007630	OR SPT-TEST-RUN			
007640	MOVE 'TEST' TO MCHLUPD-TEST-FLAGO.			
007650	MOVE MCHLUPD-TRANI TO MCHLUPD-TRANO.			
007660	MOVE MCHLUPD-FUNCI TO MCHLUPD-FUNCO, TWA-FUNC.			
007670	MOVE MCHLUPD-KEYI TO MCHLUPD-KEYO, TWA-DATA-NAME.			
007680	WRITE-OUTPUT-MAP.			
007690	ERASE-WRITE MAP MCHLUPD IN BUFFER.			
007700 *	CALL 'ISHDHLMP' USING ISHD-X05 MCHLUPDD ISHD-XF0 ISHD-X00 ISHD-X06 ISHD-X00 ISHD-X00.			
007710	OBTAIN-CALC-DDRECA.			
007720	OBTAIN CALC DORECA.			
007730 *	MOVE 0001 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0001
	IDBMSCOM (32) SR100 IDBMSCOM (43).			
007740	IF DB-REC-NOT-FOUND			
007750	MOVE 'N' TO DDRECA-FOUND-FLAG			
007760	ELSE			
007770	PERFORM IDMS-STATUS			
007780	MOVE 'Y' TO DORECA-FOUND-FLAG.			
007790				
007800	OBTAIN-NEXT-DDRECB.			
007810 *	OBTAIN NEXT DDRECB WITHIN DDRECA-DDRECB. MOVE 0002 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR101 DDRECA-DDRECB IDBMSCOM (43).			DMLC0002
007820	PERFORM IDMS-STATUS.			
007830				
007840	OBTAIN-DDPROGRAM-BY-DBKEY.			
007850 *	OBTAIN DDPROGRAM DB-KEY IS TWA-DBKEY-9. MOVE 0003 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (06) SR102 TWA-DBKEY-9 IDBMSCOM (43).			DMLC0003
007860	PERFORM IDMS-STATUS.			
007870				
007880	OBTAIN-DDFILE-BY-DBKEY.			
007890 *	OBTAIN DDFILE DB-KEY IS TWA-DBKEY-9. MOVE 0004 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (06) SR104 TWA-DBKEY-9 IDBMSCOM (43).			DMLC0004
007900	PERFORM IDMS-STATUS.			
007910				

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007920	OBTAIN-DDALIAS-BY-DBKEY.			
007930 *	OBTAIN DDALIAS DB-KEY IS TWA-DBKEY-9. MOVE 0005 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (06) SR103 TWA-DBKEY-9 IDBMSCCM (43).			DMLC0005
007940	PERFORM IDMS-STATUS.			
007950				
007960	STORE-DDRECA.			
007970 *	STORE DDRECA. MOVE 0006 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (42) SR100.			DMLC0006
007980	PERFORM IDMS-STATUS.			
007990				
008000	FIND-CURRENT-DDRECA.			
008010 *	FIND CURRENT DDRECA. MOVE 0007 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (07) SR100.			DMLC0007
008020	PERFORM IDMS-STATUS.			
008030				
008040	FIND-CURRENT-DDRECB.			
008050 *	FIND CURRENT DDRECB. MOVE 0008 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (07) SR101.			DMLC0008
008060	PERFORM IDMS-STATUS.			
008070				
008080	MODIFY-DDRECA.			
008090 *	MODIFY DDRECA. MOVE 0009 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (35) SR100.			DMLC0009
008100	PERFORM IDMS-STATUS.			
008110				
008120	STORE-DDRECB.			
008130 *	STORE DDRECB. MOVE 0010 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (42) SR101.			DMLC0010
008140	PERFORM IDMS-STATUS.			
008150				
008160	MODIFY-DDRECB.			
008170 *	MODIFY DDRECB. MOVE 0011 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (35) SR101.			DMLC0011
008180	PERFORM IDMS-STATUS.			
008190				
008200	STORE-DOPROGRM.			
008210 *	STORE DOPROGRM. MOVE 0012 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (42) SR102.			DMLC0012
008220	PERFORM IDMS-STATUS.			
008230				
008240	MODIFY-DOPROGRM.			
008250 *	MODIFY DOPROGRM. MOVE 0013 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (35) SR102.			DMLC0013
008260	PERFORM IDMS-STATUS.			

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008270				
008280	STORE-DDALIAS.			
008290 *	STORE DDALIAS. MOVE 0014 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (42) SR103.			DMLC0014
008300	PERFORM IDMS-STATUS.			
008310				
008320	MODIFY-DDALIAS.			
008330 *	MODIFY DDALIAS. MOVE 0015 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (35) SR103.			DMLC0015
008340	PERFORM IDMS-STATUS.			
008350				
008360	STORE-DDFILE.			
008370 *	STORE DDFILE. MOVE 0016 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (42) SR104.			DMLC0016
008380	PERFORM IDMS-STATUS.			
008390				
008400	MODIFY-DDFILE.			
008410 *	MODIFY DDFILE. MOVE 0017 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (35) SR104.			DMLC0017
008420	PERFORM IDMS-STATUS.			
008430				
008440	SET-UP-IDMS.			
008450 *	ACQUIRE VARIABLE BUFFER FOR SUBSCHEMA-CTRL SIZE IS BUFFER-SIZE-CTRL.			
008460 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-CTRL ISHD-H11 ISHD-XF0 ISHD-FO			
008470	SERVICE RELOAD SUBSCHEMA-CTRL.			
000010	MOVE CSECT TO PROGRAM-NAME.			OLBINDRN
000020	IF TWA-PRODUCTION-RUN			OLBINDRN
000030 *	AND SPT-PRODUCTION-RUN BIND RUN-UNIT MOVE 0018 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (59) SUBSCHEMA-CTRL SUBSCHEMA-SSNAME;			OLBINDRN DMLC0018
000040	ELSE			OLBINDRN
000050	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (59)			OLBINDRN
000060	SUBSCHEMA-CTRL			OLBINDRN
000070	TEST-SUBSCHEMA-SSNAME.			OLBINDRN
000080				
008490	PERFORM IDMS-STATUS.			
008500 *	READY DATA-REGION USAGE-MODE IS UPDATE. MOVE 0019 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (36) DATA-REGION.			DMLC0019
008510	PERFORM IDMS-STATUS.			
008520 *	READY DATA-INDEX-REGION USAGE-MODE IS UPDATE. MOVE 0020 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (36) DATA-INDEX-REGION.			DMLC0020
008530	PERFORM IDMS-STATUS.			
008540 *	ACQUIRE VARIABLE BUFFER FOR DDRECA SIZE IS BUFFER-SIZE-DDRECA.			
008550 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECA ISHD-H6 ISHD-XF0 ISHD-FO			
008560 *	SERVICE RELOAD DDRECA. BIND DDRECA. MOVE 0021 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0021

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	IDBMSCOM (48) SR100 DDRECA.			
008570 *	ACQUIRE VARIABLE BUFFER FOR DDRECB			
008580 *	SIZE IS BUFFER-SIZE-DDRECB. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECB ISHD-H7 ISHD-XF0 ISHD-F0			
008590 *	SERVICE RELOAD DDRECB. BIND DDRECB.			
	MOVE 0022 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (48) SR101 DDRECB.			DMLC0022
008600 *	ACQUIRE VARIABLE BUFFER FOR DDPROGRAM			
008610 *	SIZE IS BUFFER-SIZE-DDPROGRAM. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDPROGRAM ISHD-H8 ISHD-XF0 ISHD-F0			
008620 *	SERVICE RELOAD DDPROGRAM. BIND DDPROGRAM.			
	MOVE 0023 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (48) SR102 DDPROGRAM.			DMLC0023
008630	PERFORM IDMS-STATUS.			
008640 *	ACQUIRE VARIABLE BUFFER FOR DDFILE			
008650 *	SIZE IS BUFFER-SIZE-DDFILE. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDFILE ISHD-H9 ISHD-XF0 ISHD-F0			
008660 *	SERVICE RELOAD DDFILE. BIND DDFILE.			
	MOVE 0024 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (48) SR104 DDFILE.			DMLC0024
008670	PERFORM IDMS-STATUS.			
008680 *	ACQUIRE VARIABLE BUFFER FOR DDALIAS			
008690 *	SIZE IS BUFFER-SIZE-DDALIAS. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDALIAS ISHD-H10 ISHD-XF0 ISHD-F0			
008700 *	SERVICE RELOAD DDALIAS. BIND DDALIAS.			
	MOVE 0025 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (48) SR103 DDALIAS.			DMLC0025
008710	PERFORM IDMS-STATUS.			
008720				
008730	FINISH-IDMS.			
008740 *	FINISH.			
	MOVE 0026 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (02).			DMLC0026
008750	PERFORM IDMS-STATUS.			
008760 *	RELEASE BUFFER DDRECA. CALL 'ISHDHLPB' USING DDRECA.			
008770 *	RELEASE BUFFER DDRECB. CALL 'ISHDHLPB' USING DDRECB.			
008780 *	RELEASE BUFFER DDPROGRAM. CALL 'ISHDHLPB' USING DDPROGRAM.			
008790 *	RELEASE BUFFER DDFILE. CALL 'ISHDHLPB' USING DDFILE.			
008800 *	RELEASE BUFFER DDALIAS. CALL 'ISHDHLPB' USING DDALIAS.			
008810 *	RELEASE BUFFER SUBSCHEMA-CTRL. CALL 'ISHDHLPB' USING SUBSCHEMA-CTRL.			
008820				IDMSERR
000010	IDMS-STATUS.			
000020	IF DB-STATUS-OK			IDMSERR
000030	NEXT SENTENCE			IDMSERR
000040	ELSE			IDMSERR

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000050	PERFORM IDMS-ERROR-EXIT.			IDMSERR
000060	IDMS-ERROR-EXIT.			IDMSERR
000070	IF ERROR-STATUS NOT = '1469'			IDMSERR
000080	DUMP FROM CSECT SIZE IS 16			IDMSERR
000090 *	AND T-W-A AND RESOURCES			IDMSERR
000100 *	ID IS '** IDMS ERRORS DUMP **'			IDMSERR
000110 *	CALL 'ISHDHLPM' USING ISHD-XD6 CSECT ISHD-H16 ISHD-X22 ISHD-L1 ISHD-H22.			IDMSERR
000120 *	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR.			IDMSERR
000130 *	CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			IDMSERR
000140 *	PREPARE MAP MAPERR			IDMSERR
000150 *	MAP-PTR IS TWA-MAP-PTR SIZE IS MAPERRP.			IDMSERR
000160	CALL 'ISHDHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H5 MAPERRP			IDMSERR
000170	SERVICE RELOAD MAPERRP.			IDMSERR
000180	MOVE CSECT TO MAPERR-CSECTO.			IDMSERR
000190	MOVE VER-MOD TO MAPERR-VER-MODO.			IDMSERR
000200	IF TWA-TEST-RUN			IDMSERR
000210	OR SPT-TEST-RUN			IDMSERR
000220	MOVE 'TEST' TO MAPERR-TEST-FLAGO			IDMSERR
000230	ELSE			IDMSERR
000240	IF TWA-PRODUCTION-RUN			IDMSERR
000250	AND SPT-PRODUCTION-RUN			IDMSERR
000260	NEXT SENTENCE			IDMSERR
000270	ELSE			IDMSERR
000280	MOVE 'INVL' TO MAPERR-TEST-FLAGC.			IDMSERR
000290	MOVE 'IDMS ERRORS' TO MAPERR-IDMS-ERROR-LITERAL0.			IDMSERR
000300	MOVE ERROR-STATUS TO MAPERR-ERROR-STATUS0.			IDMSERR
000310	MOVE ERROR-SET TO MAPERR-ERROR-SET0.			IDMSERR
000320 *	MOVE ERROR-RECORD TO MAPERR-ERROR-RECORD0.			IDMSERR
	MOVE ERROR-AREA TO MAPERR-ERROR-AREAO.			IDMSERR
	ROLLBACK.			IDMSERR
	MOVE 0027 TO DML-SEQUENCE			DMLC0027
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (67).			
000330	IF NOT DB-STATUS-OK			IDMSERR
000340	MOVE 'ROLLBACK FAILED' TO MAPERR-MSG0.			IDMSERR
000350 *	WRITE MAP MAPERR IN BUFFER.			IDMSERR
	CALL 'ISHDHLMP' USING ISHD-X01 MAPERR0 ISHD-XF0 ISHD-X00 ISHD-XD6 ISHD-X00 ISHD-X00.			IDMSERR
000360	RETURN TO NEXT-TRAN SIGNON-TRAN AFTER-READ.			IDMSERR
008840 *	CALL 'ISHDHLRT' USING ISHD-XA0 SIGNON-TRAN.			
008850	GOBACK.			
008860				

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000010 IDENTIFICATION DIVISION.
000020 PROGRAM-ID.          OLDD0300.
000030 AUTHOR.              TONY LAI.
000040 INSTALLATION.        KSU DATA PROCESSING CENTER
000050                      KANSAS STATE UNIVERSITY
000060                      MANHATTAN, KANSAS 66506.
000070 DATE-WRITTEN.        11/82.
000080 DATE-COMPILED.        NOVEMBER 29, 1982  AT 12.34 PM.
000090 REMARKS.
000100 OLDD0300 - DISPLAY DATA ITEM FOR DELETE.
000110
000120 MODIFICATIONS AND CORRECTIONS -
000130 NONE AS OF 11/82.
000140
000150 ENVIRONMENT DIVISION.
000160 *IDMS-CONTROL SECTION.
000170 *PROTOCOL.            MODE IS SHACOW DEBUG
000180 *                      IDMS-RECORDS MANUAL.
000190
000200 DATA DIVISION.
000210 *SCHEMA SECTION.
000220 *DB DATASUBS          WITHIN D0SCHEMA.
000230
000240 WORKING-STORAGE SECTION.
000250 77 CSECT               PIC X(8)      VALUE 'OLDD0300'.
000260 77 VER-MOD             PIC 9V9      VALUE
000270                          1.0.
000280 77 FUNC-CODE           PIC XX       VALUE 'DD'.
000290 77 HI                  PIC S999     VALUE +1 COMP SYNC.
000300 77 SIGNON-TRAN        PIC X(4)     VALUE 'D0SD'.
000010 77 BUFFER-SIZE-CTRL  PIC S9(4)    COMP SYNC VALUE +220.  CHLSUBSZ
000020 77 BUFFER-SIZE-DDRECA PIC S9(4)    COMP SYNC VALUE +168.  CHLSUBSZ
000030 77 BUFFER-SIZE-DDRECB PIC S9(4)    COMP SYNC VALUE +72.   CHLSUBSZ
000040 77 BUFFER-SIZE-D0PRGKM PIC S9(4)   COMP SYNC VALUE +16.   CHLSUBSZ
000050 77 BUFFER-SIZE-DCFILE  PIC S9(4)   COMP SYNC VALUE +32.   CHLSUBSZ
000060 77 BUFFER-SIZE-DDALIAS PIC S9(4)   COMP SYNC VALUE +40.   CHLSUBSZ
000070 77 TEST-SUBSCHEMA-SSNAME PIC X(8)  VALUE 'XATASUBS'.  CHLSUBSZ
000320
000330 01 MESSAGES.
000340 03 DDRECA-NOT-FOUND-MESS PIC X(42)  VALUE
000350                      *** DATA ITEM NOT IN DICTIONARY DATABASE ***.
000360
000370 03 DDRECA-FOUND-MESS    PIC X(39)  VALUE
000380                      'ARE YOU READY TO DELETE THIS DATA NAME?'.
000390
000010 01 MCHLTOP.          PIC X(20)  VALUE 'C 9DDSD I I I I'.  MCHLTOP
000020 02 FILLER             PIC X(20)  VALUE ' '.  MCHLTOP
000030 02 FILLER             PIC X(20)  VALUE ' '.  MCHLTOP
000040 02 FILLER             PIC X(20)  VALUE ' '.  MCHLTOP
000050 02 FILLER             PIC X(20)  VALUE ' '.  MCHLTOP
000060 01 MCHLTOPP          PIC 9(4)  COMP VALUE 00062.  MCHLTOP
000070
000080 01 MCHLTOPC.           PIC X(19)  VALUE ' A F I I '.  MCHLTOP
000090 02 FILLER             PIC X(19)  VALUE ' '.  MCHLTOP
000100
000110 01 MCHLDEL.           PIC X(20)  VALUE 'C 9DDSD I I I I'.  MCHLDEL
000120 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000130 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000140 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000150 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000160 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000170 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000180 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000190 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000200 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000210 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL
000220 02 FILLER             PIC X(20)  VALUE ' '.  MCHLDEL

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SEQ. NO.	SOURCE STATEMENT	PAGE	2	11/29/82
000230	02 FILLER PIC X(20) VALUE ED PERSON: 8 0 .K			MCHLDEL
000240	02 FILLER PIC X(20) VALUE USAGE: 8			MCHLDEL
000250	02 FILLER PIC X(20) VALUE 0 .>JUSTIFY: 8			MCHLDEL
000260	02 FILLER PIC X(20) VALUE 0 <-ALIAS NAME:			MCHLDEL
000270	02 FILLER PIC X(20) VALUE <1. 8			MCHLDEL
000280	02 FILLER PIC X(20) VALUE 02.			MCHLDEL
000290	02 FILLER PIC X(20) VALUE 8			MCHLDEL
000300	02 FILLER PIC X(20) VALUE 0 (23.			MCHLDEL
000310	02 FILLER PIC X(20) VALUE 8			MCHLDEL
000320	02 FILLER PIC X(20) VALUE 04. 8			MCHLDEL
000330	02 FILLER PIC X(20) VALUE 0 IFUSER: <			MCHLDEL
000340	02 FILLER PIC X(20) VALUE 1. 8			MCHLDEL
000350	02 FILLER PIC X(20) VALUE 02. 8			MCHLDEL
000360	02 FILLER PIC X(20) VALUE 03. 8			MCHLDEL
000370	02 FILLER PIC X(20) VALUE 0 4*4.			MCHLDEL
000380	02 FILLER PIC X(20) VALUE 8			MCHLDEL
000390	02 FILLER PIC X(20) VALUE 05. 8			MCHLDEL
000400	02 FILLER PIC X(20) VALUE 06. 8			MCHLDEL
000410	02 FILLER PIC X(20) VALUE 0 PROGRAM U			MCHLDEL
000420	02 FILLER PIC X(20) VALUE SED: K21. 8			MCHLDEL
000430	02 FILLER PIC X(20) VALUE 02. 8			MCHLDEL
000440	02 FILLER PIC X(20) VALUE 8			MCHLDEL
000450	02 FILLER PIC X(20) VALUE 04. 8			MCHLDEL
000460	02 FILLER PIC X(20) VALUE 0 M<5. 8			MCHLDEL
000470	02 FILLER PIC X(20) VALUE 06. 8			MCHLDEL
000480	02 FILLER PIC X(20) VALUE 07. 8			MCHLDEL
000490	02 FILLER PIC X(20) VALUE 08. 8			MCHLDEL
000500	02 FILLER PIC X(20) VALUE LFILF USED: 021. 8			MCHLDEL
000510	02 FILLER PIC X(20) VALUE 2. 8			MCHLDEL
000520	02 FILLER PIC X(20) VALUE 0 Pa3. 8			MCHLDEL
000530	02 FILLER PIC X(20) VALUE 04. 8			MCHLDEL
000540	02 FILLER PIC X(20) VALUE 0 - 8			MCHLDEL
000550	02 FILLER PIC X(20) VALUE 0			MCHLDEL
000560	02 FILLER PIC X(20) VALUE 0 H			MCHLDEL
000570	02 FILLER PIC X(20) VALUE 0 *2 8			MCHLDEL
000580	02 FILLER PIC X(20) VALUE 0			MCHLDEL
000590	02 FILLER PIC X(20) VALUE 0			MCHLDEL
000600	02 FILLER PIC X(20) VALUE 0			MCHLDEL
000610	02 FILLER PIC X(20) VALUE 0			MCHLDEL
000620	02 FILLER PIC X(20) VALUE F			MCHLDEL
000630	01 MCHLDELP PIC 9(4) COMP VALUE 01169.			MCHLDEL
000450	01 MAPERR			MAPERR
000010	02 FILLER PIC X(20) VALUE 8 \$- 8			MAPERR
000020	02 FILLER PIC X(20) VALUE 8 0 \$7 8			MAPERR
000030	02 FILLER PIC X(20) VALUE			MAPERR
000040	02 FILLER PIC X(20) VALUE			MAPERR
000050	02 FILLER PIC X(20) VALUE			MAPERR
000060	02 FILLER PIC X(20) VALUE 8			MAPERR
000070	02 FILLER PIC X(20) VALUE 8			MAPERR
000080	02 FILLER PIC X(20) VALUE 8			MAPERR
000090	02 FILLER PIC X(20) VALUE 0)" 0)" .			MAPERR
000100	02 FILLER PIC X(14) VALUE			MAPERR
000110	01 MAPERRP PIC 9(4) COMP VALUE 00174.			MAPERR
000470	*01 ATB3270 COPY ATB3270.			ATB3270
000480	*01 ATB3270.			ATB3270
000002	* IN CONSTRUCTING AN ATTRIBUTE YOU MAY MAKE ONE CHOICE			ATB3270
000010	* FROM EACH OF THE THREE GROUPS BELOW. THE FIELDS DEFINED			ATB3270
000020	* BELOW HAVE BEEN NAMED IN SUCH A MANNER AS TO BE READILY			ATB3270
000030	* UNDERSTOOD ONCE THE KEY IS KNOWN. THE FOURTH, FIFTH, AND			ATB3270
000040	* SIXTH CHARACTERS OF THE NAME ARE FROM GROUPS 1-3 BELOW.			ATB3270
000050	* NOTE THAT SHORT HAND VERSIONS ARE AVAILABLE FOR DEFAULTS			ATB3270
000060	* OF MDT=NO AND REGULAR INTENSITY.			ATB3270
000070	* GROUP I FIELD TYPE			ATB3270
000080	* PROTECTED = P			ATB3270
000090	* UNPROTECTED, ALPHA NUMERIC = U			ATB3270
000100	* UNPROTECTED, NUMERIC SHIFT = N			ATB3270
000110	* PROTECTED AND CURSOR SKIP = S			ATB3270
000120	* GROUP II INTENSITY			ATB3270
000130	* REGULAR = R OR BLANK IF MDT=N			ATB3270
000140	* HIGH = H			ATB3270
000150	* OFF(DARK) = O			ATB3270

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000220 *	LIGHT PEN DETECTABLE = L			ATB3270
000230 *				ATB3270
000240 *	GROUP III MODIFIED DATA TAG			ATB3270
000250 *				ATB3270
000260 *	ON = Y			ATB3270
000270 *	OFF = N OR BLANK			ATB3270
000280 *				ATB3270
000290 *				ATB3270
000300 *	SKIP REGULAR INTENSITY			ATB3270
000310 *				ATB3270
000320	03 ATBS PIC X VALUE '0'.			ATB3270
000330	03 ATBSR REDEFINES ATBS			ATB3270
000340	PIC X.			ATB3270
000350	03 ATBSRN REDEFINES ATBS			ATB3270
000360	PIC X.			ATB3270
000370	03 ATBSRY PIC X VALUE '1'.			ATB3270
000380 *				ATB3270
000390 *	SKIP HIGH INTENSITY			ATB3270
000400 *				ATB3270
000410	03 ATBSH PIC X VALUE '8'.			ATB3270
000420	03 ATBSHN REDEFINES ATBSH			ATB3270
000430	PIC X.			ATB3270
000440	03 ATBSHY PIC X VALUE '9'.			ATB3270
000450 *				ATB3270
000460 *	SKIP OFF (DARK) INTENSITY			ATB3270
000470 *				ATB3270
000480	03 ATBSQ PIC X VALUE '2'.			ATB3270
000490	03 ATBSQN REDEFINES ATBSQ			ATB3270
000500	PIC X.			ATB3270
000510	03 ATBSQ REDEFINES ATBSQ			ATB3270
000520	PIC X.			ATB3270
000530	03 ATBSQN REDEFINES ATBSQ			ATB3270
000540	PIC X.			ATB3270
000550	03 ATBSOY PIC X VALUE QUOTE.			ATB3270
000560	03 ATBSOY REDEFINES ATBSOY			ATB3270
000570	PIC X.			ATB3270
000580 *				ATB3270
000590 *	SKIP REGULAR INTENSITY, LIGHT PEN			ATB3270
000600 *				ATB3270
000610	03 ATBSL PIC X VALUE '4'.			ATB3270
000620	03 ATBSLN REDEFINES ATBSL			ATB3270
000630	PIC X.			ATB3270
000640	03 ATBSLY PIC X VALUE '5'.			ATB3270
000650 *				ATB3270
000660 *	PROTECT REGULAR INTENSITY			ATB3270
000670 *				ATB3270
000680	03 ATBP PIC X VALUE '1'.			ATB3270
000690	03 ATBPR REDEFINES ATBP			ATB3270
000700	PIC X.			ATB3270
000710	03 ATBPRN REDEFINES ATBP			ATB3270
000720	PIC X.			ATB3270
000730	03 ATBPRY PIC X VALUE '1'.			ATB3270
000740 *				ATB3270
000750 *	PROTECT HIGH INTENSITY			ATB3270
000760 *				ATB3270
000770	03 ATBPH PIC X VALUE 'Y'.			ATB3270
000780	03 ATBPHN REDEFINES ATBPH			ATB3270
000790	PIC X.			ATB3270
000800	03 ATBPHY PIC X VALUE 'Z'.			ATB3270
000810 *				ATB3270
000820 *	PROTECT OFF (DARK) INTENSITY			ATB3270
000830 *				ATB3270
000840	03 ATBPO PIC X VALUE 'Z'.			ATB3270
000850	03 ATBPON REDEFINES ATBPO			ATB3270
000860	PIC X.			ATB3270
000870	03 ATBPOY PIC X VALUE '1'.			ATB3270
000880 *				ATB3270
000890 *	PROTECT REGULAR INTENSITY, LIGHT PEN			ATB3270
000900 *				ATB3270
000910	03 ATBPL PIC X VALUE 'U'.			ATB3270
000920	03 ATBPLN REDEFINES ATBPL			ATB3270
000930	PIC X.			ATB3270
000940	03 ATBPLY PIC X VALUE 'V'.			ATB3270
000950 *				ATB3270
000960 *	UNPROTECTED REGULAR INTENSITY			ATB3270
000970 *	ALPHA-NUMERIC			ATB3270
000980	03 ATBU PIC X VALUE ' '.			ATB3270

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000990	03 ATBUR	REDEFINES ATBU		ATB3270
001000		PIC X.		ATB3270
001010	03 ATBURN	REDEFINES ATBU		ATB3270
001020		PIC X.		ATB3270
001030	03 ATBURY	PIC X VALUE 'A'.		ATB3270
001040 *				ATB3270
001050 *	UNPROTECTED	HIGH INTENSITY		ATB3270
001060 *	ALPHA-NUMERIC			ATB3270
001070 *				ATB3270
001080	03 ATBUHN	PIC X VALUE 'H'.		ATB3270
001090	03 ATBUH	REDEFINES ATBUHN		ATB3270
001100		PIC X.		ATB3270
001110	03 ATBUHY	PIC X VALUE 'I'.		ATBTS UO
001120 *				ATB3270
001130 *	UNPROTECTED	OFF(DARK) INTENSITY		ATB3270
001140 *	ALPHA-NUMERIC			ATB3270
001150 *				ATB3270
001160	03 ATBUO	PIC X VALUE 'O'.		ATB3270
001170	03 ATBUON	REDEFINES ATBUO		ATB3270
001180		PIC X.		ATB3270
001190	03 ATBUOY	PIC X VALUE 'I'.		ATB3270
001200 *				ATB3270
001210 *	UNPROTECTED	REGULAR INTENSITY, LIGHT PEN		ATB3270
001220 *	ALPHA-NUMERIC			ATB3270
001230 *				ATB3270
001240	03 ATBUL	PIC X VALUE 'O'.		ATB3270
001250	03 ATBULN	REDEFINES ATBUL		ATB3270
001260		PIC X.		ATB3270
001270	03 ATBULY	PIC X VALUE 'E'.		ATB3270
001280 *				ATB3270
001290 *	UNPROTECTED	REGULAR INTENSITY		ATB3270
001300 *	NUMERIC SHIFT			ATB3270
001310 *				ATB3270
001320	03 ATBN	PIC X VALUE 'G'.		ATB3270
001330	03 ATBNR	REDEFINES ATBN		ATB3270
001340		PIC X.		ATB3270
001350	03 ATBNRN	REDEFINES ATBN		ATB3270
001360		PIC X.		ATB3270
001370	03 ATBNRY	PIC X VALUE 'J'.		ATB3270
001380 *				ATB3270
001390 *	UNPROTECTED	HIGH INTENSITY		ATB3270
001400 *	NUMERIC SHIFT			ATB3270
001410 *				ATB3270
001420	03 ATBNH	PIC X VALUE 'Q'.		ATB3270
001430	03 ATBNHN	REDEFINES ATBNH		ATB3270
001440		PIC X.		ATB3270
001450	03 ATBNHY	PIC X VALUE 'R'.		ATB3270
001460 *				ATB3270
001470 *	UNPROTECTED	OFF(DARK) INTENSITY		ATB3270
001480 *	NUMERIC SHIFT			ATB3270
001490 *				ATB3270
001500	03 ATBNO	PIC X VALUE 'S'.		ATB3270
001510	03 ATBNON	REDEFINES ATBNO		ATB3270
001520		PIC X.		ATB3270
001530	03 ATBNOY	PIC X VALUE 'I'.		ATB3270
001540 *				ATB3270
001550 *	UNPROTECTED	REGULAR INTENSITY, LIGHT PEN		ATB3270
001560 *	NUMERIC SHIFT			ATB3270
001570 *				ATB3270
001580	03 ATBNL	PIC X VALUE 'M'.		ATB3270
001590	03 ATBNLN	REDEFINES ATBNL		ATB3270
001600		PIC X.		ATB3270
001610	03 ATBNLY	PIC X VALUE 'N'.		ATB3270
001620 *				ATB3270
00C490				
000500 *01	KEY3270	COPY KEY3270.		
000010	01 KEY3270.			
000020	02 ENTERK	PIC X VALUE QUOTE.		
000030	02 PF1	PIC X VALUE '1'.		
000040	02 PF2	PIC X VALUE '2'.		
000050	02 PF3	PIC X VALUE '3'.		
000060	02 PF4	PIC X VALUE '4'.		
000070	02 PF5	PIC X VALUE '5'.		
000080	02 PF6	PIC X VALUE '6'.		
000090	02 PF7	PIC X VALUE '7'.		
000100	02 PF8	PIC X VALUE '8'.		
000110	02 PF9	PIC X VALUE '9'.		

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000120	02 PF10	PIC X	VALUE	'::'
000130	02 PF11	PIC X	VALUE	'::'
000140	02 PF12	PIC X	VALUE	'::'
000150	02 IMMDECT	PIC X	VALUE	'::'
000160	02 TESTREQ	PIC X	VALUE	'0'
000170	02 CLEAR	PIC X	VALUE	'::'
000180	02 PA1	PIC X	VALUE	'3'
000190	02 PA2	PIC X	VALUE	'>'
000200	02 PA3	PIC X	VALUE	'1'
000510	* COPY IDMS SUBSCHEMA-NAMES.			
000520	01 SUBSCHEMA-SSNAME	PIC X(8)	VALUE	'DATASUBS'.
	01 SUBSCHEMA-RECNAME.			
	03 SR1	PIC X(16)	VALUE	'SR1'.
	03 SR9995	PIC X(16)	VALUE	'IXSUB'.
	03 SR9997	PIC X(16)	VALUE	'IXSET'.
	03 SR9996	PIC X(16)	VALUE	'IXREC'.
	03 SR9999	PIC X(16)	VALUE	'IXGWRN'.
	03 SR9998	PIC X(16)	VALUE	'IXDET'.
	03 SR104	PIC X(16)	VALUE	'CDFILE'.
	03 SR103	PIC X(16)	VALUE	'CDALIAS'.
	03 SR102	PIC X(16)	VALUE	'CDPROGRM'.
	03 SR101	PIC X(16)	VALUE	'CDRECB'.
	03 SR100	PIC X(16)	VALUE	'CDRECA'.
	01 SUBSCHEMA-SETNAMES.			
	03 DDRECA-DDRECB	PIC X(16)	VALUE	'DDRECA-DDRECB'.
	03 DDRECA-PROGRAM	PIC X(16)	VALUE	'DDRECA-PROGRAM'.
	03 DDRECA-ALIAS	PIC X(16)	VALUE	'DDRECA-ALIAS'.
	03 DDRECA-FILE	PIC X(16)	VALUE	'DDRECA-FILE'.
	03 IX-DATA-NAME	PIC X(16)	VALUE	'IX-DATA-NAME'.
	03 IXSET-IXREC	PIC X(16)	VALUE	'IXSET-IXREC'.
	03 IXSET-IXDET	PIC X(16)	VALUE	'IXSET-IXDET'.
	03 IXSUB-IXREC	PIC X(16)	VALUE	'IXSUB-IXREC'.
	03 CALC	PIC X(16)	VALUE	'CALC'.
	01 SUBSCHEMA-AREANAMES.			
	03 DATA-INDX-REGION	PIC X(16)	VALUE	'CATA-INDX-REGION'.
	03 DATA-REGION	PIC X(16)	VALUE	'CATA-REGION'.
000530	01 ISHD-CONSTANTS.			
	02 ISHD-F0			
	03 ISHD-H0	PIC X(2)	VALUE	LOW-VALUES.
	03 ISHD-X00	PIC X	VALUE	LOW-VALUES.
	03 FILLER	PIC X	VALUE	LOW-VALUES.
02	ISHD-H5	PIC 9(4)	COMP SYNC	VALUE 9.
02	ISHD-H22	PIC 9(4)	COMP SYNC	VALUE 22.
02	ISHD-H16	PIC 9(4)	COMP SYNC	VALUE 16.
02	ISHD-H9	PIC 9(4)	COMP SYNC	VALUE 9.
02	ISHD-H10	PIC 9(4)	COMP SYNC	VALUE 10.
02	ISHD-H8	PIC 9(4)	COMP SYNC	VALUE 8.
02	ISHD-H7	PIC 9(4)	COMP SYNC	VALUE 7.
02	ISHD-H6	PIC 9(4)	COMP SYNC	VALUE 6.
02	ISHD-H11	PIC 9(4)	COMP SYNC	VALUE 11.
02	ISHD-H4	PIC 9(4)	COMP SYNC	VALUE 4.
02	ISHD-H3	PIC 9(4)	COMP SYNC	VALUE 3.

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	02 ISHD-X01 PIC X VALUE 1 1.			
	02 ISHD-X02 PIC X VALUE 1 1.			
	02 ISHD-X05 PIC X VALUE 1 1.			
	02 ISHD-X22 PIC X VALUE 1 1.			
	02 ISHD-XA0 PIC X VALUE 1 1.			
	02 ISHD-X06 PIC X VALUE 0 0.			
	02 ISHD-XE2 PIC X VALUE 1 1.			
	02 ISHD-XF0 PIC X VALUE 0 0.			
	02 ISHD-XF2 PIC X VALUE 2 2.			
	02 ISHD-L1 PIC X(22) VALUE *** IDMS ERRORS DUMP ***.			
000540	LINKAGE SECTION.			
000010	*01 TC80 COPY TCBCOB. CHLTWAEX			
000010	01 TC80.			
000020	02 ITRMQRID PIC X(4).			
000030	02 ITRMUCBA PIC 9(9) COMP SYNC.			
000040	02 ITRMPCKA PIC 9(9) COMP SYNC.			
000050	02 ITRMSIZE PIC 9(4) COMP SYNC.			
000060	02 ITRMERRP PIC X.			
000070	02 ITRMOPCD PIC X.			
000080	02 ITRMPCKC PIC X.			
000090	02 ITRMAID PIC X.			
000100	02 ITRMCADD PIC XX.			
000110	02 ITRMCADD-B REDEFINES ITRMCADD PIC 9(4) COMP.			
000120	02 ITRMTYPE PIC X.			
000130	02 ITRMNAME PIC XXX.			
000140	02 ITRMSENS PIC 9(9) COMP SYNC.			
000150	02 ITRMENTY REDEFINES ITRMSENS			
000160	PIC 9(9) COMP SYNC.			
000170	02 ITRMVSAM REDEFINES ITRMSENS.			
000180	04 ITRMVSMC PIC X.			
000190	04 ITRMVSEC PIC XX.			
000200	04 ITRMCBEC REDEFINES ITRMVSEC			
000210	PIC XX.			
000220	04 ITRMVSRC PIC X.			
000230	02 ITRMACRO PIC X.			
000240	02 ITRMSGON PIC XXX.			
000250	02 ITRMECBX PIC 9(9) COMP SYNC.			
000260	02 ITRMEXTN PIC 9(9) COMP SYNC.			
000270	02 ITRMIGAR PIC 9(9) COMP SYNC.			
000280	02 ITRMPROG PIC 9(9) COMP SYNC.			
000290	02 ITRMREPL PIC X(4).			
000300	02 ITRMFLGS PIC 9(4) COMP SYNC.			
000310	02 ITRMRLN PIC 9(4) COMP SYNC.			
000320	02 ITRMSAVE PIC X(72).			
000330	02 ITRMHAND PIC X.			
000340	02 ITRMCALP PIC XXX.			
000350	02 ITRMTRAN PIC X(4).			
000360	* USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER PIC X(512).			CHLTWAEX
000040	02 TWA-USER REDEFINES TWA-C2.			CHLTWAEX
000050	03 TWA-TRAN-CODE PIC X(4).			CHLTWAEX
000060	03 TWA-CURRENT-PRG-NAME			CHLTWAEX
000070	PIC X(8).			CHLTWAEX
000080	03 TWA-PROGRAM-FLAGS PIC X(8).			CHLTWAEX
000090	03 TWA-MAP-PTR PIC X(4).			CHLTWAEX
000100	03 TWA-MAPC-PTR PIC X(4).			CHLTWAEX
000110	03 TWA-NEXT-PRG-NAME PIC X(8).			CHLTWAEX
000120	03 TWA-NEXT-TRAN-CODE PIC X(4).			CHLTWAEX
000130	03 TWA-DBKEY PIC X(4).			CHLTWAEX
000140	03 TWA-DBKEY-9 REDEFINES TWA-DBKEY			CHLTWAEX
000150	PIC S9(9) COMP SYNC.			CHLTWAEX
000160	03 TWA-DBKEY-2 PIC X(4).			CHLTWAEX
000170	03 TWA-DBKEY-2-9 REDEFINES TWA-DBKEY-2			CHLTWAEX
000180	PIC S9(9) COMP SYNC.			CHLTWAEX
000190	03 TWA-DBKEY-3 PIC X(4).			CHLTWAEX
000200	03 TWA-DBKEY-3-9 REDEFINES TWA-DBKEY-3			CHLTWAEX
000210	PIC S9(9) COMP SYNC.			CHLTWAEX
000220	03 TWA-DISKD-DATA.			CHLTWAEX
000230	05 TWA-DISKD-ACQUIRED-FLAG			CHLTWAEX
000240	PIC X.			CHLTWAEX
000250	88 TWA-DISKD-NOT-ACQUIRED VALUE LOW-VALUES.			CHLTWAEX
000260	88 TWA-DISKD-ACQUIRED VALUE HIGH-VALUES.			CHLTWAEX
000270	05 TWA-DISKD-NO-ACQUIRED			CHLTWAEX
000280	PIC S9(3) COMP.			CHLTWAEX

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000290	03 TWA-TEST-PRODUCTION-FLAG			CHLTWAEX
000300	PIC X.			CHLTWAEX
000310	88 TWA-PRODUCTION-RUN	VALUE LOW-VALUES.		CHLTWAEX
000320	88 TWA-TEST-RUN	VALUE 'T'.		CHLTWAEX
000330	03 TWA-SIS-TERM-CODE.			CHLTWAEX
000340	05 TWA-SIS-TERM-SEMESTER			CHLTWAEX
000350	PIC X.			CHLTWAEX
000360	05 TWA-SIS-TERM-YEAR			CHLTWAEX
000370	PIC XX.			CHLTWAEX
000380	03 TWA-SIS-SUBSYSTEM-CODE			CHLTWAEX
000390	PIC X(4).			CHLTWAEX
000400	03 TWA-SEC-ACCESS-CODE			CHLTWAEX
000410	88 TWA-SEC-ACCESS-IS-INQUIRY	VALUE 'I'.		CHLTWAEX
000420	88 TWA-SEC-ACCESS-IS-UPDATE	VALUE 'U'.		CHLTWAEX
000430	03 TWA-SEC-ACCESS-DEPT	PIC XXX.		CHLTWAEX
000440	03 TWA-ITRMERRP-SAVE	PIC X.		CHLTWAEX
000450	03 FILLER	PIC X(12).		CHLTWAEX
000560	03 TWA-DD-AREA.			
000570	05 TWA-FUNC	PIC XX.		
000580	05 TWA-DATA-NAME	PIC X(30).		
000590	05 FILLER	PIC X(20).		
000600	03 TWA-FLAGS-AREA.			
000610	05 DDRECA-FOUND-FLAG	PIC X.		
000620				
000630	88 DDRECA-FOUND	VALUE 'Y'.		
000640	05 DDRECB-FOUND-FLAG	PIC X.		
000650				
000660	88 DDRECB-FOUND	VALUE 'Y'.		
000670	05 PROGRAM-EDS-FLAG	PIC X.		
000680				
000690	88 END-OF-PROGRAM	VALUE 'Y'.		
000700	05 FILE-EDS-FLAG	PIC X.		
000710	88 END-OF-FILE	VALUE 'Y'.		
000720	05 ALIAS-EDS-FLAG	PIC X.		
000730	88 END-OF-ALIAS	VALUE 'Y'.		
000740				
000010	01 RELOCATE.			SHDSPTEX
000020	02 FILLER	PIC X(12).		SHDSPTEX
000030	02 RSHDPCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000040	02 FILLER	PIC X(32).		SHDSPTEX
000050	02 RSHDCSA	PIC 9(9).	COMP SYNC.	SHDSPTEX
000060	02 FILLER	PIC X(24).		SHDSPTEX
000070	02 RSHDOCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000080	02 FILLER	PIC X(100).		SHDSPTEX
000090	02 RSHDLOWH	PIC 9(9).	COMP SYNC.	SHDSPTEX
000100	02 RSHDHIGH	PIC 9(9).	COMP SYNC.	SHDSPTEX
000110	02 FILLER	PIC X(68).		SHDSPTEX
000120	02 RSHDIVAR	PIC 9(9).	COMP SYNC.	SHDSPTEX
000130	02 FILLER	PIC X(4).		SHDSPTEX
000140	02 RSHDFREE	PIC 9(9).	COMP SYNC.	SHDSPTEX
000150	02 FILLER	PIC X(48).		SHDSPTEX
000160	02 RSHDTCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000170	02 FILLER	PIC X(40).		SHDSPTEX
000180	* USER AREA STARTS HERE.			SHDSPTEX
000190	02 SPT-REST-OF-SPT.			SHDSPTEX
000200	03 SPT-TEST-PRODUCTION-FLAG	PIC X.		SHDSPTEX
000210				SHDSPTEX
000220	88 SPT-PRODUCTION-RUN	VALUE LOW-VALUES.		SHDSPTEX
000230	88 SPT-TEST-RUN	VALUE 'T'.		SHDSPTEX
000240	03 FILLER	PIC X.		01/22/82
000250	03 FILLER	PIC X(300).		01/22/82
000260	03 FILLER	PIC XX.		01/22/82
000270	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
000280	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
000290	03 FILLER	PIC X(8).		01/22/82
000300	03 SPT-NQ3-ECB	PIC XXXX.		01/22/82
000310	03 SPT-NDQ-ECB	PIC XXXX.		06/02/82
000320	03 SPT-PRT1-BUFFER-POOL	POINTER		06/08/82
000330	PIC S9(9)	COMP SYNC.		06/08/82
000340	03 SPT-PRT2-BUFFER-POOL	POINTER		06/08/82
000350	PIC S9(9)	COMP SYNC.		06/08/82
000360	03 SPT-PRT3-BUFFER-POOL	POINTER		06/08/82
000370	PIC S9(9)	COMP SYNC.		06/08/82
000380	03 SPT-PRT4-BUFFER-POOL	POINTER		06/08/82
000390	PIC S9(9)	COMP SYNC.		06/08/82
000400	03 SPT-PRT5-BUFFER-POOL	POINTER		06/08/82
000410	PIC S9(9)	COMP SYNC.		06/08/82

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000420	03 SPT-PRT6-BUFFER-POOL-POINTER			06/08/82
000430	PIC S9(9) COMP SYNC.			06/08/82
000440	03 SPT-PRT7-BUFFER-POOL-POINTER			06/08/82
000450	PIC S9(9) COMP SYNC.			06/08/82
000460	03 SPT-PRT8-BUFFER-POOL-POINTER			06/08/82
000470	PIC S9(9) COMP SYNC.			06/08/82
000480				SHDSPTEX
000760				
000010	01 MCHLTOPI.			MCHLTOP
000020	02 MCHLTOP-TRANL	PIC X.		MCHLTOP
000030	02 MCHLTOP-TRANI	PIC X(4).		MCHLTOP
000040	02 MCHLTOP-FUNCL	PIC X.		MCHLTOP
000050	02 MCHLTOP-FUNCI	PIC XX.		MCHLTOP
000060	02 MCHLTOP-KEYL	PIC X.		MCHLTOP
000070	02 MCHLTOP-KEYI	PIC X(30).		MCHLTOP
000780				
000010	01 MCHLDELO.			MCHLDEL
000020	02 MCHLDELW	PIC X.		MCHLDEL
000030	02 FILLER	PIC X(4).		MCHLDEL
000040	02 MCHLDEL-TRANA	PIC X.		MCHLDEL
000050	02 MCHLDEL-TRANO	PIC X(4).		MCHLDEL
000060	02 FILLER	PIC X.		MCHLDEL
000070	02 MCHLDEL-FUNCA	PIC X.		MCHLDEL
000080	02 MCHLDEL-FUNCO	PIC XX.		MCHLDEL
000090	02 FILLER	PIC X.		MCHLDEL
000100	02 MCHLDEL-KEYA	PIC X.		MCHLDEL
000110	02 MCHLDEL-KEYO	PIC X(30).		MCHLDEL
000120	02 FILLER	PIC X(31).		MCHLDEL
000130	02 MCHLDEL-TEST-FLAGA	PIC X.		MCHLDEL
000140	02 MCHLDEL-TEST-FLAGO	PIC X(4).		MCHLDEL
000150	02 FILLER	PIC X.		MCHLDEL
000160	02 MCHLDEL-RDATEA	PIC X.		MCHLDEL
000170	02 MCHLDEL-RDATEO	PIC X(8).		MCHLDEL
000180	02 FILLER	PIC X.		MCHLDEL
000190	02 MCHLDEL-RTIMEA	PIC X.		MCHLDEL
000200	02 MCHLDEL-RTIMEO	PIC X(8).		MCHLDEL
000210	02 FILLER	PIC X(32).		MCHLDEL
000220	02 MCHLDEL-CSECTA	PIC X.		MCHLDEL
000230	02 MCHLDEL-CSECTO	PIC X(8).		MCHLDEL
000240	02 FILLER	PIC X.		MCHLDEL
000250	02 MCHLDEL-VER-MODA	PIC X.		MCHLDEL
000260	02 MCHLDEL-VER-MODO	PIC 9.9.		MCHLDEL
000270	02 FILLER	PIC X(47).		MCHLDEL
000280	02 MCHLDEL-DATA-NAMEA	PIC X.		MCHLDEL
000290	02 MCHLDEL-DATA-NAMEO	PIC X(28).		MCHLDEL
000300	02 FILLER	PIC X(19).		MCHLDEL
000310	02 MCHLDEL-CREATED-DATEA	PIC X.		MCHLDEL
000320	02 MCHLDEL-CREATED-DATEO			MCHLDEL
000330	03 MCHLDEL-CREATED-DATE-MMO	PIC XX.		MCHLDEL
000340	03 MCHLDEL-CREATED-DATE-SLASH-10	PIC X.		MCHLDEL
000350	03 MCHLDEL-CREATED-DATE-DDO	PIC XX.		MCHLDEL
000360	03 MCHLDEL-CREATED-DATE-SLASH-20	PIC X.		MCHLDEL
000370	03 MCHLDEL-CREATED-DATE-YYO	PIC XX.		MCHLDEL
000380	02 FILLER	PIC X(15).		MCHLDEL
000390	02 MCHLDEL-DATA-DESCA	PIC X.		MCHLDEL
000400	02 MCHLDEL-DATA-DESCO	PIC X(40).		MCHLDEL
000410	02 FILLER	PIC X(19).		MCHLDEL
000420	02 MCHLDEL-CHANGED-DATEA	PIC X.		MCHLDEL
000430	02 MCHLDEL-CHANGED-DATEC.			MCHLDEL
000440	03 MCHLDEL-CHANGED-DATE-MMO	PIC XX.		MCHLDEL
000450	03 MCHLDEL-CHANGED-DATE-SLASH-10	PIC X.		MCHLDEL
000460	03 MCHLDEL-CHANGED-DATE-DDO	PIC XX.		MCHLDEL
000470	03 MCHLDEL-CHANGED-DATE-SLASH-20	PIC X.		MCHLDEL
000480	03 MCHLDEL-CHANGED-DATE-YYO	PIC XX.		MCHLDEL
000490	02 FILLER	PIC X(11).		MCHLDEL
000500	02 MCHLDEL-DATA-PICTUREA	PIC X.		MCHLDEL
000510	02 MCHLDEL-DATA-PICTUREO	PIC X(10).		MCHLDEL
000520	02 FILLER	PIC X(12).		MCHLDEL
000530	02 MCHLDEL-DATA-LEVELA	PIC X.		MCHLDEL
000540	02 MCHLDEL-DATA-LEVELO	PIC X(6).		MCHLDEL
000550	02 FILLER	PIC X(21).		MCHLDEL
000560	02 MCHLDEL-REVISED-PERSONA	PIC X.		MCHLDEL
000570	02 MCHLDEL-REVISED-PERSONO	PIC XXX.		MCHLDEL
000580	02 FILLER	PIC X(12).		MCHLDEL
000590	02 MCHLDEL-DATA-USAGEA	PIC X.		MCHLDEL
000600	02 MCHLDEL-DATA-USAGEO	PIC X(15).		MCHLDEL
000610	02 FILLER	PIC X(14).		MCHLDEL

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000620	02 MCHLDEL-DATA=JUSTIFYA	PIC X		MCHLDEL
000630	02 MCHLDEL-DATA=JUSTIFYA	PIC X(15).		MCHLDEL
000640	02 FILLER	PIC X(22).		MCHLDEL
000650	02 MCHLDEL-ALIAS-NAME-1A	PIC X		MCHLDEL
000660	02 MCHLDEL-ALIAS-NAME-10	PIC X(30).		MCHLDEL
000670	02 FILLER	PIC X(51).		MCHLDEL
000680	02 MCHLDEL-ALIAS-NAME-2A	PIC X		MCHLDEL
000690	02 MCHLDEL-ALIAS-NAME-2C	PIC X(30).		MCHLDEL
000700	02 FILLER	PIC X(81).		MCHLDEL
000710	02 MCHLDEL-ALIAS-NAME-3A	PIC X		MCHLDEL
000720	02 MCHLDEL-ALIAS-NAME-30	PIC X(30).		MCHLDEL
000730	02 FILLER	PIC X(51).		MCHLDEL
000740	02 MCHLDEL-ALIAS-NAME-4A	PIC X		MCHLDEL
000750	02 MCHLDEL-ALIAS-NAME-40	PIC X(30).		MCHLDEL
000760	02 FILLER	PIC X(161).		MCHLDEL
000770	02 MCHLDEL-USER-NAME-1A	PIC X		MCHLDEL
000780	02 MCHLDEL-USER-NAME-10	PIC X(20).		MCHLDEL
000790	02 FILLER	PIC X(51).		MCHLDEL
000800	02 MCHLDEL-USER-NAME-2A	PIC X		MCHLDEL
000810	02 MCHLDEL-USER-NAME-20	PIC X(20).		MCHLDEL
000820	02 FILLER	PIC X(51).		MCHLDEL
000830	02 MCHLDEL-USER-NAME-3A	PIC X		MCHLDEL
000840	02 MCHLDEL-USER-NAME-30	PIC X(161).		MCHLDEL
000850	02 FILLER	PIC X(81).		MCHLDEL
000860	02 MCHLDEL-USER-NAME-4A	PIC X		MCHLDEL
000870	02 MCHLDEL-USER-NAME-40	PIC X(20).		MCHLDEL
000880	02 FILLER	PIC X(51).		MCHLDEL
000890	02 MCHLDEL-USER-NAME-5A	PIC X		MCHLDEL
000900	02 MCHLDEL-USER-NAME-50	PIC X(20).		MCHLDEL
000910	02 FILLER	PIC X(51).		MCHLDEL
000920	02 MCHLDEL-USER-NAME-6A	PIC X		MCHLDEL
000930	02 MCHLDEL-USER-NAME-60	PIC X(161).		MCHLDEL
000940	02 FILLER	PIC X(211).		MCHLDEL
000950	02 MCHLDEL-PROGRAM-USED-1A	PIC X		MCHLDEL
000960	02 MCHLDEL-PROGRAM-USED-10	PIC X(10).		MCHLDEL
000970	02 FILLER	PIC X(51).		MCHLDEL
000980	02 MCHLDEL-PROGRAM-USED-2A	PIC X		MCHLDEL
000990	02 MCHLDEL-PROGRAM-USED-20	PIC X(10).		MCHLDEL
001000	02 FILLER	PIC X(51).		MCHLDEL
001010	02 MCHLDEL-PROGRAM-USED-3A	PIC X		MCHLDEL
001020	02 MCHLDEL-PROGRAM-USED-30	PIC X(10).		MCHLDEL
001030	02 FILLER	PIC X(51).		MCHLDEL
001040	02 MCHLDEL-PROGRAM-USED-4A	PIC X		MCHLDEL
001050	02 MCHLDEL-PROGRAM-USED-40	PIC X(10).		MCHLDEL
001060	02 FILLER	PIC X(81).		MCHLDEL
001070	02 MCHLDEL-PROGRAM-USED-5A	PIC X		MCHLDEL
001080	02 MCHLDEL-PROGRAM-USED-50	PIC X(10).		MCHLDEL
001090	02 FILLER	PIC X(51).		MCHLDEL
001100	02 MCHLDEL-PROGRAM-USED-6A	PIC X		MCHLDEL
001110	02 MCHLDEL-PROGRAM-USED-60	PIC X(10).		MCHLDEL
001120	02 FILLER	PIC X(51).		MCHLDEL
001130	02 MCHLDEL-PROGRAM-USED-7A	PIC X		MCHLDEL
001140	02 MCHLDEL-PROGRAM-USED-70	PIC X(10).		MCHLDEL
001150	02 FILLER	PIC X(51).		MCHLDEL
001160	02 MCHLDEL-PROGRAM-USED-8A	PIC X		MCHLDEL
001170	02 MCHLDEL-PROGRAM-USED-80	PIC X(10).		MCHLDEL
001180	02 FILLER	PIC X(211).		MCHLDEL
001190	02 MCHLDEL-FILE-USED-1A	PIC X		MCHLDEL
001200	02 MCHLDEL-FILE-USED-10	PIC X(20).		MCHLDEL
001210	02 FILLER	PIC X(51).		MCHLDEL
001220	02 MCHLDEL-FILE-USED-2A	PIC X		MCHLDEL
001230	02 MCHLDEL-FILE-USED-20	PIC X(20).		MCHLDEL
001240	02 FILLER	PIC X(81).		MCHLDEL
001250	02 MCHLDEL-FILE-USED-3A	PIC X		MCHLDEL
001260	02 MCHLDEL-FILE-USED-30	PIC X(20).		MCHLDEL
001270	02 FILLER	PIC X(51).		MCHLDEL
001280	02 MCHLDEL-FILE-USED-4A	PIC X		MCHLDEL
001290	02 MCHLDEL-FILE-USED-40	PIC X(20).		MCHLDEL
001300	02 FILLER	PIC X(61).		MCHLDEL
001310	02 MCHLDEL-MESSAGE-1A	PIC X		MCHLDEL
001320	02 MCHLDEL-MESSAGE-10	PIC X(39).		MCHLDEL
001330	02 FILLER	PIC X		MCHLDEL
001340	02 MCHLDEL-DELETE-FLAGA	PIC X		MCHLDEL
001350	02 MCHLDEL-DELETE-FLAGO	PIC XXX.		MCHLDEL
001360	02 FILLER	PIC X		MCHLDEL
001370	02 MCHLDEL-DELETE-FLAG-MESSA	PIC X		MCHLDEL
001380	02 MCHLDEL-DELETE-FLAG-MESSO	PIC X(81).		MCHLDEL

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001390	02 FILLER	PIC X(6).		MCHLDELO
001400	02 MCHLDEL-MESSAGE-2A	PIC X.		MCHLDELO
001410	02 MCHLDEL-MESSAGE-20	PIC X(49).		MCHLDELO
001420	02 FILLER	PIC X(6).		MCHLDELO
000800				
000810	01 MAPERRO.			MAPERRO
000010	02 MAPERRW	PIC X.		MAPERRO
000020	02 FILLER	PIC X(4).		MAPERRO
000030	02 MAPERR-CSECTA	PIC X.		MAPERRO
000040	02 MAPERR-CSECT0	PIC X(8).		MAPERRO
000050	02 FILLER	PIC X.		MAPERRO
000060	02 MAPERR-VER-MODA	PIC X.		MAPERRO
000070	02 MAPERR-VER-MOD0	PIC 9.9.		MAPERRO
000080	02 FILLER	PIC X.		MAPERRO
000090	02 MAPERR-TEST-FLAGA	PIC X.		MAPERRO
000100	02 MAPERR-TEST-FLAG0	PIC X(4).		MAPERRO
000110	02 FILLER	PIC X(7).		MAPERRO
000120	02 MAPERR-MSG0	PIC X.		MAPERRO
000130	02 MAPERR-MSG0	PIC X(56).		MAPERRO
000140	02 FILLER	PIC X.		MAPERRO
000150	02 MAPERR-IDMS-ERROR-LITERAL0	PIC X.		MAPERRO
000160	02 MAPERR-IDMS-ERROR-LITERALA	PIC X(11).		MAPERRO
000170	02 FILLER	PIC X.		MAPERRO
000180	02 MAPERR-ERROR-STATUSA	PIC X.		MAPERRO
000190	02 MAPERR-ERROR-STATUS0	PIC X(4).		MAPERRO
000200	02 FILLER	PIC X.		MAPERRO
000210	02 MAPERR-ERROR-SETA	PIC X.		MAPERRO
000220	02 MAPERR-ERROR-SET0	PIC X(16).		MAPERRO
000230	02 FILLER	PIC X.		MAPERRO
000240	02 MAPERR-ERROR-RECORDA	PIC X.		MAPERRO
000250	02 MAPERR-ERROR-RECORD0	PIC X(16).		MAPERRO
000260	02 FILLER	PIC X.		MAPERRO
000270	02 MAPERR-ERROR-AREA0	PIC X.		MAPERRO
000280	02 MAPERR-ERROR-AREA0	PIC X(16).		MAPERRO
000290	02 FILLER	PIC X(12).		MAPERRO
000300				
000830				
000840 *	01 COPY IDMS DDRECA.			
	03 DATA-NAME	PIC X(30).		
	03 DATA-CREATED-DATE.			
	05 DATA-CREATED-YY	PIC XX.		
	05 DATA-CREATED-MM	PIC XX.		
	05 DATA-CREATED-DD	PIC XX.		
	03 DATA-CHANGED-DATE.			
	05 DATA-CHANGED-YY	PIC XX.		
	05 DATA-CHANGED-MM	PIC XX.		
	05 DATA-CHANGED-DD	PIC XX.		
	03 DATA-USER	OCCURS 8.		
	05 DATA-USER-NAME	PIC X(20).		
	03 DATA-REVISED-PERSON	PIC XXX.		
	03 FILLER	PIC XXX.		
000850				
000860 *	01 COPY IDMS DDRECB.			
	03 DATA-DESC	PIC X(40).		
	03 DATA-LENGTH	PIC X(10).		
	03 DATA-JUSTIFY	PIC X.		
		88 DATA-JUSTIFY-RIGHT VALUE 'R'.		
		88 DATA-JUSTIFY-LEFT VALUE 'L'.		
	03 DATA-LEVEL	PIC X.		
		88 DATA-INPUT VALUE 'I'.		
		88 DATA-OUTPUT VALUE 'O'.		
		88 DATA-INPUT-OUTPUT VALUE 'B'.		
	03 DATA-USAGE	PIC X(12).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		
000870				
000880 *	01 COPY IDMS DDPROGRM.			
	03 DATA=PROGRAM=USED	PIC X(8).		
	03 FILLER	PIC X(4).		
	03 FILLER	PIC X(4).		

000890
000900 * 01 COPY IDMS DDALIAS.
DDALIAS.

03 DATA-ALIAS-NAME PIC X(30).
03 FILLER PIC X(16).
03 FILLER PIC X(4).

000910
000920 * 01 COPY IDMS DDFILE.
DDFILE.

03 DATA-FILE-USED PIC X(20).
03 FILLER PIC X(8).
03 FILLER PIC X(4).

000930
000940 * 01 COPY IDMS SUBSCHEMA-CTRL.
SUBSCHEMA-CTRL.

03 PROGRAM-NAME PIC X(8).
03 ERROR-STATUS PIC X(4).
88 DB-STATUS-OK VALUE '0000'.

88 ANY-STATUS
VALUE '0000' THRU '9999'.
88 ANY-ERROR-STATUS
VALUE '0001' THRU '9999'.
88 DB-END-CF-SET VALUE '0307'.

03 DBKEY 88 DB-REC-NOT-FOUND VALUE '0326'.
PIC S9(8)
USAGE CCMP

03 RECORD-NAME SYNC.
03 RRECORD-NAME PIC X(16).
05 SSC-NCDN REDEFINES RECORD-NAME.
PIC X(8).
05 SSC-DBN PIC X(8).
03 AREA-NAME PIC X(16).
03 ERROR-SET PIC X(16).
03 ERROR-RECORD PIC X(16).
03 ERROR-AREA PIC X(16).
03 IDBMSCOM-AREA PIC X(100).
03 IDBMSCOM REDEFINES IDBMSCOM-AREA

03 FILLER PIC X
OCCURS 100.
05 DB-SUB-ADDR REDEFINES IDBMSCOM-AREA.
05 FILLER PIC X(4).
PIC X(96).

03 DIRECT-DBKEY PIC S9(8).
USAGE CCMP
SYNC.
03 DIRECT-DBK REDEFINES DIRECT-DBKEY
PIC S9(8).
USAGE CCMP
SYNC.

03 DATABASE-STATUS.
05 DBSTATEMENT-CODE PIC X(2).
05 DBSTATUS-CODE PIC X(5).
03 FILLER PIC X.
03 RECORD-OCCUR PIC S9(8).
USAGE CCMP
SYNC.

03 DML-SEQUENCE PIC S9(8)

USAGE COMP
SYNC.

000950

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000960	PROCEDURE DIVISION USING TCBD,			
000970	RELOCATE.			
000980				
000990	MOVE CSECT TO TWA-CURRENT-PROG-NAME.			
001000	MOVE ALL 'N' TO TWA-FLAGS-AREA.			
001010	PERFORM MAP-INPUT-MCHLTOP.			
001020	PERFORM SET-UP-IDMS.			
001030	PERFORM PROCESS-DISPLAY.			
001040	PERFORM FINISH-IDMS.			
001050 *	RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CODE AFTER-READ. CALL 'ISHOHLRT' USING ISHD-XAO TWA-NEXT-TRAN-CODE. GOBACK.			
001060				
001070				
001080	PROCESS-DISPLAY.			
001090	PERFORM PREPARE-OUTPUT-MAP.			
001100	MOVE TWA-DATA-NAME TO DATA-NAME.			
001110	PERFORM OBTAIN-CALC-DDRECA.			
001120	IF DDRECA-FOUND			
001130	MOVE ATBSO TO MCHLDEL-MESSAGE-2A			
001140	MOVE DDRECA-FOUND-MESS TO MCHLDEL-MESSAGE-10			
001150	PERFORM MOVE-DDRECA-DATA-TO-MAP			
001160	PERFORM OBTAIN-NEXT-DDRECB			
001170	PERFORM DISPLAY-ALL-CATA-TO-MAP			
001180	IF DDRECB-FOUND			
001190	PERFORM MOVE-DDRECB-DATA-TO-MAP			
001200	ELSE			
001210	NEXT SENTENCE			
001220	ELSE			
001230	MOVE ATBSO TO MCHLDEL-MESSAGE-1A,			
001240	MCHLDEL-DELETE-FLAGA,			
001250	MCHLDEL-DELETE-FLAG-MESSA			
001260	MOVE DDRECA-NOT-FOUND-MESS TO MCHLDEL-MESSAGE-20.			
001270	PERFORM WRITE-OUTPUT-MAP.			
001280				
001290	MOVE-DDRECA-DATA-TO-MAP.			
001300	MOVE DATA-NAME TO MCHLDEL-DATA-NAMEC.			
001310	IF DATA-CREATED-DATE NOT = SPACES			
001320	MOVE ALL '/' TO MCHLDEL-CREATED-DATE-SLASH-10,			
001330	MCHLDEL-CREATED-DATE-SLASH-20			
001340	MOVE DATA-CREATED-YY TO MCHLDEL-CREATED-DATE-YYO			
001350	MOVE DATA-CREATED-MM TO MCHLDEL-CREATED-DATE-MMO			
001360	MOVE DATA-CREATED-DD TO MCHLDEL-CREATED-DATE-DDO.			
001370	IF DATA-CHANGED-DATE NOT = SPACES			
001380	MOVE ALL '/' TO MCHLDEL-CHANGED-DATE-SLASH-10,			
001390	MCHLDEL-CHANGED-DATE-SLASH-20			
001400	MOVE DATA-CHANGED-YY TO MCHLDEL-CHANGED-DATE-YYO			
001410	MOVE DATA-CHANGED-MM TO MCHLDEL-CHANGED-DATE-MMO			
001420	MOVE DATA-CHANGED-DD TO MCHLDEL-CHANGED-DATE-DDO.			
001430	MOVE DATA-REVISED-PERSON TO MCHLDEL-REVISED-PERSONO.			
001440	MOVE DATA-USER-NAME (1) TO MCHLDEL-USER-NAME-10.			
001450	MOVE DATA-USER-NAME (2) TO MCHLDEL-USER-NAME-20.			
001460	MOVE DATA-USER-NAME (3) TO MCHLDEL-USER-NAME-30.			
001470	MOVE DATA-USER-NAME (4) TO MCHLDEL-USER-NAME-40.			
001480	MOVE DATA-USER-NAME (5) TO MCHLDEL-USER-NAME-50.			
001490	MOVE DATA-USER-NAME (6) TO MCHLDEL-USER-NAME-60.			
001500				
001510	DISPLAY-ALL-DATA-TO-MAP.			
001520	PERFORM OBTAIN-NEXT-DDRECB.			
001530	IF DB-STATUS-OK			
001540	PERFORM MOVE-DDRECB-DATA-TO-MAP.			
001550	PERFORM OBTAIN-FIRST-PROGRAM.			
001560	IF END-OF-PROGRAM			
001570	NEXT SENTENCE			
001580	ELSE			
001590	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-10			
001600	PERFORM LOAD-PROGRAM-NAME.			
001610	PERFORM OBTAIN-FIRST-FILE.			
001620	IF END-OF-FILE			
001630	NEXT SENTENCE			
001640	ELSE			
001650	MOVE DATA-FILE-USED TO MCHLDEL-FILE-USED-10			
001660	PERFORM LOAD-FILE-NAME.			
001670	PERFORM OBTAIN-FIRST-ALIAS.			
001680	IF END-OF-ALIAS			
001690	NEXT SENTENCE			
001700	ELSE			
001710	MOVE DATA-ALIAS-NAME TO MCHLDEL-ALIAS-NAME-10			

SEQ. NO.	SOURCE STATEMENT	PAGE	13	11/29/82
001720	PERFORM LOAD-ALIAS-NAME.			
001730				
001740	MOVE-ODRECB-DATA-TO-MAP.			
001750	MOVE DATA-DESC TO MCHLDEL-DATA-DESCC.			
001760	MOVE DATA-LENGTH TO MCHLDEL-DATA-PICTURED.			
001770	IF DATA-INPUT			
001780	MOVE 'INPUT' TO MCHLDEL-DATA-LEVEL0			
001790	ELSE			
001800	IF DATA-OUTPUT			
001810	MOVE 'OUTPUT' TO MCHLDEL-DATA-LEVEL0			
001820	ELSE			
001830	IF DATA-INPUT-OUTPUT			
001840	MOVE 'BOTH' TO MCHLDEL-DATA-LEVEL0.			
001850	IF DATA-JUSTIFY-RIGHT			
001860	MOVE 'RIGHT' TO MCHLDEL-DATA-JUSTIFY0			
001870	ELSE			
001880	IF DATA-JUSTIFY-LEFT			
001890	MOVE 'LEFT' TO MCHLDEL-DATA-JUSTIFY0.			
001900	MOVE DATA-USAGE TO MCHLDEL-DATA-USAGE0.			
001910				
001920	LOAD-PROGRAM-NAME.			
001930	PERFORM OBTAIN-NEXT-PROGRAM.			
001940	IF DB-END-OF-SET			
001950	NEXT SENTENCE			
001960	ELSE			
001970	IF DB-STATUS-OK			
001980	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-20			
001990	PERFORM OBTAIN-NEXT-PROGRAM.			
002000	IF DB-END-OF-SET			
002010	NEXT SENTENCE			
002020	ELSE			
002030	IF DB-STATUS-OK			
002040	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-30			
002050	PERFORM OBTAIN-NEXT-PROGRAM.			
002060	IF DB-END-OF-SET			
002070	NEXT SENTENCE			
002080	ELSE			
002090	IF DB-STATUS-OK			
002100	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-40			
002110	PERFORM OBTAIN-NEXT-PROGRAM.			
002120	IF DB-END-OF-SET			
002130	NEXT SENTENCE			
002140	ELSE			
002150	IF DB-STATUS-OK			
002160	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-50			
002170	PERFORM OBTAIN-NEXT-PROGRAM.			
002180	IF DB-END-OF-SET			
002190	NEXT SENTENCE			
002200	ELSE			
002210	IF DB-STATUS-OK			
002220	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-60			
002230	PERFORM OBTAIN-NEXT-PROGRAM.			
002240	IF DB-END-OF-SET			
002250	NEXT SENTENCE			
002260	ELSE			
002270	IF DB-STATUS-OK			
002280	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-70			
002290	PERFORM OBTAIN-NEXT-PROGRAM.			
002300	IF DB-END-OF-SET			
002310	NEXT SENTENCE			
002320	ELSE			
002330	IF DB-STATUS-OK			
002340	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-80.			
002350				
002360	LOAD-FILE-NAME.			
002370	PERFORM OBTAIN-NEXT-FILE.			
002380	IF DB-END-OF-SET			
002390	NEXT SENTENCE			
002400	ELSE			
002410	IF DB-STATUS-OK			
002420	MOVE DATA-FILE-USED TO MCHLDEL-FILE-USED-20			
002430	PERFORM OBTAIN-NEXT-FILE.			
002440	IF DB-END-OF-SET			
002450	NEXT SENTENCE			
002460	ELSE			
002470	IF DB-STATUS-OK			
002480	MOVE DATA-FILE-USED TO MCHLDEL-FILE-USED-30			

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	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCLM (18) SR101 DDRECA-DDRECB IDBMSCOM (43).			
003090	IF DB-REC-NOT-FOUND			
003100	MOVE 'N' TO DDRECB-FOUND-FLAG			
003110	ELSE			
003120	PERFORM IDMS-STATUS			
003130	MOVE 'Y' TO DDRECB-FOUND-FLAG.			
003140				
003150	OBTAIN-FIRST-PROGRAM.			
003160 *	OBTAIN FIRST DDPROGRAM WITHIN DDRECA-PROGRAM. MOVE 0003 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCLM (18) SR102 DDRECA-PROGRAM IDBMSCOM (43).			DMLC0003
003170	IF DB-END-OF-SET			
003180	MOVE 'Y' TO PROGRAM-EOS-FLAG			
003190	ELSE			
003200	PERFORM IDMS-STATUS			
003210	MOVE 'N' TO PROGRAM-EOS-FLAG.			
003220				
003230	OBTAIN-NEXT-PROGRAM.			
003240 *	OBTAIN NEXT DDPROGRAM WITHIN DDRECA-PROGRAM. MOVE 0004 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCLM (10) SR102 DDRECA-PROGRAM IDBMSCOM (43).			DMLC0004
003250	IF DB-END-OF-SET			
003260	NEXT SENTENCE			
003270	ELSE			
003280	PERFORM IDMS-STATUS.			
003290				
003300	OBTAIN-FIRST-FILE.			
003310 *	OBTAIN FIRST DDFILE WITHIN DDRECA-FILE. MOVE 0005 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCLM (18) SR104 DDRECA-FILE IDBMSCOM (43).			DMLC0005
003320	IF DB-END-OF-SET			
003330	MOVE 'Y' TO FILE-EOS-FLAG			
003340	ELSE			
003350	PERFORM IDMS-STATUS			
003360	MOVE 'N' TO FILE-EOS-FLAG.			
003370				
003380	OBTAIN-NEXT-FILE.			
003390 *	OBTAIN NEXT DDFILE WITHIN DDRECA-FILE. MOVE 0006 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCLM (10) SR104 DDRECA-FILE IDBMSCOM (43).			DMLC0006
003400	IF DB-END-OF-SET			
003410	NEXT SENTENCE			
003420	ELSE			
003430	PERFORM IDMS-STATUS.			
003440				
003450	OBTAIN-FIRST-ALIAS.			
003460 *	OBTAIN FIRST DDALIAS WITHIN DDRECA-ALIAS. MOVE 0007 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCLM (18) SR103 DDRECA-ALIAS IDBMSCOM (43).			DMLC0007
003470	IF DB-END-OF-SET			
003480	MOVE 'Y' TO ALIAS-EOS-FLAG			
003490	ELSE			

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003500	PERFORM IDMS-STATUS			
003510	MOVE 'N' TO ALIAS-ECS-FLAG.			
003520				
003530	OBTAIN-NEXT-ALIAS.			
003540 *	OBTAIN NEXT DOALIAS WITHIN DDRECA-ALIAS.			
	MOVE 0008 TO DML-SEQUENCE			DMLC0008
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (10)			
	SR103			
	DDRECA-ALIAS			
	IDBMSCOM (43).			
003550	IF DB-END-OF-SET			
003560	NEXT SENTENCE			
003570	ELSE			
003580	PERFORM IDMS-STATUS.			
003590				
003600	SET-UP-IDMS.			
003610 *	ACQUIRE VARIABLE BUFFER FOR SUBSCHEMA-CTRL			
003620 *	SIZE IS BUFFER-SIZE-CTRL.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-CTRL ISHD-H11 ISHD-XF0			
	ISHD-F0			
	SERVICE RELOAD SUBSCHEMA-CTRL.			
003630	MOVE CSECT TC PROGRAM-NAME.			
000010	IF TWA-PRODUCTION-RUN			OLBINDRN
000020	AND SPT-PRODUCTION-RUN			OLBINDRN
000030 *	BIND RUN-UNIT			OLBINDRN
	MOVE 0009 TO DML-SEQUENCE			DMLC0009
	CALL 'ISHDHLID' USING SLBSCHEMA-CTRL			
	IDBMSCCM (59)			
	SUBSCHEMA-CTRL			
	SUBSCHEMA-SSNAME;			
000040	ELSE			OLBINDRN
000050	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			OLBINDRN
000060	IDBMSCOM (59)			OLBINDRN
000070	SUBSCHEMA-CTRL			OLBINDRN
000080	TEST-SUBSCHEMA-SSNAME.			OLBINDRN
003650	PERFORM IDMS-STATUS.			
003660 *	READY DATA-REGION USAGE-MODE IS RETRIEVAL.			
	MOVE 0010 TO DML-SEQUENCE			DMLC0010
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (37)			
	DATA-REGION.			
003670	PERFORM IDMS-STATUS.			
003680 *	READY DATA-INDX-REGION USAGE-MODE IS RETRIEVAL.			
	MOVE 0011 TO DML-SEQUENCE			DMLC0011
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (37)			
	DATA-INDX-REGION.			
003690	PERFORM IDMS-STATUS.			
003700 *	ACQUIRE VARIABLE BUFFER FOR DDRECA			
003710 *	SIZE IS BUFFER-SIZE-DDRECA.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECA ISHD-H6 ISHD-XF0			
	ISHD-F0			
	SERVICE RELOAD DDRECA.			
003720 *	BIND DDRECA.			
	MOVE 0012 TO DML-SEQUENCE			DMLC0012
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (48)			
	SR100			
	DDRECA.			
003730	PERFORM IDMS-STATUS.			
003740 *	ACQUIRE VARIABLE BUFFER FOR DDRECB			
003750 *	SIZE IS BUFFER-SIZE-DDRECB.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECB ISHD-H7 ISHD-XF0			
	ISHD-F0			
	SERVICE RELOAD DDRECB.			
003760 *	BIND DDRECB.			
	MOVE 0013 TO DML-SEQUENCE			DMLC0013
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (48)			
	SR101			
	DDRECB.			
003770 *	ACQUIRE VARIABLE BUFFER FOR DDPROGRM			
003780 *	SIZE IS BUFFER-SIZE-DDPROGRM.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDPROGRM ISHD-H8 ISHD-XF0			
	ISHD-F0			

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003790 *	SERVICE RELOAD DDPROGRM. BIND DDPROGRM.			
	MOVE 0014 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48)			DMLC0014
003800 *	ACQUIRE VARIABLE BUFFER FOR DDFILE			
003810 *	SIZE IS BUFFER-SIZE-DDFILE. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDFILE ISHD-H10 ISHD-XFO ISHD-F0			
003820 *	SERVICE RELOAD DDFILE. BIND DDFILE.			
	MOVE 0015 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48)			DMLC0015
003830 *	ACQUIRE VARIABLE BUFFER FOR DDALIAS			
003840 *	SIZE IS BUFFER-SIZE-DDALIAS. CALL 'ISHDHLGV' USING BUFFER-SIZE-DDALIAS ISHD-H9 ISHD-XFO ISHD-F0			
003850 *	SERVICE RELOAD DDALIAS. BIND DDALIAS.			
	MOVE 0016 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48)			DMLC0016
003860				
003870	FINISH-IDMS.			
003880 *	FINISH.			
	MOVE 0017 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (02).			DMLC0017
003890	PERFORM IDMS-STATUS.			
003900 *	RELEASE BUFFER SUBSCHEMA-CTRL.			
003910 *	CALL 'ISHDHLPB' USING SUBSCHEMA-CTRL.			
003920 *	RELEASE BUFFER DDRECA.			
003930 *	CALL 'ISHDHLPB' USING DDRECA.			
003940 *	RELEASE BUFFER DDRECB.			
003950 *	CALL 'ISHDHLPB' USING DDRECB.			
003960	RELEASE BUFFER DDPROGRM.			
000010	CALL 'ISHDHLPB' USING DDPROGRM.			
000020	RELEASE BUFFER DDFILE.			
000030	CALL 'ISHDHLPB' USING DDFILE.			
000040	RELEASE BUFFER DDALIAS.			
000050	CALL 'ISHDHLPB' USING DDALIAS.			
000060	RELEASE BUFFER DDALIAS.			
000070	CALL 'ISHDHLPB' USING DDALIAS.			
000080	PERFORM IDMS-STATUS.			IDMSERR
000090 *	IF DB-STATUS-OK			IDMSERR
000100 *	NEXT SENTENCE			IDMSERR
000110 *	ELSE			IDMSERR
000120 *	PERFORM IDMS-ERROR-EXIT.			IDMSERR
000130 *	IF ERROR-STATUS NOT = '1469'			IDMSERR
000140 *	DUMP FROM CSECT SIZE IS 16			IDMSERR
000150 *	AND T-W-A AND RESOURCES			IDMSERR
000160 *	CALL 'ISHDHLPM' USING ISHD-X06 CSECT ISHD-H16 ISHD-X22 ISHD-L1 ISHD-F22.			IDMSERR
000170 *	PUT ADDRESS CF MAPERR INTO TWA-MAP-PTR.			IDMSERR
000180 *	CALL 'ISHDHLBS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			IDMSERR
000190 *	PREPARE MAP MAPERR			IDMSERR
000200 *	MAP-PTR IS TWA-MAP-PTR			IDMSERR
000210 *	SIZE IS MAPERRP.			IDMSERR
000220 *	CALL 'ISHDHLMP' USING TWA-MAP-PTR ISHD-XE2 ISHD-H5 MAPERRP			IDMSERR
000230 *	SERVICE RELOAD MAPERRP.			IDMSERR
000240 *	MOVE CSECT TO MAPERR-CSECTO.			IDMSERR
000250 *	MOVE VER-MOD TO MAPERR-VER-MODO.			IDMSERR
000260 *	IF TWA-TEST-RUN			IDMSERR
000270 *	OR SPT-TEST-RUN			IDMSERR
000280 *	MOVE 'TEST' TO MAPERR-TEST-FLAGC			IDMSERR
000290 *	ELSE			IDMSERR

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000220	IF TWA-PRODUCTION-RUN			IDMSERR
000230	AND SPT-PRODUCTION-RUN			IDMSERR
000240	NEXT SENTENCE			IDMSERR
000250	ELSE			IDMSERR
000260	MOVE 'INVL' TO MAPERR-TEST-FLAGC.			IDMSERR
000270	MOVE 'IDMS ERRORS' TO MAPERR-IDMS-ERROR-LITERAL0.			IDMSERR
000280	MOVE ERROR-STATUS TO MAPERR-ERROR-STATUS0.			IDMSERR
000290	MOVE ERROR-SET TO MAPERR-ERROR-SET0.			IDMSERR
000300	MOVE ERROR-RECORD TO MAPERR-ERROR-RECORD0.			IDMSERR
000310	MOVE ERROR-AREA TO MAPERR-ERROR-AREA0.			IDMSERR
000320 *	ROLLBACK.			IDMSERR
	MOVE 0018 TO DML-SEQUENCE			DMLC0018
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCLM (677).			
000330	IF NOT DB-STATUS-OK			IDMSERR
000340	MOVE 'ROLLBACK FAILED' TO MAPERR-MSG0.			IDMSERR
000350 *	WRITE MAP MAPERR IN BUFFER.			IDMSERR
	CALL 'ISHDHLMP' USING ISHD-X01 MAPERR0 ISHD-XF0 ISHD-X00			
	ISHD-X06 ISHD-X00 ISHD-X00.			
000360				IDMSERR
003980 *	RETURN TO NEXT-TRAN SIGNCN-TRAN AFTER-READ.			
	CALL 'ISHDHLRT' USING ISHD-XA0 SIGNCN-TRAN.			
003990	GOBACK.			

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000010	IDENTIFICATION DIVISION.			
000020	PROGRAM-ID.	OLD00301.		
000030	AUTHOR.	TONY LAI.		
000040	INSTALLATION.	KSU DATA PROCESSING CENTER		
000050		KANSAS STATE UNIVERSITY		
000060		MANHATTAN, KANSAS 66506.		
000070	DATE-WRITTEN.	11/82.		
000080	DATE-COMPILED.	NOVEMBER 29, 1982 AT 8.14 PM.		
000090	REMARKS.			
000100	OLD00301 - DELETE DATA ITEM.			
000110				
000120	MODIFICATIONS AND CORRECTIONS -			
000130	NONE AS OF 11/82.			
000140				
000150	ENVIRONMENT DIVISION.			
000160	*IDMS-CONTROL SECTION.			
000170	*PROTOCOL.	MODE IS SHADOW DEBUG		
000180	*	IDMS-RECORDS MANUAL.		
000190				
000200	DATA DIVISION.			
000210	*SCHEMA SECTION.			
000220	*DB DATASUBS	WITHIN DDSHEMA.		
000230				
000240	WORKING-STORAGE SECTION.			
000250	77 CSECT	PIC X(8) VALUE 'OLD00301'.		
000260	77 VER-MOD	PIC 9V9 VALUE		
000270		1.0.		
000280	77 FUNC-CODE	PIC XX VALUE 'DD'.		
000290	77 H1	PIC S999 VALUE +1 COMP SYNC.		
000300	77 SIGNON-TRAN	PIC XXXX VALUE 'DDSO'.		
000010	77 BUFFER-SIZE-CTRL	PIC S9(4) COMP SYNC VALUE +220.	CHLSUBSZ	
000020	77 BUFFER-SIZE-DDRECA	PIC S9(4) COMP SYNC VALUE +168.	CHLSUBSZ	
000030	77 BUFFER-SIZE-DDRECB	PIC S9(4) COMP SYNC VALUE +72.	CHLSUBSZ	
000040	77 BUFFER-SIZE-DDPROGRM	PIC S9(4) COMP SYNC VALUE +16.	CHLSUBSZ	
000050	77 BUFFER-SIZE-DDFILE	PIC S9(4) COMP SYNC VALUE +32.	CHLSUBSZ	
000060	77 BUFFER-SIZE-DDALIAS	PIC S9(4) COMP SYNC VALUE +40.	CHLSUBSZ	
000070	77 TEST-SUBSCHEMA-SSNAME	PIC X(8) VALUE 'XATASUBS'.	CHLSUBSZ	
000320				
000330	01 MESSAGES.			
000340	03 DDRECA-NOT-FOUND-MESS			
000350		PIC X(42) VALUE		
000360	*** DATA ITEM NOT IN DICTIONARY DATABASE ***.			
000370				
000010	01 MCHLDEL.			MCHLDEL
000020	02 FILLER	PIC X(20) VALUE 'C 9DDSO I I		MCHLDEL
000030	02 FILLER	PIC X(20) VALUE		MCHLDEL
000040	02 FILLER	PIC X(20) VALUE 'O A>DATA DICT		MCHLDEL
000050	02 FILLER	PIC X(20) VALUE 'IONARY SYSTEM BH 8		MCHLDEL
000060	02 FILLER	PIC X(20) VALUE '0 0		MCHLDEL
000070	02 FILLER	PIC X(16) VALUE '0 B'.		MCHLDEL
000080	02 FILLER	PIC X VALUE QUOTE.		MCHLDEL
000090	02 FILLER	PIC X(20) VALUE 'KANSAS STATE UNIVER		MCHLDEL
000100	02 FILLER	PIC X(20) VALUE 'ITY C 0 0		MCHLDEL
000110	02 FILLER	PIC X(20) VALUE 'OMCHLDEL E- 8 E/-		MCHLDEL
000120	02 FILLER	PIC X(20) VALUE 'DELETE --- 0 G-DAT		MCHLDEL
000130	02 FILLER	PIC X(20) VALUE 'A NAME: 8		MCHLDEL
000140	02 FILLER	PIC X(20) VALUE		MCHLDEL
000150	02 FILLER	PIC X(20) VALUE 'HRDATE CREATED: 8		MCHLDEL
000160	02 FILLER	PIC X(20) VALUE 'ODESCRIPTION:		MCHLDEL
000170	02 FILLER	PIC X(20) VALUE '8		MCHLDEL
000180	02 FILLER	PIC X(20) VALUE		MCHLDEL
000190	02 FILLER	PIC X(20) VALUE '0 1ZDATE CHANGED:		MCHLDEL
000200	02 FILLER	PIC X(20) VALUE '8 OPIC TURE:		MCHLDEL
000210	02 FILLER	PIC X(20) VALUE '8 0 -LEVE:		MCHLDEL
000220	02 FILLER	PIC X(20) VALUE 'L: 8 0 7REVIS:		MCHLDEL
000230	02 FILLER	PIC X(20) VALUE 'ED PERSON: 8 0 .K		MCHLDEL
000240	02 FILLER	PIC X(20) VALUE 'USAGE: 8		MCHLDEL
000250	02 FILLER	PIC X(20) VALUE '0 .>JUSTIFY: 8		MCHLDEL
000260	02 FILLER	PIC X(20) VALUE '0 <-ALIAS NAME:		MCHLDEL
000270	02 FILLER	PIC X(20) VALUE '<41. 8 02.		MCHLDEL
000280	02 FILLER	PIC X(20) VALUE '8		MCHLDEL
000290	02 FILLER	PIC X(20) VALUE '0 (23.		MCHLDEL
000300	02 FILLER	PIC X(20) VALUE '8		MCHLDEL
000310	02 FILLER	PIC X(20) VALUE '04. 8		MCHLDEL
000320	02 FILLER	PIC X(20) VALUE		MCHLDEL
000330	02 FILLER	PIC X(20) VALUE '0 IFUSER: <		MCHLDEL
000340	02 FILLER	PIC X(20) VALUE		MCHLDEL

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000350	02	FILLER	PIC X(20) VALUE	'1. 8	MCHLDEL
000360	02	FILLER	PIC X(20) VALUE	'02. 8	MCHLDEL
000370	02	FILLER	PIC X(20) VALUE	'03. 8	MCHLDEL
000380	02	FILLER	PIC X(20) VALUE	'0 8*4.	MCHLDEL
000390	02	FILLER	PIC X(20) VALUE	'8	MCHLDEL
000400	02	FILLER	PIC X(20) VALUE	'05. 8	MCHLDEL
000410	02	FILLER	PIC X(20) VALUE	'06. 8	MCHLDEL
000420	02	FILLER	PIC X(20) VALUE	'OPROGRAM U	MCHLDEL
000430	02	FILLER	PIC X(20) VALUE	'SED: K21. 8	MCHLDEL
000440	02	FILLER	PIC X(20) VALUE	'02. 8	MCHLDEL
000450	02	FILLER	PIC X(20) VALUE	'8	MCHLDEL
000460	02	FILLER	PIC X(20) VALUE	'04. 8	MCHLDEL
000470	02	FILLER	PIC X(20) VALUE	'0 M<5. 8	MCHLDEL
000480	02	FILLER	PIC X(20) VALUE	'06. 8	MCHLDEL
000490	02	FILLER	PIC X(20) VALUE	'07. 8	MCHLDEL
000500	02	FILLER	PIC X(20) VALUE	'08. 8	MCHLDEL
000510	02	FILLER	PIC X(20) VALUE	'LFILE USED: 0%1. 8	MCHLDEL
000520	02	FILLER	PIC X(20) VALUE	'2. 8	MCHLDEL
000530	02	FILLER	PIC X(20) VALUE	'0 P23. 8	MCHLDEL
000540	02	FILLER	PIC X(20) VALUE	'04. 8	MCHLDEL
000550	02	FILLER	PIC X(20) VALUE	'0 - 8	MCHLDEL
000560	02	FILLER	PIC X(20) VALUE	'0	MCHLDEL
000570	02	FILLER	PIC X(20) VALUE	'H	MCHLDEL
000580	02	FILLER	PIC X(20) VALUE	'H(YES/NO)	MCHLDEL
000590	02	FILLER	PIC X(20) VALUE	'0 *2 8	MCHLDEL
000600	02	FILLER	PIC X(20) VALUE	'0	MCHLDEL
000610	02	FILLER	PIC X(20) VALUE	'F	MCHLDEL
000620	02	FILLER	PIC X(02) VALUE	'F	MCHLDEL
000630	01	MCHLDELP	PIC 9(4) COMP VALUE	'01169.	MCHLDEL
000390					MCHLDEL
000010	01	MCHLDEL.	PIC X(20) VALUE	'A F I \$	MCHLDEL
000020	02	FILLER	PIC X(04) VALUE	'I	MCHLDEL
000030					MCHLDEL
000410	01	MAPERR.			MAPERR
000010	02	FILLER	PIC X(20) VALUE	'8 \$- 8	MAPERR
000020	02	FILLER	PIC X(20) VALUE	'8 0 \$7 8	MAPERR
000030	02	FILLER	PIC X(20) VALUE	'	MAPERR
000040	02	FILLER	PIC X(20) VALUE	'	MAPERR
000050	02	FILLER	PIC X(20) VALUE	'8	MAPERR
000060	02	FILLER	PIC X(20) VALUE	'8	MAPERR
000070	02	FILLER	PIC X(20) VALUE	'8	MAPERR
000080	02	FILLER	PIC X(20) VALUE	'8	MAPERR
000090	02	FILLER	PIC X(20) VALUE	'0)= 0 1=	MAPERR
000100	02	FILLER	PIC X(14) VALUE	'0)= 0 1=	MAPERR
000110	01	MAPERRP	PIC 9(4) COMP VALUE	'00174.	MAPERR
000430					
000440	*01	ATB3270		COPY ATB3270.	ATB3270
000002	*01	ATB3270.			ATB3270
000010	*				ATB3270
000020	*	IN CONSTRUCTING AN ATTRIBUTE YOU MAY MAKE ONE CHOICE			ATB3270
000030	*	FROM EACH OF THE THREE GROUPS BELOW. THE FIELDS DEFINED			ATB3270
000040	*	BELOW HAVE BEEN NAMED IN SUCH A MANNER AS TO BE READILY			ATB3270
000050	*	UNDERSTOOD ONCE THE KEY IS KNOWN. THE FOURTH, FIFTH, AND			ATB3270
000060	*	SIXTH CHARACTERS OF THE NAME ARE FROM GROUPS 1-3 BELOW.			ATB3270
000070	*	NOTE THAT SHORT HAND VERSIONS ARE AVAILABLE FOR DEFAULTS			ATB3270
000080	*	OF MDT=NO AND REGULAR INTENSITY.			ATB3270
000090	*				ATB3270
000100	*	GROUP I FIELD TYPE			ATB3270
000110	*				ATB3270
000120	*	PROTECTED	= P		ATB3270
000130	*	UNPROTECTED, ALPHA NUMERIC	= U		ATB3270
000140	*	UNPROTECTED, NUMERIC SHIFT	= N		ATB3270
000150	*	PROTECTED AND CURSOR SKIP	= S		ATB3270
000160	*				ATB3270
000170	*	GROUP II INTENSITY			ATB3270
000180	*				ATB3270
000190	*	REGULAR	= R	OR BLANK IF MDT=N	ATB3270
000200	*	HIGH	= H		ATB3270
000210	*	OFF(DARK)	= O		ATB3270
000220	*	LIGHT PEN DETECTABLE	= L		ATB3270
000230	*				ATB3270
000240	*	GROUP III MODIFIED DATA TAG			ATB3270
000250	*				ATB3270
000260	*	ON	= Y		ATB3270
000270	*	OFF	= N	OR BLANK	ATB3270
000280	*				ATB3270
000290	*				ATB3270

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000300 *	SKIP	REGULAR INTENSITY		ATB3270
000310 *				ATB3270
000320	03 ATBS	PIC X	VALUE '0'.	ATB3270
000330	03 ATBSR		REDEFINES ATBS	ATB3270
000340			PIC X.	ATB3270
000350	03 ATBSRN		REDEFINES ATBS	ATB3270
000360			PIC X.	ATB3270
000370	03 ATBSRY	PIC X	VALUE '1'.	ATB3270
000380 *				ATB3270
000390 *	SKIP	HIGH INTENSITY		ATB3270
000400 *				ATB3270
000410	03 ATBSH	PIC X	VALUE '8'.	ATB3270
000420	03 ATBSHN		REDEFINES ATBSH	ATB3270
000430			PIC X.	ATB3270
000440	03 ATBSHY	PIC X	VALUE '9'.	ATB3270
000450 *				ATB3270
000460 *	SKIP	OFF (DARK) INTENSITY		ATB3270
000470 *				ATB3270
000480	03 ATBSO	PIC X	VALUE '2'.	ATB3270
000490	03 ATBSOM		REDEFINES ATBSO	ATB3270
000500			PIC X.	ATB3270
000510	03 ATBSO		REDEFINES ATBSO	ATB3270
000520			PIC X.	ATB3270
000530	03 ATBSOM		REDEFINES ATBSO	ATB3270
000540			PIC X.	ATB3270
000550	03 ATBSOY	PIC X	VALUE QUOTE.	ATB3270
000560	03 ATBSOY		REDEFINES ATBSOY	ATB3270
000570			PIC X.	ATB3270
000580 *				ATB3270
000590 *	SKIP	REGULAR INTENSITY, LIGHT PEN		ATB3270
000600 *				ATB3270
000610	03 ATBSL	PIC X	VALUE '4'.	ATB3270
000620	03 ATBSLN		REDEFINES ATBSL	ATB3270
000630			PIC X.	ATB3270
000640	03 ATBSLY	PIC X	VALUE '5'.	ATB3270
000650 *				ATB3270
000660 *	PROTECT	REGULAR INTENSITY		ATB3270
000670 *				ATB3270
000680	03 ATBP	PIC X	VALUE '1'.	ATB3270
000690	03 ATBPR		REDEFINES ATBP	ATB3270
000700			PIC X.	ATB3270
000710	03 ATBPRN		REDEFINES ATBP	ATB3270
000720			PIC X.	ATB3270
000730	03 ATBPRY	PIC X	VALUE '1'.	ATB3270
000740 *				ATB3270
000750 *	PROTECT	HIGH INTENSITY		ATB3270
000760 *				ATB3270
000770	03 ATBPH	PIC X	VALUE 'Y'.	ATB3270
000780	03 ATBPHN		REDEFINES ATBPH	ATB3270
000790			PIC X.	ATB3270
000800	03 ATBPHY	PIC X	VALUE 'Z'.	ATB3270
000810 *				ATB3270
000820 *	PROTECT	OFF (DARK) INTENSITY		ATB3270
000830 *				ATB3270
000840	03 ATBPO	PIC X	VALUE '3'.	ATB3270
000850	03 ATBPON		REDEFINES ATBPO	ATB3270
000860			PIC X.	ATB3270
000870	03 ATBPQY	PIC X	VALUE '1'.	ATB3270
000880 *				ATB3270
000890 *	PROTECT	REGULAR INTENSITY, LIGHT PEN		ATB3270
000900 *				ATB3270
000910	03 ATBPL	PIC X	VALUE 'U'.	ATB3270
000920	03 ATBPLN		REDEFINES ATBPL	ATB3270
000930			PIC X.	ATB3270
000940	03 ATBPLY	PIC X	VALUE 'V'.	ATB3270
000950 *				ATB3270
000960 *	UNPROTECTED	REGULAR INTENSITY		ATB3270
000970 *	ALPHA-NUMERIC			ATB3270
000980	03 ATBU	PIC X	VALUE ' '.	ATB3270
000990	03 ATBUR		REDEFINES ATBU	ATB3270
001000			PIC X.	ATB3270
001010	03 ATBURN		REDEFINES ATBU	ATB3270
001020			PIC X.	ATB3270
001030	03 ATBURY	PIC X	VALUE 'A'.	ATB3270
001040 *				ATB3270
001050 *	UNPROTECTED	HIGH INTENSITY		ATB3270
001060 *	ALPHA-NUMERIC			ATB3270

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001070 *				ATR3270
001080	03 ATBUHN PIC X VALUE 'H'.			ATR3270
001090	03 ATBUH REDEFINES ATBUHN			ATR3270
001100	PIC X.			ATR3270
001110	03 ATBUHY PIC X VALUE 'I'.			ATBTS UO
001120 *				ATR3270
001130 *	UNPROTECTED OFF(DARK) INTENSITY			ATR3270
001140 *	ALPHA-NUMERIC			ATR3270
001150 *				ATR3270
001160	03 ATBUO PIC X VALUE 'K'.			ATR3270
001170	03 ATBUON REDEFINES ATBUO			ATR3270
001180	PIC X.			ATR3270
001190	03 ATBUOY PIC X VALUE 'L'.			ATR3270
001200 *				ATR3270
001210 *	UNPROTECTED REGULAR INTENSITY, LIGHT PEN			ATR3270
001220 *	ALPHA-NUMERIC			ATR3270
001230 *				ATR3270
001240	03 ATBUL PIC X VALUE 'D'.			ATR3270
001250	03 ATBULN REDEFINES ATBUL			ATR3270
001260	PIC X.			ATR3270
001270	03 ATBULY PIC X VALUE 'E'.			ATR3270
001280 *				ATR3270
001290 *	UNPROTECTED REGULAR INTENSITY			ATR3270
001300 *	NUMERIC SHIFT			ATR3270
001310 *				ATR3270
001320	03 ATBN PIC X VALUE 'G'.			ATR3270
001330	03 ATBNR REDEFINES ATBN			ATR3270
001340	PIC X.			ATR3270
001350	03 ATBNRN REDEFINES ATBN			ATR3270
001360	PIC X.			ATR3270
001370	03 ATBNRY PIC X VALUE 'J'.			ATR3270
001380 *				ATR3270
001390 *	UNPROTECTED HIGH INTENSITY			ATR3270
001400 *	NUMERIC SHIFT			ATR3270
001410 *				ATR3270
001420	03 ATBNH PIC X VALUE 'Q'.			ATR3270
001430	03 ATBNHN REDEFINES ATBNH			ATR3270
001440	PIC X.			ATR3270
001450	03 ATBNHY PIC X VALUE 'R'.			ATR3270
001460 *				ATR3270
001470 *	UNPROTECTED OFF(DARK) INTENSITY			ATR3270
001480 *	NUMERIC SHIFT			ATR3270
001490 *				ATR3270
001500	03 ATBNO PIC X VALUE 'S'.			ATR3270
001510	03 ATBNON REDEFINES ATBNO			ATR3270
001520	PIC X.			ATR3270
001530	03 ATBNOY PIC X VALUE 'T'.			ATR3270
001540 *				ATR3270
001550 *	UNPROTECTED REGULAR INTENSITY, LIGHT PEN			ATR3270
001560 *	NUMERIC SHIFT			ATR3270
001570 *				ATR3270
001580	03 ATBNL PIC X VALUE 'M'.			ATR3270
001590	03 ATBNLN REDEFINES ATBNL			ATR3270
001600	PIC X.			ATR3270
001610	03 ATBNLY PIC X VALUE 'N'.			ATR3270
001620 *				ATR3270
000450				
000460 *01	KEY3270			COPY KEY3270.
000010 01	KEY3270.			
000020	02 ENTERK	PIC X	VALUE	QUOTE.
000030	02 PF1	PIC X	VALUE	'1'.
000040	02 PF2	PIC X	VALUE	'2'.
000050	02 PF3	PIC X	VALUE	'3'.
000060	02 PF4	PIC X	VALUE	'4'.
000070	02 PF5	PIC X	VALUE	'5'.
000080	02 PF6	PIC X	VALUE	'6'.
000090	02 PF7	PIC X	VALUE	'7'.
000100	02 PF8	PIC X	VALUE	'8'.
000110	02 PF9	PIC X	VALUE	'9'.
000120	02 PF10	PIC X	VALUE	'0'.
000130	02 PF11	PIC X	VALUE	'1'.
000140	02 PF12	PIC X	VALUE	'2'.
000150	02 IMMDECT	PIC X	VALUE	'3'.
000160	02 TESTREQ	PIC X	VALUE	'4'.
000170	02 CLEAR	PIC X	VALUE	'5'.
000180	02 PA1	PIC X	VALUE	'6'.
000190	02 PA2	PIC X	VALUE	'7'.

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000200	02 PA3	PIC X	VALUE '.,'.	
000470	* COPY IDMS SUBSCHEMA-NAMES.	PIC X(8)	VALUE 'DATASUBS'.	
000480	01 SUBSCHEMA-SSNAME			
	01 SUBSCHEMA-RECNAME.			
	03 SR1	PIC X(16)	VALUE 'SR1	'.
	03 SR9995	PIC X(16)	VALUE 'IXSUB	'.
	03 SR9997	PIC X(16)	VALUE 'IXSET	'.
	03 SR9996	PIC X(16)	VALUE 'IXREC	'.
	03 SR9999	PIC X(16)	VALUE 'IXOWNER	'.
	03 SR9998	PIC X(16)	VALUE 'IXDET	'.
	03 SR104	PIC X(16)	VALUE 'DDFILE	'.
	03 SR103	PIC X(16)	VALUE 'DDALIAS	'.
	03 SR102	PIC X(16)	VALUE 'DDPROGRM	'.
	03 SR101	PIC X(16)	VALUE 'DDRECB	'.
	03 SR100	PIC X(16)	VALUE 'DDRECA	'.
	01 SUBSCHEMA-SETNAMES.			
	03 DDRECA-DDRECB	PIC X(16)		
	03 DDRECA-PROGRAM	VALUE 'DDRECA-DDRECB	'.	
	03 DDRECA-ALIAS	PIC X(16)		
	03 DDRECA-FILE	VALUE 'DDRECA-ALIAS	'.	
	03 IX-DATA-NAME	PIC X(16)		
	03 IXSET-IXREC	VALUE 'DDRECA-FILE	'.	
	03 IXSET-IXDET	PIC X(16)		
	03 IXSUB-IXREC	VALUE 'IX-DATA-NAME	'.	
	03 CALC	PIC X(16)		
	01 SUBSCHEMA-AREANAMES.	VALUE 'IXSET-IXREC	'.	
	03 DATA-INDX-REGION	PIC X(16)		
	03 DATA-REGION	VALUE 'IXSET-IXDET	'.	
		PIC X(16)		
		VALUE 'IXSUB-IXREC	'.	
		PIC X(16)		
		VALUE 'CALC	'.	
		PIC X(16)		
		VALUE 'DATA-INDX-REGION'.		
		PIC X(16)		
		VALUE 'DATA-REGION	'.	
000490	01 ISHD-CONSTANTS.			
	02 ISHD-FO.			
	03 ISHD-H0	PIC X(2)	VALUE LOW-VALUES.	
	03 ISHD-X00	PIC X	VALUE LOW-VALUES.	
	03 FILLER	PIC X	VALUE LOW-VALUES.	
	02 ISHD-H5	PIC 9(4)	COMP SYNC VALUE 5.	
	02 ISHD-H22	PIC 9(4)	COMP SYNC VALUE 22.	
	02 ISHD-H16	PIC 9(4)	COMP SYNC VALUE 16.	
	02 ISHD-H9	PIC 9(4)	COMP SYNC VALUE 9.	
	02 ISHD-H10	PIC 9(4)	COMP SYNC VALUE 10.	
	02 ISHD-H8	PIC 9(4)	COMP SYNC VALUE 8.	
	02 ISHD-H7	PIC 9(4)	COMP SYNC VALUE 7.	
	02 ISHD-H6	PIC 9(4)	COMP SYNC VALUE 6.	
	02 ISHD-H11	PIC 9(4)	COMP SYNC VALUE 11.	
	02 ISHD-H4	PIC 9(4)	COMP SYNC VALUE 4.	
	02 ISHD-H3	PIC 9(4)	COMP SYNC VALUE 3.	
	02 ISHD-X01	PIC X	VALUE '.	
	02 ISHD-X02	PIC X	VALUE '.	
	02 ISHD-X05	PIC X	VALUE '.	
	02 ISHD-X22	PIC X	VALUE '.	

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	02 ISHD-XA0 PIC X VALUE '1'.			
	02 ISHD-XD6 PIC X VALUE '0'.			
	02 ISHD-XE2 PIC X VALUE 'S'.			
	02 ISHD-XF0 PIC X VALUE 'O'.			
	02 ISHD-XF2 PIC X VALUE '2'.			
	02 ISHD-L1 PIC X(22) VALUE '** IDMS ERRORS DUMP **'.			
000500	LINKAGE SECTION.			
000010	*01 TCBD COPY TCBCOB.			CHLTWAEX
000010	01 TCBD.			
000020	02 ITRMQRID PIC X(4).			
000030	02 ITRMUCBA PIC 9(9) COMP SYNC.			
000040	02 ITRMPCKA PIC 9(9) COMP SYNC.			
000050	02 ITRMSIZE PIC 9(4) COMP SYNC.			
000060	02 ITRMERRP PIC X.			
000070	02 ITRMOPCD PIC X.			
000080	02 ITRMPCKC PIC X.			
000090	02 ITRMAID PIC X.			
000100	02 ITRMCADD PIC XX.			
000110	02 ITRMCADD-B REDEFINES ITRMCADD PIC 9(4) COMP.			
000120	02 ITRMTYPE PIC X.			
000130	02 ITRMNAME PIC XXX.			
000140	02 ITRMSENS PIC 9(9) COMP SYNC.			
000150	02 ITRMENTY REDEFINES ITRMSENS PIC 9(9) COMP SYNC.			
000160	02 ITRMVSAM REDEFINES ITRMSENS.			
000180	04 ITRMVSMC PIC X.			
000190	04 ITRMVSEC PIC XX.			
000200	04 ITRMCBEC REDEFINES ITRMVSEC.			
000210	04 ITRMVSRM PIC XX.			
000220	04 ITRMVSRM PIC X.			
000230	02 ITRMACRO PIC X.			
000240	02 ITRMSGON PIC XXX.			
000250	02 ITRMECBX PIC 9(9) COMP SYNC.			
000260	02 ITRMEXTN PIC 9(9) COMP SYNC.			
000270	02 ITRMIOAR PIC 9(9) COMP SYNC.			
000280	02 ITRMPROG PIC 9(9) COMP SYNC.			
000290	02 ITRMREPL PIC X(4).			
000300	02 ITRMFLGS PIC 9(4) COMP SYNC.			
000310	02 ITRMRLN PIC 9(4).			
000320	02 ITRMSAVE PIC X(72).			
000330	02 ITRMHAND PIC X.			
000340	02 ITRMCALP PIC XXX.			
000350	02 ITRMTRAN PIC X(4).			
000360	* USER AREA STARTS HERE.			
000020	02 TWA-C2.			CHLTWAEX
000030	05 FILLER PIC X(512).			CHLTWAEX
000040	02 TWA-USER REDEFINES TWA-C2.			CHLTWAEX
000050	03 TWA-TRAN-CODE PIC X(4).			CHLTWAEX
000060	03 TWA-CURRENT-PROG-NAME			CHLTWAEX
000070	PIC X(8).			CHLTWAEX
000080	03 TWA-PROGRAM-FLAGS PIC X(8).			CHLTWAEX
000090	03 TWA-MAP-PTR PIC X(4).			CHLTWAEX
000100	03 TWA-MAPC-PTR PIC X(4).			CHLTWAEX
000110	03 TWA-NEXT-PROG-NAME PIC X(8).			CHLTWAEX
000120	03 TWA-NEXT-TRAN-CODE PIC X(4).			CHLTWAEX
000130	03 TWA-DBKEY PIC X(4).			CHLTWAEX
000140	03 TWA-DBKEY-9 REDEFINES TWA-DBKEY			CHLTWAEX
000150	PIC S9(9) COMP SYNC.			CHLTWAEX
000160	03 TWA-DBKEY-2 PIC X(4).			CHLTWAEX
000170	03 TWA-DBKEY-2-9 REDEFINES TWA-DBKEY-2			CHLTWAEX
000180	PIC S9(9) COMP SYNC.			CHLTWAEX
000190	03 TWA-DBKEY-3 PIC X(4).			CHLTWAEX
000200	03 TWA-DBKEY-3-9 REDEFINES TWA-DBKEY-3			CHLTWAEX
000210	PIC S9(9) COMP SYNC.			CHLTWAEX
000220	03 TWA-DISK-DATA.			CHLTWAEX
000230	05 TWA-DISKD-ACQUIRED-FLAG PIC X.			CHLTWAEX
000240	88 TWA-DISKD-NOT-ACQUIRED VALUE LOW-VALUES.			CHLTWAEX
000250	88 TWA-DISKD-ACQUIRED VALUE HIGH-VALUES.			CHLTWAEX
000260	05 TWA-DISKD-NO-ACQUIRED PIC S9(3) COMP.			CHLTWAEX
000270	03 TWA-TEST-PRODUCTION-FLAG			CHLTWAEX
000280	PIC X.			CHLTWAEX
000290	88 TWA-PRODUCTION-RUN VALUE LOW-VALUES.			CHLTWAEX
000300	88 TWA-TEST-RUN VALUE 'T'.			CHLTWAEX
000310				
000320				

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000330	03 TWA-SIS-TERM-CODE			CHLTWAEX
000340	05 TWA-SIS-TERM-SEMESTER			CHLTWAEX
000350	PIC X.			CHLTWAEX
000360	05 TWA-SIS-TERM-YEAR			CHLTWAEX
000370	PIC XX.			CHLTWAEX
000380	03 TWA-SIS-SUBSYSTEM-CODE			CHLTWAEX
000390	PIC X(4).			CHLTWAEX
000400	03 TWA-SEC-ACCESS-CODE			CHLTWAEX
000410	88 TWA-SEC-ACCESS-IS-INQUIRY	VALUE 'I'.		CHLTWAEX
000420	88 TWA-SEC-ACCESS-IS-UPDATE	VALUE 'U'.		CHLTWAEX
000430	03 TWA-SEC-ACCESS-DEPT	PIC XXX.		CHLTWAEX
000440	03 TWA-ITRMERRP-SAVE	PIC X.		CHLTWAEX
000450	03 FILLER	PIC X(12).		CHLTWAEX
000520	03 TWA-DD-AREA.			
000530	05 TWA-FUNC	PIC XX.		
000540	05 TWA-DATA-NAME	PIC X(30).		
000550	05 FILLER	PIC X(20).		
000560	03 TWA-FLAGS-AREA.			
000570	05 DDRECA-FOUND-FLAG	PIC X.		
000580	88 DDRECA-FOUND	VALUE 'Y'.		
000590	05 PROGRAM-EOS-FLAG	PIC X.		
000600	88 END-OF-PROGRAM	VALUE 'Y'.		
000610	05 FILE-EOS-FLAG	PIC X.		
000620	88 END-OF-FILE	VALUE 'Y'.		
000630	05 ALIAS-EOS-FLAG	PIC X.		
000640	88 END-OF-ALIAS	VALUE 'Y'.		
000650				
000660				
000670	01 RELOCATE.			SHDSPTEX
000010	02 FILLER	PIC X(12).		SHDSPTEX
000020	02 RSHDPCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000030	02 FILLER	PIC X(32).		SHDSPTEX
000040	02 RSHDCSA	PIC 9(9).	COMP SYNC.	SHDSPTEX
000050	02 FILLER	PIC X(24).		SHDSPTEX
000060	02 RSHDOCT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000070	02 FILLER	PIC X(100).		SHDSPTEX
000080	02 RSHDLOW	PIC 9(9).	COMP SYNC.	SHDSPTEX
000090	02 RSHDHIGH	PIC 9(9).	COMP SYNC.	SHDSPTEX
000100	02 FILLER	PIC X(68).		SHDSPTEX
000110	02 RSHDIVAR	PIC 9(9).	COMP SYNC.	SHDSPTEX
000120	02 FILLER	PIC X(4).		SHDSPTEX
000130	02 RSHDFREE	PIC 9(9).	COMP SYNC.	SHDSPTEX
000140	02 FILLER	PIC X(48).		SHDSPTEX
000150	02 RSHDICT	PIC 9(9).	COMP SYNC.	SHDSPTEX
000160	02 FILLER	PIC X(40).		SHDSPTEX
000170	02 USER AREA STARTS HERE.			SHDSPTEX
000180	* 02 SPT-REST-OF-SPT.			SHDSPTEX
000190	03 SPT-TEST-PRODUCTION-FLAG	PIC X.		SHDSPTEX
000200	88 SPT-PRODUCTION-RUN	VALUE LOW-VALUES.		SHDSPTEX
000210	88 SPT-TEST-RUN	VALUE 'T'.		SHDSPTEX
000220	03 FILLER	PIC X.		01/22/82
000230	03 FILLER	PIC X(300).		01/22/82
000240	03 FILLER	PIC XX.		01/22/82
000250	03 SPT-NQ1-ECB	PIC XXXX.		01/22/82
000260	03 SPT-NQ2-ECB	PIC XXXX.		01/22/82
000270	03 FILLER	PIC X(8).		01/22/82
000280	03 SPT-NQ3-ECB	PIC XXXX.		01/22/82
000290	03 SPT-NQ4-ECB	PIC XXXX.		06/02/82
000300	03 SPT-NQ5-ECB	PIC XXXX.		06/08/82
000310	03 SPT-PRT1-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000320	03 SPT-PRT2-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000330	03 SPT-PRT3-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000340	03 SPT-PRT4-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000350	03 SPT-PRT5-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000360	03 SPT-PRT6-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000370	03 SPT-PRT7-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000380	03 SPT-PRT8-BUFFER-POOL-POINTER	PIC S9(9)	COMP SYNC.	06/08/82
000390				06/08/82
000400				06/08/82
000410				06/08/82
000420				06/08/82
000430				06/08/82
000440				06/08/82
000450				06/08/82
000460				06/08/82
000470				SHDSPTEX
000480				

000690					
000010	01	MCHLDEL.			MCHLDEL
000020	02	MCHLDEL-TRANL	PIC X.		MCHLDEL I
000030	02	MCHLDEL-TRANI	PIC X(4).		MCHLDEL I
000040	02	MCHLDEL-FUNCL	PIC X.		MCHLDEL I
000050	02	MCHLDEL-FUNCI	PIC XX.		MCHLDEL I
000060	02	MCHLDEL-KEYL	PIC X.		MCHLDEL I
000070	02	MCHLDEL-KEYI	PIC X(30).		MCHLDEL I
000080	02	MCHLDEL-DELETE-FLAGL	PIC X.		MCHLDEL I
000090	02	MCHLDEL-DELETE-FLAGI	PIC XXX.		MCHLDEL I
000710					
000010	01	MCHLDELO.			MCHLDEL
000020	02	MCHLDELM	PIC X.		MCHLDELO
000030	02	FILLER	PIC X(4).		MCHLDELO
000040	02	MCHLDEL-TRANA	PIC X.		MCHLDELO
000050	02	MCHLDEL-TRANO	PIC X(4).		MCHLDELO
000060	02	FILLER	PIC X.		MCHLDELO
000070	02	MCHLDEL-FUNCA	PIC X.		MCHLDELO
000080	02	MCHLDEL-FUNCO	PIC XX.		MCHLDELO
000090	02	FILLER	PIC X.		MCHLDELO
000100	02	MCHLDEL-KEYA	PIC X.		MCHLDELO
000110	02	MCHLDEL-KEYO	PIC X(30).		MCHLDELO
000120	02	FILLER	PIC X(31).		MCHLDELO
000130	02	MCHLDEL-TEST-FLAGA	PIC X.		MCHLDELO
000140	02	MCHLDEL-TEST-FLAGO	PIC X(4).		MCHLDELO
000150	02	FILLER	PIC X.		MCHLDELO
000160	02	MCHLDEL-RDATEA	PIC X.		MCHLDELO
000170	02	MCHLDEL-RDATEO	PIC X(8).		MCHLDELO
000180	02	FILLER	PIC X.		MCHLDELO
000190	02	MCHLDEL-RTIMEA	PIC X.		MCHLDELO
000200	02	MCHLDEL-RTIMEO	PIC X(8).		MCHLDELO
000210	02	FILLER	PIC X(32).		MCHLDELO
000220	02	MCHLDEL-CSECTA	PIC X.		MCHLDELO
000230	02	MCHLDEL-CSECTO	PIC X(8).		MCHLDELO
000240	02	FILLER	PIC X.		MCHLDELO
000250	02	MCHLDEL-VER-MODA	PIC X.		MCHLDELO
000260	02	MCHLDEL-VER-MODO	PIC 9.9.		MCHLDELO
000270	02	FILLER	PIC X(47).		MCHLDELO
000280	02	MCHLDEL-DATA-NAMEA	PIC X.		MCHLDELO
000290	02	MCHLDEL-DATA-NAMEO	PIC X(28).		MCHLDELO
000300	02	FILLER	PIC X(19).		MCHLDELO
000310	02	MCHLDEL-CREATED-DATEA	PIC X.		MCHLDELO
000320	02	MCHLDEL-CREATED-DATEO			MCHLDELO
000330	03	MCHLDEL-CREATED-DATE-MMO	PIC XX.		MCHLDELO
000340	03	MCHLDEL-CREATED-DATE-SLASH-10	PIC X.		MCHLDELO
000350	03	MCHLDEL-CREATED-DATE-000	PIC XX.		MCHLDELO
000360	03	MCHLDEL-CREATED-DATE-SLASH-20	PIC X.		MCHLDELO
000370	03	MCHLDEL-CREATED-DATE-YYO	PIC XX.		MCHLDELO
000380	02	FILLER	PIC X(15).		MCHLDELO
000390	02	MCHLDEL-DATA-DESCA	PIC X.		MCHLDELO
000400	02	MCHLDEL-DATA-DESCO	PIC X(40).		MCHLDELO
000410	02	FILLER	PIC X(19).		MCHLDELO
000420	02	MCHLDEL-CHANGED-DATEA	PIC X.		MCHLDELO
000430	02	MCHLDEL-CHANGED-DATEO			MCHLDELO
000440	03	MCHLDEL-CHANGED-DATE-MMO	PIC XX.		MCHLDELO
000450	03	MCHLDEL-CHANGED-DATE-SLASH-10	PIC X.		MCHLDELO
000460	03	MCHLDEL-CHANGED-DATE-000	PIC XX.		MCHLDELO
000470	03	MCHLDEL-CHANGED-DATE-SLASH-20	PIC X.		MCHLDELO
000480	03	MCHLDEL-CHANGED-DATE-YYO	PIC XX.		MCHLDELO
000490	02	FILLER	PIC X(11).		MCHLDELO
000500	02	MCHLDEL-DATA-PICTUREA	PIC X.		MCHLDELO
000510	02	MCHLDEL-DATA-PICTURED	PIC X(10).		MCHLDELO
000520	02	FILLER	PIC X(12).		MCHLDELO
000530	02	MCHLDEL-DATA-LEVELA	PIC X.		MCHLDELO
000540	02	MCHLDEL-DATA-LEVELO	PIC X(6).		MCHLDELO
000550	02	FILLER	PIC X(21).		MCHLDELO
000560	02	MCHLDEL-REVISED-PERSONA	PIC X.		MCHLDELO
000570	02	MCHLDEL-REVISED-PERSONO	PIC XXX.		MCHLDELO
000580	02	FILLER	PIC X(12).		MCHLDELO
000590	02	MCHLDEL-DATA-USAGEA	PIC X.		MCHLDELO
000600	02	MCHLDEL-DATA-USAGEO	PIC X(15).		MCHLDELO
000610	02	FILLER	PIC X(14).		MCHLDELO
000620	02	MCHLDEL-DATA-JUSTIFYA	PIC X.		MCHLDELO
000630	02	MCHLDEL-DATA-JUSTIFYO	PIC X(5).		MCHLDELO
000640	02	FILLER	PIC X(22).		MCHLDELO
000650	02	MCHLDEL-ALIAS-NAME-1A	PIC X.		MCHLDELO
000660	02	MCHLDEL-ALIAS-NAME-1O	PIC X(30).		MCHLDELO

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000670	02 FILLER	PIC X(5).	MCHLDEL0	
000680	02 MCHLDEL-ALIAS-NAME-2A	PIC X.	MCHLDEL0	
000690	02 MCHLDEL-ALIAS-NAME-20	PIC X(30).	MCHLDEL0	
000700	02 FILLER	PIC X(8).	MCHLDEL0	
000710	02 MCHLDEL-ALIAS-NAME-3A	PIC X.	MCHLDEL0	
000720	02 MCHLDEL-ALIAS-NAME-30	PIC X(30).	MCHLDEL0	
000730	02 FILLER	PIC X(5).	MCHLDEL0	
000740	02 MCHLDEL-ALIAS-NAME-4A	PIC X.	MCHLDEL0	
000750	02 MCHLDEL-ALIAS-NAME-40	PIC X(30).	MCHLDEL0	
000760	02 FILLER	PIC X(16).	MCHLDEL0	
000770	02 MCHLDEL-USER-NAME-1A	PIC X.	MCHLDEL0	
000780	02 MCHLDEL-USER-NAME-10	PIC X(20).	MCHLDEL0	
000790	02 FILLER	PIC X(5).	MCHLDEL0	
000800	02 MCHLDEL-USER-NAME-2A	PIC X.	MCHLDEL0	
000810	02 MCHLDEL-USER-NAME-20	PIC X(20).	MCHLDEL0	
000820	02 FILLER	PIC X(5).	MCHLDEL0	
000830	02 MCHLDEL-USER-NAME-3A	PIC X.	MCHLDEL0	
000840	02 MCHLDEL-USER-NAME-30	PIC X(16).	MCHLDEL0	
000850	02 FILLER	PIC X(8).	MCHLDEL0	
000860	02 MCHLDEL-USER-NAME-4A	PIC X.	MCHLDEL0	
000870	02 MCHLDEL-USER-NAME-40	PIC X(20).	MCHLDEL0	
000880	02 FILLER	PIC X(5).	MCHLDEL0	
000890	02 MCHLDEL-USER-NAME-5A	PIC X.	MCHLDEL0	
000900	02 MCHLDEL-USER-NAME-50	PIC X(20).	MCHLDEL0	
000910	02 FILLER	PIC X(5).	MCHLDEL0	
000920	02 MCHLDEL-USER-NAME-6A	PIC X.	MCHLDEL0	
000930	02 MCHLDEL-USER-NAME-60	PIC X(16).	MCHLDEL0	
000940	02 FILLER	PIC X(21).	MCHLDEL0	
000950	02 MCHLDEL-PROGRAM-USED-1A	PIC X.	MCHLDEL0	
000960	02 MCHLDEL-PROGRAM-USED-10	PIC X(10).	MCHLDEL0	
000970	02 FILLER	PIC X(5).	MCHLDEL0	
000980	02 MCHLDEL-PROGRAM-USED-2A	PIC X.	MCHLDEL0	
000990	02 MCHLDEL-PROGRAM-USED-20	PIC X(10).	MCHLDEL0	
001000	02 FILLER	PIC X(5).	MCHLDEL0	
001010	02 MCHLDEL-PROGRAM-USED-3A	PIC X.	MCHLDEL0	
001020	02 MCHLDEL-PROGRAM-USED-30	PIC X(10).	MCHLDEL0	
001030	02 FILLER	PIC X(5).	MCHLDEL0	
001040	02 MCHLDEL-PROGRAM-USED-4A	PIC X.	MCHLDEL0	
001050	02 MCHLDEL-PROGRAM-USED-40	PIC X(10).	MCHLDEL0	
001060	02 FILLER	PIC X(8).	MCHLDEL0	
001070	02 MCHLDEL-PROGRAM-USED-5A	PIC X.	MCHLDEL0	
001080	02 MCHLDEL-PROGRAM-USED-50	PIC X(10).	MCHLDEL0	
001090	02 FILLER	PIC X(5).	MCHLDEL0	
001100	02 MCHLDEL-PROGRAM-USED-6A	PIC X.	MCHLDEL0	
001110	02 MCHLDEL-PROGRAM-USED-60	PIC X(10).	MCHLDEL0	
001120	02 FILLER	PIC X(5).	MCHLDEL0	
001130	02 MCHLDEL-PROGRAM-USED-7A	PIC X.	MCHLDEL0	
001140	02 MCHLDEL-PROGRAM-USED-70	PIC X(10).	MCHLDEL0	
001150	02 FILLER	PIC X(5).	MCHLDEL0	
001160	02 MCHLDEL-PROGRAM-USED-8A	PIC X.	MCHLDEL0	
001170	02 MCHLDEL-PROGRAM-USED-80	PIC X(10).	MCHLDEL0	
001180	02 FILLER	PIC X(21).	MCHLDEL0	
001190	02 MCHLDEL-FILE-USED-1A	PIC X.	MCHLDEL0	
001200	02 MCHLDEL-FILE-USED-10	PIC X(20).	MCHLDEL0	
001210	02 FILLER	PIC X(5).	MCHLDEL0	
001220	02 MCHLDEL-FILE-USED-2A	PIC X.	MCHLDEL0	
001230	02 MCHLDEL-FILE-USED-20	PIC X(20).	MCHLDEL0	
001240	02 FILLER	PIC X(8).	MCHLDEL0	
001250	02 MCHLDEL-FILE-USED-3A	PIC X.	MCHLDEL0	
001260	02 MCHLDEL-FILE-USED-30	PIC X(20).	MCHLDEL0	
001270	02 FILLER	PIC X(5).	MCHLDEL0	
001280	02 MCHLDEL-FILE-USED-4A	PIC X.	MCHLDEL0	
001290	02 MCHLDEL-FILE-USED-40	PIC X(20).	MCHLDEL0	
001300	02 FILLER	PIC X(6).	MCHLDEL0	
001310	02 MCHLDEL-MESSAGE-1A	PIC X.	MCHLDEL0	
001320	02 MCHLDEL-MESSAGE-10	PIC X(39).	MCHLDEL0	
001330	02 FILLER	PIC X.	MCHLDEL0	
001340	02 MCHLDEL-DELETE-FLAGA	PIC X.	MCHLDEL0	
001350	02 MCHLDEL-DELETE-FLAGO	PIC XXX.	MCHLDEL0	
001360	02 FILLER	PIC X.	MCHLDEL0	
001370	02 MCHLDEL-DELETE-FLAG-MESSA	PIC X(8).	MCHLDEL0	
001380	02 MCHLDEL-DELETE-FLAG-MESSO	PIC X(6).	MCHLDEL0	
001390	02 FILLER	PIC X.	MCHLDEL0	
001400	02 MCHLDEL-MESSAGE-2A	PIC X.	MCHLDEL0	
001410	02 MCHLDEL-MESSAGE-20	PIC X(49).	MCHLDEL0	
001420	02 FILLER	PIC X(6).	MCHLDEL0	
000730				

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000740
000010 01 MAPERRO.
000020 02 MAPERRW PIC X. MAPERRO
000030 02 FILLER PIC X(4). MAPERRO
000040 02 MAPERR-CSECTA PIC X. MAPERRO
000050 02 MAPERR-CSECTO PIC X(8). MAPERRO
000060 02 FILLER PIC X. MAPERRO
000070 02 MAPERR-VER-MODA PIC X. MAPERRO
000080 02 MAPERR-VER-MODO PIC 9.9. MAPERRO
000090 02 FILLER PIC X. MAPERRO
000100 02 MAPERR-TEST-FLAGA PIC X. MAPERRO
000110 02 MAPERR-TEST-FLAGO PIC X(4). MAPERRO
000120 02 FILLER PIC X(7). MAPERRO
000130 02 MAPERR-MSGA PIC X. MAPERRO
000140 02 MAPERR-MSGO PIC X(56). MAPERRO
000150 02 FILLER PIC X. MAPERRO
000160 02 MAPERR-IDMS-ERROR-LITERALA PIC X. MAPERRO
000170 02 MAPERR-IDMS-ERROR-LITERALO PIC X(11). MAPERRO
000180 02 FILLER PIC X. MAPERRO
000190 02 MAPERR-ERROR-STATUSA PIC X. MAPERRO
000200 02 MAPERR-ERROR-STATUSO PIC X(4). MAPERRO
000210 02 FILLER PIC X. MAPERRO
000220 02 MAPERR-ERROR-SETA PIC X. MAPERRO
000230 02 MAPERR-ERROR-SETO PIC X(16). MAPERRO
000240 02 FILLER PIC X. MAPERRO
000250 02 MAPERR-ERROR-RECORDA PIC X. MAPERRO
000260 02 MAPERR-ERROR-RECORDO PIC X(16). MAPERRO
000270 02 FILLER PIC X. MAPERRO
000280 02 MAPERR-ERROR-AREAA PIC X. MAPERRO
000290 02 MAPERR-ERROR-AREAO PIC X(16). MAPERRO
000300 02 FILLER PIC X(12). MAPERRO
000760
000770 * COPY IDMS DDRECA.
01 DDRECA.
03 DATA-NAME PIC X(30).
03 DATA-CREATED-DATE.
05 DATA-CREATED-YY PIC XX.
05 DATA-CREATED-MM PIC XX.
05 DATA-CREATED-DD PIC XX.
03 DATA-CHANGED-DATE.
05 DATA-CHANGED-YY PIC XX.
05 DATA-CHANGED-MM PIC XX.
05 DATA-CHANGED-DD PIC XX.
03 DATA-USER OCCURS 6.
05 DATA-USER-NAME PIC X(20).
03 DATA-REVISED-PERSON PIC XXX.
03 FILLER PIC XXX.
000780
000790 * COPY IDMS DDRECB.
01 DDRECB.
03 DATA-DESC PIC X(40).
03 DATA-LENGTH PIC X(10).
03 DATA-JUSTIFY PIC X.
88 DATA-JUSTIFY-RIGHT VALUE 'R'.
88 DATA-JUSTIFY-LEFT VALUE 'L'.
03 DATA-LEVEL PIC X.
88 DATA-INPUT VALUE 'I'.
88 DATA-OUTPUT VALUE 'O'.
88 DATA-INPUT-OUTPUT VALUE 'B'.
03 DATA-USAGE PIC X(12).
03 FILLER PIC X(4).
03 FILLER PIC X(4).
000800
000810 * COPY IDMS DDPROGRM.
01 DDPROGRM.
03 DATA-PROGRAM-USED PIC X(8).
03 FILLER PIC X(4).
03 FILLER PIC X(4).
000820
000830 * COPY IDMS DDALIAS.
01 DDALIAS.

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	03 DATA-ALIAS-NAME	PIC X(30).		
	03 FILLER	PIC X(6).		
	03 FILLER	PIC X(4).		
000840				
000850 *	COPY IDMS DDFILE.			
	01 DDFILE.			
	03 DATA-FILE-USED	PIC X(20).		
	03 FILLER	PIC X(8).		
	03 FILLER	PIC X(4).		
000860				
000870 *	COPY IDMS SUBSCHEMA-CTRL.			
	01 SUBSCHEMA-CTRL.			
	03 PROGRAM-NAME	PIC X(8).		
	03 ERROR-STATUS	PIC X(4).		
		88 DB-STATUS-OK VALUE '0000'.		
		88 ANY-STATUS		
		VALUE '0000' THRU '9999'.		
		88 ANY-ERROR-STATUS		
		VALUE '0001' THRU '9999'.		
		88 DB-END-OF-SET VALUE '0307'.		
		88 DB-REC-NOT-FOUND VALUE '0326'.		
	03 DBKEY	PIC S9(8)		
		USAGE COMP		
		SYNC.		
	03 RECORD-NAME	PIC X(16).		
	03 RRECORD-NAME	REDEFINES RECORD-NAME.		
	05 SSC-NODN	PIC X(8).		
	05 SSC-DBN	PIC X(8).		
	03 AREA-NAME	PIC X(16).		
	03 ERROR-SET	PIC X(16).		
	03 ERROR-RECORD	PIC X(16).		
	03 ERROR-AREA	PIC X(16).		
	03 IDBMSCOM-AREA	PIC X(100).		
	03 IDBMSCOM	REDEFINES IDBMSCOM-AREA		
		PIC X		
		OCCURS 100.		
	03 FILLER	REDEFINES IDBMSCOM-AREA.		
	05 DB-SUB-ADDR	PIC X(4).		
	05 FILLER	PIC X(96).		
	03 DIRECT-DBKEY	PIC S9(8)		
		USAGE COMP		
		SYNC.		
	03 DIRECT-DBK	REDEFINES DIRECT-DBKEY		
		PIC S9(8)		
		USAGE COMP		
		SYNC.		
	03 DATABASE-STATUS.			
	05 DBSTATEMENT-CODE	PIC X(2).		
	05 DBSTATUS-CODE	PIC X(5).		
	03 FILLER	PIC X.		
	03 RECORD-OCCUR	PIC S9(8)		
		USAGE COMP		
		SYNC.		
	03 DML-SEQUENCE	PIC S9(8)		

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	USAGE COMP SYNC.			
000880	PROCEDURE DIVISION			
000890	USING TCBD,			
000900	RELOCATE.			
000910				
000920	MOVE CSECT TO TWA-CURRENT-PRG-NAME.			
000930	MOVE ALL *N* TO TWA-FLAGS-AREA.			
000940	PERFORM SET-UP-IDMS.			
000950	PERFORM PROCESS-DISPLAY.			
000960	PERFORM FINISH-IDMS.			
000970 *	RETURN TO NEXT-TRAN TWA-NEXT-TRAN-CODE AFTER-READ. CALL 'ISHDHLRT' USING ISHD-XAO TWA-NEXT-TRAN-CODE. GOBACK.			
000980				
000990	PROCESS-DISPLAY.			
001000	PERFORM READ-INPUT-MAP.			
001010	PERFORM PREPARE-OUTPUT-MAP.			
001020				
001030	MOVE TWA-DATA-NAME TO DATA-NAME.			
001040	PERFORM OBTAIN-CALC-DDRECA.			
001050	IF DDRECA-FOUND			
001060	PERFORM MOVE-ALL-DATA-TO-MAP			
001070	PERFORM PROCESS-DELETE			
001080	ELSE			
001090	MOVE DDRECA-NOT-FOUND-MESS TO MCHLDEL-MESSAGE-20.			
001100	PERFORM WRITE-OUTPUT-MAP.			
001110				
001120	PROCESS-DELETE.			
001130	IF MCHLDEL-DELETE-FLAG1 = 'YES'			
001140	MOVE MCHLDEL-KEY1 TO DATA-NAME			
001150 *	FIND CALC DDRECA MOVE 0001 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0001
	IDBMSCOM (32) SR100:			
001160	IF DB-REC-NOT-FOUND			
001170	MOVE DDRECA-NOT-FOUND-MESS TO MCHLDEL-MESSAGE-20			
001180	MOVE ATBSH TO MCHLDEL-MESSAGE-2A			
001190	MOVE ATBSO TO MCHLDEL-MESSAGE-1A,			
001200	MCHLDEL-DELETE-FLAG1			
001210	MCHLDEL-DELETE-FLAG-MESSA			
001220	ELSE			
001230	PERFORM DELETE-ANY-MEMBER-RECORDS			
001240	ELSE			
001250	MOVE 'INVALID RESPONSE' TO MCHLDEL-MESSAGE-20			
001260	MOVE ATBSO TO MCHLDEL-MESSAGE-1A,			
001270	MCHLDEL-DELETE-FLAG1,			
001280	MCHLDEL-DELETE-FLAG-MESSA			
001290	MOVE ATBSH TO MCHLDEL-MESSAGE-2A			
001300	MOVE ATBSHY TO MCHLDEL-DATA-NAMEA			
001310	MCHLDEL-FUNCA.			
001320				
001330	DELETE-ANY-MEMBER-RECORDS.			
001340	*****			
001350 *	DELETE ANY RECORDS ON DICTIONARY DATABASE			
001360 *				
001370 *				
001380	*****			
001390				
001400 *	FIND NEXT DDRECB WITHIN DDRECA-DDRECB. MOVE 0002 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR101 DDRECA-DDRECB.			DMLC0002
001410	IF DB-STATUS-OK			
001420 *	ERASE DDRECB MOVE 0003 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			DMLC0003

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	IDBMSCCM (52) SR101;			
001430	IF DB-STATUS-OK			
001440	NEXT SENTENCE			
001450	ELSE			
001460	PERFORM IDMS-ERROR-EXIT			
001470	ELSE			
001480	IF DB-END-OF-SET			
001490	NEXT SENTENCE			
001500	ELSE			
001510	PERFORM IDMS-ERROR-EXIT.			
001520	PERFORM FIND-DDPROGRM.			
001530	PERFORM ERASE-DDPROGRM.			
001540	UNTIL DB-END-OF-SET.			
001550	PERFORM FIND-DDFILE.			
001560	PERFORM ERASE-DDFILE.			
001570	UNTIL DB-END-OF-SET.			
001580	PERFORM FIND-DDALIAS.			
001590	PERFORM ERASE-DDALIAS.			
001600	UNTIL DB-END-OF-SET.			
001610 *	OBTAIN CURRENT DDRECA.			
	MOVE 0004 TO DML-SEQUENCE			DMLC0004
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (07)			
	SR100			
	IDBMSCOM (43).			
001620	IF DB-STATUS-OK			
001630 *	ERASE DDRECA			
	MOVE 0005 TO DML-SEQUENCE			DMLC0005
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (52)			
	SR100;			
001640	IF DB-STATUS-OK			
001650	NEXT SENTENCE			
001660	ELSE			
001670	PERFORM IDMS-ERROR-EXIT			
001680	ELSE			
001690	PERFORM IDMS-ERROR-EXIT.			
001700	MOVE 'DATA NAME HAS BEEN DELETED' TO MCHLDEL-MESSAGE-20			
001710	MOVE ATBSH TO MCHLDEL-MESSAGE-2A.			
001720	MOVE ATBSO TO MCHLDEL-DELETE-FLAGA.			
001730	MCHLDEL-DELETE-FLAG-MESSA,			
001740	MCHLDEL-MESSAGE-1A.			
001750	MOVE SPACES TO TWA-DATA-NAME, TWA-FUNC.			
001760				
001770	MOVE-ALL-DATA-TO-MAP.			
001780	PERFORM MOVE-DDRECA-DATA-TO-MAP.			
001790	PERFORM OBTAIN-NEXT-DDRECB.			
001800	PERFORM MOVE-DDRECB-DATA-TO-MAP.			
001810	PERFORM OBTAIN-FIRST-PROGRAM.			
001820	IF END-OF-PROGRAM			
001830	NEXT SENTENCE			
001840	ELSE			
001850	MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-10			
001860	PERFORM LOAD-PROGRAM-NAME.			
001870	PERFORM OBTAIN-FIRST-FILE.			
001880	IF END-OF-FILE			
001890	NEXT SENTENCE			
001900	ELSE			
001910	MOVE DATA-FILE-USED TO MCHLDEL-FILE-USED-10			
001920	PERFORM LOAD-FILE-NAME.			
001930	PERFORM OBTAIN-FIRST-ALIAS.			
001940	IF END-OF-ALIAS			
001950	NEXT SENTENCE			
001960	ELSE			
001970	MOVE DATA-ALIAS-NAME TO MCHLDEL-ALIAS-NAME-10			
001980	PERFORM LOAD-ALIAS-NAME.			
001990				
002000	MOVE-DDRECA-DATA-TO-MAP.			
002010	MOVE DATA-NAME TO MCHLDEL-DATA-NAME0.			
002020	IF DATA-CREATED-DATE NOT = SPACES			
002030	MOVE ALL '/' TO MCHLDEL-CREATED-DATE-SLASH-10,			
002040	MCHLDEL-CREATED-DATE-SLASH-20			
002050	MOVE DATA-CREATED-YY TO MCHLDEL-CREATED-DATE-YY0			
002060	MOVE DATA-CREATED-MM TO MCHLDEL-CREATED-DATE-MM0			
002070	MOVE DATA-CREATED-DD TO MCHLDEL-CREATED-DATE-DD0.			
002080	IF DATA-CHANGED-DATE NOT = SPACES			

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002090      MOVE ALL '/' TO MCHLDEL-CHANGED-DATE-SLASH-10.
002100      MCHLDEL-CHANGED-DATE-SLASH-20.
002110      MOVE DATA-CHANGED-YY TO MCHLDEL-CHANGED-DATE-YYO
002120      MOVE DATA-CHANGED-MM TO MCHLDEL-CHANGED-DATE-MMO
002130      MOVE DATA-CHANGED-DD TO MCHLDEL-CHANGED-DATE-DDO.
002140      MOVE DATA-REVISED-PERSON TO MCHLDEL-REVISED-PERSONO.
002150      MOVE DATA-USER-NAME (1) TO MCHLDEL-USER-NAME-10.
002160      MOVE DATA-USER-NAME (2) TO MCHLDEL-USER-NAME-20.
002170      MOVE DATA-USER-NAME (3) TO MCHLDEL-USER-NAME-30.
002180      MOVE DATA-USER-NAME (4) TO MCHLDEL-USER-NAME-40.
002190      MOVE DATA-USER-NAME (5) TO MCHLDEL-USER-NAME-50.
002200      MOVE DATA-USER-NAME (6) TO MCHLDEL-USER-NAME-60.
002210
002220      MOVE DDRECB-DATA-TO-MAP.
002230      MOVE DATA-DESC TO MCHLDEL-DATA-DESCO.
002240      MOVE DATA-LENGTH TO MCHLDEL-DATA-PICTURED.
002250      IF DATA-INPUT
002260          MOVE 'INPUT' TO MCHLDEL-DATA-LEVELO
002270      ELSE
002280          IF DATA-OUTPUT
002290              MOVE 'OUTPUT' TO MCHLDEL-DATA-LEVELO
002300      ELSE
002310          IF DATA-INPUT-OUTPUT
002320              MOVE 'BOTH' TO MCHLDEL-DATA-LEVELO.
002330          IF DATA-JUSTIFY-RIGHT
002340              MOVE 'RIGHT' TO MCHLDEL-DATA-JUSTIFYO
002350      ELSE
002360          IF DATA-JUSTIFY-LEFT
002370              MOVE 'LEFT' TO MCHLDEL-DATA-JUSTIFYO.
002380          MOVE DATA-USAGE TO MCHLDEL-DATA-USAGEO.
002390
002400      LOAD-PROGRAM-NAME.
002410      PERFORM OBTAIN-NEXT-PROGRAM.
002420      IF DB-END-OF-SET
002430          NEXT SENTENCE
002440      ELSE
002450          IF DB-STATUS-OK
002460              MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-20
002470              PERFORM OBTAIN-NEXT-PROGRAM.
002480          IF DB-END-OF-SET
002490              NEXT SENTENCE
002500      ELSE
002510          IF DB-STATUS-OK
002520              MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-30
002530              PERFORM OBTAIN-NEXT-PROGRAM.
002540          IF DB-END-OF-SET
002550              NEXT SENTENCE
002560      ELSE
002570          IF DB-STATUS-OK
002580              MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-40
002590              PERFORM OBTAIN-NEXT-PROGRAM.
002600          IF DB-END-OF-SET
002610              NEXT SENTENCE
002620      ELSE
002630          IF DB-STATUS-OK
002640              MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-50
002650              PERFORM OBTAIN-NEXT-PROGRAM.
002660          IF DB-END-OF-SET
002670              NEXT SENTENCE
002680      ELSE
002690          IF DB-STATUS-OK
002700              MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-60
002710              PERFORM OBTAIN-NEXT-PROGRAM.
002720          IF DB-END-OF-SET
002730              NEXT SENTENCE
002740      ELSE
002750          IF DB-STATUS-OK
002760              MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-70
002770              PERFORM OBTAIN-NEXT-PROGRAM.
002780          IF DB-END-OF-SET
002790              NEXT SENTENCE
002800      ELSE
002810          IF DB-STATUS-OK
002820              MOVE DATA-PROGRAM-USED TO MCHLDEL-PROGRAM-USED-80.
002830
002840      LOAD-FILE-NAME.
002850      PERFORM OBTAIN-NEXT-FILE.

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002860	IF DB-END-OF-SET			
002870	NEXT SENTENCE			
002880	ELSE			
002890	IF DB-STATUS-OK			
002900	MOVE DATA-FILE-USED TO MCHLDEL-FILE-USED-20			
002910	PERFORM OBTAIN-NEXT-FILE.			
002920	IF DB-END-OF-SET			
002930	NEXT SENTENCE			
002940	ELSE			
002950	IF DB-STATUS-OK			
002960	MOVE DATA-FILE-USED TO MCHLDEL-FILE-USED-30			
002970	PERFORM OBTAIN-NEXT-FILE.			
002980	IF DB-END-OF-SET			
002990	NEXT SENTENCE			
003000	ELSE			
003010	IF DB-STATUS-OK			
003020	MOVE DATA-FILE-USED TO MCHLDEL-FILE-USED-40.			
003030	LOAD-ALIAS-NAME.			
003040	PERFORM OBTAIN-NEXT-ALIAS.			
003050	IF DB-END-OF-SET			
003060	NEXT SENTENCE			
003070	ELSE			
003080	IF DB-STATUS-OK			
003090	MOVE DATA-ALIAS-NAME TO MCHLDEL-ALIAS-NAME-20			
003100	PERFORM OBTAIN-NEXT-ALIAS.			
003110	IF DB-END-OF-SET			
003120	NEXT SENTENCE			
003130	ELSE			
003140	IF DB-STATUS-OK			
003150	MOVE DATA-ALIAS-NAME TO MCHLDEL-ALIAS-NAME-30			
003160	PERFORM OBTAIN-NEXT-ALIAS.			
003170	IF DB-END-OF-SET			
003180	NEXT SENTENCE			
003190	ELSE			
003200	IF DB-STATUS-OK			
003210	MOVE DATA-ALIAS-NAME TO MCHLDEL-ALIAS-NAME-40.			
003220	READ-INPUT-MAP.			
003230	PUT ADDRESS OF MCHLDEL INTO TWA-MAPC-PTR.			
003240	CALL 'ISHDHLS' USING ISHD-X02 TWA-MAPC-PTR MCHLDEL.			
003250	* MAP-INPUT TO MAP MCHLDEL			
003260	* MAPC-PTR IS TWA-MAPC-PTR.			
003270	* CALL 'ISHDHLM1' USING TWA-MAPC-PTR ISHD-X00 ISHD-XF2 ISHD-H3			
	SERVICE RELOAD MCHLDEL.			
003280	PREPARE-OUTPUT-MAP.			
003290	PUT ADDRESS OF MCHLDEL INTO TWA-MAP-PTR.			
003300	* CALL 'ISHDHLS' USING ISHD-X02 TWA-MAP-PTR MCHLDEL.			
003310	* PREPARE MAP MCHLDEL			
003320	* MAP-PTR IS TWA-MAP-PTR			
003330	* SIZE IS MCHDEL.			
	CALL 'ISHDHLMR' USING TWA-MAP-PTR ISHD-XE2 ISHD-H4 MCHDEL			
	SERVICE RELOAD MCHDEL.			
003340	MOVE CSECT TO MCHLDEL-CSECTO.			
003350	MOVE VER-MOD TO MCHLDEL-VER-MODO.			
003360	MOVE CURRENT-DATE TO MCHLDEL-ROATEO.			
003370	CALL 'KSRTIME' USING MCHLDEL-RTIMEO, H1.			
003380	IF TWA-TEST-RUN			
003390	OR SPT-TEST-RUN			
003400	MOVE 'TEST' TO MCHLDEL-TEST-FLAGO.			
003410	MOVE MCHLDEL-TRAN1 TO MCHLDEL-TRANO.			
003420	MOVE MCHLDEL-FUNCI TO MCHLDEL-FUNCO, TWA-FUNC.			
003430	MOVE MCHLDEL-KEY1 TO MCHLDEL-KEYO, TWA-DATA-NAME.			
003440	WRITE-OUTPUT-MAP.			
003450	* ERASE-WRITE MAP MCHLDEL IN BUFFER.			
003460	* CALL 'ISHDHLMR' USING ISHD-X05 MCHDEL0 ISHD-XF0 ISHD-X00			
	ISHD-XD6 ISHD-X00 ISHD-X00.			
003470	OBTAIN-CALC-DDRECA.			
003480	DDRECA.			
003490	* OBTAIN CALC			
	MOVE 0006 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IOBMSCCM (32)			
	SR100			
	IOBMSCOM (43).			

DMLC0006

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003500	IF DB-REC-NOT-FOUND			
003510	MOVE 'N' TO DDRECA-FOUND-FLAG			
003520	ELSE			
003530	PERFORM IDMS-STATUS			
003540	MOVE 'Y' TO DDRECA-FOUND-FLAG.			
003550	OBTAIN-FIRST-PROGRAM.			
003560	* OBTAIN FIRST DDPROGRM WITHIN DDRECA-PROGRAM.			
003570	MOVE 0007 TO DML-SEQUENCE			DMLC0007
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (18)			
	SR102			
	DDRECA-PROGRAM			
	IDBMSCOM (43).			
003580	IF DB-END-OF-SET			
003590	MOVE 'Y' TO PROGRAM-EOS-FLAG			
003600	ELSE			
003610	PERFORM IDMS-STATUS			
003620	MOVE 'N' TO PROGRAM-EOS-FLAG.			
003630				
003640	OBTAIN-NEXT-DDRECB.			
003650	* OBTAIN NEXT DDRECB WITHIN DDRECA-DDRECB.			DMLC0008
	MOVE 0008 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (10)			
	SR101			
	DDRECA-DDRECB			
	IDBMSCOM (43).			
003660	IF DB-END-OF-SET			
003670	NEXT SENTENCE			
003680	ELSE			
003690	PERFORM IDMS-STATUS.			
003700				
003710	OBTAIN-NEXT-PROGRAM.			
003720	* OBTAIN NEXT DDPROGRM WITHIN DDRECA-PROGRAM.			DMLC0009
	MOVE 0009 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (10)			
	SR102			
	DDRECA-PROGRAM			
	IDBMSCOM (43).			
003730	IF DB-END-OF-SET			
003740	NEXT SENTENCE			
003750	ELSE			
003760	PERFORM IDMS-STATUS.			
003770				
003780	OBTAIN-FIRST-FILE.			
003790	* OBTAIN FIRST DDFILE WITHIN DDRECA-FILE.			DMLC0010
	MOVE 0010 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (18)			
	SR104			
	DDRECA-FILE			
	IDBMSCOM (43).			
003800	IF DB-END-OF-SET			
003810	MOVE 'Y' TO FILE-EOS-FLAG			
003820	ELSE			
003830	PERFORM IDMS-STATUS			
003840	MOVE 'N' TO FILE-EOS-FLAG.			
003850				
003860	OBTAIN-NEXT-FILE.			
003870	* OBTAIN NEXT DDFILE WITHIN DDRECA-FILE.			DMLC0011
	MOVE 0011 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCOM (10)			
	SR104			
	DDRECA-FILE			
	IDBMSCOM (43).			
003880	IF DB-END-OF-SET			
003890	NEXT SENTENCE			
003900	ELSE			
003910	PERFORM IDMS-STATUS.			
003920				
003930	OBTAIN-FIRST-ALIAS.			
003940	* OBTAIN FIRST DDALIAS WITHIN DDRECA-ALIAS.			DMLC0012
	MOVE 0012 TO DML-SEQUENCE			

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	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (18) SR103 DDRECA-ALIAS IDBMSCOM (43).			
003950	IF DB-END-OF-SET			
003960	MOVE 'Y' TO ALIAS-EOS-FLAG			
003970	ELSE			
003980	PERFORM IDMS-STATUS			
003990	MOVE 'N' TO ALIAS-EOS-FLAG.			
004000				
004010	OBTAIN-NEXT-ALIAS.			
004020 *	OBTAIN NEXT DDALIAS WITHIN DDRECA-ALIAS. MOVE 0013 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR103 DDRECA-ALIAS IDBMSCOM (43).			DMLC0013
004030	IF DB-END-OF-SET			
004040	NEXT SENTENCE			
004050	ELSE			
004060	PERFORM IDMS-STATUS.			
004070				
004080	FIND-DDRECB.			
004090 *	FIND NEXT DDRECB WITHIN DDRECA-DDRECB. MOVE 0014 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR101 DDRECA-DDRECB.			DMLC0014
004100	IF DB-STATUS-OK			
004110	OR DB-END-OF-SET			
004120	NEXT SENTENCE			
004130	ELSE			
004140	PERFORM IDMS-ERROR-EXIT.			
004150				
004160	ERASE-DDRECB.			
004170 *	ERASE DDRECB. MOVE 0015 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (52) SR101.			DMLC0015
004180	IF NOT DB-STATUS-OK			
004190	PERFORM IDMS-ERROR-EXIT.			
004200	PERFORM FIND-DDRECB.			
004210				
004220	FIND-DDPROGRM.			
004230 *	FIND NEXT DDPROGRM WITHIN DDRECA-PROGRAM. MOVE 0016 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR102 DDRECA-PROGRAM.			DMLC0016
004240	IF DB-STATUS-OK			
004250	OR DB-END-OF-SET			
004260	NEXT SENTENCE			
004270	ELSE			
004280	PERFORM IDMS-ERROR-EXIT.			
004290				
004300	ERASE-DDPROGRM.			
004310 *	ERASE DDPROGRM. MOVE 0017 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (52) SR102.			DMLC0017
004320	IF NOT DB-STATUS-OK			
004330	PERFORM IDMS-ERROR-EXIT.			
004340	PERFORM FIND-DDPROGRM.			
004350				
004360	FIND-DDFILE.			
004370 *	FIND NEXT DDFILE WITHIN DDRECA-FILE. MOVE 0018 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCOM (10) SR104 DDRECA-FILE.			DMLC0018

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004380	IF DB-STATUS-OK			
004390	OR DB-END-OF-SET			
004400	NEXT SENTENCE			
004410	ELSE			
004420	PERFORM IDMS-ERROR-EXIT.			
004430				
004440	ERASE-DDFILE.			
004450 *	ERASE DDFILE.			
	MOVE 0019 TO DML-SEQUENCE			DMLC0019
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (52)			
	SR104.			
004460	IF NOT DB-STATUS-OK			
004470	PERFORM IDMS-ERROR-EXIT.			
004480	PERFORM FIND-DDFILE.			
004490				
004500	FIND-DDALIAS.			
004510 *	FIND NEXT DDALIAS WITHIN DDRECA-ALIAS.			DMLC0020
	MOVE 0020 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (10)			
	SR103			
	DDRECA-ALIAS.			
004520	IF DB-STATUS-OK			
004530	OR DB-END-OF-SET			
004540	NEXT SENTENCE			
004550	ELSE			
004560	PERFORM IDMS-ERROR-EXIT.			
004570				
004580	ERASE-DDALIAS.			
004590 *	ERASE DDALIAS.			
	MOVE 0021 TO DML-SEQUENCE			DMLC0021
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (52)			
	SR103.			
004600	IF NOT DB-STATUS-OK			
004610	PERFORM IDMS-ERROR-EXIT.			
004620	PERFORM FIND-DDALIAS.			
004630				
004640	SET-UP-IDMS.			
004650 *	ACQUIRE VARIABLE BUFFER FOR SUBSCHEMA-CTRL			
004660 *	SIZE IS BUFFER-SIZE-CTRL.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-CTRL ISHD-H11 ISHD-XFO			
	ISHD-F0			
	SERVICE RELOAD SUBSCHEMA-CTRL.			
004670	MOVE CSECT TO PROGRAM-NAME.			OLBINDRN
000010	IF TWA-PRODUCTION-RUN			OLBINDRN
000020	AND SPT-PRODUCTION-RUN			OLBINDRN
000030 *	BIND RUN-UNIT			DMLC0022
	MOVE 0022 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (59)			
	SUBSCHEMA-CTRL			
	SUBSCHEMA-SSNAME;			
000040	ELSE			OLBINDRN
000050	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			OLBINDRN
000060	IDBMSCCM (59)			OLBINDRN
000070	SUBSCHEMA-CTRL			OLBINDRN
000080	TEST-SUBSCHEMA-SSNAME.			OLBINDRN
004690	PERFORM IDMS-STATUS.			
004700 *	READY DATA-REGION USAGE-MODE IS UPDATE.			DMLC0023
	MOVE 0023 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (36)			
	DATA-REGION.			
004710	PERFORM IDMS-STATUS.			
004720 *	READY DATA-INDX-REGION USAGE-MODE IS UPDATE.			DMLC0024
	MOVE 0024 TO DML-SEQUENCE			
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (36)			
	DATA-INDX-REGION.			
004730	PERFORM IDMS-STATUS.			
004740 *	ACQUIRE VARIABLE BUFFER FOR DDRECA			
004750 *	SIZE IS BUFFER-SIZE-DDRECA.			
	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECA ISHD-H6 ISHD-XFO			
	ISHD-F0			

SEQ. NO.	SOURCE STATEMENT	PAGE	19	11/29/82
004760 *	SERVICE RELOAD DDRECA. BIND DDRECA. MOVE 0025 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR100 DDRECA.			DMLC0025
004770	PERFORM IDMS-STATUS.			
004780 *	ACQUIRE VARIABLE BUFFER FOR DDRECB. SIZE IS BUFFER-SIZE-DDRECB.			
004790 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDRECB ISHD-H7 ISHD-XF0 ISHD-F0			
004800 *	SERVICE RELOAD DDRECB. BIND DDRECB. MOVE 0026 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR101 DDRECB.			DMLC0026
004810 *	ACQUIRE VARIABLE BUFFER FOR DDPROGRM. SIZE IS BUFFER-SIZE-DDPROGRM.			
004820 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDPROGRM ISHD-H8 ISHD-XF0 ISHD-F0			
004830 *	SERVICE RELOAD DDPROGRM. BIND DDPROGRM. MOVE 0027 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR102 DDPROGRM.			DMLC0027
004840 *	ACQUIRE VARIABLE BUFFER FOR DDFILE. SIZE IS BUFFER-SIZE-DDFILE.			
004850 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDFILE ISHD-H10 ISHD-XF0 ISHD-F0			
004860 *	SERVICE RELOAD DDFILE. BIND DDFILE. MOVE 0028 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR104 DDFILE.			DMLC0028
004870 *	ACQUIRE VARIABLE BUFFER FOR DDALIAS. SIZE IS BUFFER-SIZE-DDALIAS.			
004880 *	CALL 'ISHDHLGV' USING BUFFER-SIZE-DDALIAS ISHD-H9 ISHD-XF0 ISHD-F0			
004890 *	SERVICE RELOAD DDALIAS. BIND DDALIAS. MOVE 0029 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (48) SR103 DDALIAS.			DMLC0029
004900	FINISH-IDMS.			
004910	FINISH.			
004920 *	MOVE 0030 TO DML-SEQUENCE CALL 'ISHDHLID' USING SUBSCHEMA-CTRL IDBMSCCM (02).			DMLC0030
004930	PERFORM IDMS-STATUS.			
004940 *	RELEASE BUFFER SUBSCHEMA-CTRL. CALL 'ISHDHLPB' USING SUBSCHEMA-CTRL.			
004950 *	RELEASE BUFFER DDRECA. CALL 'ISHDHLPB' USING DDRECA.			
004960 *	RELEASE BUFFER DDRECB. CALL 'ISHDHLPB' USING DDRECB.			
004970 *	RELEASE BUFFER DDPROGRM. CALL 'ISHDHLPB' USING DDPROGRM.			
004980 *	RELEASE BUFFER DDFILE. CALL 'ISHDHLPB' USING DDFILE.			
004990 *	RELEASE BUFFER DDALIAS. CALL 'ISHDHLPB' USING DDALIAS.			
005000	IDMS-STATUS.			IDMSERR
000010				
000020	IF DB-STATUS=OK			IDMSERR
000030	NEXT SENTENCE			IDMSERR

SEQ. NO.	SOURCE STATEMENT	PAGE	20	11/29/82
000040	ELSE			IDMSERR
000050	PERFORM IDMS-ERROR-EXIT.			IDMSERR
000060				IDMSERR
000070	IDMS-ERROR-EXIT.			IDMSERR
000080	IF ERROR-STATUS NOT = '1469'			IDMSERR
000090 *	DUMP FROM CSECT SIZE IS 16			IDMSERR
000100 *	AND T-W-A AND RESOURCES			IDMSERR
000110 *	TO IS ** IDMS ERRORS DUMP **			IDMSERR
	CALL 'ISHDHLP' USING ISHD-XD6 CSECT ISHD-H16 ISHD-X22			
	ISHD-L1 ISHD-H22.			
000120 *	PUT ADDRESS OF MAPERR INTO TWA-MAP-PTR.			IDMSERR
	CALL 'ISHDHLS' USING ISHD-X02 TWA-MAP-PTR MAPERR.			
000130 *	PREPARE MAP MAPERR			IDMSERR
000140 *	MAP-PTR IS TWA-MAP-PTR			IDMSERR
000150 *	SIZE IS MAPERRP.			IDMSERR
	CALL 'ISHDHLM' USING TWA-MAP-PTR ISHD-XE2 ISHD-H5 MAPERRP			
	SERVICE RELOAD MAPERRP.			
000160	MOVE CSECT TO MAPERR-CSECTO.			IDMSERR
000170	MOVE VER-MOD TO MAPERR-VER-MODO.			IDMSERR
000180	IF TWA-TEST-RUN			IDMSERR
000190	OR SPT-TEST-RUN			IDMSERR
000200	MOVE 'TEST' TO MAPERR-TEST-FLAGC			IDMSERR
000210	ELSE			IDMSERR
000220	IF TWA-PRODUCTION-RUN			IDMSERR
000230	AND SPT-PRODUCTION-RUN			IDMSERR
000240	NEXT SENTENCE			IDMSERR
000250	ELSE			IDMSERR
000260	MOVE 'INVL' TO MAPERR-TEST-FLAGO.			IDMSERR
000270	MOVE 'IDMS ERRORS' TO MAPERR-IDMS-ERROR-LITERALO.			IDMSERR
000280	MOVE ERROR-STATUS TO MAPERR-ERROR-STATUSO.			IDMSERR
000290	MOVE ERROR-SET TO MAPERR-ERROR-SETO.			IDMSERR
000300	MOVE ERROR-RECORD TO MAPERR-ERROR-RECORDO.			IDMSERR
000310	MOVE ERROR-AREA TO MAPERR-ERROR-AREAO.			IDMSERR
000320 *	ROLLBACK.			IDMSERR
	MOVE 0031 TO DML-SEQUENCE			DMLC0031
	CALL 'ISHDHLID' USING SUBSCHEMA-CTRL			
	IDBMSCCM (67).			
000330	IF NOT DB-STATUS-OK			IDMSERR
000340	MOVE 'ROLLBACK FAILED' TO MAPERR-MSGO.			IDMSERR
000350 *	WRITE MAP MAPERR IN BUFFER.			IDMSERR
	CALL 'ISHDHLP' USING ISHD-X01 MAPERR ISHD-XF0 ISHD-X00			
	ISHD-XD6 ISHD-X00 ISHD-X00.			
000360				IDMSERR
005020 *	RETURN TO NEXT-TRAN SYGNON-TRAN AFTER-READ.			
	CALL 'ISHDHLRT' USING ISHD-XA0 SYGNON-TRAN.			
005030	GOBACK.			
005040				

A TOOL FOR USE IN
ON-LINE DATA DICTIONARY CREATION

BY

CHINHO LAI

B. S., Soochow University, 1975

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Computer Science

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1983

ABSTRACT

During the 1960s, the data and the responsibility for the data was fragmented among users. During the 1970s, a major trend has been toward the use of the shared-data data base. Shared data bases have brought into focus the need for assigned responsibility and control of the organization's data resources. The Data Dictionary (DD) system, which is attracting an increasing degree of interest among data processing users, it offers the potential of bringing a substantial degree of order and control to many aspect of data processing activities. The primary aim of a DD is to provide the what, where and how of data usage that can make it possible to control future uses. A data dictionary involves the introduction of standards for names, definitions and documentations, as well as identifying corporate owners of data and which units may share data items. This report describes the design and implementation of user-friendly data dictionary creation tool within an on-line environment.