

# Software Product Description

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**PRODUCT NAME: DBMS-10, Version 5, Data Base Management System**

**SPD 8.20.4**

## **DESCRIPTION:**

The DECsystem-10 Data Base Management System provides software to define, access and maintain data in the network structures of an integrated data base. The DBMS-10 implementation is based upon the CO-DASYL Data Base Task Group Report of April 1971. DBMS-10 provides the following functions:

### *Data Description Process*

Data structures can be established in either an hierarchical form (commonly described as trees), or networks with multi-level relationships. Relationships can exist within files or between one or more files (areas) with no fixed limit on the length of chains. The number of relationships in which any record may participate and the size of the record will normally be limited only by the design constraints of the application.

### *Data Manipulation Process*

Data based records can be referenced through a set of data manipulation statements included in COBOL or FORTRAN application programs. These statements include the ability to store, modify and delete fields and records that are of specific interest to an authorized applications user. Also included are the abilities to insert and remove records within structural relationships. It is possible (via the data definition process) to directly access specific records by symbolic keys or by movement through structural relationships.

This software provides the following:

*Data Description Language (DDL)* — Is used by a data base administrator to create and maintain procedure language-level descriptions of arrays, records, areas (data files) and sets (inter-record relationships). The data base descriptions (schema/sub-schemas) are established and maintained by the DDL compiler, SCHEMA.

*Data Manipulation Language (DML)* — Used by an applications programmer writing in COBOL or FORTRAN to store, retrieve, modify and delete data and to insert or remove inter-record data relationships. The DML comprises an extended verb set which is added to the DECsystem-10 COBOL host language and a preprocessor for FORTRAN-10 programs. COBOL programs which include Data Manipulation Language statements are processed directly by the COBOL compiler.

*Data Base Control System (DBCS)* — Is a run-time interface between a COBOL or FORTRAN program, the description and access privilege attributes (i.e., the processed DDL information), and the DECsystem-10 operating system. The DBCS exists as a specific module within the COBOL object-time system (LIBOL) and the FORTRAN object-time system (FOROTS).

Date Base Administrator Utilities:

**DBMEND:** Recovery utility which provides roll back or roll forward of selected data base transactions.

**DBINFO:** Data base utility to selectively dump data from a data base. It can also be used to generate statistics about the data base, a DDL cross reference listing and other descriptive information about the DDL program.

**STATS:** Component within DBCS used to obtain run-time information about each DML verb, as well as statistics about data base reads and writes of pages.

## **MINIMUM HARDWARE REQUIRED:**

Any valid TOPS-10 configuration with:

- A minimum of 128K words of memory
- Mass storage with minimum of 150 disk pages for DBMS-10 system software and sufficient space for data base areas
- Magnetic tape or disk units to dump and reload user-established data base areas

## **OPTIONAL HARDWARE SUPPORTED:**

Supports any mass storage, unit record or terminal device by the prerequisite software. Magnetic tape units can be used for optional failsafe and journal files

## **PREREQUISITE SOFTWARE:**

TOPS-10, Version 6.03 or later  
DECsystem-10 COBOL-68, Version 11 or  
FORTRAN-10, Version 5 or later

## **OPTIONAL SOFTWARE SUPPORTED:**

None

## **TRAINING CREDITS:**

None

## **SUPPORT CATEGORY:**

A — Software Support will be provided as stated in

-2-

the Software Support Categories Addendum to this SPD.

**UPDATE POLICY:**

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer without additional charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

**ORDERING INFORMATION:**

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU. All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources Agreement between Purchaser and DIGITAL.

The following key (F, M, P) represents the distribution

media for the product and must be specified at the end of the order number, e.g., QH101-AF = binaries on 7-track magnetic tape.

F = 7-track Magnetic Tape  
M = 1600 bpi 9-track Magnetic Tape  
P = 800 bpi 9-track Magnetic Tape

*Standard Options*

QH101 -A— Single-use license, binaries, documentation, support services (media: F, M, P)

QH101 -U— Armed services procurement regulation license, sources, documentation, support services (media: F, M, P)

**ADDITIONAL SERVICES:**

QH101 -3— Maintenance service (media: F, M, P)

QH101 -Z— Armed services procurement regulation maintenance service (media: F, M, P)

ADDENDUM  
SOFTWARE SUPPORT CATEGORIES

Each software product (hereinafter 'SOFTWARE') with a designated Support Category A or B in the applicable Software Product Description (SPD) existing at the time of order will be the current release at the time of delivery and will conform to the SPD. DIGITAL's sole obligation shall be to correct defects (nonconformance of the SOFTWARE to the SPD) as described below. Any SOFTWARE with a designated Support Category C will be furnished on an 'as is' basis.

For SOFTWARE with a designated Support Category A or B, DIGITAL will provide the services set forth below without additional charge.

**CATEGORY A**

1. Upon notification by customer to the nearest DIGITAL office that the computer system, including all required prerequisite hardware and software, is ready for the installation of the SOFTWARE, DIGITAL will install such SOFTWARE in any location within the contiguous forty-eight (48) United States, the District of Columbia, or a country in which DIGITAL or a subsidiary of DIGITAL has a software service facility. The notification must be received by DIGITAL and the system must be ready for installation within thirty (30) days after the delivery of the SOFTWARE to customer or DIGITAL will have no obligation to install. Installation will consist of: (1) verification that all components of the SOFTWARE have been received by customer, (2) loading the SOFTWARE, and (3) executing a DIGITAL sample procedure.
2. During the ninety (90) day period after installation, if the customer encounters a problem with the current unaltered release of the SOFTWARE which DIGITAL determines to be a defect in the SOFTWARE, DIGITAL will provide the following remedial service (on site where necessary): (1) if the SOFTWARE is inoperable, apply a temporary correction (TC) or make a reasonable attempt to develop an emergency by-pass, and (2) assist the customer to prepare a Software Performance Report (SPR) and submit it to DIGITAL.
3. During the one (1) year period following installation, if the customer encounters a problem with the SOFTWARE which his diagnosis indicates is caused by a SOFTWARE defect, the customer may submit an SPR to DIGITAL. DIGITAL will respond to problems reported in SPRs which are caused by defects in the current unaltered release of the SOFTWARE via the Maintenance Periodical for the SOFTWARE, which reports SPRs received, code corrections, temporary corrections, generally useful emergency by-passes and/or notice of the availability of corrected code. Software Updates, if any, released by DIGITAL during the one (1) year period, will be provided to the customer on DIGITAL's standard distribution media as specified in the applicable SPD. The customer will be charged only for the media on which such updates are provided, unless otherwise stated in the applicable SPD, at DIGITAL's then current media prices.

**CATEGORY B**

During the one (1) year period following delivery, the services provided to the customer will be the same as set forth in 3 above.

**CATEGORY C**

SOFTWARE is provided on an 'as is' basis. Any software services, if available, will be provided at the then current charges.

DIGITAL shall have the right to make additional charges for any additional effort required to provide services resulting from customer use of other than current unaltered release of the SOFTWARE operated in accordance with the SPD.