digital

Software Product Description

PRODUCT NAME: CTS-300, Version 5, Commercial Transaction System-300   **SPD 12.9.4**

DESCRIPTION:

CTS-300 is a complete software environment for the DEC Datasystem 320s and 350s. It provides an operating system, a high-level programming language, system utilities, a text editor, a sort/merge program, and program preparation tools. Program preparation is done in a single-user environment, but production can be done with up to eight users on the system simultaneously.

Features of CTS-300 include:

System Monitor — There are two monitors delivered with CTS-300 Version 5, the single-job monitor and the foreground/background monitor. Both the single-job (SJ) and the foreground/background (FB) monitor support one production job with single-user DIBOL, up to four simultaneous production jobs with time-shared DIBOL. The FB monitor can support systems with greater than 56K bytes of memory. (When exercising this feature, the FB monitor is referred to as the XM monitor. The user must do a system generation to include XM support). The XM monitor supports up to sixteen simultaneous production jobs (and at most eight terminals) with timeshared DIBOL. This feature is available only for systems that include memory management.

These monitors provide clear and concise messages to prompt the operator, and the user's keyboard commands are consistent and short. The monitors support a contiguous file structure and files can be accessed randomly or sequentially. The user can assign symbolic names to the peripheral devices so that programs can be device-independent. There is also a batch facility so the user can queue up a series of jobs to run unattended by the operator.

Command Language — CTS-300 is designed for interactive use. The new keyboard commands are consistent in format and easy to understand. The high-level command language allows transition from source to executing code with one statement. Indirect files allow command sequences to be stored and invoked by the user.

The DIBOL Language — DIBOL is DIGITAL's own business-oriented high-level language. It is similar to COBOL in that it has a Data Division and a Procedure Division. Its procedural statements are English-like, but it is a more concise language than COBOL. DI-

BOL provides the ability to do data manipulation, arithmetic expression evaluation, table subscripting, record re-definition, external calls to other programs, and sequential and random access and indexed access to files. Exception conditions cause control to transfer to a user-specified statement which can query status registers to determine the cause of the condition. A comprehensive on-line debugging utility permits the program developer to isolate and correct programming errors quickly.

Text Editor — The Text Editor is used to create and modify ASCII files. Both character- and line-oriented commands are provided, along with full provision for command interaction, editing macros, and run-time file manipulation. The Text Editor is used to create DIBOL source programs as well as data files.

Sort/Merge — The Sort/Merge utility permits the user to define the parameters for the sorting or merging of data files. A DIBOL program is then generated by the system to perform the required sort or merge. The user can specify up to eight key fields to control the ordering of the output records, in either ascending or descending sequence. A wide range of control of operating parameters, such as the number of work files to be used, is provided to enable the user to achieve maximum sort efficiency.

Linker — The Linker is used to convert the output of the DIBOL compiler into run-time format. The Linker can combine a main program with many compiled external subroutines into a single executable job. The linker provides the ability to specify overlays, so the run-time job uses less main memory than would otherwise be required. Even with overlays, the Linker is very easy to use.

PIP — The Peripheral Interchange Program (PIP) is a program that allows transfer of files (ASCII or binary) between any RT-11 supported devices. PIP also allows the user to rename and delete files.

DUP — The Device Utility Program (DUP) performs general utility functions in support of disk devices. Among DUP functions are initializing devices, scanning for bad blocks, and compressing data on a disk.

DIRECT — The directory program (DIR) is used to list the file directory for disk devices. DIR allows directory listing sorted by file name, file type, date, size, or position.

Librarian — The Librarian creates and maintains libraries of commonly used programs. The Linker uses the libraries in building executable jobs by copying into the job any required library programs.

FILEX — The FILEX (File Exchange) program provides for a universal file format, via floppy disks, between Datasystem 300s and 500s. This utility creates an IBM-compatible floppy, in 3741 format, which can be read by an IBM system and a Datasystem.

DECFORM — The DECFORM Data Entry 300 system utility is a "forms compiler" that processes screen format directives and produces a DIBOL program which, when compiled and executed, performs specified data entry functions. In addition to defining screen formats, auto-duplication, alphabetic or decimal checking, range checking, field totaling, cross-field validation, and auto-increment characteristics, DECFORM facilitates additions, inquiries, changes, verifications to sequentially ordered files, or ISAM (Indexed Sequential Access Method) files. Deletions are possible only with ISAM files. DECFORM is primarily a tool to facilitate and reduce program development.

DMS-300 — Data Management Services for the DEC Datasystem 300 (DMS-300) provides capabilities for handling sequential, random or keyed records in files. Records can be keyed by a symbolic value within each record. Records thus keyed are accessed by an ISAM technique. DMS-300 also supports file sharing and multivolume files.

MINIMUM HARDWARE REQUIRED:

Any valid DEC Datasystem 320 or 350 series configuration that includes:

- A VT05, VT50H, VT52, VT100 or LA36 console terminal. A VT50H or VT52 terminal is required for use with the DECFORM utility.
- The Extended Instruction Set (EIS or equivalent) and memory management hardware (KT11 or equivalent), if extended memory support is required.

OPTIONAL HARDWARE:

- Additional memory up to a system total of 28K words (56K bytes) on D320 systems
- Additional memory to a system total of 124K words (248K bytes) on D350 systems
- Up to a system total of 8 VT05, VT50H, VT52, VT100 or LA36 terminals
- Up to 4 LS11, LA35, LA11, or LP11 line printers
- Up to 8 DL11 asynchronous line interfaces (1 per terminal)
- A DZ11 multiplexer with up to 7 lines
- RK11 disk cartridge controller with up to 8 logical disk units (An RK05-F fixed-head disk drive uses two logical units.)
- RL11 disk cartridge controller with up to 4 disk units
- RPR11 disk pack controller with up to 8 RPR02 disk drives
- RX11 floppy disk system (either single or dual drive)
- RX211 floppy disk system (double density)
- RK611 disk pack controller with up to 8 RK06 disk drives
- RK711 disk pack controller with up to 8 RK07 disk units
- CR11 card reader
- TME11 magnetic tape controller with up to 8 TE10 transports or a TJE16 controller with up to 8 TE16 transports

PREREQUISITE SOFTWARE:

None

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

TWO (2) — Applies only to options that include support services. Consult the latest Educational Services Catalog at your local office for the available courses, course requirements, and guidelines.

SUPPORT CATEGORY:

A — Software Support will be provided as stated in 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 for a media 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.

Standard options with no support services are only available after the purchase of one supported license. When a software license is ordered without support services, the category of support applicable to such software is Category C.

A single-use license only option is a license to copy the software previously obtained under license, and use such software in accordance with DIGITAL's Standard Terms and Conditions of Sale. The category of support applicable to such copied software is Category C.

The following key (E, Q, T, V, X, Y, Z) represents the distribution media for the product and must be specified at the end of the order number, e.g., QJ354-HE = distribution on RK05 disk.

E = RK05 Disk Cartridge
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge
X = RX02 Dual Density Floppy Diskette
Y = RX01 Floppy Diskette
Z = No hardware dependency

Standard Options

This software is available only with a valid DEC Datasystem 320 or 350 that includes support services. It is also offered under a license for use with a valid DEC Datasystem 320 or 350 that does not include software support services.

DS352—RX01 Floppy Disk Based
DS356—RPR02 Disk Pack Based
D322—RX01 Floppy Disk Based
D323—RX02 Floppy Disk Based
D325—RL01 Cartridge Disk Based
D324—RK05 Cartridge Disk Based
D354—RK05 Cartridge Disk Based
D355—RL01 Cartridge Disk Based
D357—RK06 Disk Based
D358—RK07 Cartridge Disk Based

Update Options

Users of previous CTS-300 versions whose specified Support Category warranty has expired may order the following software update at the then current charge for such update, for use under the existing license. Except where the medium is designated as Z, the update is distributed in source or binary form on the appropriate medium. A software update where the medium is designated as Z grants the user of CTS-300 the right to copy the previously ordered QJ354-H or QJ354-W software update for use on an additional single CPU on which a CTS-300 license has been obtained. No installation or other services are included unless specifically stated otherwise.

QJ354 -H— Binaries, documentation (media: E, Q, T, V, X, Y)

QJ354 -H— Right to copy for single-use (under existing license), no binaries, no documentation, no support services (media: Z)

Users of previous CTS-300 versions whose specified Support Category warranty has not expired may order under license the following software update for the then current media charge. The update is distributed in binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QJ354 -W— Binaries, documentation (media: E, Q, T, V, X, Y)

ADDITIONAL SERVICES:
QJ354 -3— Standard Binary Program Update Service (media: E, Q, T, V, X, Y)

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.