

## VOICE/DATA PROTECTION FEATURE

### FEATURE DOCUMENT 1A ESS™ SWITCH

CONTENTS	PAGE
1. INTRODUCTION .....	1
2. USER PERSPECTIVE .....	2
3. ENGINEERING .....	5
4. IMPLEMENTATION .....	7
5. ADMINISTRATION .....	10
6. SUPPLEMENTARY INFORMATION ...	11
7. COMMENT FORM .....	11

#### Tables

A. Recent Change Information for VDP Feature .....	8
--	---

#### 1. INTRODUCTION

##### DEFINITION

1.01 The VDP (Voice/Data Protection) feature protects customer voice and/or data transmission from destructive interruption by other 1A ESS switch features that cause a tone to be transmitted to a busy customer's station line. With VDP, instead of interrupting the busy station line, the interruption feature is inhibited and line busy tone is returned to the calling party.

##### A. Feature Option

1.02 The VDP feature may be provided to a customer with or without an option known as SC (station control). When both VDP and SC are provided, the feature is commonly known as VDPSC (Voice/data protection station control). With VDPSC, the subscribing customer exercises usage control of VDP from a station telephone set by dialing a VDP activation or deactivation access code. When VDPSC is initially assigned, the VDP feature is inactive. It remains inactive until the subscribing customer requests activation by dialing the DCP activation access code. If VDP is assigned without SC, then VDP is permanently activated and remains activated until VDP is unassigned.

##### B. Interruption Features

1.03 The 1A ESS switch features that can be inhibited by the VDP or VDPSC feature are categorically grouped into two separate classes as follows:

Class 1 (Note)

- o Inhibit CWO (Call Waiting Originating)
- o Inhibit DCW (Dial Call Waiting)
- o Inhibit CWT (Call Waiting Termination)
- o Inhibit CPO (Attendant Camp-On).

Class 2 (Note)

- o Inhibit all class 1 features
- o Inhibit BVL (Busy Verification of Station Lines)
- o Inhibit BVT (Busy Verification of Centrex Trunks)
- o Inhibit DCPU (Directed Call Pickup With Barge In).

Note: A POTS (plain old telephone service) or RSS (remote switching system) individual station line is allowed CWT only. A centrex line is allowed CWT, CWO, DCW, and DCPU. A cen-

AT&T TECHNOLOGIES, INC. - PROPRIETARY

PRINTED IN U.S.A.          Page 1

AT&T 231-390-087

trex attendant line is allowed CPO, BVL, and BVT. The default class for all customers is class 1.

ECONOMIC WORTH

1.04 The VDP feature is economical to the local telephone company in that the feature allows an interruption feature and a data switching feature to coexist on the same station line or in the same centrex customer group.

1.05 With VDPSC, a subscribing customer has an activate/deactivate capability for the CWT feature. Thus, customers unable to use CWT because of the potential disruption caused by the call waiting tone are allowed to subscribe to CWT. This should result in a CWT subscription increase. To provide the activate/deactivate capability for CWT services,

both VDPSC and CWT must be subscribed to.

1.06 Since VDP maybe provided to a variety of customers [i.e., POTS, centrex, RSS, or MLG (multiline group)], additional revenue should be available by offering expanded switching data features to these respective customers. Normally, charging for the VDP feature is on a monthly basis; no provisions exist for feature charging on a per activation/deactivation basis.

#### FEATURE AVAILABILITY

1.07 The VDP feature is initially available with the IAE9 generic programs.

#### FEATURE GROUPS

1.08 To provide VDP, the optional VDP feature group and associated feature package number 212 must be loaded. The applicable set cards are 9SVDP and 9FVDP, respectively.

#### FEATURE ASSIGNMENT

1.09 The VDP feature is assigned to a POTS, centrex, or RSS customer on a per individual line basis. Dependent upon the type of customer, either the class 1 or class 2 interruption features can be inhibited. (See paragraph 1.03.)

1.10 The VDP feature can also be assigned on a per MLG (hunting or nonhunting) basis. Then, VDPSC can be assigned on a terminal/line basis within the group. The terminal/line may activate/deactivate VDPSC for that terminal/line only.

#### INCOMPATIBILITIES

1.11 The VDP feature is not allowed for the begin hunt DN (directory number) in a MLHG (multiline hunt group). If a terminal/line requires more flexibility in VDP than the MLHG allows, then a nonhunt DN must be assigned. The nonhunt DN must be associated with the terminal/line through a recent change service order that associates a SBN (special billing number) to the terminal.

## 2. USER PERSPECTIVE

#### CUSTOMER PREMISES EQUIPMENT

2.01 A VDPSC subscribing customer can utilize either a DTMF (dual tone multifrequency) or a rotary dial (dial pulse) station telephone set to request activation/deactivation of VDPSC.

#### ACTIVATION- POTS, CENTREX, OR RSS CUSTOMERS

##### A. Permanently Assigned-VDP

2.02 If the VDP feature is provided to a subscribing customer permanently assigned (via a service order or CSR [centrex station rearrangement] command), it is activated upon assignment and remains activated until unassigned.

#### B. VDPSC Assigned

##### Idle Station

2.03 A VDPSC subscribing customer requests activation of VDPSC by going off-hook, receiving dial tone, and dialing the specified VDP activation access code. (Digit assignment for this code is a local telephone company option.) If this code is valid, confirmation tone, followed by dial tone is returned and VDPSC is activated.

##### Station With Flash Capability

2.04 A VDPSC subscribing customer with switchhook flash capability can activate VDPSC from an established 2-party call. First, the activating customer flashes the switchhook placing the called station party on consultation hold. When dial tone is received, the customer dials the VDP

Page 2

ISS 1, AT&T 231-390-087

vation access code. If this code is valid, confirmation tone, followed by dial tone is returned and VDPSC is activated. The activating customer can initiate any action that can be initiated following a switchhook flash.

#### DEACTIVATION -POTS, CENTREX, OR RSS CUSTOMERS

##### A. Permanently Assigned-VDP

2.05 The VDP feature is deactivated when it is no longer assigned to a subscribing customer line. For a POTS, RSS, or centrex line, VDP is unassigned by a service order or, for centrex only, a CSR command. A service order must be used to remove the VDP assignment for a M/G.

#### B. VDPSC Assigned

##### Idle Station

2.06 A VDPSC subscribing customer requests deactivation of VDP by going off-hook, receiving dial tone, and dialing the VDP deactivation access

code. (Digit assignment for this code is a local telephone company option.) If this code is valid, confirmation tone, followed by dial tone is returned and the VDPSC feature is deactivated.

#### Station With Flash Capability

2.07 A VDPSC subscribing customer with switchhook flash capability can deactivate VDP from an established 2-party call. First, the deactivating customer flashes the switchhook placing the called station party on consultation hold. When dial tone is received, the customer dials the VDP deactivation access code. If this code is valid, confirmation tone, followed by dial tone is returned and the VDPSC is deactivated. The customer can initiate any action that can be initiated following a switchhook flash.

#### ABNORMAL OPERATIONS

2.08 If a POTS or RSS customer not assigned VDPSC (Dials the VDP activation/deactivation access code, SSEA (special service error announcement) is returned. If a centrex customer not assigned VDPSC dials the VDP activation/deactivation access code, reorder tone is returned.

2.09 If a POTS, centrex, or RSS customer assigned VDPSC dials the VDP activation/deactivation code while the feature is activated/deactivated, confirmation tone is returned and the feature remains activated/deactivated.

2.10 If switch resources are not available during activation/deactivation of VDPSC, reorder tone is returned.

#### INTERACTIONS

##### A. General

2.11 Basically, the VDP feature is a "terminating" feature. However, with the SC option, a subscribing customer is allowed to activate and deactivate the feature on line originations. Thus, VDPSC has software interfaces with other originating features that utilize customer dialed access codes. These software interfaces are described under the heading "Originating Interactions" while the remaining feature interactions are described under the heading "Terminating Interactions."

##### B. Originating Interactions

##### Call Forwarding Variable

2.12 Customers that subscribe to both VDPSC and CFV (Call Forwarding Variable) can dial the

access codes for both features on a single telephone call. If the customer desires to activate CFV and activate or deactivate VDPSC, the VDP activation/deactivation access code must be dialed first. With POTS CFV, the CFV activation access code is always followed by the remote station telephone number to which a courtesy call is immediately placed. For more detailed information applicable to POTS-CFV and CTX-CFV, see reference A(2) in Part 6.

#### Call Hold

2.13 A centrex customer with both the CIID (Call Hold) and VDPSC features may dial access codes for both features in either order (i.e., upon flashing and receiving dial tone, a customer may place a called party on hold, using the CIID access code and then activate or deactivate VDPSC or may reverse the sequence and dial VDPSC first). For more detailed information applicable to CHD, see reference A(2) in Part 6.

### Page 3

AT&T 231-390-087

#### Cancel Call Waiting

2.14 Customers who have both the CCW (Cancel Call Waiting) (i.e., customers must have CWT to have CCW capability) and VDPSC features, can activate both on a single telephone call by dialing the respective access codes in either order. However, since CCW is a per call feature, CCW remains in effect for that call only; VDPSC remains in effect until its deactivation code is dialed. For more detailed information applicable to CCW, see reference A(3) in Part 6.

#### Carrier Interconnect

2.15 The VDP activate/deactivate access code may be dialed on a CI (Carrier Interconnect) call provided the respective code is dialed before the 10XXX carrier designation code. For more detailed information applicable to CI, see reference A(4) in Part 6.

#### Centrex Station Rearrangement

2.16 A customer with the CSR feature is able to add, delete, and change VDP and its associated options on a per line basis. A CSR response to

a feature verification for a centrex line includes the VDP optional word and its associated options. The CSR feature is not able to modify VDP for MLGs because CSR cannot change group feature assignments. For more detailed information applicable to CSR, see references A(5) and A(6) in Part 6.

#### Multiline Hunt

2.17 The VDP feature and its options are assignable, via a service order, to a MLG (hunting or nonhunting) on a per group basis. However, if a terminal/line within the respective group activates/deactivates VDPSC, then VDP is active/inactive for that terminal/line only. For more detailed information applicable to MLGs, see reference A(7) in Part 6.

#### Speed Calling

2.18 A customer with VDPSC and Speed Calling may activate/deactivate VDP before dialing a speed call number. With Customer Changeable Speed Calling, the VDPSC customer may activate or deactivate VDPSC when dial tone is returned after changing a speed calling entry. The VDPSC access codes are not permitted as entries in a speed calling list. For more detailed information applicable to Speed Calling and Customer Changeable Speed Calling, see reference A(8) in Part 6.

### C. Terminating Interactions

#### Busy Verification of Station Lines

2.19 If a centrex attendant attempts to busy verify a station line for which VDP with class 2 is active, busy tone is returned to the attendant and the existing connection is not interrupted. This includes a busy verification applied to a station line because of call forwarding, series completion, or multiline hunting. For more detailed information applicable to BVL, see reference A(9) in Part 6.

#### Busy Verification of Centrex Trunks

2.20 If a centrex attendant attempts to busy verify a centrex trunk which is connected to a station line for which VDP with class 2 is active, busy tone is returned to the attendant and the existing connection is not interrupted. One exception is the busy verification of preemptible AUTOVON trunks. In this case VDP does not inhibit the verification even though class 2 is assigned and VDP is active. For more detailed information applicable to BVT, see reference A(9) in Part 6.

#### Attendant Camp-On

2.21 If a centrex attendant attempts to camp-on a station line that has VDP active, the camp-on request is denied (i.e., the connection is not interrupted) and busy tone is returned to the attendant. For

more detailed information applicable to CPO, see reference A(10) Part 6.

#### Call Forwarding Variable

2.22 If a call terminates to a customer station line having both CFV and VDP active, then CFV takes precedence and the call is forwarded to the remote station. In this case, VDP has no effect since call interruption is not attempted.

#### Call Forwarding Busy Line

2.23 If a terminating station with call waiting and VDP active also has CFBI, (Call Forwarding Busy Line), the customer will receive CFBL treat-

Page 4

ISS 1, AT&T 231-390-087

ment. For more detailed information applicable to CFBL, see reference A(1) in Part 6.

#### Call Transfer

2.24 If a terminating station line has both call transfer and VDP active and the terminating station party transfers the call to a third party, then VDP is no longer active for that call. The VDP feature applies to the individual line call and not the transferred call. For more detailed information applicable to call transfer, see reference A(11) in Part 6.

#### Call Waiting Terminating

2.25 A customer may not subscribe to both CWT and VDP without the SC option (these are conflicting features). The VDPSC feature can be used to prevent interrupts on an established call. For more detailed information applicable to CWT, see reference A(12) in Part 6.

#### Call Waiting Originating

2.26 If an originating party with CWO dials a terminating station line with VDP active, busy treatment is provided to the originating party and the existing connection is not interrupted. For more detailed information applicable to CWO, see reference A(12) in Part 6.

#### Dial Call Waiting



2.27 If an originating party with DCW dials a terminating party who has activated VDP, busy tone is returned to the originating party and the existing connection is not interrupted. When DCW is on a given call; call forwarding, series completion, and multiline hunting are not checked for the terminating line. Thus, busy tone is returned if VDP is active rather than checking for CFBL. For more detailed information applicable to DCW, see reference A(13) in Part 6.

#### Directed Call Pickup With Barge-In

2.28 If an originating party dials a terminating party with DCPU and VDP class 2 active, busy tone is returned to the station attempting barge-in, and the existing connection is not interrupted. Barge-in is only attempted when the existing connection is in a stable talking state. Prior to talking (i.e., the ringing state), regular call pickup is invoked and there is no interaction with VDP. For more detailed information applicable to DCPU, see reference in Part 6.

#### Multiline Hunt

2.29 If a terminating MLG line has VDP active, attempts to apply CWO, DCW, or CPO cause busy tone to be returned to the originating party. If the terminating MLG line has a nonhunt DN assigned with the CWT feature, then the originating line receives busy treatment when attempting a call to the nonhunt DN. (Hunt DNs in a MLG cannot be assigned CWT.)

#### Series Completion

2.30 If a line with VDP active and CWT is part of a series completion group, and this line is the last line to be hunted, then busy treatment is provided and the existing connection is not interrupted. For more detailed information applicable to the Series Completion feature, see reference A(15) in Part 6.

#### Message Desk Service

2.31 If a line with MDS (Message Desk Service) and the visual message waiting indicator option has VDP active; then when the line is busy and receives a message waiting indicator activation or deactivation request, MDS queues the message waiting indicator until the line goes on-hook. The MDS feature is inhibited under class 1 and class 2. For more detailed information applicable to MDS, see reference A(16) in Part 6.

#### OPERATIONAL LIMITATIONS

2.32 The VDP feature cannot prevent disruptions originating from a source external to the 1A

ESS switch (e.g., another switching system), or any operator service signaling from interfering with voice or data transmission, or prohibit the preemption of AUTOVON trunks. The VDP feature prevents interruptions only on the subscribing customer's station line serviced by the 1A ESS switch.

### 3. ENGINEERING

Note: These guidelines are for planning purposes only. The COEES (Central Office Equip-

Page 5

AT&T 231-390-087

ment Engineering) and the Information System Engineering Document, Index 42 should be used to manually order and engineer the 1A ESS switch. The standard recommended automated procedure is COEES-MO (Mechanized Ordering).

### HARDWARE

3.01 No new or unique hardware circuits are required to implement the VDP feature. If the feature subscription is heavy, then the quantity of customer digit receivers SD-1A172 or SD-1A173 may require some increase.

### SOFTWARE

#### A. Base Generic Program

3.02 Approximately 892 program store words are required in the 1AE9 base generic program to implement the VDP feature.

#### B. Optionally Loaded Feature Package

3.03 The 9FVDP feature package number 212 must be loaded. The 9FVDP feature package requires approximately 650 program store words which are manually added to COEES using the GO MEMORY or DO RW commands.

#### C. Parameters/Call Store Areas

3.04 A 50-word unrestricted duplicated call store table, RVDPKMDB, is required for the VDP feature. This table is used to build the KMDB (keyword message data block) information before the

KMDB is placed on the RC batch queue.

3.05 Two existing unrestricted duplicated call store tables (RCBQ and RCBQX) are increased to include the recent change area required for the VDP or VDPSC feature. The additional words required for increasing these tables can be estimated using the following formulas:

- o Additional RCBQ words =  $\text{NRCVBQ} \times \text{MARK (9SVDP)}$

- o Additional RCBQX words =  $30 [\text{NRCVBQ} \times \text{MARK (9SVDP)}]$

3.06 Four parameter words (B6VDP, B6VDP + 1, B6VDP2, and B6VDP + 2) are required to point blocks of unrestricted duplicated call store used for collecting traffic measurements when VDP is assigned on a centrex group basis. The size of the two centrex peg count blocks is equal to the value of the CTG set card.

#### D. Translations

##### Directory Number Translator

3.07 Item VDP (bit 10) in the DNCL3 word of the DN auxiliary block indicates the presence or absence of the VDP feature. If VDP = 1, the VDP feature is present and a VDP optional word (optional word 1) is built in the DN auxiliary block. The VDP feature cannot appear on station lines with a terminating abbreviated class code. The VDPSC item (bit 22) in the VDP optional 1 word indicates the presence or absence of the SC option. If VDPSC = 1, the SC option is present. This allows a station to activate and deactivate the VDP feature. When VDPSC = 1, item VDPAD (bit 23) in the VDP optional 1 word indicates the status of VDP. (VDPAD = 1 indicates VDP is activated and VDPAD = 0 indicates VDP is deactivated.) Bits 5 through 0 in the VDP optional 1 word represent the interruption features to be inhibited. For each interruption feature to be inhibited, the corresponding bit is set = 1. Bits 2 through 0 represent the class 1 features that are inhibited. This is the default class for all customers. Centrex customers may also have bits 5 through 3 set = 1 to indicate the class 2 interruption features that are inhibited.

##### Multiline Hunt Group Common Block Translator

3.08 Item VDP (bit 10) in the DNCL3 word of the MLHG common block indicates the presence or absence of the VDP feature. If VDP = 1, the VDP feature is present and a VDP word (word 19) is built in the MLHG common block. Item VDPSC (bit 22) in word 19 indicates the presence or absence of the SC option. Bits 5 through 0 in word 19 represent the interruption features to be inhibited. For each interruption feature to be inhibited, the corresponding bit is set = 1. Bits 2 through 0 represent the class 1 fea-

tures that are inhibited. This is the default class for all customers. Centrex customers may also have bits 5 through 3 set = 1 to indicate the class 2 interruption features that are inhibited. Hunt DNs cannot be assigned VDP; nonhunt DNs can be assigned VDP. If a nonhunting MLHG terminal is called directly, the

Page 6

ISS, AT&T 231-390-087

interruption features set = 1 in optional word 1 of the DN auxiliary block prevail. If the call arrives at the terminal as a result of being hunted, the hunt group features status prevails. If a MLG has the SC option, then item VDPAD (bit 23) in the hunting list and outdial list word type A or type B indicates if the terminal has VDP active. (VDPAD = 1 indicates activation and VDPAD = 0 indicates deactivation.) If the hunting list and outdial list word is type C, then item VDPAD (bit 23) of word 1 indicates that the terminal has VDP active if VDPAD = 1. The interruption features to be inhibited for the terminal are the features set = 1 for the group in bits 5 through 0 in word 19. If a terminal has a nonhunt DN with VDPSC assigned and the MLHG also has VDPSC upon activation from the terminal, then VDPAD in the DN auxiliary block will be set = 1 and VDPAD in the appropriate hunt list or terminal auxiliary block will be set = 1. Conversely, upon deactivation of VDP, the same bits will be set = 0. Effective with the 1AE9 and later generic programs, the MLHG common block becomes 21 words in length.

#### Prefixed Access Code Translator

3.09 For a POTS or RSS customer, a final data type 05 word with a feature code = 27 (bits 4 through 0) is required to translate the dialed digits associated with the VDP activation/deactivation access code. Item VDPAD (bit 5) in the final data type 05 word indicates if a customer request is for activation or deactivation of VDP. If VDPAD = 1, the request is for activation. If VDPAD = 0, the request is for deactivation. Toggling of the VDPAD indicator is software controlled.

#### Centrex Digit Interpreter Table Translator

3.10 A final data type 05 word with a subtype = 27 (bits 4 through 0) must be built in the centrex digit interpreter tables to translate the dialed digits associated with the VDP activation/deactivation access code. Item VDPAD (bit 5) in the final data type 05 word indicates if a centrex customer request is for activation or deactivation of VDP. If VDPAD = 0, the request is for deactivation. Toggling of the VDPAD indicator is software controlled.

## REAL TIME

3.11 The VDP feature has a minimal impact on real time.

## 4. IMPLEMENTATION

4.01 The VDP feature is implemented on a per switch basis by making the appropriate translation data changes, input of the appropriate set cards, and feature assignment on a per DN and/or a MLG basis. Once these respective tasks are completed, the feature should be verified using the appropriate I/O (input/output) messages and by making test calls.

## RC MESSAGES

4.02 The RC messages, keywords, and options used in implementing the VDP feature are as identified and described in Table A. For detailed information applicable to RC formats, see reference Part 6.

## VERIFICATION

4.03 To verify these translation data changes, the following messages are used:

VFY-DN  
VFY-CSTG-34  
VFY-CSTG-36  
VF:DNSVY:  
VFY-XDGNT-  
VFY:QUEUE:

The output messages impacted are: TR01, TR02, TR15, TR16, TR75, TR109. For detailed information applicable to these I/O messages, see references B(5) and B(6) in Part 6.

4.04 If the VDP feature is associated with a CSR (Centrex Station Real-Arrangement), the CSR LNDSP (line display) command returns the following: VDP if the centrex station line has the feature assigned, SC if the SC option applies, ACT or INACT (depending on the activity state of SC), and CL1 or CL2 (depending on which class of interruption features apply).

## ASSIGNMENT RESTRICTIONS

4.05 The VDP feature cannot be assigned to station lines that use a terminating abbreviated class code. If VDP is to be assigned to a MLHG, the begin-hunt DN cannot be assigned VDP.

AT&amp;T 231-390-087

TABLE A

## RECENT CHANGE INFORMATION FOR VDP FEATURE

MESSAGE	KEYWORDS (OPTION)	FUNCTION
RC:LINE	VDP (Yes/No)	Used to set/reset the VDP feature indicator (bit 10) in the DNCL3 word built in the DN auxiliary block translator. If the yes option is used, the VDP feature is present and a VDP optional word (optional word 1) is built in the DN auxiliary block. If the no option is used, the VDP feature indicator is reset. *, + +
	STC (Yes/No)	Used to set/reset the VDPSC indicator (bit 22) in the VDP optional 1 word built in the DN auxiliary block translator. If the yes option is used, the VDPSC indicator is set, thus allowing a station line to dial an activation/deactivation access code for the VDP feature. If the no option is used, the VDPSC indicator is reset. *, + +
	VACT (Yes/No)	Used to set/reset the VDPAD indicator (bit 23) in the VDP optional 1 word built in the DN auxiliary block. If the yes option is used, the VDPAD indicator is set. If the no option is used, the VDPAD indicator is reset. +, + +
	CLASS (a)	If a station line has the VDP feature assigned, this keyword and option are used to inhibit a specific class of interruption features that are identified individually (1 bit per feature) in the VDP optional 1 word built in the DN auxiliary block translator. The value for option (a) can be 1 or 2. The default class is class 1. Class 2 is only available for centrex lines. The individual features inhibited by class are identified in paragraph 1.03. + +
RC:MLHG	VDP (Yes/No)	Used to set/reset the VDP feature indicator (bit 10) built in the DNCL3 word of the MLHG common block translator. If the yes option is used, the VDP feature is present for the group and a VDP word (word 19) is built in the MLHG common block. If the no option is used, the VDP feature indicator is reset. S S
	STC (Yes/No)	Used to set/reset the VDPSC indicator (bit 22) in word 19 of the MLHG common block translator. If the yes option is used, the VDPSTC indicator is set, thus allowing a terminal within the group to dial an activation/deactivation access code for the VDP feature. If the no option is used, the VDPSC indicator in word 19 is reset. #

CLASS (a) If a MLG (hunting or nonhunting) has the VDP feature assigned, this keyword and option are used to inhibit a specific class of interruption features that are identified individually (1 bit per feature) in word 19 of the MLHG common block translator. The value for option (a) can be 1 or 2. The default class is class 1. Class 2 is only available for centrex groups. The individual features inhibited by class are identified in paragraph 1.03.

See footnotes on next page.

Page 8

ISS, AT&T 231-390-087

#### TABLE A (Contd)

##### RECENT CHANGE INFORMATION FOR VDP FEATURE

RC:CTXDI STYP (aa) This keyword and option are used to build a final data type 05 word within the centrex digit interpreter table. A type 27 entry indicates an access code is used for activation or deactivation of VDP on a centrex line basis.

RC:PSWD DATA (aa) This keyword and option are used to build a final data type 05 word within PACT. A feature type 27 entry indicates an access code is used for activation or deactivation of VDP on a POTS or RSS station line basis.

\* If VDP is assigned to a DN without the STC option, then VDP is active and remains active until VDP is unassigned. If VDP is assigned to a DN with the STC option, then VDP is initially inactive and remains inactive until the subscribing customer dials the VDP activation access code. The digits utilized for a VDP activation/deactivation access code are a local telephone company option.

+ The VACT keyword can only be input when a station line already has VDPSTC. For a MLG terminal, VACT may only be input when the MLG already has VDPSTC. The VACT keyword cannot be input with either the VDP or STC keywords. The VACT keyword may only be input on a change message. If a MLG terminal has a nonhunt DN assigned, and both the MLG and nonhunt DN have VDPSTC, then both the VDPAD indicator on the DN and the VDPAD on the terminal are set/reset.

+ The VDP, STC, VACT, and CLASS keywords are CSR changeable via the CSR command LNCHG.

S When a MLG (hunting or nonhunting) is assigned VDP, then all terminals in its hunt or outdial lists can use the VDP feature. Begin hunt DNs associated with a MLHG terminal cannot individually be assigned VDP, but

nonhunt DNs can be assigned VDP. This is accomplished using the RC:LINE message. If a MLHG is assigned VDP, then any nonhunt DNs are not required to be assigned VDP. The interruption features inhibited on the DN are used when the line is called directly. The interruption features inhibited on the MLHG are used when call termination is a result of being hunted. If a terminal has a nonhunt DN with VDPSTC and the MLHG also has VDPSTC, upon entering the VDP deactivation access code, the same are marked with VDP activated. Conversely, upon entering the VDP deactivation access code, the same are marked as VDP deactivated. The activation/deactivation access code dialed by a terminal controls only that terminal. There is no line that is able to dial the activation/deactivation access code for the entire group.

- # If VDP is assigned to a MLHG without the STC option, then VDP is active and remains active until VDP is unassigned. If VDP is assigned to a MLG with the STC option, then VDP is initially inactive and remains inactive until a terminal within the group dials the VDP activation access code.

Page 9

AT&T 231-390-087

## SET CARDS

4.06 The VDP or VDPSC feature requires the following new set cards: 9SVDP, 9FVDP, and NRCVBQ. The 9SVDP and 9FVDP set cards define the VDP feature group and feature package, respectively. The NRCVBQ set card defines the number of RCBQ entries required for activation/deactivation of VDP. The value range for the NRCVBQ set card equals 0 or 2 through 24. The default value equals 4. To determine the value for NRCVBQ, the P.001 (n X 0.1) formula can be used. The n in this formula specifies the number of ABSBH (average busy season busy hour) VDP activations/deactivations.

4.07 The existing NRCBQ set card has been modified to include the NRCVBQ in the RCBQ and RCBQX call store tables located in duplicated call store. To calculate the new value of NRCBQ, the following formula can be used: New value of NRCBQ = (16 X MARK of (9SBISI)) + ((NCCPIC X MARK (FFC102)) + (NRCSBQ X MARK (9SSLE)) + (NRCVBQ X MARK (9SVDP))). For explanation of set card formulas, refer to Parameter Guide PG-1A.

## TRANSLATION FORMS

4.08 The following translation forms apply to the VDP feature. For detailed information of these forms, refer to Translation Guide TG-1A.

- o ESS 1101
- o ESS 1107
- o ESS 1109
- o ESS 1315.



## 5. ADMINISTRATION

### MEASUREMENTS

5.01 The TMCs (traffic measurement codes) 144 and 145 are unique to the VDPSC feature. They are available on the H-, C-, DA-15, and S- traffic schedules.

TMC	DESCRIPTION
144	Centrex VDPSC Successful Activations Peg Count: For each selected centrex group, this counts the number of times the 1A ESS switch activates VDPSC in response to a centrex station line request to activate the VDP feature.
145	Centrex VDPSC Successful Deactivations Peg Count: For each selected centrex group, this counts the number of times the 1A ESS switch deactivates VDPSC in response to a centrex station line request to deactivate the VDP feature.

5.02 The following TMC 005 EGOs (equipment group or office count number) also apply to the VDPSC feature.

EGO	DESCRIPTION
256	Total VDPSC Successful Activations Peg Count: This measurement counts the total number of times the 1A ESS switch activates VDPSC in response to a station line request to activate the VDP feature.
257	Total VDPSC Successful Deactivations Peg Count: This measurement counts the total number of times the 1A ESS switch deactivates VDPSC in response to a station line request to deactivate the VDP feature.
258	Total VDPSC Overflow Count: This measurement counts the number of times the 1A ESS switch fails to activate VDPSC in response to an activation request by a station line due to unavailability of switch resources.

5.03 The VDP feature has no impact on AMA (automatic message accounting).

Page 10

ISS 1, AT&T 231-390-087

## 6. SUPPLEMENTARY INFORMATION

### REFERENCES

6.01 The following documentation contains information pertaining to or affected by the VDP feature.

#### A. AT&T Practices

- (1) 231-090-074-Call Forwarding Variable Feature Document
- (2) 231-090-076-Call Hold Feature Document
- (3) 231-390-088-Cancel Call Waiting Feature Document
- (4) 231-090-120-Carrier Interconnect Feature Document
- (5) 231 -090-075-Call Forwarding Busy Line/Call Forwarding Don't Answer Feature Document
- (6) 231-390-064-Centrex Station Rearrangements Feature Document
- (7) 231-090-180-Multiline Groups Feature Document
- (8) 231-090-401-Speed Calling Feature Document
- (9) 231-090-070-Busy Verification of Centrex Trunks/Lines Feature Document
- (10) 231-090-056-Attendant Camp-On Feature Document
- (11) 231-090-079-Call Transfer Feature Document
- (12) 231-090-081-Call Waiting Feature Document
- (13) 231-090-370-Dial Call Waiting Feature Document
- (14) 231-090-403-DCPU With Barge-In Feature

## Document

(15) 231-090-179-Series Completion Feature  
Document

(16) 231-390-170-Message Desk Service Feature  
Document

(17) 231-318-325-Line RC Procedures.

## B. Other Documentation

(1) Translation Guide TG-1A

(2) Office Parameter Specification PA-6A001

(3) Parameter Guide PG-1A

(4) Translation Output Configurations PA-6A002

(5) Input Message Manual IM-6A001

(6) Output Message Manual OM-6A001

(7) 759-100-000 OEES BISP - Subject Index - COEES

(8) 759-100-100 BISP-General Description-  
COEES

(9) COEES Information System Engineering  
Document-Index 42.

## 7. COMMENT FORM

7.01 A comment form is located at the back of this  
practice to provide a communications channel  
from the user to the writer.

Page 11

AT&T 231-390-087

## COMMENT FORM

Your comments and suggestions concerning accuracy, level of coverage, organization, etc., of this document will be appreciated. Please be as specific as possible for technical comments.

( ) Check to request reply (technical comments only, please).

Mail comments to:

AT&T Consumer Products

Dept. COWR251350  
2400 Reynolda Road  
Winston-Salem, N.C. 27106

AT&T Practice

Name

Tel ( )

co.

Address

City, State

Zip