Host Interface Functions Checklist

12-Jan-94

Introduction

This section provides tables showing ANSI host interface control functions that should be supported by VT510 software terminal emulation. To simplify understanding the huge number of functions and corresponding rich interface, this section is divided into a number of largely independent subsections and tables which describe functionally related parts of the ANSI host interface. These subsections are:

- Code Extension Functions
  - Control Coding
  - Character Coding
  - Graphic Character Sets
- Terminal Management Functions
- Character Cell Display Service Class
  - Display Coordinate System and Addressing
  - * Active Position and Cursor
  - * Margins and Scrolling
  - * Cursor Movement
  - * Horizontal Tabulation
  - * Page Size and Arrangement
  - * Status Display
  - * Right to Left
  - Window Management
  - Visual Attributes and Renditions
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  - Mode States
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  - OLTP Features
  - Saving and Restoring terminal State
- Keyboard Processing Functions
- Soft Key Mapping (UDK)
- Soft Fonts (DRCS)
- Printing
- Terminal Communication and Synchronization
- Text Locator Extension
- Session Management Extension
- Documented Exceptions

Code Extension Functions

Symbol	Name	1st Used
	Control Coding	
CAN	Cancel	VT100
SUB	Substitute	VT100
ESC	Escape	VT100
DCS	Device Control String	VT220
CSI	Control Sequence Introducer	VT100
ST	String Terminator	VT220
OSC	Operating System Command	DECterm
PM	Privacy Message	
APC	Application Program Command	VT420
S7C1T	Select 7-bit C1 Transmission	VT220
S8C1T	Select 8-bit C1 Transmission	VT220
	Character Coding	
	Announce Subset of Code Extension Facilities	VT320
LS0	Locking Shift Zero (SI)	VT100
LS1	Locking Shift One (SO)	VT100
LS2	Locking Shift Two	VT220
LS3	Locking Shift Three	VT220
LS1R	Locking Shift One Right	VT220
LS2R	Locking Shift Two Right	VT220
LS3R	Locking Shift Three Right	VT220
SS2	Single Shift Two	VT220
SS3	Single Shift Three	VT220
	Graphic Character Sets	
SCS	Select Character Set	VT100
	ASCII	VT100
	DEC Special Graphics (Line Drawing)	VT100
	DEC MCS	VT220
	ISO Latin-1	VT320
	UPSS	VT320
	DEC Technical	VT340, VT420
	ISO Latin-2, Hebrew, Greek, Cyrillic, Turkish	VT510
DECNRCM	(National Replacement) Character Set Mode	VT220
DECAUPSS	Assign User-Preference Supplemental Set	VT320
DECRQUPSS	Request User-Preference Supplemental Set	VT320

Terminal Management Functions

Symbol	Name	1st Used
	Identification, status, and Initialization	
DA1	Primary Device Attributes	VT100
DA2	Secondary Device Attributes	VT220
DECRPTUI	Report Terminal Unit ID	VT420
DSR	Device Status Report	VT100
DECID	Identify Device	VT100
DECTID	Select Terminal ID	VT510
DECSCL	Select Conformance Level	VT220
DECSR	Secure Reset	VT420
DECSRC	Secure Reset Confirmation	VT420
DECSTR	Soft Terminal Reset	VT220
DECSTUI	Set Terminal Unit ID (Restricted)	VT420
RIS	Reset to Initial state	VT100
	Emulations	
DECPCTERM	Enter/Exit PC Term Mode from DEC VT mode	VT420PC
DECTME	Terminal Mode Emulation	VT510
	Set-Up	
DECSSL	Select Set-Up Language	VT510
DECCRTSM	CRT Save Mode (not required)	VT510
DECOSCNM	Overscan Mode	VT510
DECSRFR	Select Refresh Rate	VT510
DECLTOD	Load Time of Day	VT510
DECLBAN	Load Banner Message	VT510

Display Coordinate System and Addressing

Symbol	Name	1st Used
	Active Position And Cursor	
DECTCEM	Text Cursor Enable Mode	VT220
DECSCUSR	Set Cursor Style	VT510
	Margins And Scrolling	
DECSTBM	Set Top and Bottom Margin	VT100
DECSLRM	Set Left and Right Margin	VT420
DECLRMM	Left Right Margin Mode	VT420
DECOM	Origin Mode	VT100
DECSCLM	Scrolling Mode	VT100
IND	Index	VT100
RI	Reverse Index	VT100
DECFI	Forward Index	VT420
DECBI	Back Index	VT420
DECSSCLS	Set Scroll Speed	VT510
	Cursor Movement	
BS	Backspace	VT100
LF	Line Feed	VT100
VT	Vertical Tab	VT100
FF	Form Feed	VT100
CR	Carriage Return	VT100
NEL	Next Line	VT100
LNM	Line Feed/New Line Mode	VT100
CUU	Cursor Up	VT100
CUD	Cursor Down	VT100
CUF	Cursor Forward	VT100
CUB	Cursor Backward	VT100
CUP	Cursor Position	VT100
HVP	Horizontal/Vertical Position	VT100
CPR	Cursor Position Report	VT100
DECXCPR	Extended Cursor Position Report	VT340, VT420
CHA	Cursor Horizontal Absolute	VT510
CNL	Cursor Next Line	VT510
CPL	Cursor Previous Line	VT510
HPA	Horizontal Position Absolute	VT510
HPR	Horizontal Position Relative	VT510
VPA	Vertical Line Position Absolute	VT510
VPR	Vertical Position Relative	VT510
	Horizontal Tabulation	
HT	Horizontal Tab	VT100
HTS	Horizontal Tabulation Set	VT100
TBC	Tabulation Clear	VT100
CBT	Cursor Backward Tabulation	VT510
CHT	Cursor Horizontal Forward Tabulation	VT510
DECST8C	Set Tab at every 8 columns	VT420PC
	Page Size and Arrangement	
DECCOLM	Column Mode	VT100

	DECNCSM	No Clear Screen on column Mode	VT510
	DECSCPP	Set Columns Per Page	VT340, VT420
	DECSLPP	Set Lines Per Page	VT340, VT420
		Page Movement	
	NP	Next Page	VT340, VT420
	PP	Preceding Page	VT340, VT420
	PPA	Page Position Absolute	VT340, VT420
	PPR	Page Position Relative	VT340, VT420
	PPB	Page Position Backward	VT340, VT420
		Status Display	
	DECSASD	Select Active Status Display	VT340, VT320
	DECSSDT	Select Status Display Type	VT340, VT320
		Right to Left	
	DECRLM	Right to Left Mode	VT510
	DECRLCM	Right to Left Copy Mode	VT510
	DDD1	VT100 mode Hebrew	VT510
	DDD2	VT100 mode Hebrew	VT510
	DDD3	VT100 mode Hebrew	VT510

Window Management

Symbol	Name	1st Used
DECHCCM	Horizontal Cursor Coupling Mode	VT340, VT420
DECVCCM	Vertical Cursor Coupling Mode	VT340, VT420
DECPCCM	Page Cursor Coupling Mode	VT340, VT420
DECRQDE	Request Displayted Extent	VT340, VT420
DECSNLS	Select Number of Lines per Screen (exception)	VT420
DECARSM	Auto Resize Mode	DECterm, VT420
SU	Pan Down	VT340, VT420
SD	Pan Up	VT340, VT420

Visual Attributes and Renditions

Symbol	Name	1st Used
DECSCNM	Screen Mode	VT100
	Line Renditions	
DECSWL	Single Width Line	VT100
DECDWL	Double Width Line	VT100
DECDHLT	Double Height Line Top	VT100
DECDHLB	Double Height Line Bottom	VT100
	Character Renditions	
SGR	Select Graphic Rendition	VT100
	0=all off	VT100
	1=bold	VT100
	4=underscore	VT100
	5=blink	VT100
	7=reverse	VT100
	22=not bold	VT220
	24=non underline	VT220
	25=not blink	VT220
	27=non reverse	VT220

Audible Indicators

Symbol	Name	1st Used
BEL	Warning Bell	VT100
DECSKCV	Set Keyclick Volume	VT510
DECSWBV	Set Warning Bell Volume	VT510
DECSMBV	Set Margin Bell Volume	VT510

Mode States			
	Symbol	Name	1st Used
	SM/RM	Set Mode/Reset Mode	VT100
		ANSI	
		20=LNM	VT100
		2=KAM	VT220
		4=IRM	VT102
		12=SRM	VT220
		3=CRM	VT510
		DEC Private	VT100
		1=DECCKM	VT100
		2=DECANM	VT100
		3=DECCOLM	VT100
		4=DECSCLM	VT100
		5=DECSCNM	VT100
		6=DECOM	VT100
		7=DECAWM	VT100
		8=DECARM	VT100
		18=DECPFF	VT220
		19=DECPEX	VT220
		25=DECTCEM	VT220
		42=DECNRCM	VT220
		60=Horizontal Cursor Coupling	VT340, VT420
		61=Vertical Cursor Coupling	VT340, VT420
		64=Page Cursor Coupling	VT340, VT420
		66=DECNKM	VT320
		67=DECBKM	VT340, VT420
		68=DECKBUM	VT320
		69=DECLRMM (DECVSSM)	VT340, VT420
		73=DECXLRM	VT420
		81=DECKPM	VT420
		34=DECRLM	VT510
		35=DECHEBM	VT510
		36=DECHCEM	VT510
		57=DECNAKB	VT510
		95=DECNCSM	VT510
		96=DECRLCM	VT510
		98=DECARSM	VT510
		99=DECMCM	VT510
		100=DECAAM	VT510
		101=DECCANSM	VT510
		102=DECNULM	VT510
		103=DECHPDXM	VT510
		104=DECESKM	VT510
		106=DECOSCNM	VT510
		108=DECNUMLK	VT510
		109=DECCAPSLK	VT510
		110=DECKLHIM	VT510

Editing Functions

Symbol	Name	1st Used
IRM	Insert/Replacement Mode	VT102
ICH	Insert Character	VT102
DCH	Delete Character	VT102
IL	Insert Line	VT100
DL	Delete Line	VT100
DECIC	Insert Column	VT420
DECDC	Delete Column	VT420
ECH	Erase Character	VT100
EL	Erase in Line	VT100
DECSEL	Selective Erase in Line	VT220
ED	Erase in Display	VT100
DECSED	Selective Erase in Display	VT220
DECSCA	Select Character Attribute (selective erase)	VT220

OLTP Features

Symbol	Name	1st Used
	Rectangular Area Operations	
DECCRA	Copy Rectangular Area	VT420
DECFRA	Fill Rectangular Area	VT420
DECERA	Erase Rectangular Area	VT420
DECSERA	Selective Erase Rectangular Area	VT420
DECCARA	Change Attribute in Rectangular Area	VT420
DCERARA	Reverse Attribute in Rectangular Area	VT420
DECSACE	Select Attribute Change Extent Mode	VT420
	Data Integrity	
DECRQCRA	Request Checksum of Rectangular Area	VT420
DSR	Device Status Report (Memory Checksum)	VT420
DECCKSR	Checksum Report	VT420
	Macros	
DECDMAC	Define Macro	VT420
DECINVM	Invoke Macro	VT420
DECMSR	Macro Space Report	VT420

Saving and Restoring Terminal State

Symbol	Name	1st Used
	Cursor Save Buffer	
DECSC	Save Cursor	VT100
DECRC	Restore Cursor	VT100
	Terminal State Interrogation	
DECRQM	Request Mode	VT320
DECRPM	Report Mode	VT320
DECNKM	Numeric Keypad Mode	VT320
DECRQSS	Request Selection or Setting	VT320
DECRPSS	Report Selection or Setting	VT320
DECRQPSR	Request Presentation State Report	VT320
DECPSR	Presentation State Report	VT320
DECCIR	Cursor Information Report	VT320
DECTABSR	Tabulation Stop Report	VT320
DECRSPS	Restore Presentation State	VT320
DECRQTSR	Request Terminal State Report	VT320
DECTSR	Terminal State Report	VT320
DECRSTS	Restore Terminal State	VT320

Keyboard Processing Functions

Symbol	Name	1st Used
DECARM	Autorepeat Mode	VT100
DECBKM	Backarrow Key Mode	VT420
DECCKM	Cursor Keys Mode	VT100
DECEKBD	Extended Keyboard Report	VT420
DECKBUM	Keyboard Usage Mode	VT320
DECKPAM	Keypad Application Mode	VT100
DECKPM	Key Position Mode	VT420
DECKPNM	Keypad Numeric Mode	VT100
DECNKM	Numeric Keypad Mode	VT320
DSR	Device Status Report (keyboard status)	VT220
KAM	Keyboard Action Mode	VT220
DECLFC	Local Functions Control	VT420
DECLFKC	Local Function Key Control	VT420
DECSMKR	Select Modifier Key Reporting	VT420
DECHEBM	Hebrew Keyboard Map mode	VT510
DECHCEM	Hebrew Encoding Mode	VT510
DECNAKB	NA/Greek Selection	VT510
DECESKM	Secondary Keyboard Language Mode	VT510
DECSLCK	Set Lock Key Style	VT510
DECKBD	Keyboard Dialect Selection	VT510
DECNUMLK	NumLock Mode	VT510
DECCAPSLK	CapsLock Mode	VT510
DECKLHIM	Keyboard LEDs Host Indicator Mode	VT510
DECLL	Load LEDs	VT100

Soft Key Mapping (UDK)

Symbol	Name	1st Used
DECUDK	User Defined Keys	VT220
DSR	Device Status Report (UDK lock)	VT220
DECPKA	Program Key Action	VT510
DECPFK	Program Function Key	VT510
DECPAK	Program Alphanumeric Key	VT510
DECCKD	Copy Key Default	VT510
DECRQPKFM	Program Key Free Memory Inquiry	VT510
DECPKFMR	Program Key Free Memory Report	VT510
DECRQKT	Inquire a Key Type	VT510
DECRPKT	Report a Key Type	VT510
DECRQKD	Inquire a Key Definition	VT510
DECRPFK	Report definition of a Function Key	VT510
DECRPAK	Report definition of a Alphanumeric Key	VT510

Soft Fonts (DRCS)

Symbol	Name	1st Used
DECDLD	Downline Load	VT220

Printing

Symbol	Name	1st Used
DECPEX	Print Extent Mode	VT220
DECPFF	Print Form Feed Mode	VT220
DSR	Device Status Report (printer port)	VT220
MC	Media Copy	VT220
DECSPRTT	Select Printer Type	VT510
DECSDPT	Select Digital Printed Data Type	VT510
DECSPPCS	Select Proprinter Character Set	VT510

Terminal Communication and Synchronization

Symbol	Name	1st Used
BREAK		VT100
XON		VT100
XOFF		VT100
ENQ	Enquiry	VT100
SRM	Send Receive Mode	VT220
DECXRLM	Transmit Rate Limiting Mode	VT420
DECMCM	Modem Control Mode	VT510
DECAAM	Auto Answerback Mode	VT510
DECLANS	Load Answerback Message	VT510
DECCANSM	Conceal Answerback Message Mode	VT510
DECNULM	Ignore Null Mode	VT510
DECHPDXM	Half Duplex Mode	VT510
DECSFC	Select Flow Control	VT510
DECSDDT	Select Disconnect Delay Time	VT510
DECSTRL	Set Transmit Rate Limit	VT510
DECSCS	Select Communication Speed	VT510
DECSCP	Select Communication Port	VT510
DECSPP	Set Port Parameter	VT510

Text Locator Extension

Symbol	Name	1st Used
DECEFR	Enable Filter Rectangle	UWS
DECELR	Enable Locator Reports	UWS
DECLKD	Locator Key Definition	UWS
DECLRP	Locator Report	UWS
DECRQLP	Request Locator Position	UWS
DECSLE	Select Locator Events	UWS
DSR	Device Status Report (Locator Status)	UWS

Session Management Extension

Symbol	Name	1st Used
DECES	Enable Sessions	VT340, VT420

Documented Exceptions

Symbol	Name	1st Used
DECANM	ANSI/VT52 Mode	VT100
DECALN	Screen Alignment	VT100
DECAWM	Autowrap Mode	VT100
DECTST	Invoke Confidence Test	VT100
CRM	Control Representation Mode	VT100