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0.1 Package Visual

Author Martin Cattoen Date 16/08/04

Description Draw in text mode. Visual files can be used as resources by others programs

File name visual.ads

0.1.1 Clauses

Context clauses

• V04.Crt

Use clauses

• V04

0.1.2 Basic objects

Name	Type	Default					
Constants							
Screen depth MAX_LINE MAX_COLUMN	Natural Natural	Crt.Max_Line Crt.Max_Column	constant				
Cursor FORE_COLOR_CURSOR BACK_COLOR_CURSOR CHARACTER_CURSOR	Crt.Color_Type Crt.Color_Type Character	Crt.White Crt.Black Character'Val (177)	constant constant constant				
Definite colors MAGIC_COLOR	Crt.Color_Type	Crt.Black	constant				
Keys (functions) KEY_CHOICE_MACRO KEY_CHOICE_COLOR_FORE KEY_INSERT_CODE_CHARACTER KEY_INITIALIZE_FILE KEY_OPEN_FILE KEY_SAVE_FILE KEY_APPLY_COLOR_BACK KEY_APPLY_COLOR_FORE KEY_SELECT_COPY KEY_COPY KEY_PASTE KEY_MODE_INSERT_REPLACE KEY_EXIT_VISUAL	Integer	Crt.K_Shift_F1 Crt.K_Ctrl_F Crt.K_Ctrl_I Crt.K_Ctrl_I Crt.K_Ctrl_N Crt.K_Ctrl_O Crt.K_Ctrl_S Crt.K_Delete Crt.K_Delete Crt.K_Alt_F5 Crt.K_F5 Crt.K_Alt_F7 Crt.K_Insert Crt.K_Escape	constant				
Keys (colors) KEY_BLACK KEY_BLUE KEY_GREEN KEY_CYAN KEY_RED KEY_MAGENTA	Integer Integer Integer Integer Integer Integer Integer	Crt.K_F1 Crt.K_F2 Crt.K_F3 Crt.K_F4 Crt.K_F5 Crt.K_F6	constant constant constant constant constant				

KEY_BROWN	Integer	$Crt.K_{-}F7$	constant
KEY_GRAY	Integer	$Crt.K_F8$	constant
KEY_LIGHT_BLUE	Integer	$Crt.K_Ctrl_F2$	constant
KEY_LIGHT_GREEN	Integer	$Crt.K_Ctrl_F3$	constant
KEY_LIGHT_CYAN	Integer	$Crt.K_Ctrl_F4$	constant
KEY_LIGHT_RED	Integer	$Crt.K_Ctrl_F5$	constant
KEY_LIGHT_MAGENTA	Integer	Crt.KCtrlF6	constant
KEY_YELLOW	Integer	$Crt.K_{-}F9$	constant
KEY_WHITE	Integer	$Crt.K_{-}F10$	constant
$NULL_{FILE}$	Visual_File	$(Tab_Fore \Rightarrow$	constant
		$(others \Rightarrow (others))$	
		\Rightarrow Crt.Gray)),	
		$Tab_Back \Rightarrow$	
		$(others \Rightarrow (others)$	
		\Rightarrow Crt.Black)),	
		$Tab_Char \Rightarrow (others)$	
		\Rightarrow (others \Rightarrow , \Rightarrow , \Rightarrow)))	

0.1.3 Definitions

Types

Name Declaration

T_Tab_Color array (Line,Column) of Crt.Color_Type
T_Tab_Char array (Line,Column) of Character
Line Natural range 1..MAX_LINE
Column Natural range 1..MAX_COLUMN

Record Visual_File

Component Type Default

Tab_Char
Tab_Back
Tab_Fore
Tab_Color
Tab_Color

Exceptions

• Open_Visual_File_Error

Pragmas

Elaborate_Body

0.1.4 Subprograms

0.1.4.1 Open

function Open return Visual_File

Parameter name Type Mode Default

Name String in

 $\begin{array}{l} Description: \mbox{Load a visual file} \\ Name: \mbox{The visual file name to load} \\ Return: \mbox{The loaded visual file} \end{array}$

Exceptions: Raise Open_Visual_File_Error if Name is not available or file is not a Visual file

0.1.4.2 Open

function Open return Visual_File

Parameter name Type Mode Default

Name String in Success Boolean access

 $\begin{array}{c} Description: \ \, \text{Load a visual file} \\ Name: \ \, \text{The visual file name to load} \\ \end{array}$

Success: Tre if open succeed, false otherwise

Return: The loaded visual file

Exceptions: Raise Open_Visual_File_Error if Name is not available or file is not a Visual file

0.1.4.3 Create

procedure Create

Parameter name Type Mode Default

Name String in Item Visual_File in

 $\begin{array}{l} Description: \mbox{ Create a visual file} \\ Name: \mbox{ The visual file name to create} \end{array}$

Item: The visual file to create

0.1.4.4 Text_File_To_Visual

function Text_File_To_Visual return Visual_File

Parameter name Type Mode Default

From String in

Description: Load a visual file from an external text file

From: The text file name to load

Return: The visual file

0.1.4.5 Visual_To_Text_File

procedure Visual_To_Text_File

Parameter name Type Mode Default

From Visual_File in To String in

Description: Write an external text file from a visual file

From: The visual file to write

0.1.4.6 Clean_Screen

procedure Clean_Screen

Parameter name	Type	Mode	Default
Item	Visual_File	$\mathbf{i}\mathbf{n}$	
Min_C_Scr	Column	$\mathbf{i}\mathbf{n}$	1
Min_LScr	Line	$\mathbf{i}\mathbf{n}$	1
Max_C_Scr	Column	$\mathbf{i}\mathbf{n}$	MAX_COLUMN
Max_L_Scr	Line	\mathbf{in}	MAX_LINE
Min_C_Fil	Column	$\mathbf{i}\mathbf{n}$	1
$ m Min_L_Fil$	Line	\mathbf{in}	1
Put_Magic_Color	Boolean	\mathbf{in}	True

Description: Display item to screen

Item: $Min_-C_-Scr:$ $Min_L_Scr:$ Max_C_Scr : $Max_LScr:$ Min_-C_-Fil : Min_LFil :

 $Put_Magic_Color:$

0.1.4.7 Processing

procedure Processing

ColorsBlack : $\langle F1 \rangle$ Blue : $\langle \overline{F2} \rangle$ Green: $\langle \overline{F3} \rangle$ Cyan : $\langle \overline{F4} \rangle$ $Red: \langle \overline{F5} \rangle$ Magenta : $\langle \overline{F6} \rangle$ Brown: $\langle \overline{F7} \rangle$ $Gray: \langle \overline{F8} \rangle$ Yellow: $\langle \overline{F9} \rangle$ White: $\langle \overline{F10} \rangle$ $Light_Blue : \langle C-F2 \rangle$ Light_Green: (C-F3)

 $Light_Cyan : \langle C-F4 \rangle$ $Light_Red : \langle C-F5 \rangle$ $Light_Magenta : \langle \overline{C-F6} \rangle$

 $Main\ commands$

 $\langle \underline{\text{Esc}} \rangle : \text{Quit}; \langle \underline{\text{F5}} \rangle : \text{Copy}; \langle \underline{\text{F7}} \rangle : \text{Paste};$

 $\langle \overline{\text{C-s}} \rangle$: Save; $\langle \overline{\text{C-o}} \rangle$: Load; $\langle \overline{\text{C-n}} \rangle$: New file;

 $\langle \overline{\text{C-f}} \rangle$: Shape color; $\langle \overline{\text{Del}} \rangle$: Fill background color;

 $\langle \underline{\text{C-i}} \rangle$: Character code; $\langle \underline{\text{C-m}} \rangle$: macro character code

 $Editing\ commands$

 $\label{eq:def_def} $$ $\overline{\mbox{Up}}, \mbox{$\overline{\mbox{Down}}$}, \mbox{$\overline{\mbox{Right}}$}, \mbox{$\overline{\mbox{Left}}$} : Write;$

 $\langle \overline{\text{C-Up}} \rangle, \langle \overline{\text{C-Down}} \rangle, \langle \overline{\text{C-Right}} \rangle, \langle \overline{\text{C-Left}} \rangle$: Move cursor;

 $\langle \underline{\text{M-Up}} \rangle$, $\langle \underline{\text{M-Down}} \rangle$, $\langle \underline{\text{M-Right}} \rangle$, $\langle \underline{\text{M-Left}} \rangle$: Write macro character;

0.1.4.8 Code_Char

function Code_Char return Character

 $\begin{array}{c} Description: \mbox{ Get character code} \\ Code_Char: \mbox{ Character code} \end{array}$

Return: ASCII.NUL if character code is not available