Ti99Dir

a Ti-file viewer and manager for Windows

With Ti99Dir it is possible to view the contents of TI-files stored on a PC in V9T9 format and view TI-files stored in binary images of DSK, SCSI, IDE, WDS or CF7A+ disks. With this version of Ti99Dir you are able to create new DSK images and copy TI-files in V9T9 format to this DSK image or copy TI-files stored on another DSK image or SCSI, IDE or WDS, CF7A+ image. A DSK image can also be read from or written to a CF7A+ compact flash card to be used with the CF7A+ sidecar.

Operation

The purpose of Ti99Dir is to manage your TI files on your PC's hard disk. A TI file can be a V9T9 format file, a binary floppy disk image, a binary floppy disk image as used by PC99, an image of a SCSI, IDE or WDS hard disk or a compact flash card or a CF7A+ compact flash card image.

Ti99Dir has a left and right file list window. The cursor can be moved up and down in a file list by using the arrow keys. Selecting the left or right file list can ba accomplished with the tab key. The file, directory or image under the cursor is the selected file. The contents of the selected file can be viewed in a separate window if the file contains data, a basic or extended basic program, a TI-artist picture or a GIF picture. The contents of the selected file can be viewed in the same file list window if the file is an Archive file, a floppy disk image, a hard disk image or a compact flash card image containing TI files.

The Ti99Dir main window

In the above picture you see the following parts:

1 The menu

For everything you like to do with your TI-files you can find an option in the menu.

2 A context menu

A context menu appears when right-clicking on a file or a group of selected files in the left or right file list window or current path (4). Like in the main menu, it depends on the type of selected file or files what function in the context menu is enabled.

3 The button bar

The button bar gives some options for some often used function:
a)View file, DSK or IMG info
b)View file, DSK or IMG contents
c)Extract file from DSK or IMG
d)Convert TI-file to PC text file
e)Reread the current directory of the window where the cursor is in
f)Swap the left en right file list windows
g)Goto root (that is where you started to browse)
h)Goto upper directory

4 The current path

Gives the current pathname of the file list.

5 The file list header

Clicking on one of the file list headers item gives another sorting order in the file list window. The sorting order is as follows:

Item	Description	Sort order
Pc Name	Displays the filename on your PC disk of the TI file. Is not necessarily the same as the TI Name and has not necessarily an extension.	Pc Name - Ti Name - Size - Type - Attr
Ti Name	Displays the Ti Name as found in the file or image.	Ti Name - Size - Type - Attr
Size	Displays the file size in 256 byte sectors of the file data.	Size - Type - Attr
Type	Displays the file type of the files. See also the file type table Ti99Dir recognizes.	Type - Attr
Attr	Displays the file attribute: - for none, P for Protected and A for Archive. These attributes are ignored by Ti99Dir for all file operations. If it is a file in a directory (or FOAD) then 'v9t9' is added if the file is in V9t9 format and 'tifiles' is added if the file has got the 'TIFILES' header.	Attr

Description	Displays the file description (if available) which was added to a file with John Birdwell's disk utilities (DSKU) program.	

6 Marked files

Marked files can be copied and deleted. Operations on marked files have a higher priority than the same operation on the selected file by the cursor. Marked files become unmarked when another directory or image is read in the same file list window. All kinds of marked files can be copied to another directory.
Marked floppy disk images can also be copied to a CF7A+ card image or to a CF7A+ card directly.
It is possible to copy data files directly from an archive, floppy disk image, hard disk image or CF7A+ card image.

7 The cursor

The filename under the cursor is the selected file. A selected file can be viewed, renamed, deleted or copied. If there are marked files in the list the delete and copy function will operate on the marked files. All kinds of selected files can be copied to another directory. A selected floppy disk image (DSK) can also be copied to a CF7A+ card image or to a CF7A+ card directly.
It is possible to copy data files directly from an archive, floppy disk image, hard disk image or CF7A+ card image.

8 The bottom line

The bottom line displays the total of sectors of the marked files against the total number of sectors in the whole directory and the total number of marked files against the total number of files in the directory.

Ti99Dir recognizes the following file types:

File type	File extension	Description
VOLUME		A volume label
DIS/FIX		A display fixed file
DIS/VAR		A display variable file
INT/FIX		An internal fixed file
INT/VAR		An internal variable file
PROGRAM		A program file
SUBDIR		A subdirectory of a directory, floppy disk image or hard disk image
UPRDIR		An upper directory
UNKNOWN		An unknown file type that in first instance looked like a TI file
DSK	.dsk	A floppy disk image
PC99/SD	.dsk	A PC99 single density floppy disk image
PC99/DD	.dsk	A PC99 double density floppy disk image
PTIMG	.img	A hard disk image with a partition table (IDE)
HDIMG	.img	A hard disk image (SCSI, IDE, WDS)
CF7A+DSK		A volume list of a CF7A+ card or image
CF7A+IMG	.cf7	A CF7A+ card image
DOS		An ordinary DOS (PC) file

Configuration file

Ti99Dir makes use of a configuration file (Ti99Dir.ini) to store the user settings and some automatic generated settings for internal use. The configuration file must be saved in the same directory as Ti99Dir.exe for proper operation. The contents of the configuration file and meaning of the various keys are as follows:

The main window dimensions are always checked against the dimensions of your computer screen. If Ti99Dir falls outside your screen area then Ti99Dir will be automatically placed in the center off the screen.

```
[Ti99Dir]
;Main window dimensions
left=value
top=value
width=value
height=value
```

The font information defines the dimensions of the font you have selected and is automatically created.

```
; Font information
fname=fontname
fheight=value
fweight=value
fitalic=value (0|1)
```

The color information defines the colors for the main window you selected. These values reflects the color choices you made in the options dialog and is automatically created.

```
; Color information in decimal RGB format
textcolor=value
backcolor=value
markcolor=value
```

Ti994w / Ti99Hdx Compatibility option defines how certain characters in the TI filename are translated for the PC filename. The characters '\ / : * ? " < > |' are not allowed in a PC filename. If this option is not set then these kind of characters are replaced by a '@' character. If this option is set then the most significant bit of these kind of characters are set which enables Ti994w and Ti99Hdx to find the correct TI files. This option reflects the choice made in the options dialog and is automatically created.

```
; Ti994w / Ti99Hdx Compatibility
hdxcompatible=value (0|1)
```

Extracttifiles defines in what format extracted from DSK images, PC99 disk images, CF7A+ images, Hard disk images or ARC files are saved. The default is the V9T9 format but when this option is set then all extracted will be saved in the TIFILES format.

```
; Extract files from images in the TIFILES format
extracttifiles=value (0|1)
```

Mousewheel option defines the use (translation) of mouse wheel messages. This option reflects the choice made in the options dialog and is automatically created.

```
; Mousewheel option
mousewheel=value (0|1)
```

The header item widths defines the widths of the header items [Pc Name], [Ti Name], [Size], [Type] and [Attr]. The sort order defines the header item of how the file list is ordered: 0=Pc Name, 1=Ti Name etc. These entries are automatically created when a header item width is changed or another sort order is selected.

```
; header item widths
hdrsize=width width width width width width
sortby=value (0-5)
```

The picviewer key defines the drive letter, path and name for an external GIF-viewer.

```
; Definition for the external GIF viewer
picviewer=C:\Program Files\Irfanview\i_view32.exe
```

The path keys are created when extracting a TI file, hard disk or CF7A+ card images or selecting other paths for the left or right browser window. The keys default_path_left and default_path_right are used when Ti99Dir is started again.

```
; Some paths last used
default_path_left  =D:\Ti994w\dsk4
default_path_right =D:\Ti994w\dsk4
save_as_ti_path    =D:\Ti994w\dsk4\subdir\
hdsk_img_path      =D:\Ti994w\dsk4\
```

```
cf7a_img_path       =D:\Ti994w\dsk4\subdir\
```

When selecting another directorie in the left or right window with menu option [Files]->[Select another directorie] the five most recent directories are saved so that these can be quickly selected again with the menu option [Files]->[Select a recent used directory]->[1 ...].

```
[recentdirectories]
dir01=D:\X
dir02=D:\Ti994w\dsk
dir03=D:\Ti994w\Doads
dir04=D:\Ti994w\dsk1
dir05=D:\Ti994w\dsk3
```

The [Ti_Pc_File_Conversion] section defines wich method to used when converting TI files to PC files (see also menu option [Tools]->[Convert TI file to PC file]). The key in this section is a TI filetype. The variable belonging to the key is an extension and a conversion method, for example:

```
Dis/Var 80=.txt,AddCrLf
```

wich means that when converting a display variable file with a maximum record length of 80 characers, the selection in the TI file to PC file conversion dialog is configured for converting this file type to a .txt PC file and cariage return / linefeed character combination is added to every line. The rules for this section are:

TI filetype:

Dis/Fix n	Display Fixed file
Dis/Var n	Display Variable file
Int/Fix n	Internal Fixed file
Int/Var n	Internal Variable file
Program	Program file

In wich n is a record length from 1 to 255 characters. A program file doesn't have a record length.

extension: can be any type. First character must be a '.'

Conversion option:

Select	User must select conversion option
AddCrLf	Add cariage return / linefeed characters after every line
AddLf	Add linefeed characters after every line
Binary	Copy filedata as is to the PC file

When converting a TI program file to a PC file the conversion option is always considered binary.

The [Pc_Ti_File_Conversion] section defines wich method to used when converting PC files to TI files (see also menu option [Tools]->[Convert PC file to TI file]). The key in this section is an extension. The variable belonging to the key is a TI filetype and a conversion method, for example:

```
.txt=Dis/Var 80,RemoveCrAndOrLf
```

wich means that when converting a .txt file, the selection in the PC file to TI file conversion dialog is configured for converting this file to a display variable file with a maximum record length of 80 characters and all cariage return and/or linefeed characters are removed. The rules for this section are:

extension: can be any type. First character must be a '.'

TI filetype:

Dis/Fix n	Display Fixed file
Dis/Var n	Display Variable file
Int/Fix n	Internal Fixed file
Int/Var n	Internal Variable file
Program	Program file

In wich n is a record length from 1 to 255 characters. A program file doesn't have a record length.

Conversion option:

Select	User must select conversion option
RemoveCrAndOrLf	Remove all cariage-return and linefeed characters
ConvertCrLfToCr	Convert all cariage-return / linefeed characters to a single cariage return character

ConvertCrLfToLf	Convert all cariage-return / linefeed characters to a single linefeed character
Binary	Copy filedata as is to the TI file

When converting a PC file to a TI program file the conversion option is always considered binary.

The [EDITxx] sections defines the dimensions of all the 16 viewer windows. These entries are automatically created.

```
; Dimensions for the 16 viewer windows [EDIT01] through [EDIT16]
[EDIT01]
left=value
top=value
width=value
height=value
```

The [PageSetup] section defines the paper margins for your (default) printer. It depends on your global settings if the values are 1/1000 of millimeters (Metric) or inches (Angelsaksisch). This option reflects the settings made in the page setup dialog of any of the edit windows and is automatically created.

```
MarginLeft=value
MarginTop=value
MarginRight=value
MarginBottom=value
```

Menu: Files

Select another directory

This menu options opens the default windows dialog for selecting a storage device and/or directory.

Selecting another directory

Browse for a directory you want to use and click the [Ok] button. The contents of the directory will be displayed in the current browser window.

Select a recent used directory

This menu option let you select a directory from a list of five recently used directories.

Reread directory

This menu option let you reread a directory, a floppy disk image (DSK), a floppy disk image (volume) on a CF7A+ image image (CF7A+DSK) or a CF7A+ image (CF7A+IMG).

Swap file list windows

This menu option let you swap the contents of the left and right file list windows. Selected files stay selected and the cursor will be kept on its position.

Read CF7A+ Volume list

Opens a dialog in which a CF7A+ compact flash card can be selected. Use a CF-card reader to connect the CF7A+ card to your computer.

Selecting a CF7A+ card to read

The CF7A+ card must be recognized by Ti99Dir as a real CF7A+ card, this means that at least Volume #1 of the CF7A+ card must have been initialized. All the CF7A+ cards recognized are added to the dropdown list with their drive letter (A:-Z:), type (CF7A+) card size (Mb) and the name of the first volume. If more than one CF7A+ cards are found, select the one you want to use in the dropdown list. Next click [Ok] to read all the volume names on the Cf7A+ card. The volume names will be displayed in the browser window in which the cursor was at the moment this menu option was chosen.

Initialize CF7A+ Volume

If the current browser window contains the volume names of a CF7A+ card or a CF7A+ card image then the volume selected by the cursor can be initialized by using this menu option.

Initializing a CF7A+ volume

Enter a volume name for the volume to initialize. The size of a CF7A+ volume is fixed to 40 track, 20 sectors/track and 1600 sectors. The selected volume will be initialized after clicking the [Initialize] button.

Mount CF7A+ Volumes

If the current browser window contains the volume names of a CF7A+ card or a CF7A+ image or a CF7A+ image is selected then three volumes can be mounted for the CF7A+ images by using this menu option.

Mounting CF7A+ volumes

Select a volume to mount for DSK1, DSK2 and DSK3 and click the [Mount] button. The selected volumes will be save in the volume information block (VIB) of the first DSK volume of the CF7A+ card or in the header if the CF7A+ image file. Mount information is preserved when the first volume of a CF7A+ card becomes overwritten.

Create new DSK image

If the browser window contains the contents of a directory then a new empty DSK image will be created in that directory.

Creating a new DSK image

A dialog is opened in which the volume name can be entered and the desired disk size can be chosen. The DSK image will be created after clicking the [Create] button.

View file, .DSK or .IMG info (F2)

Displays in a dialog box the characteristics of the selected file, disk information of the selected DSK image, or partition information of a selected SCSI, IDE or WDS image.

View Archive, Directory, .DSK, .IMG or .CF7 (F3 or ctrl-F3)

Selecting this menu option has the same effect on the selected item as pressing the F3 (ctrl-F3) or enter (ctrl-enter) key or double clicking (ctrl-double clicking) on the items name.
If the selected item is an Archive file(INT/FIX 128) then the contents of this file is shown in the browser window.

If the selected item is a directory then the contents is shown in the browser window.

If the selected item is a floppy disk image (.DSK), a SCSI, IDE or WDS image (.IMG) or a CF7A+ image (.CF7) then the contents if this image is shown in the browser window.

If the control key is pressed together with the F3 or enter key or while double clicking the contents is shown in the opposite browser window.

View File (F3)

Displays the contents of the selected file in a viewer window. The data is shown in a readable form. If the file contains a basic or extended basic program then the contents of the file is converted to a program listing. If the file contains a Forth colon definition then the contents of the file is displayed in blocks of 16 lines and 64 characters per line.

Double clicking a file has the same effect.

View Forth blocks (Shift F3)

Force to show a Dis/Fix 128 file as a file with Forth Blocks (See also View file).

View file hexadecimal (F4)

Displays the contents of the selected TI file (DIS/VAR, INT/VAR, DIS/FIX, INT/FIX or PROGRAM) hexadecimal in a viewer window.

View MyArt 256x212 picture (F8)

If the selected TI file contains a MyArt picture (DIS/FIX 128) the contents of this file is displayed in a viewer window as a picture of 256x212 pixels with a maximum of 256 colors.

Example of a MyArt picture with 256x212 pixels and 256 colors

View MyArt 512x212 picture (shift F8)

If the selected TI file contains a MyArt picture (DIS/FIX 128) the contents of this file is displayed in a viewer window as a picture of 512x212 pixels with a maximum of 16 colors.

Example of a MyArt picture with 512x212 pixels and 16 colors

View TiArtist or GIF picture (F9)

If the selected TI file contains a GIF picture (DIS/FIX 128) or a TI-artist picture (PROGRAM file of 24 sectors and name ends with _P) the contents of this file is displayed in a viewer window as a picture. If in the same directory of a selected TI-artist file a color file exists (PROGRAM file of 24 sectors and name ends with _C) then this file is also used for displaying the picture.

For displaying a GIF picture Ti99Dir makes use of an external viewer like Irfanview http://www.irfanview.com/ or any other GIF-picture viewer that can be called with a filename on the command line. See the help section about the configurationfile to learn how to add an external viewer.

Example of a TiArtist picture

View characterset (shift F9)

If the selected TI file contains a characterset (usually CHARA1 PROGRAM file) the contents of this file is displayed in a viewer window as a picture which displays the defined characters.

Example of a characterset

Feed file list to edit window

Opens a viewer window which shows the contents of the file browser. The contents of this window can be edited and printed.

Exit

Exits the Ti99Dir program.

Menu: Tools

With the options in the Tools menu TI files can be converted and disk images can be saved and restored.

Convert TI file to PC file (Ctrl F6)

This menu option makes it possible to convert the contents of the selected TI file to a PC file. A dialogbox is opened for selecting some conversion options (see also how to add conversion options for this dialogbox to the Ti99Dir configuration file).

Converting a TI file to a PC file

The filetype and recordlength of the TI file are displayed and grayed out. A filename for the PC file is created from the TI filename. All forbidden characters for a PC filename ('\', '/', ':', '*', '?', '"', '<', '>', '|') are converted to a '@' character. If a matching TI filetype and record length is found in the Ti99Dir configuration file than that extension is added to the PC filename and the right conversion option is used else a conversion option must be selected:

Add CR/LF (EDITOR/ASM)	A cariage-return/linefeed character sequence is added at the end of every line. Use this option when converting TI files with no end-of-line character like assembler sources or C99 sources, etcetera.
Add LF (TI WRITER)	A linefeed characters is added at of every line Use this option when converting TI files wich are created with TI-writer.
Binary (no conversion)	Use this option to store the contents of a TI file as is in a PC file like binary data or GIF pictures.

When converting a TI program file to a PC file the conversion option is always considered binary.

Convert PC file to TI file (Ctrl F6)

This menu option makes it possible to convert the contents of the selected PC file in a TI file. A dialogbox is opened for selecting some conversion options (see also how to add conversion options for this dialogbox to the Ti99Dir configuration file).

Converting a PC file to a TI file

A filename for the TI file is created from the PC filename. A maximum of 10 characters of the PC filename are taken and converted to uppercase. If the extension of the PC file is found in the Ti99Dir configuration file than those conversion options are used else a TI filetype, recordlength and a conversion option must be selected:

Remove CR and/or LF (EDITOR/ASM)	All cariage-return and linefeed characters are removed from the file. Use this option when converting a file for the editor/assembler environment, like assembler sources or C99 sources, etc.
Convert CR/LF or LF to CR (TI WRITER)	All cariage-return / linefeed sequences or linefeed characters are converted to a cariage-return character. Use this option when converting a file wich will be used with TI-writer, like text files etc.
Convert CR/LF or CR to LF	All cariage-return / linefeed sequences or cariage-return characters are converted to a linefeed character. This option is just to be complete with all the choices.
Binary (no conversion)	Use this option to store the contents of a PC file as is in a TI file like binary data or GIF pictures. With this type of conversion it is also possible to add a three word header (6 bytes) to program file as expected by some loaders. Some common headers are:

Editor/Assembler option 5 program loader	
Word 1	More to load flag: FFFF = More to load 0000 = Last file to load
Word 2	Number of bytes lo load
Word 3	Absolute load address

Gram Kracker	
Word 1 - Byte 1 (MSB)	More to load flag: FF = More to load 80 = Load UTIL option next 00 = Last file to load
	What Gram Chip or Ram Bank: 01 = Grom/Gram 0 g0000

Word 1 - Byte 2 (LSB)	02 = Grom/Gram 1 g2000 03 = Grom/Gram 2 g4000 04 = Grom/Gram 3 g6000 05 = Grom/Gram 4 g8000 06 = Grom/Gram 5 gA000 07 = Grom/Gram 6 gC000 08 = Grom/Gram 7 gE000 09 = Rom/Ram Bank 1 r6000 0A = Rom/Ram Bank 2 r6000 00 or FF = Program image - load to memory expansion
Word 2	Number of bytes lo load
Word 3	Absolute load address

When converting a PC file to a TI program file the conversion option is always considered binary.

Convert TIFILES file to V9T9 file (Ctrl F7)

With this menu option a file in the TIFILES format can be converted to a file in V9T9 format which is the standard used by Ti99Dir. A TIFILES file is commonly used for uploading a file to the TI99/4a over a serial connection with a terminal emulator.

Convert V9T9 file to TIFILES file (Ctrl F7)

With this menu option a file in V9T9 format can be converted to a file in the TIFILES format. A file in the TIFILES format is commonly used for uploading a file to the TI99/4a over a serial connection with a terminal emulator.

Convert PC99 DSK-image to V9T9 DSK-image

Convert the selected PC99 disk image or marked PC99 disk images from the file list in the current browser window to V9T9 disk image(s) to the location displayed in the browser window at the opposite side.

Converting PC99 disk images

A PC99 DSK-image has a filetype PC99/SD or PC99/DD for a single density or double density respectively in TI-DIR. A PC99 disk image contains all the disk information inclusive sync-bytes and sectors and tracks in the same order as on a real floppy disk while the V9T9 format only contains the raw sector information in the right order. PC99 is another TI99/4a emulator from CaDD Electronics http://www.cadd99.com/ .

Show PC99 DSK-image track and sector layout

This menu options shows in a separate window the sector order in the tracks of a select PC99 floppy disk image (PC99/SD or PC99/DD).

Extract all files from ARC-file or DSK-image

Whith this menu option it is possible to extract all files from an ARC-file or a (PC99) DSK-image or all selected ARC-files or (PC99) DSK-images to a directory. A sub directory with the same name as the ARC-file or DSK volume label is created first before the files are extracted.

Extracting files from ARC's and DSK's.

Method:

Select an ARC-file or DSK-image and choose the menu option "Extract all files from ARC-file or DSK-image". A directory containing all the files of the ARC-file or DSK-image will be created in the destination (opposite) Ti99Dir file window.
or ...

Optional: Create a new directory in the destination (opposite) Ti99Dir file window and go into this directory.

Then: Select the ARC-files and/or DSK-images in the source directory (use menu option "Mark-Mark all TI-files" or use "Ctrl Gray +" to select all files in the source directory) and choose the menu option "Extract all files from ARC-file or DSK-image". All the files in the selected ARC-files and DSK-images will be extracted and copied automatically to a new directory, all non-Arc-files and non- DSK-images will be skipped.
The directory created will have the same name as the TI- name of the ARC-file(s) or DSK-image(s). If a directory allready exists with such a name a sequence number between parenthesis is added to the directory name.

Convert ARC-file to V9T9 DSK-image

Whith this menu option it is possible to convert an ARC-file or all selected ARC-files to a V9T9 DSK-images. A DSK-image is created first before all the files of the ARC-file are copied. It dependes on the total number of sectors of all the files in the ARC-file what size of DSK-image will be created. In most cases a DSK-image of 720 sectors (DSSD 40 tracks) will be sufficient. If this is not big enough a DSK-image of 1440 sectors (DSDD 40 tracks will be created.

Converting ARC-files to DSK-images.

Method:

Select an ARC-file and choose the menu option "Convert ARC-file to V9T9 DSK-image". A DSK-image containing all the files of the ARC-file will be created in the destination (opposite) Ti99Dir file window.
or ...

Optional: Create a new directory in the destination (opposite) Ti99Dir file window and go into this directory.

Then: Select the ARC-files in the source directory to convert (use menu option "Mark-Mark all TI-files" or use "Ctrl Gray +" to select all files in the source directory) and choose the menu option "Convert ARC-file to V9T9 DSK- image". All ARC-files will be converted automatically to a DSK-image, all non-Arc-files will be skipped.
The DSK-image created will have the same name as the TI-name of the ARC-file(s). If a DSK-image allready exists with such a name a sequence number between parenthesis is added to the name.

Show image VIB, DDR, FDIR or FDR

This menu options shows in separate dialog windows the layout of volume information block (VIB), directory descriptor record (DDR), file descriptor index record (DIR) and file descriptor record (FDR) of hard disk, floppy disk of compact flash cards.

By selecting a WDS, SCS, DSK or CF7A+ disk image in the file list of TI99Dir and choosing this menu option a VIB dialog window is opened.

Example of a VIB of a hard disk image.

Depending of the disk image the next step could be made to open a DDR dialog window by double clicking or selecting a subdirectory name and klick the [>>] button. A FDIR or another DDR dialog window can be opened from a VIB or DDR dialog window by using the same procedure. An FDR dialog window can only be opened via an FDIR dialog. The (raw) contents of a file fraction can be displayed in a viewer window by double clicking or selecting one of the data chain pointers and click the [>>] button.

Backup TI formatted SCS / IDE / WDS or CF7A+ disk image

With this menu option it is possible to create a backup image of a Scsi, Ide, Wds or Cf7a+ disk image.

Selecting a physical to backup

A dialog is displayed in which the physical TI-mass storage device can be selected.

Selecting a filename for the backup

By pressing the [...] button a default Windows dialog is opened for selecting the location and filename for the image file. The image will

be saved after pressing the [Save disk image] button.

The disk must be recognized by Ti99Dir as a real TI mass storage device. A hard disk or ZIP-disk must be formatted and initialized with i.e. Du2k and at least volume #1 of a Cf7a+ must have been initialized.

It is possible to use ZIP-drives and CF-card readers for connection real TI mass storage device to your PC. A Scsi, Ide and Wds image contains only the raw sector information and is saved in a file with the .IMG extension. A Cf7a+ image starts with a 128 byte header with some information for Ti99Dir so that it doesn't confuse this image with a floppy disk image, followed by the raw sector information. Because only half words are used on a Cf7a+ card the image save is only half the size of the Cf7a+ card. A Cf7a+ image is saved in a file with the .CF7 extension.

Restore TI formatted SCS / IDE / WDS or CF7A+ disk image

With this menu option it is possible to write a previously stored image of a Scsi, Ide, Wds or Cf7+ disk image back to the original device.

Selecting a physical drive to restore

A dialog is displayed in which the physical TI-mass storage device can be selected. By pressing the [...] button a default Windows dialog is opened for selecting the location and filename for the previous saved image file. The image will be restored to the TI mass storage device after pressing the [Restore disk image] button. The disk must be recognized by Ti99Dir as a real TI mass storage device. A hard disk or ZIP-disk must be formatted and initialized with i.e. Du2k and at least volume #1 of a Cf7a+ must have been initialized. This is a safety matter to prevent you against overwriting your external hard disk with the family photos!

Menu: Mark

With the options in the Mark menu single and multiple files can be selected.

Mark TI file (Gray +)

Mark the file under the cursor.

UnMark TI file (Gray -)

Unmark the file under the cursor.

Mark all TI files (Ctrl Gray +)

Mark all the files in the browser window except directories.

UnMark all TI files (Ctrl Gray -)

Unmark all the files in the browser window.

Menu: Commands

Copy file(s) (F5)

Copy the selected file or marked files from the file list in the current browser window to the location displayed in the browser window at the opposite side.

Copy files to a volume in a Cf7a+ card image

Any kind of file can be copied to another directory. Files in archives, floppy disk images, hard disk images or CF7A+ card images will automatically be extracted. Floppy disk images (volumes) on a CF7A+ card or image will automatically be shrinked to their original size if possible.

When PC files are about to be copied, a dialogbox for converting a PC file to a TI file is automatically opened (see also Convert PC file to TI file).
TI files can also copied to floppy disk images (DSK) and floppy disk images (volumes) in a CF7A+ image (CF7A+DSK).

Floppy disk images (DSK) and PC99 floppy disk images (PC99/SD and PC99/DD) can also be copied to a CF7A+ card or a CF7A+ image. Floppy disk images will automatically be expanded to 1600 sectors.

Copy DSK images to a Cf7a+ card or card image

Before a floppy disk image can be copied a volume number must be chosen. If more than one floppy disk images are copied simultaneously than the volume number is incremented by one automatically but you still have a chance to change the volume number. If the option Auto copy next DSK image is checked then all selected floppy disk images are copied automatically starting with the chosen volume number.

About to overwriting an existing file

If a file already exists a warning is given. Click on the [Yes] button to overwrite the file, click the [No] button to skip this copying this file, click the [All] button to overwrite this file and any other file that already exists or click the [Cancel] button for canceling the whole copy operation.

Rename file or directory (F6)

If the browser window contains the contents of a directory, a floppy disk image (.DSK) file list or a CF7A+ volume (.CF7) file list then the TI file selected by the cursor can be renamed.

Renaming a DSK file

A dialog is opened in which the new filename can be entered. If a files with an extension is renamed, like disk images (.DSK, .IMG or .CF7), than the current extension is preserved. The file will be renamed after clicking the [Rename] button.

Create new directory (F7)

If the browser window contains the contents of a directory then a new directory can be created in that directory.

Creating a new directory

A dialog is opened in which the new directory name van be entered. The directory will be created after clicking the [Create] button.

Delete file or directory (Del)

If the browser window contains the contents of a directory, a floppy disk image (.DSK) file list or a CF7A+ volume (.CF7) file list then

the directory or file selected by the cursor or all marked directories or files can be deleted.

Deleting eight marked files

A dialog is opened for asking confirmation for the deletion. The Directories and files will be deleted after clicking the [Delete] button. Only empty directories can be deleted.

Set file attributes

If the browser window contains the contents of a directory then the protected and/or archive attribute of the file selected by the cursor or all marked files can be altered.

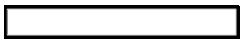
Change the attributes of three marked files

A dialog is opened for asking confirmation for the attribute alteration. An unchecked attribute is cleared, a checked attribute is set and a grayed attribute is left unchanged. The atrributes of the files will be changedd after clicking the [Set] button.

Menu: Configurations

Options

Opens a dialog in which some options can be changed or selected.



The configuration window

Font
To select a font for the browser windows click on the [Change] button in the font frame. A windows font dialog will be opened. Select the font you want to use and press [Ok] to accept or [Cancel] to discard your selection.

Color
To select a color for the text (filenames), background or marked filenames press the corresponding [Change] button. A windows color dialog will be opened. Select a color and press [Ok] to accept or Cancel to discard your selection. The cursor color is always the text and background color reversed.

WDS / SCS / IDE / CF7A+ drives
Select in this section the drive letters which are allowed to use for reading and writing WDS, SCS, IDE, CF7A+ images.
This selection is used when creating a backup from or when restoring an image to (for example) a compact flash card or when reading a CF7A+ volume list. Ti99Dir always checks all available removable drives for a TI99 kind of (hard)disk header. This process can be speed up by only selecting those drive letters which are normally assigned to your CF-card or ZIP-disk. Drive C:, which is normally your boot disk, is always disabled.

Miscellaneous

Enable Ti994wand Ti99Hdx compatibility

Select this option to make Ti99Dir compatible with the emulator Ti994w and the HDX server Ti99Hdx.

The characters '\ / : * ? " < > |' are not allowed in a PC filename. By default Ti99Dir will replace these characters by a '@' character. However, when Ti994w and Ti99Hdx creates a PC filename out of a TI filename and one of these characters are encountered then the most significant bit of that character will be set. This will result in a PC filename with one ore more strange characters but at least the filename is unique and Ti994w and Ti99Hdx is able to find the PC file containing the TI file.

Save all extracted files in TIFILES format

Select this option to save all extracted files from DSK images, PC99 disk images, CF7A+ images, Hard disk images or ARC files in the TIFILES format.

The TIFILES format is used by file transfer programs like TELCO. The default is the V9T9 format. There is a slight difference between the TIFILES and V9T9 format in the the header of the file.

Enable windows mouse wheel messages

Since I used Windows XP it occurred to me that the scroll wheel on my mouse didn't worked anymore with the scroll bar in the Ti99Dir browser window. Up till Windows 98 and Windows NT4 the scroll wheel messages where passed to the Ti99Dir program via a WM_VSCROLL message but I found out that this isn't the case anymore. This has maybe something to do with mouse drivers, I don't know. When on your PC your scroll wheel doesn't work you can try to switch the mouse wheel messages on. Ti99Dir then translates the mouse wheel messages WM_MOUSEWHEEL to WM_VSCROLL messages.

Function keys

The following function keys are available in Ti99Dir:

Up-arrow	Move the file cursor one line up.
Down-Arrow	Move the file cursor one line down.
Home	Move the file cursor to the top of the list
End	Move the file cursor to the end of the list
Tab	Move the file cursor to the left or right file list
Enter	If the file type under the cursor is a directory an Archive file (DIS/FIX 128) a floppy disk image (DSK, PC99/SD, PC99/DD) or an hard disk image (HDIMG or CF7A+IMG) then the contents of the current file list is replaced by the contents of the selected file.
Insert Gray +	Mark the file under the cursor (except directories).
Gray -	Unmark the file under the cursor.
Ctrl Gray +	Mark all the files in the file list (except directories).
Ctrl Gray -	Unmark all the files in the file list.
F5	Copy the selected file or all the Marked files. See also menu option: Copy file(s))
F6	Rename the selected file. See also menu option: Rename file or directory)
F7	Create a new directory. See also menu option: Create new directory)
Delete	Delete the selected file or directory or all marked files. See also menu option: Delete file or directory)
F2	Display extra information about the selected file. See also menu option: View file, .DSK or .IMG info)
F3 double click	Display the contents of the selected file in a viewer window or the file list of a directory, Archive, floppy disk image or hard disk image in the current browser window. See also menu option: View directory, archive, .DSK, .IMG or .CF7) and/or View file)
Ctrl F3 Ctrl double click	Display the contents of the file list of a directory, Archive, floppy disk image or hard disk image in the opposite browser window.
F4	Display the contents of the selected file in a hexadecimal form in a viewer window if possible. See also menu option: View file hexadecimal)
Ctrl F6	Convert the selected TI file to a PC file if possible. See also menu option: Convert PC file to TI file)
Ctrl F6	Convert the selected PC file to a TI file if possible. See also menu option: Convert TI file to PC file)
Ctrl F7	Convert a TIFILES format file to a V9T9 format file. See also menu option: Convert TIFILES file to V9T9 file)
Ctrl F7	Convert a V9T9 format file to a TIFILES format file. See also menu option: Convert V9T9 file to TIFILES file)
F8	Display the contents of the selected file as a Myart picture of 256x212 pixels and 256 colors if possible. See also menu option: View Myart 256x212 picture)
Shift F8	Display the contents of the selected file as a Myart picture of 512x212 pixels and 16 colors if possible. See also menu option: View Myart 512x212 picture)
F9	Display the contents of the selected file as a picture if possible. See also menu option: View TiArtist or GIF picture)
Shift F9	Display the contents of the selected program file as a characterset if possible. See also menu option: View characterset)
Ctrl R	Reread a directory, a floppy disk image (DSK), a floppy disk image (volume) on a CF7A+ image image (CF7A+DSK) or a CF7A+ image (CF7A+IMG). See also menu option: Reread directory)
Ctrl U	Swap the contents of the left and right file list windows. See also menu option: Swap file list window)

Viewer

The viewer is used to display the contents of files. Data files or program files recognized as a basic program are displayed in a readable form. Display Fixed files with a record length of 128 bytes containing at least a colon definition (: x ;) somewhere in the first 12 sectors and all characters in these sectors are printable then this file is assumed to contain Forth words and is displayed in blocks of 16 lines with 64 characters per line. In all other cases the content of the files is displayed in a hexadecimal form.

It is possible to open a maximum of 16 viewer windows. The content of a viewer window is always read only except when a directory listing is fed to a viewer. Parts or all of the content can be selected and copied and used in to other program, i.e. inserting the selected text into a TI99/4A simulator like Ti994w.

Displaying a basic program file in a viewer

File menu

New
Open...
Save
These menu options are always disabled.
The viewer can not be used to select or insert data from/into directories, disk or hard disk images or files.

Save As...
Save the content of the viewer window as a text file (.txt) on your PC harddisk. A dialog box for selecting a directory and entering a file name is presented before saving the file.

Print...
Print the whole content or selection of the viewer window to your printer. A dialog box for selecting the printer, printer options and print range is presented. It is not possible te enter page numbers or a range of pages. Page numbers has no meaning in this viewer.

Print Setup...
Presents a dialog box for selecting and setup your printer and paper size and orientation.

Page Setup...
Presents a dialog box for selecting the paper size, orientation and marges.

Exit
Closes the viewer window.

Edit menu

Undo (Ctrl+Z)
Undo's the last edit action.

Cut (Ctrl+X)
Copies the selection of the viewer window to the clip board and removes it from the viewer window (if it is not read only).

Copy (Ctrl+C)
Copies the selection of the viewer window to the clip board.

Paste (Ctrl+V)
Inserts the contents of the clip board into the viewer window (if it is not read only).

Del
Deletes the selection or a character at the cursor location of the viewer window (if it is not read only).

Select All
Selects the whole content of the viewer window.

Search menu

Find (Ctrl+F)
Search for a word or string. A dialog box for selecting search options is presented.

Find Next (F3)
Find the next word or string from top to bottom in the viewer window.

Find previous (F4)
Find the previous word or string from bottom to top in the viewer window.

Replace...
Replace a word or string for some other words or string (if not read only). A dialog box for selecting replace options is presented.

Command line options

Ti99Dir can be started with an initial pathname on the command line. This pathname will be used to populate the left and right file browser window. This kind of operation makes it possible to start Ti99Dir with a windows shortcut or use Ti99Dir as a tool for i.e. TotalCommander (by Christian Ghisler, C. Ghisler & Co, see http://www.ghisler.com/)

Shortcut parameters

I assume that you know how to create a shortcut in windows for a program file and how to open the properties window.

```
Target    : x:\pathname to ti99dir\Ti99Dir.exe y:\your ti file path\
Start in  : x:\pathname to ti99dir\
```

In which x: is the drive letter of the path were Ti99Dir.exe resides, and y: is the drive letter of the path were your TI files collection resides.

Totalcommander parameters

If Ti99Dir is used as a tool for TotalCommander then it is possible to use TotalCommander to browse to your TI file collection and click on your own made Ti99Dir command button in TotalCommander to open the Ti99Dir browser window. See also the help file of TotalCommander for creating your own button bar.

```
Command   : x:\pathname to ti99dir\Ti99Dir.exe
Parameters: %p%n
Start path: x:\pathname to ti99dir\
Icon file : x:\pathname to ti99dir\Ti99Dir.exe
Icon      : select first icon
Tooltip   : Ti99Dir - TI file browser
```

In which x: is the drive letter of the path were Ti99Dir.exe resides, and %p%n is replaced by TotalCommander for the source path and filename under the cursor.