



FreeTW

the Tele-Web-Viewer

Technical notes

Spyware

FreeTW expressly assure you that, in any case, the FreeTW application does not write or read anything out of its installation folder and that does not send any information on the Web. My personal data aren't completely hidden and, with very little work, you would be able to find my PSTN number, eMail, address and come to my home (I can't provide you with a strong baseball bat and it is your duty to take it with you...)

But pay attention: This warranty is valid only for the files that I send you directly and I am not responsible about the contents of the files that you copied from another source, downloaded from any other place different from www.freetw.net .

It's very easy to insert into a program something weird and a lot of bad guys are interested to do that. This malicious modification could lead to unpleasant effects when FreeTW will be run in your PC, so use an Antivirus software with Firewalls, Antispam, etc. (my hint is to install AVG-Free and SpyBot that are working well, are free of charge, aren't resource hungry)

However my opinion is that it is a good practice to install FreeTW in a notebook into your living room dedicated to entertainment tasks (maybe it will run an eMule too) . This notebook must not contain very important data (credit card codes, etc.) and should have a few programs installed. Doing that no virus or spyware could lead to important damages and, in the worst case, the FreeTW system would be fully restored in short times.

Fortunately FreeTW is very different from the classical browsers so it shows even an intrinsic security. The viruses would be disoriented by the environment they found, don't know how to behave, go in starvation and finally have to die.

Prerequisites

To execute FreeTW the PC system must be composed as following :

Operating System	WindowsXP or WindowsVista
Processor	More than 1.2GHz but not above 2.5Ghz (my hint is to use a Celeron 1.8GHz about, that consumes and heats a few so having a silent fan)
Ram	About 500MegaByte (with 1GigaByte the restarting is a little bit slower)
Video controller	Recent notebook controllers are appropriate (built from year 2005 on)
Case model	Notebook silent model (Tower, MiniTower, Desktop e MediaCenters usually are more noisy) Do not trust on the seller telling you about their silence. A shop is very different from a living room in evenings...
Mandatory software	"Internet Explorer 7", "Windows Media Player 11", "NET Framework 3.5"
Useful software	"Real player", "Quick time", "Java", "Flash" (to visit some web pages) "Microsoft Speech SDK 5.1" (for the voice control – <u>only with XP</u>) "Kazaa Lite Codec Pack" (and other codec collections for video and audio)

Installing FreeTW

FreeTW does not “install”, does not write inside the Windows registry, does not write anything outside of its folder and all its files are contained into its main folder named “FreeTW” .

Even if there isn't any installer, FreeTW is very easy to be started into a new computer. If into the system some essential elements are missing, then the local installation files or the web URLs to download the missing components are suggested by the application itself and are prepared to be installed.

The FreeTW files are the following:

FreeTW.zip	about 12 mega byte (containing the FreeTW program, the channels of the WebTVs and some instruction pdf files)
FreeTW_Extra_Codecs.zip	about 76 mega byte (contains a lot of codecs audio and video)
FreeTW_Extra_Installers.zip	about 79 mega byte (contains the installators for all the components eventually missing in the system)
FreeTW_Extra_VoiceInput.zip	about 70 mega byte (contains what is needed to use the voice control with WindowsXP)

First of all you have to inflate the file "FreeTW.zip" in a destination directory chosen by you. A folder “FreeTW” will be created, containing subfolders and files. The folder “FreeTW” could then be moved everywhere, in every future time, and will continue to work. (see notes 1 and 2)

Then you will open the folder FreeTW you will launch the Shortcut so that it will associate with the executable file FreeTW.exe. After that you could move this shortcut "FreeTW" using the mouse right button onto the desktop and then select to “Create shortcut”

Now that all has been done, please try to run FreeTW with a mouse double click on the shortcut. If some mandatory component is yet missing FreeTW will ask you to install it facilitating your task. (see note 3)

If you download the "Extra" files too, it is advisable to inflate and put all their contents inside the "Extra" subfolder of FreeTW so that it will be available when needed.

Note 1 - *In WindowsVista systems there are some limits, The best place is in "User Documents" because you can copy there files and you can execute there applications without special authorizations from the operating system. Another good place is into the "C:\Program files" folder but you will have to give an authorization to start copying there the files. Into the most of Vista folders it will not be possible to execute FreeTW and you will experience protection errors during the startup or during run time.*

Note 2 - *If you move the FreeTW folder, the desktop shortcut will have to be deleted and made again.*

Note 3 - *FreeTW does not install any system components directly because it is our choice that it has to work inside its folder without doing anything outside.*

To uninstall FreeTW

To completely remove FreeTW from the system, simply erase all the "FreeTW" main folder.

How to create backups of FreeTW

Every time that a modification of the channels is done, FreeTW creates a copy of all the indexes files into the folder "Program_Backups" but when major disasters arises like f.i. the breaking of the hard disk or if the notebook has been stolen, this automatic backup is not enough.

To create a complete backup you have to copy the entire folder FreeTW (maybe to another computer or onto a CD) . Requested room is about 250 mega byte.

The copied folder – the backup – could also be used to install (copy it) onto another PC to start FreeTW on that machine.

If you want to spare hard disk space, it is possible to reduce this backup to about 15 MegaByte deleting the "Extra" subfolder. In this way you will no more have the local installers and codecs but however you could download them later from Internet.

**From here on, this file will become really technical
and you don't have to read it.**

**FreeTW will be in the future an Open Source project
and here you can find some documentation
that may be useful to programmers
to go on with the development.**

Folder structure

The folders of "FreeTW" are structured in this way:

FreeTW

Channels	contains the files "channel indexes"
Channels_Backups	contains the backup copies of the files "channel indexes"
Channels_Icons	contains the snapshots (thumbnails) of pictures and web channels
Docs	contains the PDF files with the documentation
Extra	contains system components and codecs to be installed
Program_Files	contains the executable files and the DLL libraries
Program_Icons	contains the icons internally used by the application
Program_Locales	contains the message files translated in different languages
Program_Sounds	contains the sound files used by the program
Remotes	contains the setups of the remote controls
User_Files	

The folder User_Files contains

Channellist.txt	a text file with the list of all channels
UserOptions.txt	a text file with the user options
UserText.txt	this file contains the strings chosen by the user

Usually the executables and the DLLs should reside inside the folder "Program_Files" as illustrated :

FreeTW.exe	checks the prerequisites and launches FreeTW_core.exe
FreeTW_core.exe	this is the main application of FreeTW
Interop.SHDocVw.dll	
Interop.SpeechLib.dll	
msvbvm60.dll	

A programmer could find it useful to put inside the "Program files" folder the full "Visual Studio 2008" environment and to leave debug and release files in their native positions, inside the "bin" subfolder:

```
FreeTW
  Program_Files
    Project Visual Studio
      Bin
        Debug
          FreeTW.exe
        Release
          FreeTW.exe
```

Or it could be preferred to put the project or projects aside the FreeTW folder :

```
FreeTW
  Project Visual Studio
    Bin
      Debug
        FreeTW.exe
      Release
        FreeTW.exe
```

In any case, FreeTW will browse up into the folder structure until finding a folder named "FreeTW" containing the subfolders "Program_Icons" and "Program_Sounds" and it will use this one as the main folder. If it is not found it will search inside "Documents/FreeTW" and, should it be not present, it will create a basic structure. (remote controls will be missing, the icons and the sounds too, but FreeTW could be run without experiencing errors)

Future possible developments of the FreeTW project

Substitute "Windows Media Player" with direct invocation of "Direct Show"

This possibility has already been predisposed, gathering all the communications with WindowsMediaPlayer into a tenth of functions inside the "WMP_app" module.

Low level "Direct Show" functions should be used through the "DirectShowLib-2005.dll" as you can see in the example "Direct Show Example.zip"

Pros:

- to have more control on the different functions
- better managing the fast forward and rewind for the files other than "WMV"
- controlling (and memorizing) the color options, brightness and equalization values.
- run FreeTW in more instances (now Windows Media Player makes impossible to do so)
- downloading the video streams other than the WMV ones but even the AVI as VLC can do.
- throw away WMP because of its difficult to reach menus and tiny captions

Cons:

- the equalizator will be no more available, the SRS and the WOW will be absent (they are well working...)
- the audio controls should be built again in the form of Direct Show filters with an hard work
- the ASX files will be hard to be opened and they'll have to be managed deeply by the application
- commercial DVDs will be hard to be played and a new DVD player should be written from scratch

Add the possibility of recording audio and video

FreeTW put at disposal the addresses of the audio-video streams, so it should be enough to develop a recording module with two functions only :

- register from this address (URL, filename)
- stop recording

This module should be able to record while you are watching something else and it should be capable to enregister more than one stream in the same time (being the bandwidth enough to do so)

Creating a module of this type should not be difficult. The hard work will be managing the communications with the user.

My opinion is that it is important to maintain FreeTW a simple application. It should be usable without stressing the user. For this reason, wether innovative solutions to record are developed, or it is better to avoid doing it.