

CMPSCI 120 Fall 2008
Lab #2
Professor William T. Verts

Setting Up

From the class web site follow the link to the CamWatcher program, then download the following file into a single folder on your computer:

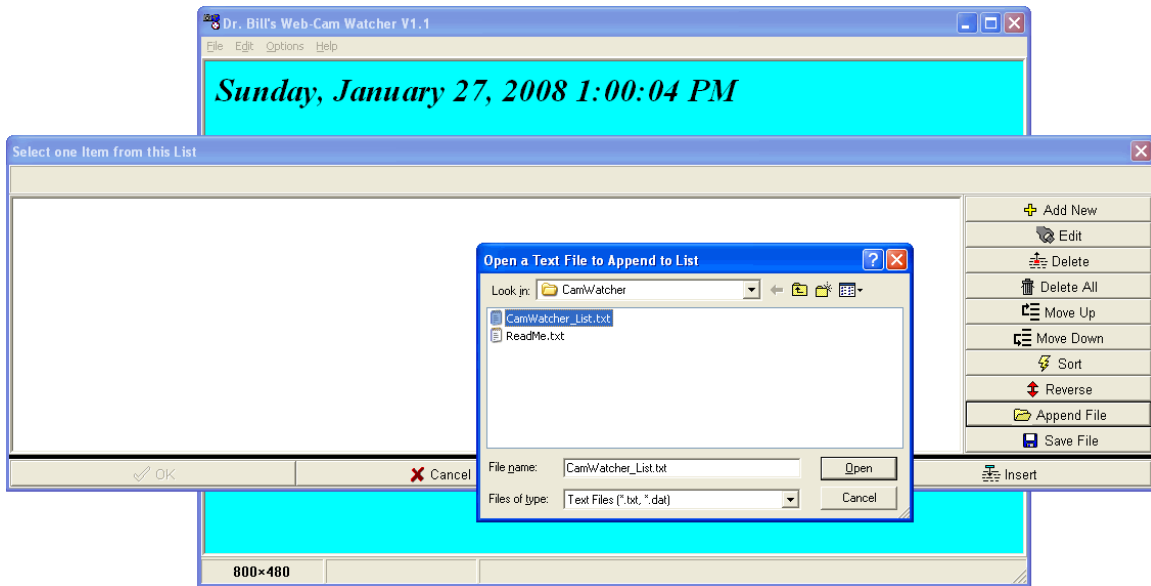
CamWatcher_Distribution_V2_0.zip

Unpack the contents into that same folder. You will have one .EXE file, one .PreINI file, and two .TXT files, totaling about 844 kilobytes in size. Before you run anything downloaded from the Web you should scan it for viruses. The .EXE file is the program file, which will run as-is (there is no lengthy installation process necessary, but there are some configuration options). One of the text files is called `ReadMe.txt`, which contains a summary of the setup process listed on this page. The other text file is called `CamWatcher_List.txt`, which contains a list of known cameras.

The `CamWatcher.PreINI` file must always stay in the same folder as the `CamWatcher.EXE` file, and contains information about where the program is allowed to store its files. The .PreINI file is a text file editable by Notepad. One entry in the .PreINI file is the line `Path=C:\DATA\`, which means that when CamWatcher is run it will automatically create a folder called DATA at the root of the current drive. (Inside DATA it will create two additional folders, one called INIT, which will contain the initialization files for the program, and one called WEB, which will contain all the images downloaded from the Internet.)

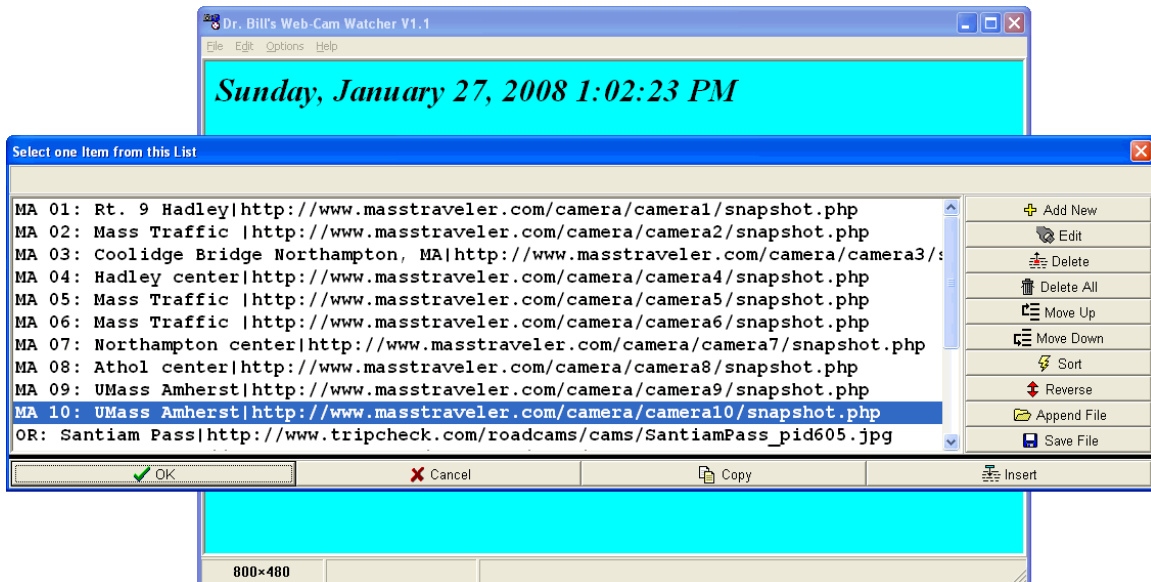
To run this program directly from a flash drive, copy both the .EXE and .PreINI files into the same folder on your flash drive, and edit the .PreINI file to contain the line `Path=\DATA\` (without the C : as part of the string). Do this in any setting where access to the C : drive may be restricted, such as in a public computer lab. You may also edit the .PreINI file to set the default path to any desired folder on your computer.

Run the `CamWatcher.exe` program. The window will come up full-screen, in a light cyan color. Click on File-Add Camera, and in the dialog box click the Append File button. Select `CamWatcher_List.txt` from your folder, as shown in the following image, and then click the Open button.



The list of cameras will be populated from the text file, and initially will contain around twenty cameras or other frequently updated web graphics (such as weather maps). This step needs to be done only once, as the camera list will be “remembered” the next time the program is run. (Any additional cameras may be added to the list from other external text files in the same way.)

Using the buttons at the right side of the dialog box, as shown below, the camera list may be sorted, the order of items in the list may be changed, items may be deleted or edited, new items can be added, and the list saved to a text file.

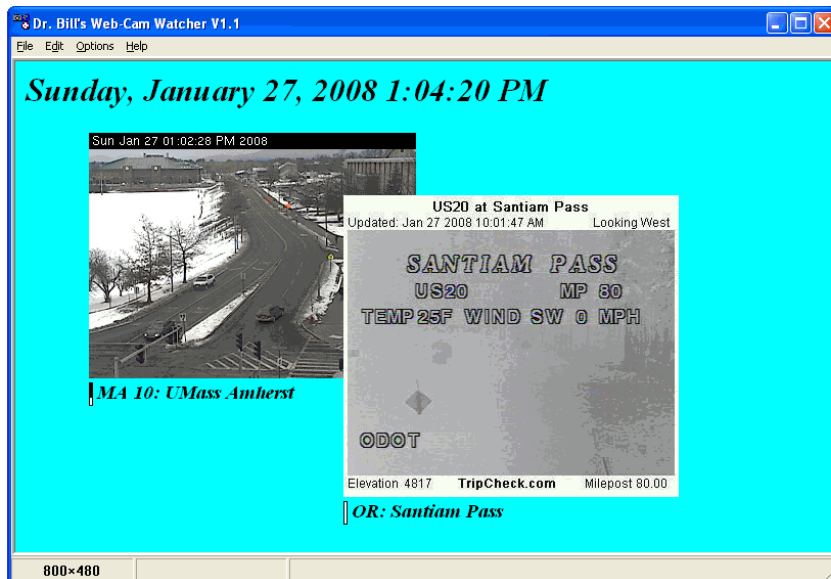


Pick a camera from the list and click OK. The dialog will disappear, the camera view will be fetched from the Web, and its image will appear on screen in the upper left corner of the program window. Click on File-Add Camera again to load another camera view.

You may ***left-click-drag an image*** to drag the camera view to any location on the screen. Alternatively, you may ***right-click the image*** to popup a menu that allows you to set properties such as refresh time (the default is 60 seconds), image size, its relative position in a stack of multiple cameras, see its current settings, copy it to the clipboard, or delete it entirely. You may also ***right-click a blank region*** of the screen to popup a menu that allows you to add a camera (a shortcut for **File-Add Camera**) or set the background color.

By default, the name of the camera will appear under the image as a caption along with a timer progress bar that shows the remaining portion of the interval before the camera will be refreshed. The **Options** menu contains settings for showing or not showing the progress bar, the caption, or the current time and date, for sounding or not sounding a tone on a fetch from the Web, and for setting the background color. All of these settings will be saved in the `CamWatcher.INI` file stored in the `\DATA\INIT` folder on program exit, and will be restored the next time the program is run. The current set of camera views will be saved in `Default.wcm`, also in `\DATA\INIT`, or may be saved manually to another `.wcm` (**webcam**) file. Deleting the `CamWatcher.INI` and `Default.wcm` files from the `\DATA\INIT` folder forces all options back to their default settings on the next run. The images fetched from the Web will be stored in subfolders of the `\DATA\WEB` folder.

The image below shows the views from two cameras, one from Massachusetts and one from Oregon. The Oregon camera is on top because it was added after the Massachusetts camera. It was also dragged to a location on screen where both it and the Massachusetts camera are visible. The Massachusetts camera is about $\frac{2}{3}$ of the way through its interval before refreshing, and the Oregon camera has just started its timing interval.



Play with the program to familiarize yourself with its functions. Note that the program may stall if a camera takes a long time to load. Use of broadband is recommended; use of a dial-up connection to the Internet is not.

A “dead” camera will show up as a small red square box (the program may stall for a few seconds); if that happens then ***right-click*** the red box and select Edit-Delete from the pop-up menu. Any camera that shows up as a large white rectangle just needs to be reloaded; hitting **Ctrl**R will force a reload of all cameras.

The Assignment

Click on **File-New** to delete any cameras that you’ve loaded from the list. Also, make certain that Options-Show Time on Screen, Options-Show Caption Under Image, and Options-Show Timer Under Image, are all checked (✓). Set the background color to something light with Options-Pick Background-Color, or leave it set to light cyan.

Using your favorite Web browser, look for remote cameras or regularly updated graphics (such as weather maps) somewhere out on the ‘Net, ***not*** including those in the default list provided with the CamWatcher program. When you find a suitable candidate, tell the Web browser to show you the underlying HTML source code of the Web page (click on View-Page Source in Mozilla Firefox or View-Source in Microsoft Internet Explorer). Examine the HTML source code to see if the images are identifiable as .BMP, .GIF or .JPG files, with easily extractable Web addresses. When you find one, harvest the complete URL.

In CamWatcher, click on **File-Add Camera**, and in the popup dialog click the Add New button. In the little popup, type in a description of the camera, a vertical bar character, and the URL of the camera (for example: My Camera|http://www.jpg) and click OK to add it to the list. Select the newly added camera and click OK. The camera view should appear on screen at its full size, updated once every 60 seconds.

Adjust the ***size***, ***position***, and ***refresh interval*** appropriately. Some camera views are very large, and take up too much real estate on screen; if so, then right-click the image and set the Zoom to something smaller than 100%. **Do not** use any cameras that require a refresh interval of longer than once per minute.

If the Web address is to a “dead camera” (bad Web address, failed server, etc.) the image will appear as a small square dot with the caption underneath. To delete a camera, dead or otherwise, right-click it and select **Edit-Delete** from the popup.

Find at least five unique working Web images (no porn!) that update the image with a new view at least once per minute. Arrange them on the screen so that all the images and all the captions can be seen. Delete any and all dead cameras from your list.

Click on **File-Save** to save your definitions as a file which is **your last name**, an **underscore**, the **first letter of your first name**, and the extension **.wcm** (for example, I would save the file as `verts_w.wcm`).

Create a **.zip** archive with **your last name**, **the first letter of your first name**, an **underscore**, the **number 2**, a second **underscore**, and the extension **.zip** (I would create `verts_w_2.zip`). Note that many Windows systems do not show file extensions.

Copy the `.wcm` file into the `.zip` archive, then email the `.zip` archive as an attachment to **literacy@cs.umass.edu** (the class mail drop). Make sure that the subject line of the email says **CMPSCI 120 Assignment #2**. Empty `.zip` files will be rejected!

The assignment will be scored out of 30 points. You will be graded on several things:

1. 25 Points: Did you find five working cameras? (Five points for each unique working camera, up to the limit of five. No extra credit. Three points will be removed if a camera does not update at least once per minute. Five points will be removed for each dead camera, or if you use a camera from the list provided with the program, *even if* there are five unique working cameras that satisfy the assignment!)
2. 1 Point: Did you save your list to the `.wcm` file correctly? (One point for following the naming instructions.)
3. 1 Point: Did you create the `.zip` archive correctly? (One point for following the naming instructions.)
4. 3 Points: Did you email it correctly? (Two points for sending it to the correct address, one point for using the specified subject line.)