

World Image Tracker

Copyright Fountain Computer Products 2010



World Image Tracker

Copyright Fountain Computer Products 2010

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of the publisher.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks.

While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs and source code that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.

Printed: August 2010

Table of Contents

	Foreword	0
	Part I Index	6
1	Getting Started.....	6
2	The Loading Process.....	7
3	Overview	7
	Image Window	7
	Image Status Bar.....	8
	Address Bar	8
	Tool Bar	8
	General Status Bar.....	9
	Tool Pages	9
	Image Links Page.....	9
	Folders and Organization	10
	Displaying A Link	10
	Adding A Folder	10
	Adding A Link	11
	Extracting Your Own Links.....	11
	Static Image Links	12
	Dynamic Image Links.....	12
	Programmed Image Links.....	13
	URLs	13
	The Macro Editor	14
	Editing Time/Date Macros	15
	Editing Counter Macros	15
	Format Commands	16
	Time Zones	18
	Dragging Address Bar Links	19
	Link Macros	19
	Date/Time Macro	20
	GMT and UTC	21
	The Counter Macro	21
	Editing Links and Folders.....	22
	Loading and Saving Links.....	22
	AnimationsPage.....	23
	Animation Section	23
	GiF Animation Section.....	24
	Time Data Section	25
	Dealing With Corrupted Images.....	25
	Removing Duplicates	26
	Loading Animated GIFs.....	26
	Saving and Loading Animations.....	26
	Image Tools Page.....	27
	Resizing Images.....	28
	Part II Settings	30
	Part III User Agreement	32

Part IV Contact Information	34
Part V Terminology and Conventions	36
Index	37

Part



1 Index

Introduction. The World Wide Web is filled with constantly changing pictures and images. For example, you can find weather maps, weather radars, road cams, mountain cams, city cams and even scientific images showing things like the solar corona. The **World Image Tracker (WIT)** allows you to grab and display these images. Because the images are often small, **WIT** allows you to expand the images so they are easier to see and read. Because these images are constantly changing, **WIT** can automatically download the latest image so the display is always up to date. **WIT** automatically saves every image so you can track changes over time and even animate to produce movies of the changes. This allows you to do things like track thunderstorms, view road conditions in real time and even watch the eruptions of volcanoes. The image manipulating tools in **WIT** allow you to improve the clarity of the images, which is especially useful for night images. Here are detailed instructions for using **WIT**:

Basics

Getting Started
Overview
Tool Pages
Image Window
Address Bar
Tool Bar
Image Status Bar
General Status Bar
Settings

Links

Image Links Page
Folders/Organization
Displaying A Link
Adding A Folder
Adding A Link

Dragging Address Bar Links
Editing Links and Folders
Loading and Saving Links
Extracting Your Own Links

Animations

Animations Page
Capturing Animated GIFs
Saving/Loading Animations
Corrupted ImagesDuplicates

Image Tools

Image Tools Page

Resizing and Magnifying

Resizing Images

Macros

Link Macros
The Macro EditorEditing
Time/Date MacrosEditing
Counter Macros
The Counter Macro
Date/Time Macro
Format Commands

Details

The Loading ProcessURLs
Time Zones
GMT and UTC

Misc

Freeware
Contact Information
Terminology/Conventions

1.1 Getting Started

After the World Image Tracker (**WIT**) has been installed on your computer you will find an icon on your desktop. To run **WIT**, simply double-click on this icon. Once **WIT** is running, you can perform the following basic operations:

1. Loading Images. To load an image, select the Image Link Page on the Tool Pages at left side of the screen. Next, select a link and double click on it. The program will begin to load the image and in a few seconds, it will be displayed in the Image Window.

2. Auto-Load. Many images on the Internet change periodically, displaying new information. For example, Weather Radar maps can be updated every minute to display changing weather conditions. **WIT** can check periodically and display any new images that are available. In this way, **WIT** will always display the most recent image. This is useful for tracking the weather or road conditions. If you want **WIT** to check the image periodically and download new versions, as they become available, press the Auto Load Button on the Tool Bar at the top of the window.

3. Animations. Every time **WIT** downloads a new image, it saves the image for later display. If the program has been running in Auto-Load Mode for a while, it will probably have several images saved. **WIT** can play back these images at high speed, which makes them into a kind of time lapse movie of

the changes in the images. This is very useful for things like tracking weather changes and anticipating the arrival of storms.

To animate the saved images, select the Animation Page on the Tool Pages at the left side of the window and press the Animation Button. The program will begin displaying images in sequence, which produces a movie of the changes in the image over time. There are also other tools that allow you to manipulate and save your animations.

4. Image Tools. Many images from the Internet will be difficult to view because they are too dark or grainy or have some other defect. For this reason, **WIT** has a set of tools that allow you to improve the image quality. The Images Tools Page on the Tools Pages at the left side of the window allows you to adjust the contrast, brightness, and gamma of the Internet images. There are also sophisticated tools for bringing out the details of faint images.

1.2 The Loading Process

The Loading Process. When **WIT** loads an image, it begins by transmitting a request for the image to the specified URL. The program then waits for the image to arrive. If the image does not arrive with current time-out period, the program aborts the request.

Image File Format Types. After the image arrives, **WIT** checks to see what type of image it is. Currently, **WIT** can read four types of images: BMP, GIF, JPG, JPEG, and PNG. When it loads an image, it tries to determine the image type so it can display it properly. It does this by first examining the “signature” bytes that are usually contained within an image file, since this is the most reliable method of accurately determining the format. If that fails, it looks the file extension. Attempting to load an unsupported image type will result in an error. Also, corrupted or defective images files will also cause errors.

Download Time. The time it takes to download each image is governed by your Internet connection speed. The files average a little over 100Kbytes. A dialup connection will download the file in about 35 seconds. A 256K DSL connection will download the file in 7 seconds and 1.5 megabit connection will load in about 1 second.

Time Delays. Some web pages have built-in Time Delays to prevent them from being overwhelmed by hundreds of requests from a Denial-Of-Service (DOS) attack.

1.3 Overview

Overview. The **WIT** Window is divided into several sections. Here is a description of each section:

Tool Pages	Tool Bar
Image Window	Image Status Bar
Address Bar	General Status Bar

1.3.1 Image Window

Image Window. The Image Window displays images from the Internet and takes up the majority of the right side of the screen. The displayed image will normally take up the whole window, which will magnify small images and make them easier see and pick out details. You can also display the image at its actual size by enabling the Actual Size check box on the Image Status Bar.

1.3.1.1 Image Status Bar

Image Status Bar. The Image Status bar sits just above the Image Window. It displays four items:



Current Link. This displays the name of the current image being displayed. For example, if it displays Denver area weather radar, it might display “Denver.”

Img Size. This item displays the size of the current image in pixels. This is the raw image size before *WIT* has had a chance to expand or contract the image.

GMT. This item displays the current Greenwich Mean Time, which is the universal world time. Many images are stamped with the GMT for the time the image was taken. The GMT display is useful for determine how old the picture might be.

Actual Size. When this option is enabled, the image is displayed at its actual size. When the option is disabled, the object is expanded to fill the Image Window. If *WIT* itself is expanded, the image will be large allowing you to see fine details in the image.

1.3.1.2 Address Bar

Address Bar. The Address Bar is found along the top of the screen. The Address Bar displays the URL or Internet Address of the currently selected image link. Pressing the Go Button to the right or the Manual Load Button on the Tool Bar will cause *WIT* to attempt to load the image from the currently URL.



You can also manually type or paste links into the Address Bar to view different images. Once you have tested a new Link, you can add it to your list of Favorite Links by dragging the icon just to the left of the address bar down to the Links Page.

1.3.1.3 Tool Bar

Tool Bar. The Tool Bar runs along the top of the screen. It contains three buttons: Auto-Load, Manual Load and Abort Load.



Auto-Load Button. Putting the Auto-Load Button in the “Down” position causes the program to periodically load an image from the currently selected link. (Each time you press the button, it toggles between the Up and Down positions.) If the image that is loaded is different from the last image that was load, the program will display the new image. The time interval between downloads can be set to a different value for each link.

Manual Load Button. Pressing this button causes the program to immediately load and image from the currently selected link. If the image that is loaded is different from the last image that was loaded, the program will display the new image.

Abort Load Button. Pressing this button causes the program to abort any pending download operations. This can be useful to stop the loading process if the link is valid or if the server on the other end is not responding. *WIT* will automatically abort if it receives no response in certain period of

time, usually 60 seconds. (You can set the time out period using the Settings Options.)

1.3.1.4 General Status Bar

General Status Bar. The General Status Bar appears along the bottom of *WIT*'s Window. Here is a detailed description of each item:



Reading. This item displays the number of bytes read as the program loads an image.

Age. This is the elapsed time since a new, unique image was loaded. The value is dependent on how often a new image is posted on the Internet. The time intervals range from a few seconds to several hours. The typical time intervals for Weather Radar is about five minutes.

Error. This item displays any error that may occur during the process of loading and displaying images. The error messages are generally of two types:

1. Image Errors. These are usually caused by corrupted or defective image files. They can also occur if the program attempts load an image-type that *WIT* does not handle.

2. Internet Errors. Internet errors are usually caused by problems connecting to the web site where an image is stored. This can be caused by your computer losing its connection to the Internet. It can also be caused by problems outside your computer on the Internet itself. For example, the server handling the image could be down.

Status. This items displays the status of recent and pending download operations. When the program has requested an image and is waiting for the server to respond, the program will display the message "Loading". After the image has loaded, the program will display "Image Received – New" if the image is new. If the image is a duplicate of previously received message, the program will display "Image Received – Duplicate".

1.3.2 Tool Pages

Tool Pages. The Tool Pages are found along the left side of the screen. It consists of three pages: the Links Page, the Animations Page and the Tools Page. Each page is selected by clicking on the corresponding tab at the top of the section. You can also hide the Tool Pages by dragging the *divider* that appears just to the right side of the Pages. Here is a detailed description of each of the pages:

Image Links Page
Animations Page
Image Tools Page
Size Page

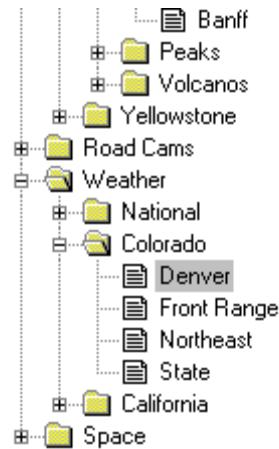
1.3.2.1 Image Links Page

Image Links Page. The Image Links Page displays a list of links to images on the web. It is similar to the "Favorites" page that appears in Internet Explorer™ and other browsers. The Image Links Page makes it easy for you to organize and select any web image to track. Here is detailed information about using Image Links:

Folders and Organization	Dragging Address Bar Links
Displaying A Link	Link Macros
Adding A Folder	Editing Links and Folders
Adding A Link	Loading and Saving Links

1.3.2.1.1 Folders and Organization

Organization. The Image Links are organized in a “Tree” structure. The Tree can contain both “Folders” and “Links.” A “Link” contains the URL information needed to connect to a specific image on the web. A “Folder” is used to organize the “Links” into categories to make it easier to find particular Links. For example, all the Weather Radar information could be put into a single folder name “Weather.” “Folders” can also be nested to better organize your Links. For example, you could have a Folder called “Colorado” nested inside your “Weather” folder that would contain all the Weather Radar Images for the state of Colorado.



Expanding and Collapsing Folders. One of the big advantages of Folders is that they can be expanded or collapsed. When a folder is collapsed, all the Links and Sub-Folders are hidden. This hides the clutter of extraneous Folders and Links and helps you zero in on the Links you want.

If a folder is collapsed, you can expand it by double clicking on it. You can also expand it by single clicking on the small “Plus-Sign” just to the left. Likewise, you can collapse an expanded Folder by double clicking it or single clicking on the “minus sign” to the left.

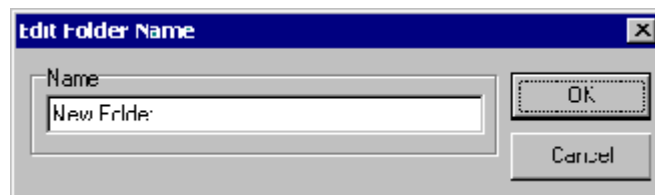
You can expand all Folders by selecting the “Links|Expand All” option from the menu bar. Likewise, you can collapse all Folders by selecting the “Links|Collapse All” option from the menu bar.

1.3.2.1.2 Displaying A Link

Displaying A Link. If you want to display the image associated with a link, you simply double click on the Link in the Link Tree. The Image Name will be displayed in the Image Status Bar and **WIT** will begin loading the image. If you want new images to be loaded automatically, put the Auto Load Button on the Tool Bar in the “Down” position.

1.3.2.1.3 Adding A Folder

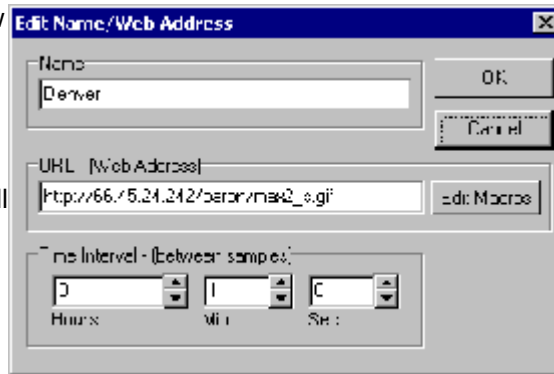
Adding A Folder. To add a new Folder to the Tree, first select an existing Folder by left clicking on the Tree. (The new Folder will be added a “Child” of the selected Folder.)



Next, right click anywhere in the Tree. This will bring up a Menu. Select the “Add Folder” option. Finally, enter a name for the new folder and press OK. (The same option is available in the Main Menu under the “Links” option.)

1.3.2.1.4 Adding A Link

Adding A Link. To add a new Link to the Tree, first select a Folder by left clicking on the Link Tree. (The new Link will be added to the selected Folder.) Next, right click anywhere in the Tree. This will bring up a Menu. Select the "Add Link" option. The program will now display the Link Dialog Box, which has four items:



Name. This is the name that will appear in the Tree and you would normally enter a short description of the Link. For example, you might want to the Weather Radar for San Francisco, "Bay Area Radar."

Link. This is the URL or Web Address of the image. Normally, it will contain the address of an image that you want to display. (Click here for information about figuring out the Web Address of an image you may find on the Internet.)

Time Intervals. This value controls how often the program downloads a new image. In other words, it is the time interval between samples. The default value is 1 minute, but you can set the value to anything between 1 second and 720 hours (30 days.) The range for a typical Weather Radar or Web Cam is between 30 seconds and 5 minutes. If you are using a Dialup Connection, you probably want to keep interval above two minutes because a dialup connection can take over a minute to make.

You can test the optimal time interval by using a small interval of a few seconds. This will cause **WIT** to try to load the image several times a minute. You can then find the actual time between new images by checking the Average Interval on the Animations Page. The best option is to use a value that is about 50% smaller than the average time. This will insure that the program will catch each new image, even if it arrives early.

Macro Button. Macros are used to handle Image URLs that change over time. The Macro Button brings up the Macro Editor and allows you to add macros to the URL string.

When you are satisfied with the Name, Link and Interval press OK.

1.3.2.1.4.1 Extracting Your Own Links

WIT comes with a large selection of image links. However, it is often useful to extract your own links. For example, you might come across an image that you want to monitor while browsing the Internet. The problem is that most of the time, the image will be embedded in a web page along with other images, text and information. As a result, the address in address bar of your browsers corresponds to the whole web page, not the specific image that you want to monitor. What you need is the URL for the specific image. There are three basic kinds of image links that you will find on the Internet. Here are detailed descriptions of each type and how to extract their links:

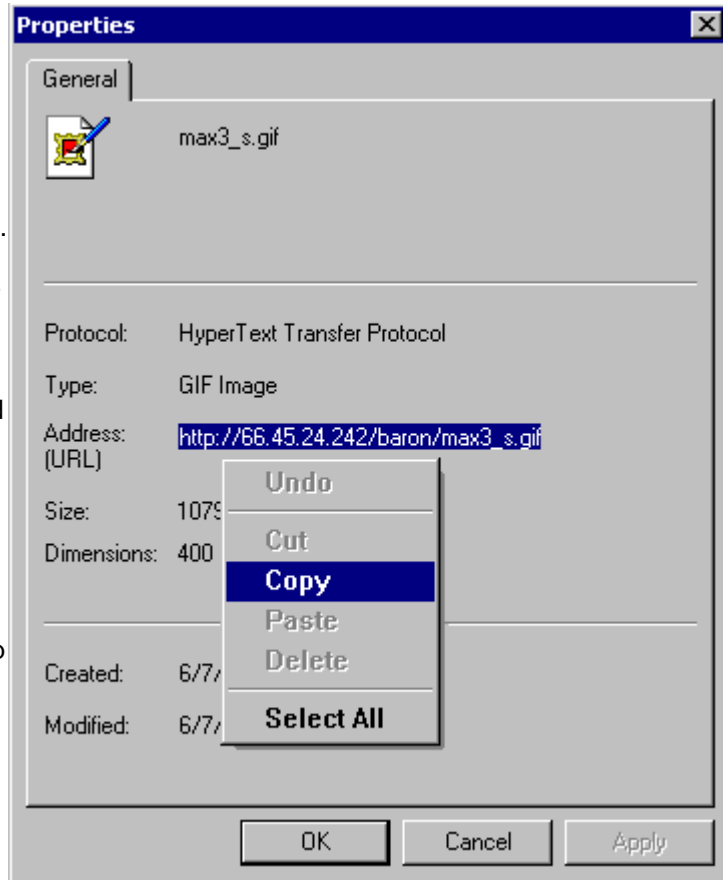
- Static Images Links
- Dynamic Image Links
- Programmed Image Links

Static Image Links. Static Image links have the same URL and filename all the time. The owner of the web page changes the image periodically but does not change the URL or the image filename. This is the most common kind of image link.

To find the URL for a static image, first right click on the image and then select the “Properties” option. This will bring up the “Properties” dialog pictured to the right. Highlight the URL and right click again. Finally, select the “Copy” option.

Pasting Into WIT. To move the link to *WIT*, highlight the Address Bar, right click and select the “Paste” option. You can then press the Manual Load button, to see if the correct image appears.

You can save the link by dragging to the Link Tree. If URL has date or time codes embedded in it, you may need to add Macros to keep image up to date.



This image shows the Properties Dialog for Internet Explorer. Other browsers have similar Dialogs that work the same way.

Dynamic Image Links. Dynamic Image links have URLs and filenames that change over time. For example, each day’s worth of images may have a different URL. Likewise, each filename might change according to the time the image was produced.

You can extract Dynamic Links in exactly the same way as Static Links by pasting them into the Address Bar of WIT. However, since they are constantly changing, the image will quickly go out of date. As a result, you will need to add Macros to the URL to keep it up to date.

How To Identify Dynamic Links. Dynamic Links are easy to identify because they are constantly changing. If you go back to the web page at a later time, you will see that the URL has changed. You can also identify dynamic links just by looking at the URL. Generally speaking, you will see numbers in the URL that correspond to the time and date. For example, here is a link for Mt. Etna:

<http://www.ct.ingv.it/webcams/Ecv/20050705/0000/Ecv0034.jpg>

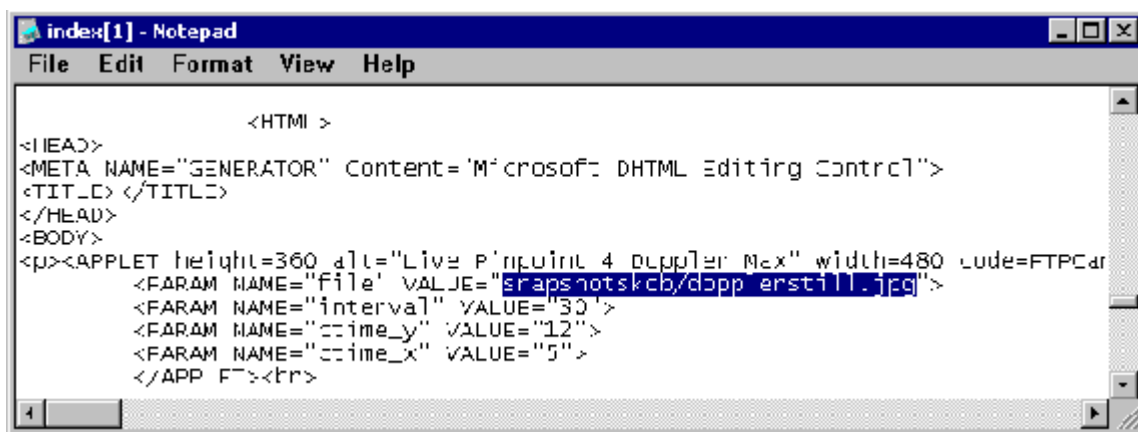
As you can see, part of the URL contains the number “20050705”. It is easy to see that this is the date 07/05/2005. When you see this type of information embedded in the URL, you should use the

Macro Editor to insert Macros into the URL.

Programmed Image Links. Some web pages have images that are loaded using programming code that is embedded in the web page. When you right click on the Image (as described under Static Links), no menu will be displayed. This indicates that the image is loaded by a code and not by the browser.

To find the link for this type of image, you must dig deeper. You do this by viewing the raw HTML for the web page. In Internet Explorer, you do this by selecting "View|Source" from the menu bar. (Other browsers have similar options.)

The browser will then display the raw HTML code in an Editor such as Notepad:



```

<HTML >
<HEAD>
<META NAME="GENERATOR" Content="Microsoft DHTML Editing Control">
<TITLE> </TITLE>
</HEAD>
<BODY>
<p><APPLET height=360 alt="Live P'ncuirl 4 Doppler Max" width=480 code=FTPCar
  <PARAM NAME="file" VALUE="snapshotskob/doppp_erstill.jpg">
  <PARAM NAME="interval" VALUE="30">
  <PARAM NAME="ctime_y" VALUE="12">
  <PARAM NAME="ctime_x" VALUE="5">
</APPLET></p>

```

The HTML code will contain a number of commands that instruct the browser to load images. You can usually find the by simply searching for image file extensions such as GIF, JPG, JPEG, BMP, and PNG. Since the web page may display many images, it may take some trial and error find the right image.

In the example above, we have located a link for weather radar images. You will notice that the URL is not complete in that it does not have the normal "http://" that you expect to see. Normally, this means that the rest of the URL will just be the base URL for the web page. In this case, we ended up the following URL:

<http://www.kobtv.com/snapshotskob/dopplerstill.jpg>

1.3.2.1.4.2 URLs

URL stands for Universal Resource Locator. URL's are used to specify the location of a document, image or other item on the Internet or even on your local computer. URL's are the familiar Internet address that we type into the address bar of a browser to connect to a web page. *WIT* uses URL's to retrieve images from the Internet.

A typical URL looks some thing like this:

<http://www.fountainware.com/world/map.gif>

A URL consists of the three parts:

1. Transport Protocol. The Transport Protocol is the first part of the URL and it describes the method that should be used to retrieve an item. In the example above, the Transport Protocol is “http”, which means that the image is to be retrieved using Hypertext Transport Protocol. Other protocols include “ftp” and “https”.

2. Domain Name. The Location is the second part of the URL and it specifies where the item can be found on the Internet or even on your own computer. In the example above, the location is “www.fountainware.com/world/”, which specifies that the item will be found on the Fountainware web sight in a subdirectory called “world.”

3. Filename. The final item in the URL is the filename. In the example above, the filename is “map.gif”. It is easy to see by the “gif” extension that this is a “GIF” image.

1.3.2.1.4.3 The Macro Editor

The Macro Editor is designed to simplify the process of entering and editing Macros. You can access the Editor by right clicking on any link in the Tree. The Editor consists of several parts. Here is a detailed description of each one:

URL. This item displays the current link that is being edited. Macros can be manually entered into this string, but it is usually easier to use the tools described below.

Expanded URL. This item shows what the URL will look like when the macros are converted to their actual value.

Find Next Macro Button.

Pressing this button causes the program to search through the URL and find the next Macro. If a Macro is found, it will be highlighted and the appropriate form to edit the macro will be displayed.

Expand Button. Pressing this button causes **WIT** to process the URL and display the resulting URL in the Expanded URL box.

Date/Time Macro - Used to insert date and time information into the URL

Format	Description
D	Date with no leading zeros.
DD	Date with leading zeros.
M	Month with no leading zeros.

Macros. This item selects the type of macro to be inserted. When you select a macro type, the bottom half of the window changes so you can enter parameters for that type of Macro. Here are detailed descriptions of each Macro Type:

Editing Time/Date Macros
Editing Counter Macros.

Manual Entry of Time/Date Macros
Manual Enter of Counter Macros.

Date/Time Macros. This type of macro allows you to insert selected portions of the date or time into a URL. To the right, you will see the Date/Time Macro options. Here is detailed description of each item:

Format String. The Format String consists of a series of letters that specify which parts of the date or time will be inserted into the URL. For example, the letter “D” would insert the day of the month in the URL. [Click here for list of all format commands.](#)

Format Options. This item displays a list of all possible letter combinations available for the Format String. There is also a description of what the letters do. Double clicking on an item causes the corresponding characters to be inserted in the Format String.

Offset From UTC. The Date and Time macro is based on Coordinated Universal Time (UTC). Depending on the location of the web page, you may need to adjust the time for a particular Time Zone. Every Time Zone in the World is defined as an offset from UTC. For example, the Mountain Time Zone in the United States is –7 hours from UTC.

To do control the Time Zone, **WIT** allows you to add an offset to the base time. Values entered in the UTC Offset Field are added to the UTC value. This will allow you to configure the date and time for any conceivable Time Zone.

Insert Macro In URL. Pressing this button inserts the currently composed macro into the URL at the cursor. If a block of text is highlighted, the highlighted text will be replaced by the new macro.

[Click here for more detailed information about Date Macros.](#)

Counter Macros. This type of macro allows you to insert numerical counts into a URL. To the right, you will see the Counter Macro options. Setting these values controls the value of that will be inserted into the URL.

Counter Equation. The actual count is derived from the following equation:

$$\text{Count} = ((\text{Seconds} + \text{Offset1}) * \text{Multiplier}) + \text{Offset2}$$

All of the values in the equation (except seconds) correspond to values you can set in the Editor. Here are detailed descriptions of the equation values:

Seconds. All counters are based on the number of seconds since 0:00 GMT Time. Since there are

3600 seconds per hour ($60 * 60$) and 60 seconds per minute, 1:30 GMT would be 5400 seconds. Seconds are used to give these counters sufficient resolutions for all situations.

Offset1. The first Offset is used to compensate for different time zones. For example, if the counter needed to be based on Mountain Standard Time in the US, you would use an offset of 25200. This is because Mountain Time is seven hours less than GMT and there are 3600 second per hour ($-7 * 60 * 60$).

Multiplier. The Multiplier is used to control how rapidly the counter increases. For example, if you have an image whose count changes every 30 seconds, you would use the value 0.033333 ($1/30$).

Divider. The Divider is the inverse ($1/X$) of the Multiplier and it parallels the Multipliers value. In other words, when the Multiplier changes the Divider also changes and vice versa. This makes it easier to enter certain Multiplier values. For example, if the count changes every 30 seconds, it is a lot easier to enter 30 in the Divider than to enter 0.033333 in the Multiplier.

Offset2. The counter will normally start at zero for 0:00:00 GMT. However, it would not be unusual for a web counter to start at one or some other value. The second Offset allows you to set the starting value of the counter when the time is 0:00:00.

Leading Zeros. This item controls whether the Counter will have leading zeros. If the option is enabled, counter will be padded with leading zeros.

Width. The Width value controls the number of leading zeros in the count. Leading zeros are added to the Count so that the total number of digits matches the Width. For example, if the Width value were four, a count of 123 would be represented as 0123.

Insert Macro In URL. Pressing this button inserts the currently composed macro into the URL at the cursor. If a block of text is highlighted, the highlighted text will be replaced by the new macro.

[Click here for more detailed information about Counter Macros.](#)

The format of the Date Macro is controlled by a series of letters placed in the Format section. Each letter stands for one aspect of the time or date. For example, the letters "HH" indicate that the two digit form of the current hour be placed should be inserted into the URL. Also, the program does not care if the letters are upper or lower case.

The Format Letters can be combined in any way you want to match the needs of the URL. For example, if you used the letters "YMMDD", the result would be the current date "050214". Likewise, the letters "DDMMYY" would yield "140205".

Any characters enclosed in single or double quotes are displayed as-is and do not affect formatting. For example, if you used the letters YY+"MM"+"DD" the result would 05+02+14.

The following table gives a detailed description of all the Format Letters:

Basic Commands

D - Inserts the day-of-the-month as a one or two digit number with no leading zero (1-31).

DD - Inserts the day-of-the-month as a two digit number with leading zeros added, as necessary, to expand it to two digits (01-31).

M - Inserts the month as a one or two-digit number with no leading zero (1-12). If the M immediately follows an H or HH, the M is interpreted to be minutes. (See "N" and "NN" below.)

MM - Inserts the month as a two digit number with leading zeros added, as necessary, to expand it to two digits (01-12). If an M immediately follows an H or HH, the M is interpreted to be minutes. (See "N" and "NN" below.)

YY - Inserts the year as a two-digit number (00-99).

YYYY - Inserts the year as a four-digit number (0000-9999).

H - Inserts the hour as a one or two digit number with no leading zero (0-23).

HH - Inserts the hour as a two digit number with leading zeros added, as necessary, to expand it to two digits (00-23).

N - Inserts the minute as a one or two digit number with no leading zero (0-59).

NN - Inserts the minute as a two digit number with leading zeros added, as necessary, to expand it to two digits (00-59).

S - Inserts the second as a one or two digit number with no leading zero (0-59).

SS - Inserts the second as a two digit number with leading zeros added, as necessary, to expand it to two digits (00-59).

Z - Inserts the millisecond as a one, two or three digit number with no leading zero (0-999).

ZZZ - Inserts the millisecond as a three digit number with leading zeros added, as necessary, to expand it to three digits (000-999).

Advanced Commands

DDD - Inserts the abbreviation for the day-of-the-week based on the current operating system settings. (Set in the Control Panel, under "Regional and Language Options.")

DDDD - Inserts the full name for the day-of-the-week (Sunday-Saturday) based on the current operating system settings. (Set in the Control Panel, under "Regional and Language Options.")

DDDDD - Inserts the date based on the current operating system settings for the "Short Date" format. (Set in the Control Panel, under "Regional and Language Options.")

DDDDDD - Inserts the date based on the current operating system settings for the "Long Date" format. (Set in the Control Panel, under "Regional and Language Options.")

MMM - Inserts the abbreviation for the month based on the current operating system settings. (Set in the Control Panel, under "Regional and Language Options.")

MMMM - Inserts the full name for the month based on the current operating system settings. (Set in the Control Panel, under "Regional and Language Options.")

C - Inserts both the date and time based on the the current operating system settings for the "Short Date" format. (Set in the Control Panel, under "Regional and Language Options.") The time will not be displayed if the time is precisely midnight.

T - Inserts the time based on the current operating system settings for the "Short Time" format. (Set in the Control Panel, under "Regional and Language Options.")

TT - Inserts the time based on the current operating system settings for the "Long Time" format. (Set in the Control Panel, under "Regional and Language Options.")

AM/PM - Causes the preceding "H" or "HH" to be interpreted as 12-hour time, with an AM or PM attached to indicate before and afternoon. The case of AM/PM command indicates the case to be inserted.

A/P - Causes the preceding "H" or "HH" to be interpreted as 12-hour time, with an A or P attached to indicate before and afternoon. The case of A/M command indicates the case to be inserted.

AMPM - Causes the preceding "H" or "HH" to be interpreted as 12-hour time. Times before noon and after noon are indicated by attaching text derived from operating system settings. (Set in the Control Panel, under "Regional and Language Options.")

/ - This character indicates that operating system's "Date Separator" should be inserted. (Set in the Control Panel, under "Regional and Language Options.")

: - This character indicates that operating system's "Time Separator" should be inserted. (Set in the Control Panel, under "Regional and Language Options.")

The following chart shows common time zones and the corresponding offsets from GMT or UTC. The offsets can be entered into the Date Macro to adjust the URL for a particular date.

Name	Abbreviation	Location	Offset	DST*	Offset
Hawaii-Aleutian Standard Time	HAST	North America	-10.0		-9.0
Alaska Standard Time	AKST	North America	-9.0		-8.0
Pacific Standard Time	PST	North America	-8.0		-7.0
Mountain Standard Time	MST	North America	-7.0		-6.0
Central Standard Time	CST	North America	-6.0		-5.0
Eastern Standard Time	EST	North America	-5.0		-4.0
Atlantic Standard Time	AST	North America	-4.0		-3.0
Newfoundland Standard Time	NST	North America	-3.5		-2.5
Greenwich Mean Time	GMT	Europe	0.0		1.0
Coordinated Universal Time	UTC	Europe	0.0		1.0
Western European Time	WET	Europe	0.0		1.0
Central European Time	CET	Europe	1.0		2.0
Mitteleuropäische Zeit	MEZ	Europe	1.0		2.0
Eastern European Time	EET	Europe	2.0		3.0
Christmas Island Time	CXT	Australia	7.0		8.0
Australian Western Standard Time	AWST	Australia	8.0		9.0
Australian Central Standard Time	ACST	Australia	9.5		10.5
Australian Eastern Standard Time	AEST	Australia	10.0		11.0
Norfolk (Island) Time	NFT	Australia	11.5		12.5

*DST = Daylight Savings Time or Summer

1.3.2.1.5 Dragging Address Bar Links

Dragging Address Bar Links. You can also create a new link by dragging the URL from the Address Bar to the Link Tree.



You start by dragging the icon to the left of the URL. As you drag across the Link Tree, collapsed folders will be expanded so you can get to any part of the Tree. When you reach the target location, you simply drop it and a link labeled "New" will appear. You can then edit the link to give it an appropriate name.

1.3.2.1.6 Link Macros

Link Macros. In some instances, the URL for an image will change periodically and quickly go out of date. For this reason, *WIT* has a special Macro Feature that can track the changing URL over time.

Changing URLs. The URL can change in several different ways. For example, some web sites change the filename every time a new image is displayed. Also, some web pages store the images in different directory every day. Typically the filenames and directory names will have a numerical representation of the time or date embedded in them. For example, here is the URL for Mt. Etna on June the 10th at 20:30:33 GMT:

<http://www.ct.ingv.it/webcams/Ecv/20050610/2000/Ecv2461.jpg>

The URL contains several date/time codes. Here is a description and analysis of the codes:

1. **20050610.** It was easy to see that this is the numerical value of the Year, Month and Date.
2. **2000.** It is easy to see that this was the hour in UTC time.
3. **2461.** This item is less obvious, but with a little testing, it was discovered that the web page generates a new image every 30 seconds and this number incremented with every new image. As a result, the number could be calculated by taking the number seconds since 0:00 GMT and dividing by 30:

$$\begin{aligned} \text{Seconds} &= \text{Hours} * 3600 + \text{Minutes} * 60 + \text{Seconds} \\ 73833 &= (20 * 3600) + (30 * 60) + 33 \\ \text{Count} &= \text{Seconds} / 30 \\ 2461 &= 73833 / 30 \end{aligned}$$

What Is A Macro? Macros are small pieces of code that are placed in the URL. Every time the URL is used, *WIT* replaces the macro with numbers or letters specified by the macro. Typically this will be time or date information. For example, a typical macro looks like this:

<date>0,YYYYMMDD</date>

This particular Macro inserts the Year, Month and Day into the URL. Other macro can insert other information.

XML Format. As you can see, macros use an XML-style format consisting of commands enclosed in "Angle Brackets" (<>). There is always a "Beginning Command" and "Ending Command" with arguments in between. The Beginning Command is identical to the Ending Command, except that

the second command is preceded by a “Forward Slash.”

Entering Macros. Macros can be typed directly into the Address Bar or into one of the Links using the Edit command. You can also use the Macro Editor to enter macros.

Specific Macros. Currently there are two Macros available in *WIT*. Here are detailed descriptions of each:

Date/Time Macro
Counter Macro

1.3.2.1.6.1 Date/Time Macro

Normally, you would enter Date Macros using the Macro Editor. However, in some instance it may be useful to manually enter the Macro into the Address Bar. Here is a detailed description of the Date Macro.

Inserting Dates/Times In URL’s. The links to some images will have dates embedded in them. For example, the URL for a Mt. Etna web cam looks something like this:

“<http://www.ct.ingv.it/webcams/Emv/20050214/2300/Emv2783.jpg>”

It is obvious that the number “20050214” is really the date 02/14/2005. Likewise, the number “2300” is probably current UTC or GMT time. As a result, it is likely that these dates and times will change periodically as time passes. For this reason, the program allows you to insert date and time codes into the URL. This will cause the URL to change according to the date and time.

To insert the current date or time in a URL, you simply insert a code that looks like this:

<date>0,YYYYMMDD</date>

The code is divided into several sections: <date>offset,format</date>. Here is a detailed description of each item:

1. <date> </date>. These two items indicate the beginning and ending of the date code. The word “date” must be in lower case.

2. Offset. The date and time code is based on Coordinated Universal Time (UTC) or Greenwich Mean Time (GMT). This is the time at 0 degrees Longitude, which runs through Greenwich, England. Since the time and date used in a URL string may correspond to a different part of the world, the Offset allows you to convert the date/time to a different time zone. The Offset specifies the numbers of hours UTC and is added to current UTC time. You can specify minutes and seconds by entering decimal fractions. For example, an offset of 1.5 would specify 1 hour 30 minutes.

As you move west of Greenwich, England, the time decreases. For example, the Mountain Time Zone in the United States is –7 hours from UTC. If you were working with a URL that was using Mountain Time, you would enter –7 for the Offset. [Click here to view a chart of common world time zones.](#)

3. Format. The Format information specifies which time and date information is inserted into the URL by the Date Code. For example, specifying the letters YY would insert the last two digits of the year. [Click here for a detailed description of all the format options.](#)

World time is based on two main standards: GMT and UTC. For all intents and purposes, you can think of UTC and GMT as the same thing.

GMT. GMT stands for Greenwich Mean Time. This is the time for the town Greenwich, England, which happens to lie right on the zero-Longitude line. When the sun is directly overhead in Greenwich, it is 1200 hours GMT. Likewise, midnight in Greenwich, corresponds to 0:00:00 GMT.

UTC. UTC stands for Coordinated Universal Time and it is based on a highly accurate atomic clock. Since the earth's rotation is gradually slowing down, leap seconds are periodically added to UTC to keep in sync with earth time. Without these corrections, UTC would be useless for navigation.

Time Zones. The earth rotates 15 degrees every hour ($360 / 24 = 15$). For this reason, the time changes by one hour for every 15 degrees of longitude. To accommodate this variation in time, the earth is divided into Time Zones that roughly correspond to 15-degree bands of longitude. However, time zones are often adjusted to keep cities and regions in the same time zone. For example, the dividing line between Mountain Time and Pacific Time should run through the center of the state of Utah (USA). Nevertheless, the whole state of Utah is in the Mountain Time zone to keep whole state on one time. (Click here for a list of worldwide time zones.)

1.3.2.1.6.2 The Counter Macro

Normally, you would enter Counter Macros using the Macro Editor. However, in some instance it may be useful to manually enter the Macro into the Address Bar. Here is a detailed description of the Counter Macro.

Using Counters. The links to some images will have "counts" embedded in them. For example, the URL for a Mt. Etna web cam looks something like this:

"<http://www.ct.ingv.it/webcams/Emv/20050214/2300/Emv2783.jpg>"

With some analysis, it was discovered that the number in the image name "Emv2783.jpg" changed every 30 seconds and was the number of images collected since 0:00 GMT. As a result, the **WIT** allows you to insert Count Codes into URL's. These Count Codes are based on GMT Time and change according to the time of day.

To insert a count into a URL, you simply insert a code that looks like this:

<counter>0.033333,0,0,1,4</counter>

This particular code creates a counter whose value is incremented every 30 seconds since 0:00 GMT. The code is divided into several sections:

<counter>Multiplier,Offset1,Offset2,LeadingZeros,Width</counter>

Here is a detailed description of each item:

<counter>Multiplier,Offset,LeadingZeros,Width</counter>

1. <counter> </counter>. These two items indicate the beginning and ending of the counter code. The word "counter" must be in lower case.

2. Multiplier and Offset1 and Offset2. The actual count is derived from the following equation:

Count = ((Seconds + Offset1) * Multiplier) + Offset2

a. Seconds. All counters are based on the number of seconds since 0:00 GMT Time. Since there are 3600 seconds per hour ($60 * 60$), 1:00 GMT would be 3600 seconds. Seconds are used to give these counters sufficient resolutions for all situations.

b. Offset1. The first Offset is used to compensate for different time zones. For example, if the counter needed to be based on Mountain Standard Time in the US, you would use an offset of -25200. This is because Mountain Time is seven hours less than GMT and there are 3600 second per hour ($-7 * 60 * 60$).

c. Multiplier. The Multiplier is used to control how often the counter increments. For example, if you have an image whose count changes every 30 seconds, you would use the value 0.03333 ($1/30$).

d. Offset2. The “seconds” value for counter normally starts at zero for 0:00:00 GMT. However, it would not be unusual for a web counter to start at one or some other value. The Offset2 allows you to set the starting value of the counter when the time is 0:00:00.

e. Leading Zeros. This value controls whether the counter will have leading zeros or not. A value of zero indicates that the number will be output without leading zeros. A value of one indicates that the number will have leading zeros.

f. Width. The Width value controls the number of leading zeros in the count. Leading zeros are added to the count so that the number digits in the count matches the Width. For example, if the Width value were four, a count of 123 would be represented as 0123.

Count Parameters. All count parameters can be floating-point values. (A floating-point number can be whole numbers or fractions such as -5 , 100, or 0.001 can be entered.)

Counter Values. The resulting counter values that are inserted into the URL are always integers.

1.3.2.1.7 Editing Links and Folders

Editing A Link/Folder. To edit a Folder or Link, first left click on the item to highlight it. Next, right click on the item. This will bring up a Menu. Select the “Edit” option. This will display Add/Edit Link window, which will allow you to change the Name and the URL if the item is a Link. (The same option is available in the Main Menu under the “Links” option.)

Deleting A Link/Folder. To delete a Folder or Link, first left click on the item to highlight it. Next, right click on the item. This will bring up a Menu. Finally, select the “Delete” option. (The same option is available in the Main Menu under the “Links” option.)

Moving A Link/Folder. Links and Folder can be moved by dragging them to a new location within the Tree.

1.3.2.1.8 Loading and Saving Links

Saving the Link Tree. You can save the current contents of the Link Tree by selecting the “File|Save Links” option from the menu bar. This saves the Link Tree to the Default file so the next time the program is run, the saved links will appear in the Link Tree.

Save Link As. This option allows you to save the links to any file. This is useful for building special libraries of links. To save the file to any file, select the “File|Save Links As” option from the menu bar. Simply select a folder and enter the name you want to use and press OK.

Loading Links. *WIT* automatically loads the Default Link File when the program first runs. This option allows you load any Link File. This is useful for loading special Link Libraries. To load a file,

select “File|Load Links” from the menu bar.

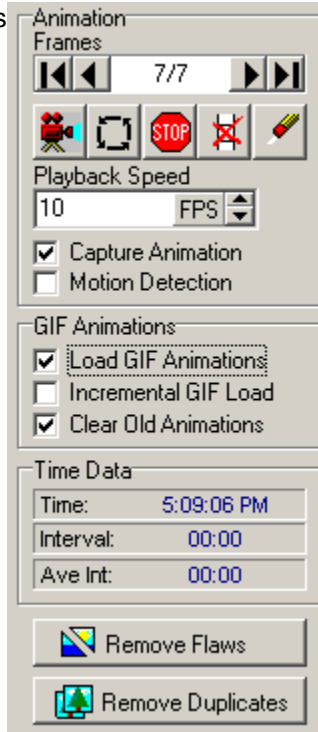
Loading Branches. You can also insert to the contents of a file at specific point in the Link Tree. For example, you might want to insert a file containing the Weather Links in a specific folder in the Tree. To insert a file in the Tree, first select the folder where you want to place the new links. Next select the “Files|Insert Links” option from the menu bar. The links in the file you have selected will be inserted into the folder you have chosen.

1.3.2.2 AnimationsPage

Animations Page. The Animations Page allows you to setup, control and edit animations of images that you have received from the Internet. By default, *WIT* automatically saves every new image that it receives. As a result, these images can be played back as animations, creating a time-lapse movie of the images. This is useful for things like tracking and predicting the weather.

The Animations Page is divided into three sections. Here are detailed descriptions of each section:

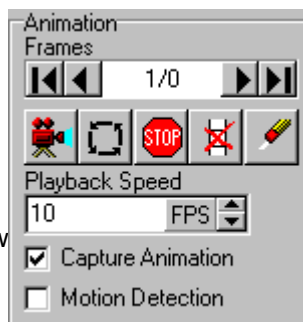
- Animation Section
- GIF Animations Section
- Time Data Section
- Removing Flaws
- Removing Duplicates



1.3.2.2.1 Animation Section

The Animation Section has several controls that are used to manipulate the animations. Here are detailed descriptions of each control:

Frames Control. This control allows you to select individual animation frames to view. The two numbers in the center show the current animation frame that is being displayed and the total number of frames available. The “outer arrows” move to the beginning and end of the move.



The “inner arrows” step one frame at a time, forward or backward through the animation. If you hold these arrows down, they “auto repeat” at 10 times per second, which allows you to manually animate both forward and backward, with precise control.

Play Animation Button. Pushing this button causes the program to display all the saved images in

rapid sequence, thereby animating the display. The animation speed is controlled by the Playback Speed control described below.

Loop Animation Button. When this button is in the “Down” position, WIT continuously plays the animation in a loop.

Stop Button. This button stops the animation display if it is running. This useful for interrupting a long play back, especial when the images are being displayed at low speed.

Delete Frame Button. This button deletes the frame that is currently selected frame in the Frame Control. This is useful for removing corrupted frames that are sometimes downloaded from the Internet.

Erase Animation. This button deletes all captured animation frames. Note: once all the frames have been erased, you cannot restore them.

Playback Speed. This option controls the playback speed of the animation in frames per second. The faster the playback, the smoother the animation. On the other hand, with a fast playback speed, you may miss details.

Capture Animations. If this box is checked, WIT will save every newly loaded frame for later viewing and animation. If the box is unchecked, no frames are saved.

Motion Detection. When this option is enabled, WIT displays the motion between the last frame and the current frame. The unchanged parts of the frame are displayed in black. Parts of the frame that have changed are displayed in color. This option is useful security applications where you monitoring an unchanging scene looking for anything different.

1.3.2.2.2 GiF Animation Section

The GIF Animation Section allows you to control the capture animated GIF files from the web. There are two options:

Load GIF Animations. When this checkbox is enabled, WIT will load all images in the GIF file in to the current animation sequence. If the checkbox is disabled, the program treats the file like an ordinary GIF and only captures the first image in the animation.



Incremental GIF Load. In many instances, when a new GIF animation is posted on a web site, the first image is deleted and a new image is added to the end. In this way, the animation moves forward in time while maintaining the small file size. If WIT were to load every frame of each new animation, there would be lots of duplicate frames and the animation would skip around in time. With the “Incremental GIF Load” option enabled, WIT only loads the newest, non-duplicate images.

Clear Old Animations. When this option is enabled the program erases the old animation whenever it finds a new animation. This may be useful when each new animation is contains different frames. It is also simpler than incremental mode in that the software doesn't have to make a decision about which frames are new frames. This option is not available if Incremental Mode is not enabled.

1.3.2.2.3 Time Data Section

Time Display. Each image that is saved is marked with time when the image was received. This allows you to precisely determine when an image was captured. As you step through previously saved frames with the Frame Control, the time will change reflecting the time of a particular frame.

Time Data	
Time:	1:00:12 PM
Interval:	06:08
Ave Int:	05:51

Interval. This item displays the time interval between the currently displayed frame and the previous frame. This is useful for figuring out how often new images are available on the Internet. It can be used to set the optimal interval between images.

Average Interval. This item displays the average interval for all saved images. This is useful for figuring out how often new images are available on the Internet. It can be used to set the optimal interval between images.

Saving and Loading Animations. Click here for information about saving and loading animations.

1.3.2.2.4 Dealing With Corrupted Images

While you are capturing images, it is not uncommon to load corrupted images. Corrupted images usually caused by minor problems with the web page's computer.

There is no way to prevent corrupted images from loading, however, WIT has a special option that makes it easy to remove corrupted images.



Removing Flaws. To remove corrupted images, simply press the "Remove Flaws" button on the Animations Page. The program will then analyze all the animation frames, looking for flaws. If it finds any corrupt frames, it will give you the option of removing them.

Flaw Analysis. The program uses two techniques for finding flaws:

Black Frames. In the first technique, the program looks for frames where the bottom half is all black. This is a common flaw in Web Cam images. The option can be enabled and disabled in the Settings window.

Anomalous Frames. The second option works by finding frames that are significantly different from adjacent frames. For example, if one frame is significantly different from the ones before and after, it is probably flawed. Since the program looks at for frames that are very different from adjacent frames, it may miss situations where two frames in a row are corrupted. Fortunately, it is relatively rare to have two bad frames in a row. In the worst case scenario, you can always delete flawed frame using the Frames Control and the Delete button.

Flaw Threshold Settings. The flaw analysis is based on how different one image is from another. You can control how sensitive the program is to flaws by setting the Flaw Threshold.

1.3.2.2.5 Removing Duplicates

WIT always checks to see if the most recently loaded image is a duplicate and it only saves newest images for animations. However, in some cases, the web server will redisplay an old image even after newer images have been displayed. Since WIT only check that last image to see if there is a duplicate, it may save images that are duplicates of older images. This can cause the animation to jitter back and forth between older and newer images. This is usually cause be software problems in their web server.



Removing Flaws. To remove duplicate images, simply press the “Remove Duplicates” button on the Animations Page.

The program will then analyze all the animation frames, looking for duplicates. If it finds any duplicate frames, it will give you the option of removing them.

1.3.2.2.6 Loading Animated GIFs

Some web sites have images that are already animated using “Animated GIF” files. Animated GIF files contain multiple images that will be played automatically by most browsers. This allows web pages to show animated displays of things like changing weather conditions.

Loading GIF Animations. *WIT* can extract these images and include them in its animation sequences. To minimize the load time, the typical GIF animation on a web page only has about a half dozen images. As a result, these web pages only display short animation sequences. On the other hand, *WIT* can capture and combine multiple GIF animations so the sequences of hundreds of images can be animated.

Note: you can also save sequences of images that *WIT* has collected as animated GIF files.

1.3.2.2.7 Saving and Loading Animations

Saving Animations. You can save your animations several different ways.

Frame Files. Fame Files contain exact copies of all the animation frames that have been saved in *WIT*. For this reason, Frame Files are the best way to save animations if you want to maintain the original resolution of the images. Also, Frame Files are the only type of file that can be reloaded into *WIT* for editing and played back. On the other hand, because Frame Files are uncompressed, they can be very large, often taking many megabytes of disk space for a few hours of a saved images. To save an animation as a Frame File, select the “File|Save Frames” option from the menu bar. Likewise, to load a Frame File, select the “File|Load Frames” option from the menu bar.

AVI Files. You can also save your animations to standard Windows AVI files. AVI files can be compressed so they use much less disk space than Frame Files. In fact, *WIT* allows you to control the amount of compression so you can choose between quality and size.

AVI files can be played by several media players such as Windows Media Player. In addition, they can be displayed on the Internet, converted to other formats and even edited with programs like the Windows Movie Editor that comes with Windows XP. To save an Animation as an AVI file, select the “File|Save AVI File” option from the menu bar.

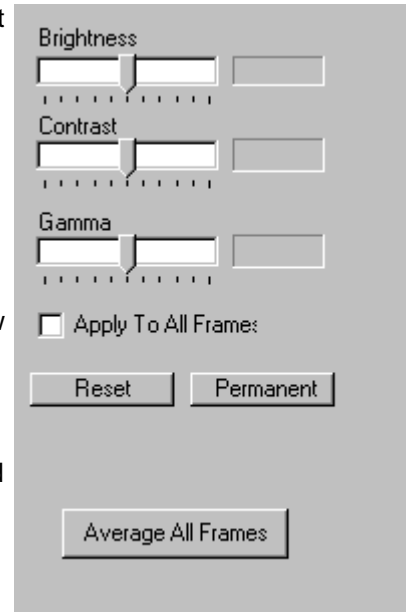
GIF Files. Animations can also be saved as GIF files. Animated GIF files are commonly used to display animation on web pages. To save the animation as an Animated GIF, select the “File|Save Animated GIF” option from the menu bar.

1.3.2.3 Image Tools Page

Image Tools Page. The Image Tools page contains tools that allow you to improve the quality of the images you receive. For example, images from a web cam may too dark to make out details. Here is a detailed description of each control:

Brightness. This control sets the brightness of the image. This is similar to the “Brightness” control on a television set. Technically, the brightness control shifts the intensity of each pixel in the image up and down. A brightness of 0.5 produces no change in the image. A brightness value above 0.5 increases the intensity of each pixel. A brightness value below 0.5 decreases the intensity of each pixel.

Contrast. This control sets the contrast of the image. This is similar to the “Contrast” control on a television set. Technically, the contrast control makes dark pixels darker and light pixels lighter, increasing the difference or contrast between light and dark parts of a scene.



A contrast of 0.5 produces no change in the image. A contrast value above 0.5 increases the contrast. A contrast value below 0.5 decreases the contrast.

Gamma. Gamma adjusts the brightness of the dark and light parts of the image, while leaving the mid-range pixels alone. This is useful for bringing out the details of an image that may be hidden in overly dark or bright portions of a scene. A gamma value of 0.5 produces no change in the image. A gamma value of above 0.5 increases the brightness in the dark and light areas. A gamma value below 0.5 decreases the brightness in the dark and light areas.

Apply To All Frames. When this option is enabled, the Brightness, Contrast and Gamma values are applied to all frames that are displayed. With option off, the Brightness, Contrast and Gamma values are returned to their original values. (Note: enabling this option does not permanently change the images. It also does not effect the way the images are saved to file.)

Reset Button. Pressing the Reset Button resets the Brightness, Contrast and Gamma to a neutral value of 0.5 so that there is no change to the original images.

Permanent Button. Pressing the Permanent Button sets the Brightness, Contrast and Gamma of all saved images to the current value. This make the changes permanent and the change cannot be undone by reset the values.

Average All Frames. Pressing this button causes the program to average all captured frames and display the resulting image. This is useful in several situations. For example, some web cams have circuitry that automatically increases the gain when there are low light levels. In night scenes, the gain will be so high, that there will be lots of noise in the picture, usually in the form of light and dark splotches in the image. Averaging the frames will remove the noise and allow you to see very dim aspects of the scene.

The option can also be used to create a composite image of all the changes in the scene over a period of time. In the resulting image, the unchanging parts of the scene will be sharp and clear and everything that is moving be will be smeared. This makes it easy to see things that have changed and the direction of the movement. For example, using this option you can see the track of all storms over the course of an afternoon.

1.3.2.4 Resizing Images

The Size Page has controls that allow you to resize the images you download from the Internet. This is useful for magnifying images to pick out more detail. It is also useful for reducing the size of animations and movie files. The Resizing Tools use special methods that reduce the distortion that can sometime occur when resizing images. Here is a detailed of the resizing tools available in WIT:

Resize Button. Pressing this button will resize the currently displayed image to the new size. This does not permanently change the image size. The size and appearance of the image is controlled by the options described below.

Resize All. Pressing this button will resize all the frames in the current animation. This will permanently change the images and you may not be able to restore original size without causing some loss or resolution or distortion.

New Size. This option displays the width and height of the image will be after it is resized. You can increase the size by pressing the Up Arrow to the right. You can decrease the size by pressing the Down Arrow to right.

Units. This option control the units that are used to change the size when you press the Up or Down button. The Percent Option changes the size by a percentage. For example, if you increase a 100x100 image by 50%, the new size will be 150x150.

ToolPagesThis option is generally used when you want to make large changes. The Pixel Option changes the size by a certain number of pixels. It is generally used when you want to make small, precise changes. It is also use to make the new image a precise size.

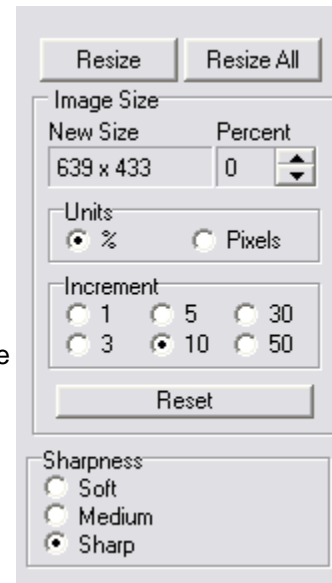
Increment. This option controls how much change occurs each time you press the Up or Down arrow. The units will be either percentage or pixels, depending on which units are used.

Reset. Pressing this button resets the new image size to the original size of the image.

Sharpness. This option controls the appearance of the image. If you set the option to “Soft”, the resulting image will be soft and smooth, but may be missing some fine detail. If you set the option to “Sharp” there will be more fine detail, but there maybe some artifacts around the edges of objects.

When an image is expanded, the program creates an image that has more pixels than the original image. For this reason, the program has to guess at how these missing pixels will look. Likewise, when an image is contracted, the program has to throwaway extra pixels. These two problems produce artifacts in the image such as jagged borders around the edges of objects or missing lines.

To solve this problem, WIT uses special algorithms to smooth image. The sharpness option controls how aggressive the program is in dealing with the missing information.



Part



2 Settings

Settings. *WIT* allows you to set a number of factors that control the way the program operates. To access these settings, select the “Options|Settings” item from the menu bar. Here is a detailed description of each option:

Image Wait Timeout. This parameter controls how long the program will wait before aborting a download. For example, if the timeout is set to 60 seconds, the program will abort if the image has not been received for 60 seconds. You probably want to set longer timeout if you are using a dialup connection to the Internet.

Flaw Threshold. This parameter controls the sensitivity of the Flaw Removal Routines. Flaws are located and removed based the difference between adjacent frames. The difference is measured in percentage. The higher the threshold, the greater the percentage difference required to indicate that a frame is flawed. The default value is 10%. Higher values would used for scenes that change rapidly.

AVI Compression. This parameter controls the amount of compression that is applied to each file AVI file. The more compression, the smaller the file but the poorer the image quality. Likewise, the lower the compression, the higher the image quality.

Default File/Path. This parameter controls what list of Image Links will be loaded when the program first runs. Normally, the file will be “default.itrx” and will be found in the folder where *WIT* was installed (normally c:\Program Files\Fountain\WIT”.) Since you can create your own custom Link Files, you can use this option to have that file load when the program first runs.

Saving Settings. The current *WIT* setting can be saved so that they will become the default the next time you run the program. To save the current settings as the default, select the “Option|Save Setting|” item from the menu bar.

Part



3 User Agreement

WIT is a Freeware product. You can use it free of charge for your own personal use. You may share it with others as long as you only share the original installation package. You may not share individual pieces of the program. You may not repackage the program and you may not sell the program. The software is not public domain and Fountain Computer reserves copyright and all other rights. Fountain Computer may add features in the future that will require registration or the payment of a fee to use.

Part



4 Contact Information

More Contact information can be found here:

<http://www.fountainware.com/wit>

Part



5 Terminology and Conventions

If you are new to the computer or Windows, some of the nomenclature can be confusing. Here is a description of some of the terminology that is used throughout this documentation:

- 1. Click, Click-On or Clicking-On.** In many situations, you will be expected to move the mouse cursor to a specific location on the screen and then press the left or right mouse button. This is often referred to as “click-on.” So if you read that you should “click the left mouse button on” something, it means that you should move the mouse to that location and press the mouse button. If a particular mouse button is not specified, you can generally assume that it means the left mouse button.
- 2. Dragging and Dropping.** Dragging is usually accomplished by moving the mouse cursor to a specific location on the screen, pressing the left mouse button down, and while the button remains pressed, moving the mouse cursor to a new location. This process is usually used to move something from one place to another and it gives the sensation of actually “dragging” the object around. Once the object reaches its destination, you “drop” the object by releasing the mouse button.
- 3. Menu Terminology.** Most Windows programs have something called a “Menu Bar” at the top of the screen. The Menu Bar has a series of words like “File, Edit, View, etc.,” along its length. If you click-on a menu item, a menu box will drop down. Each menu box can contain additional menus so that you may have a series of menus, one inside the other. In this documentation, a series of menu items like this are specified by the words separated by a vertical bar. For example, “View|Toolbars|Forms” tells you to select “View” from the main menu bar and then “Toolbars” and then “Forms” from its submenu.
- 4. Dialog Boxes.** A Dialog Box is generally a small window that is used to get information from the user of the program. It usually has Boxes, Buttons and Lists that allow the user to set various options. It often has buttons such as OK, Apply, Close and Cancel that indicate what type of action will take place when the Dialog Box is closed.
- 5. Cut, Copy and Paste.** Many text boxes and lists in Windows allow text to be moved to and from the Windows Clipboard. In some instances, you can Right Click on box or list and a menu will appear that gives you Cut, Copy and Paste options. In other instances, you can Cut by hitting Control-X, Copy by hitting Control-C and Paste by hitting Control-V.

Index

- A -

- Abort Button 8
- Adding A Folder 10
- Adding Links 11
- Address Bar 8
- Animated GIFs
 - Loading 26
- Animation Section 23
- Animations
 - GIF Section 24
 - Loading 26
 - Saving 26
- Animations Page 23
- Auto-Load Button 8

- C -

- Contact Information 34
- Conventions 36
- Corrupted Data 25
- Corrupted Images 25
- Counter Macro 21

- D -

- Date Code Format 16
- Date Macro 20
- Displaying Links 10
- Dragging Address Bar Links 19
- Duplicates
 - Removing 26
- Dynamic Image Links 12

- E -

- Editing Counter Macros 15
- Editing Links and Folders 22
- Editor
 - Macro 14
- Extracting Links 11

- F -

- Folders
 - Adding 10
 - Editing 22
- Folders and Organization 10
- Format
 - Date Code 16
- Format Commands 16

- G -

- General Status Bar 9
- Getting Started 6
- GIF Animation Section 24
- GIF Animations 24
- GMT 21

- I -

- Image Links Page 9
- Image Link
 - Static 12
- Image Loading Process 7
- Image Status Bar 8
- Image Tools Page 27
- Image Window 7
- Images
 - Corrupted 25
 - Resizing 28
- Index 6

- L -

- Link Macros 19
- Links
 - Displaying 10
 - Dragging From Address Bar 19
 - Dynamic Image 12
 - Editing 22
 - Programmed Image 13
- Links Adding 11
- Loading Animated GIFs 26
- Loading Animations 26
- Loading Links 22
- Loading Process 7

- M -

Macro
 Counter 21
Macro Date/Time 20
Macro Editor 14
Macros
 Editing Counters 15
 Editing Time and Date 15
 Link 19
Manual Load Button 8

- O -

Overview 7

- P -

Page
 Image Tools 27
Pages
 Animation 23
 Image Links 9
Programmed Image Links 13

- R -

Registration 32
Removing Duplicates 26
Resizing Image 28

- S -

Saving Animations 26
Saving Links 22
Section
 Time 25
Settings 30
Starting 6
Static image Links 12
Status Bar
 General 9

- T -

Terminology 36
Time Data Section 25
Time Date Macros 15
Time Macro 20
Time Zones 18
Tool Bar 8
Tool Pages 9

- U -

URL's 13
UTC 21