SWMEDALS_NV Version 2 Installation Guide

Updated: Aug 9, 2011.

Introduction

This installation guide contains instructions for installing, configuring, and running SWMEDALS_NV. SWMEDALS_NV is a software for transmitting weather data from DAVIS Vantage™ automatic weather station (AWS) to the data center at Community Weather Information Network (Co-WIN). Data from the DAVIS Vantage™ AWS is first collected by WeatherLink®, the software that came with the DAVIS Vantage™ AWS as a part of its product package, after which WeatherLink® creates a data text file that is read by SWMEDALS_NV and then transmit to Co-WIN data center. The data flow from DAVIS Vantage™ AWS to Co-WIN data center using the SWMEDALS_NV is illustrated in Figure 1.

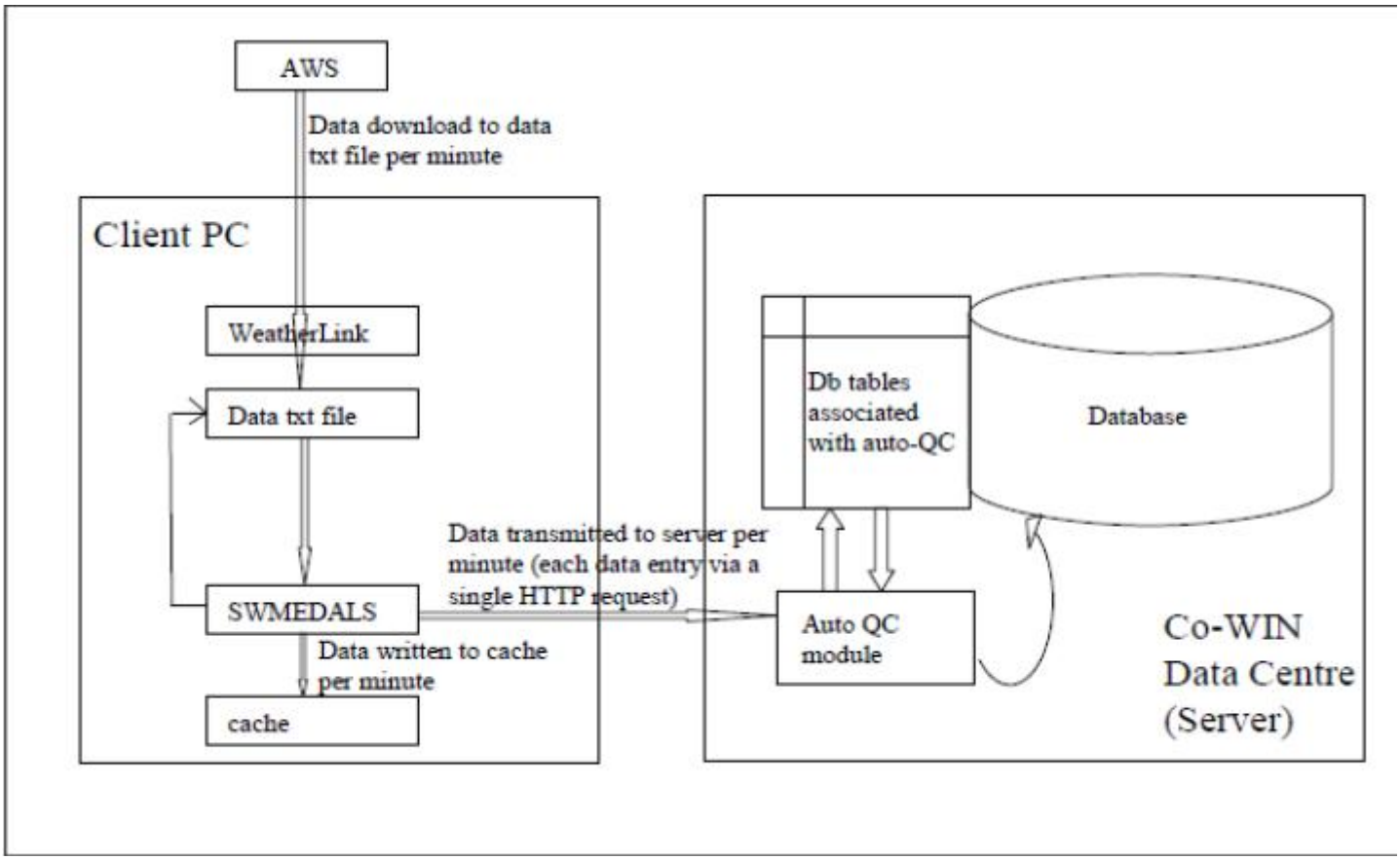


Figure 1: Co-WIN Data Transmission Overview

Prerequisites

You should first install and configure the DAVIS Vantage™ AWS and WeatherLink® before installing SWMEDALS_NV. Instructions for installation and configuration of the DAVIS AWS and WeatherLink® should be included with the product package you receive when you purchase the DAVIS Vantage™ AWS. Do not proceed with SWMEDALS_NV unless you have already installed and configured the DAVIS Vantage™ AWS and WeatherLink® already.

Installation and Configuration of SWMEDALS_NV

Assuming you have successfully installed and configured the DAVIS Vantage™ AWS and WeatherLink®, below is the instructions for installing, configuring, and running SWMEDALS_NV. In the example below, it

is assumed that the WeatherLink® program has been installed in the directory C:\Program Files\WeatherLink, and the data text file generated by WeatherLink in the directory C:\data\6999, but these locations are configurable by the user in WeatherLink®.

Step 1: Download SWMEDALS_NV Software

If you have purchased the SWMEDALS_NV software, you may download it from

ftp://weather.ap.polyu.edu.hk/

You'll need username and password to enter the ftp site, which you'll obtain after purchasing SWMEDALS_NV. Once you have entered the FTP site, download the latest version. The filename is in the format swmedals_x_x_x_x.zip

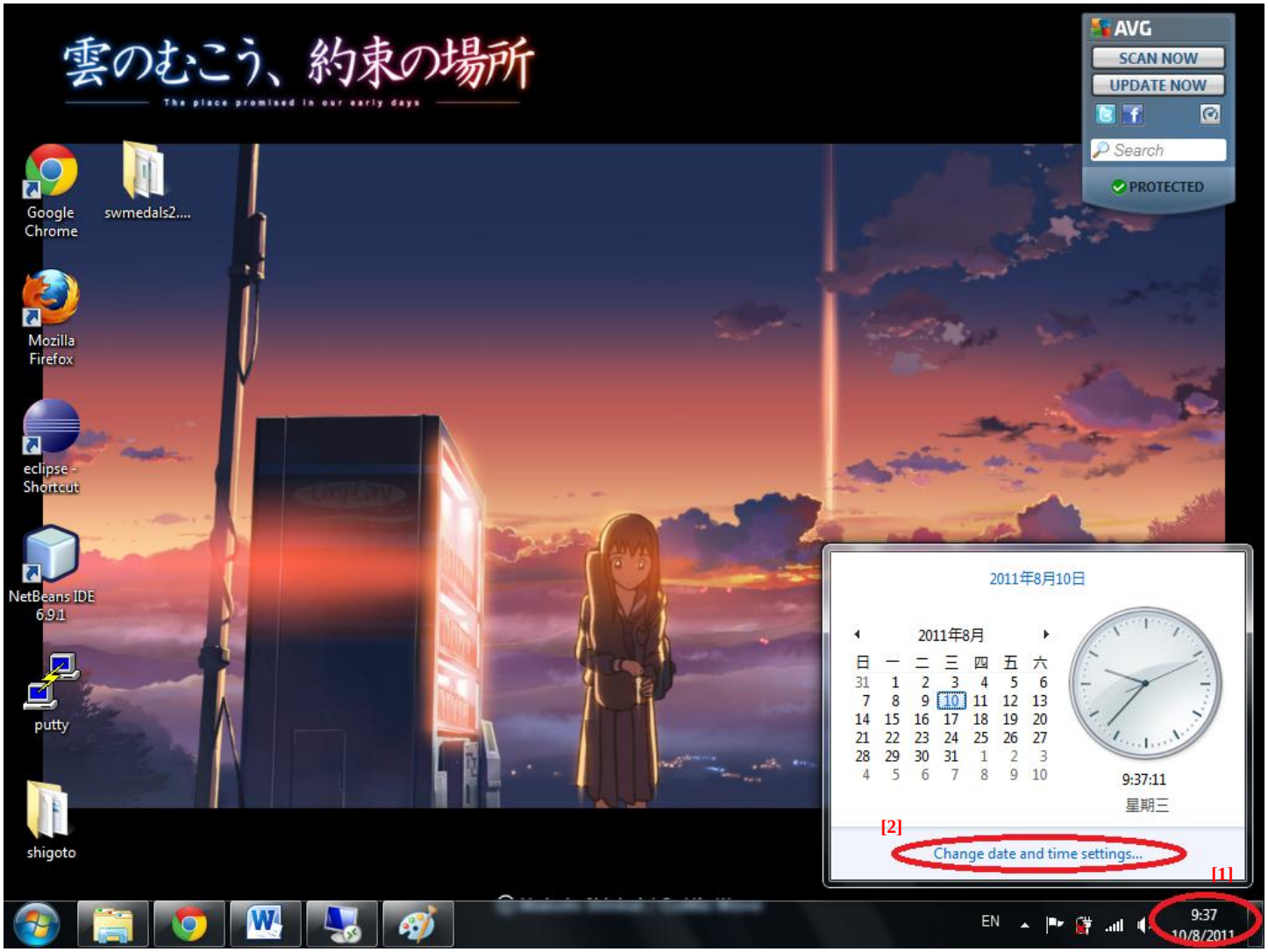
Step 2: Extract the zip file

Extract the downloaded zip file to Desktop or any other location you prefer.

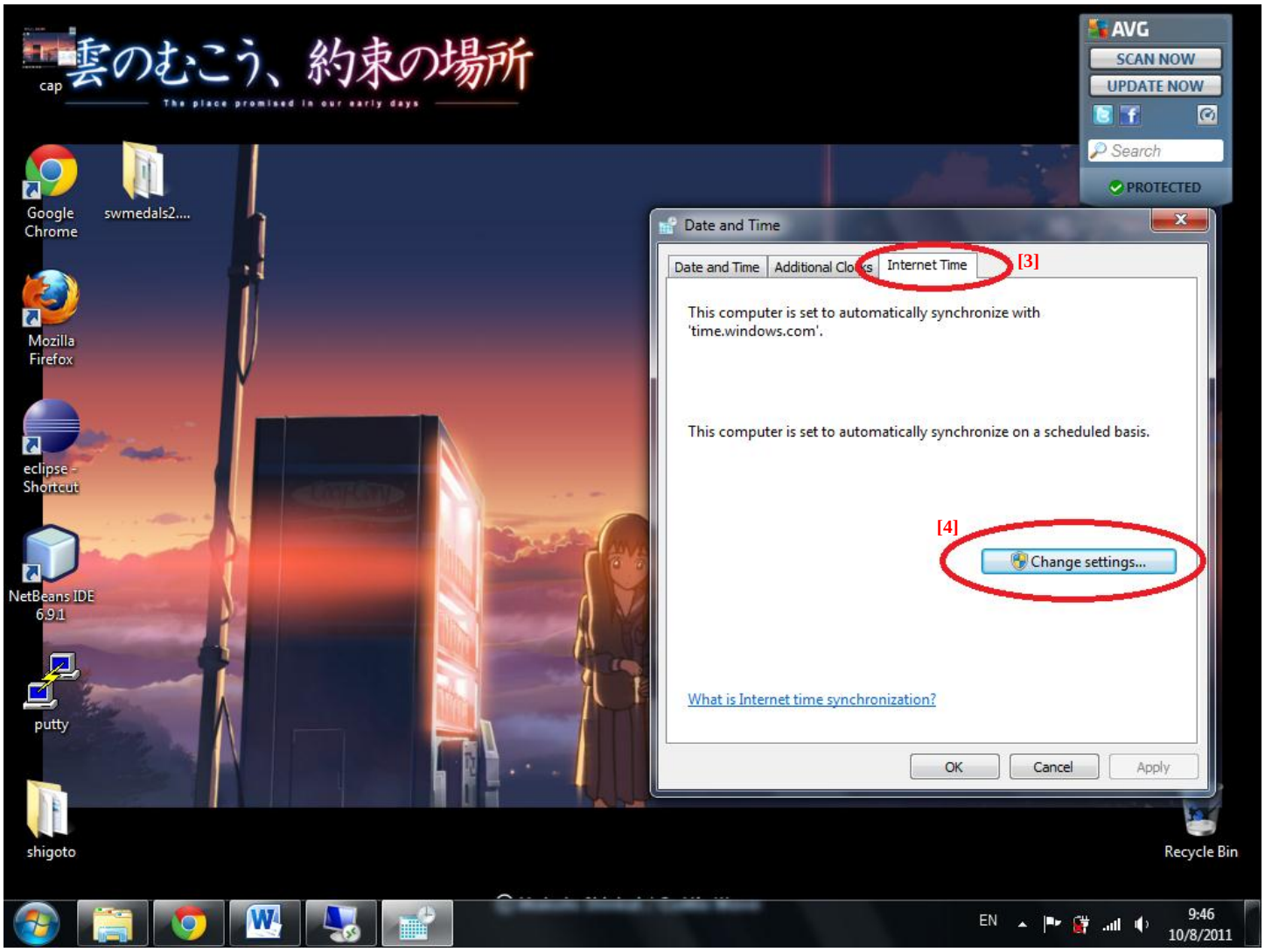
Step 3: Client PC Setup

a) Synchronize client PC with HKO time server

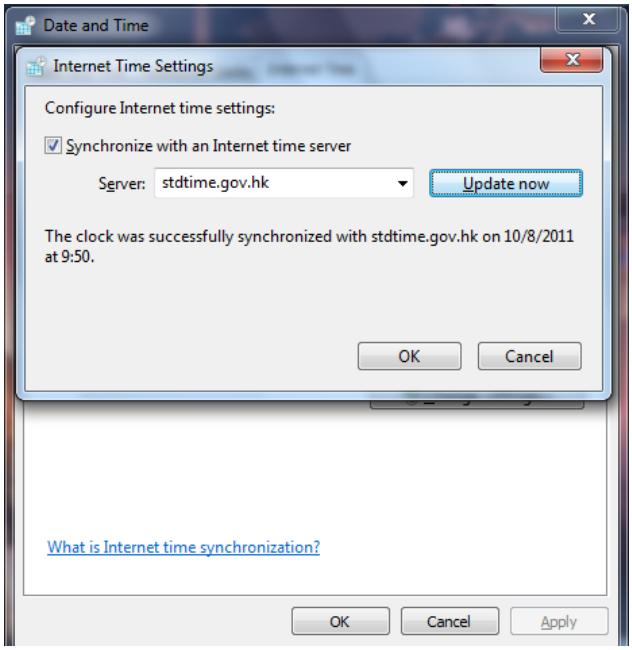
[1] Click the clock at the lower-right hand corner of the screen to bring up calendar, then [2] click "Change date and time settings".



In the resulting Date and Time dialog box, click the “Internet Time” tab [3], then click the “Change settings” button [4] to bring up the Internet Time Settings dialog box.

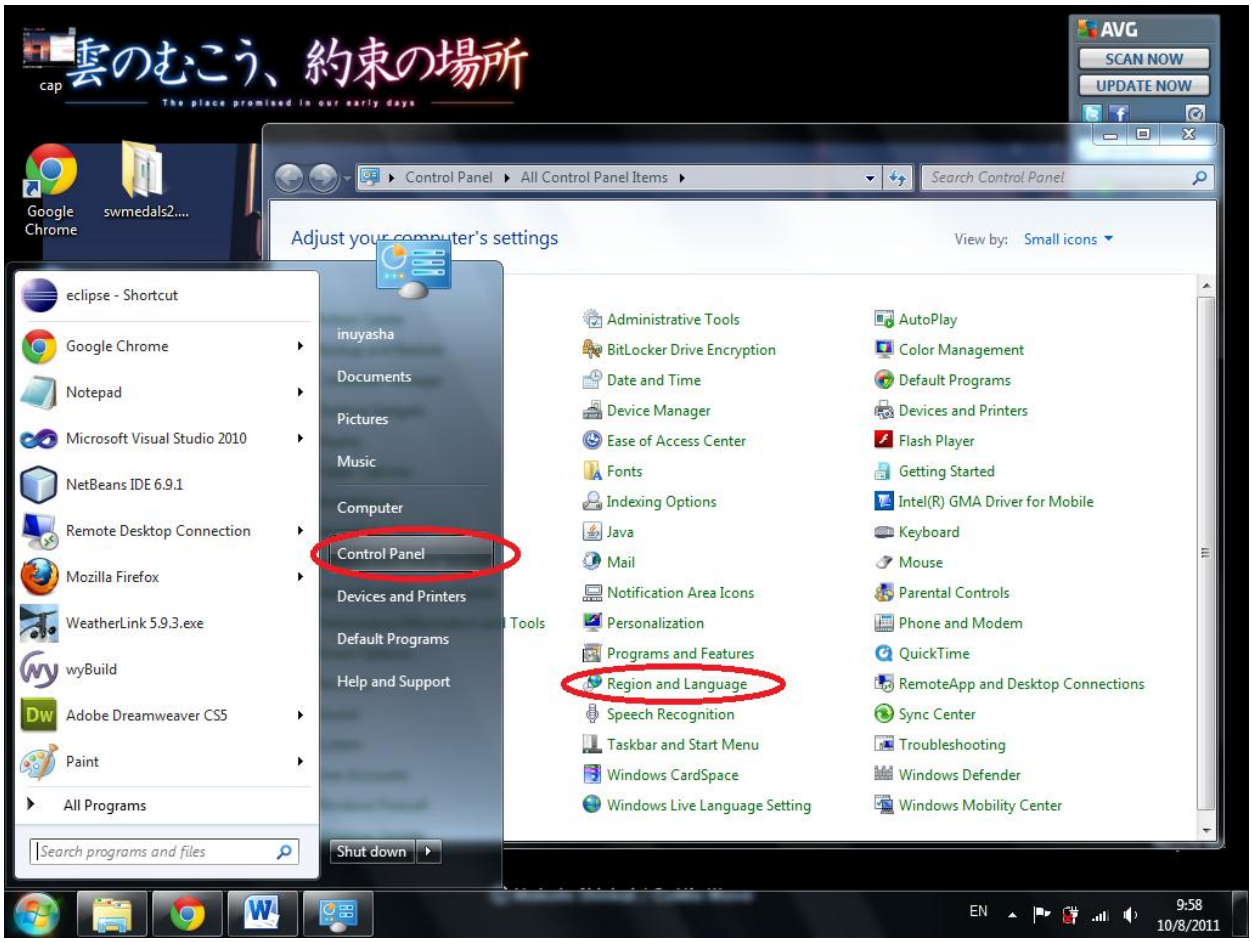


In the Internet Time Settings dialog box, ensure that the checkbox “Synchronize with an Internet time server” is checked and fill in “stdtime.gov.hk” in the Server textbox. Once this is done, click the “Update now” button to synchronize your PC with HKO time server. Click OK buttons afterward.

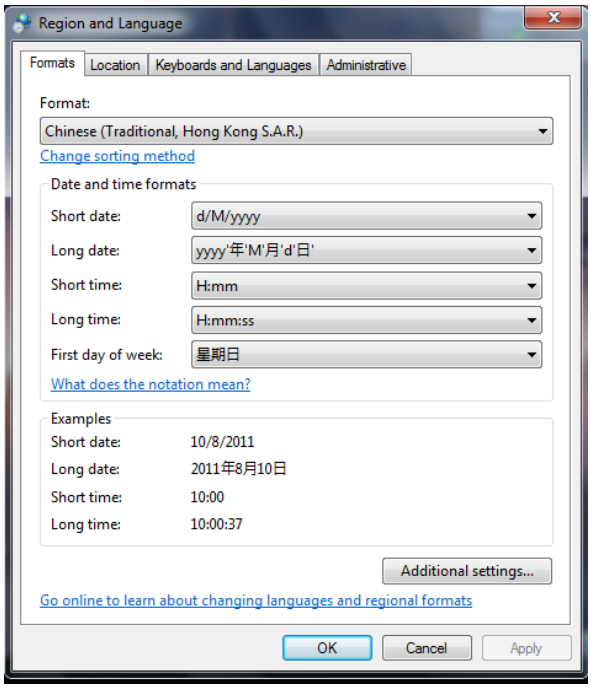


b) Date & time setting

Go to Start > Control Panel and then double click the “Region and Language” icon to bring up the Region and Language window.



In the resulting Region and Language dialog box, go to the Formats tab, then select “Chinese (Traditional, Hong Kong S.A.R.)” in the Formats field. Then click OK button.



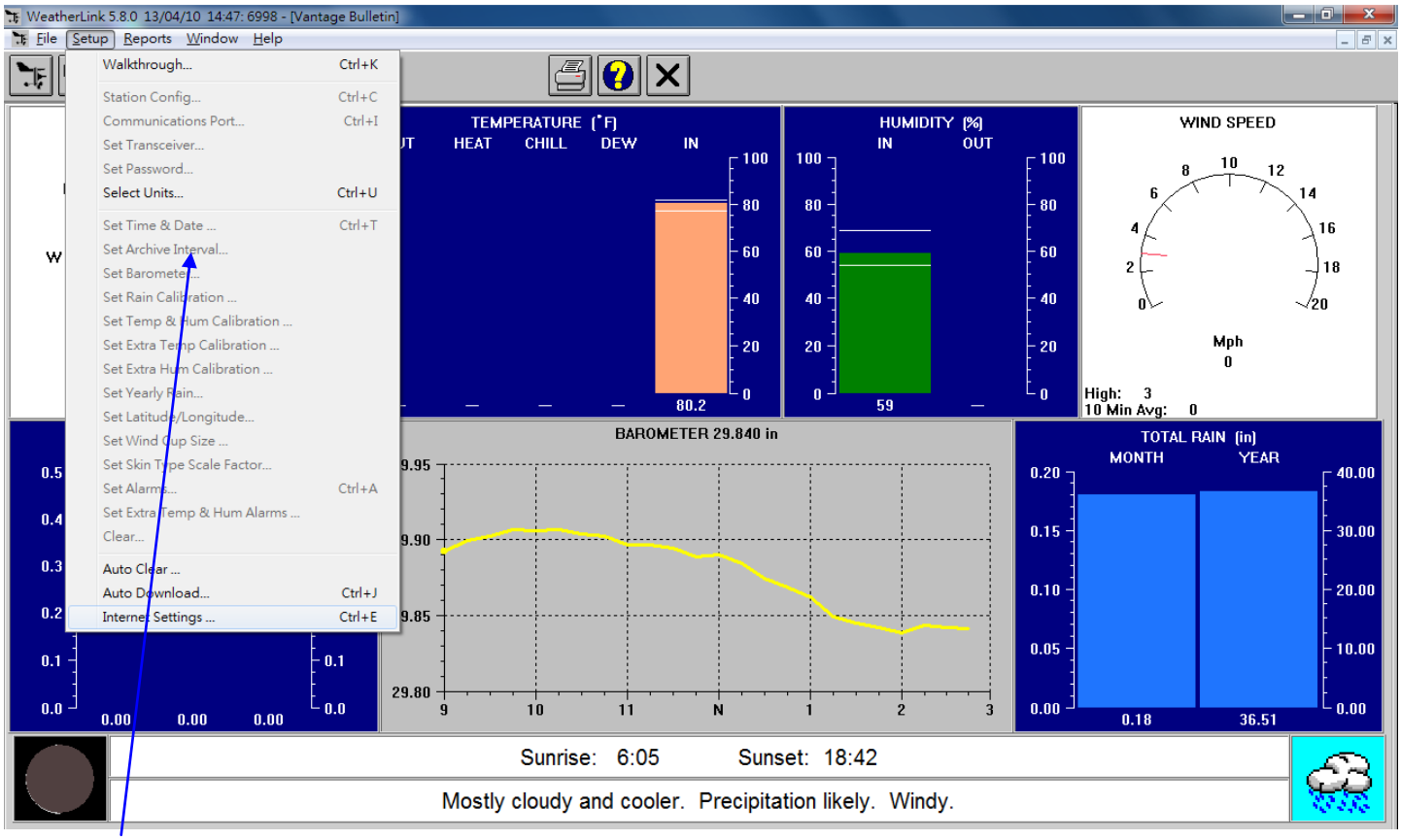
Step 4: WeatherLink® setting

SWMEDALS_NV functions by reading a data text file (a file called downld08.txt) generated by WeatherLink®. Therefore before we configure and run SWEMDAS_NV, we need to configure WeatherLink® to auto-generate the necessary data text file first.

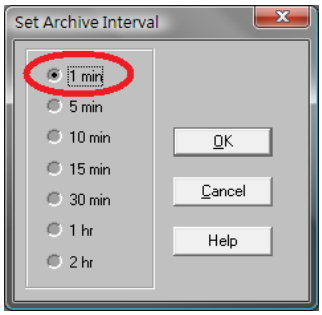
a) Upgrade to WeatherLink® 5.9.3

If WeatherLink® is below version 5.9.0, upgrade WeatherLink® to version 5.9.3. The upgrade file can be downloaded at http://www.davisnet.com/support/weather/software.asp. SWMEDALS_NV has been tested to work with WeatherLink® version 5.9.0 and above. For versions below 5.9.0, we have not tested whether SWEMDALS_NV works or not.

b) Set the archive interval: 1 min



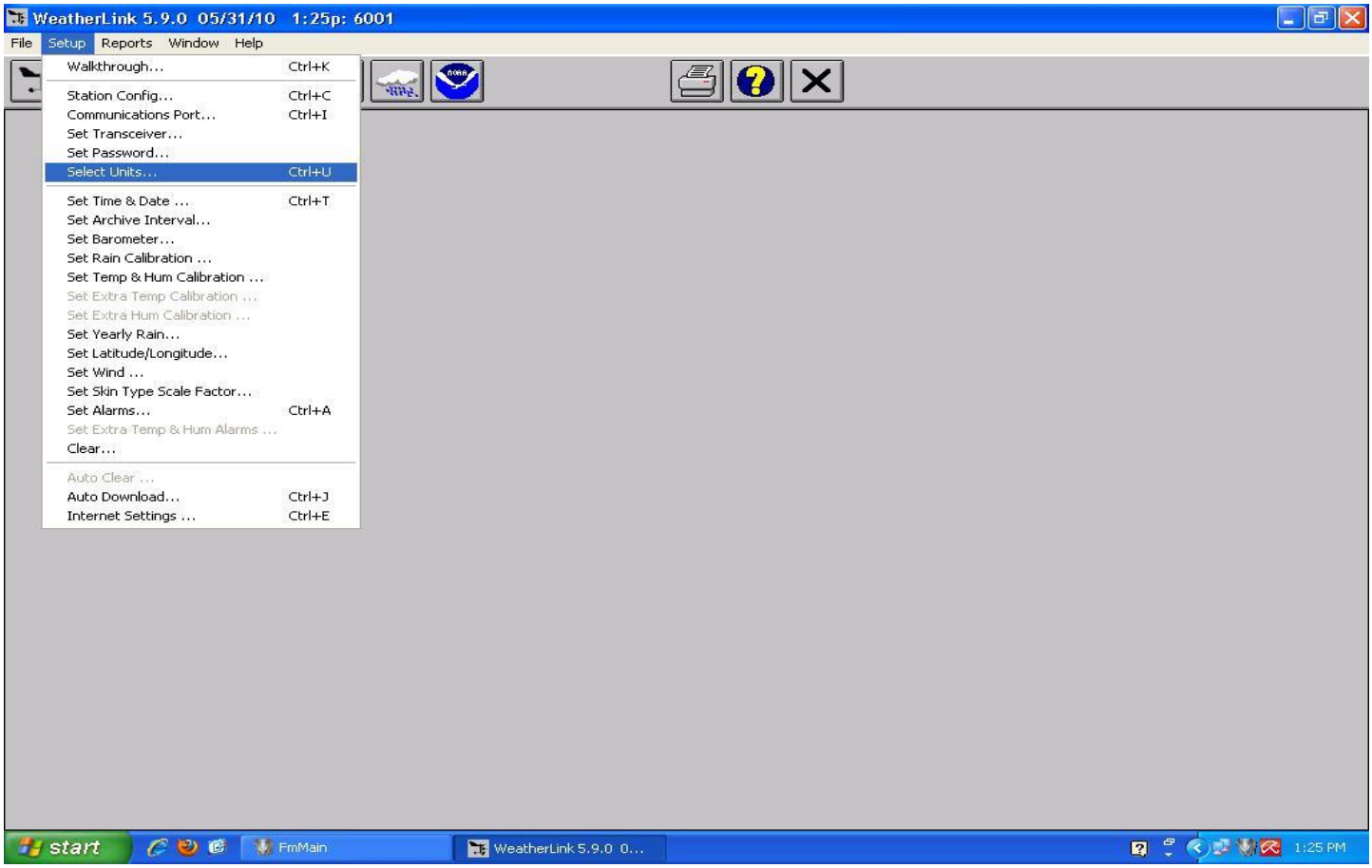
Click “Set Archive Interval”.



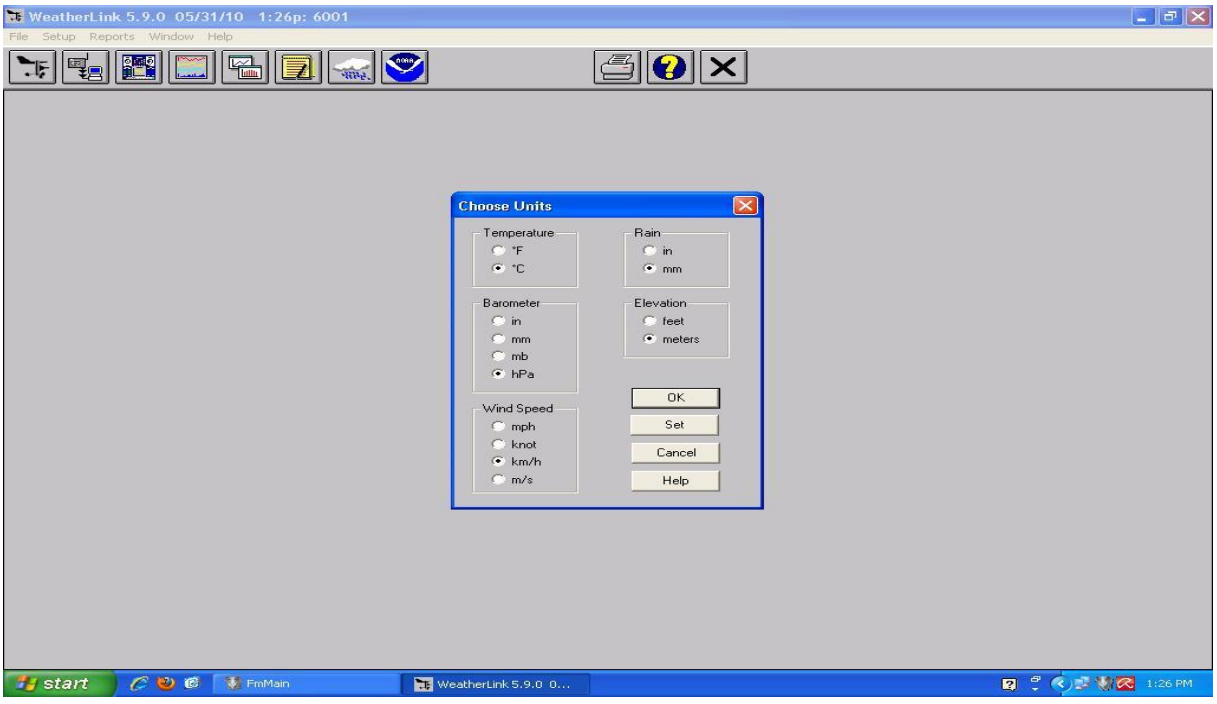
Set Archive Interval = 1 min.

c) Set the Measurement Units.

Click “Select Units”

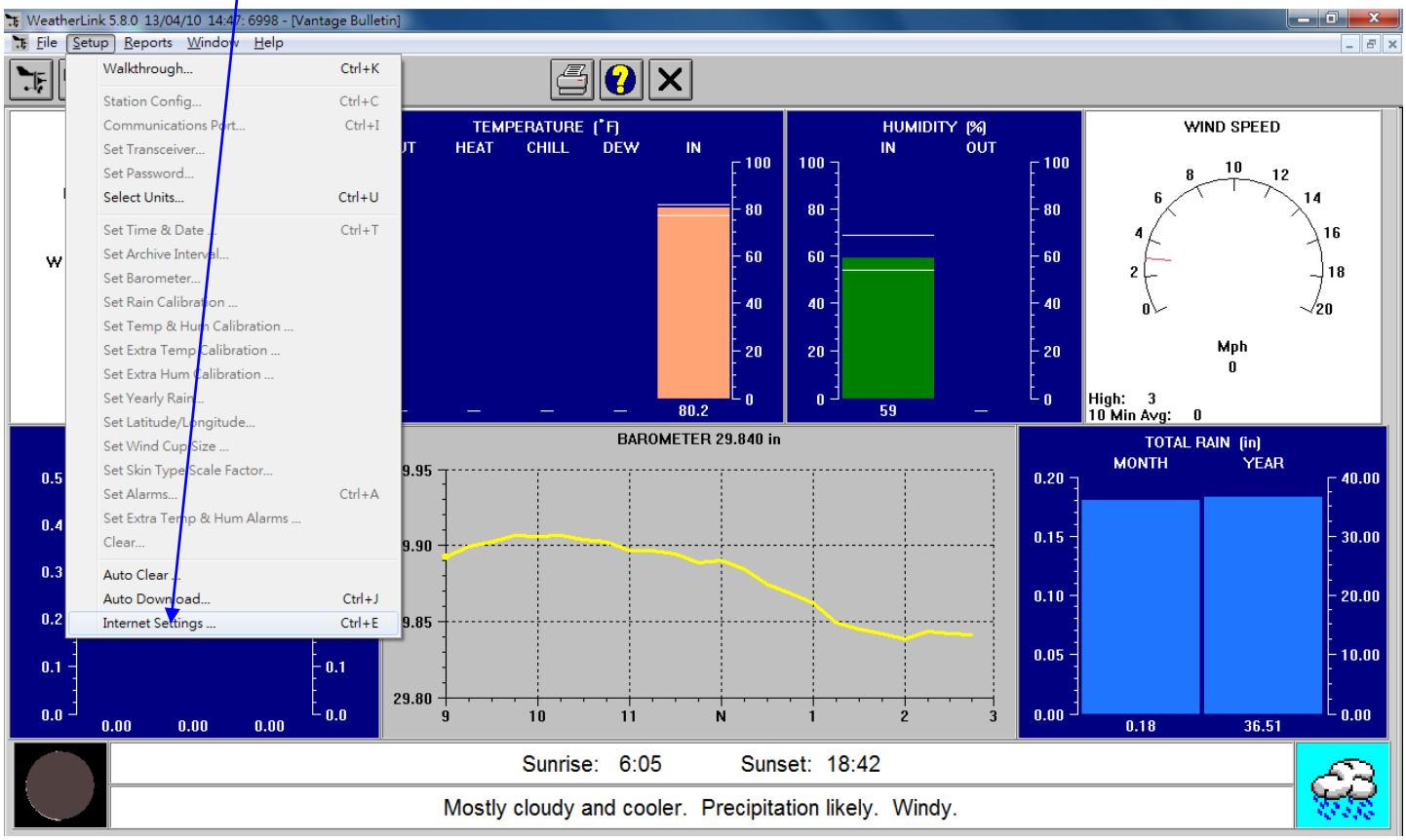


Set the appropriate data measurement units. (Temperature = deg C, Barometer = hPa, Wind Speed = km/h, Rain = mm, and Elevation = meters).

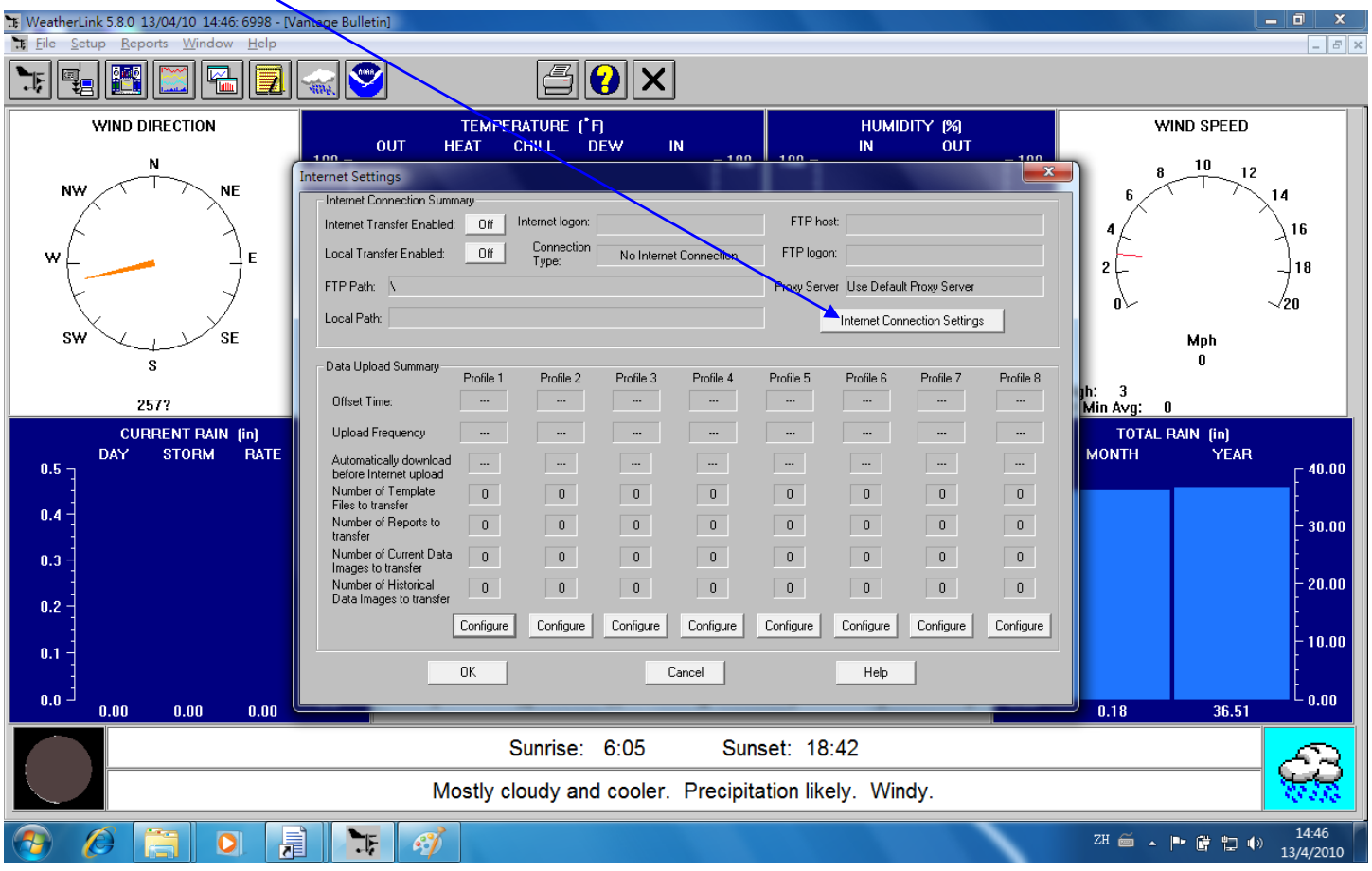


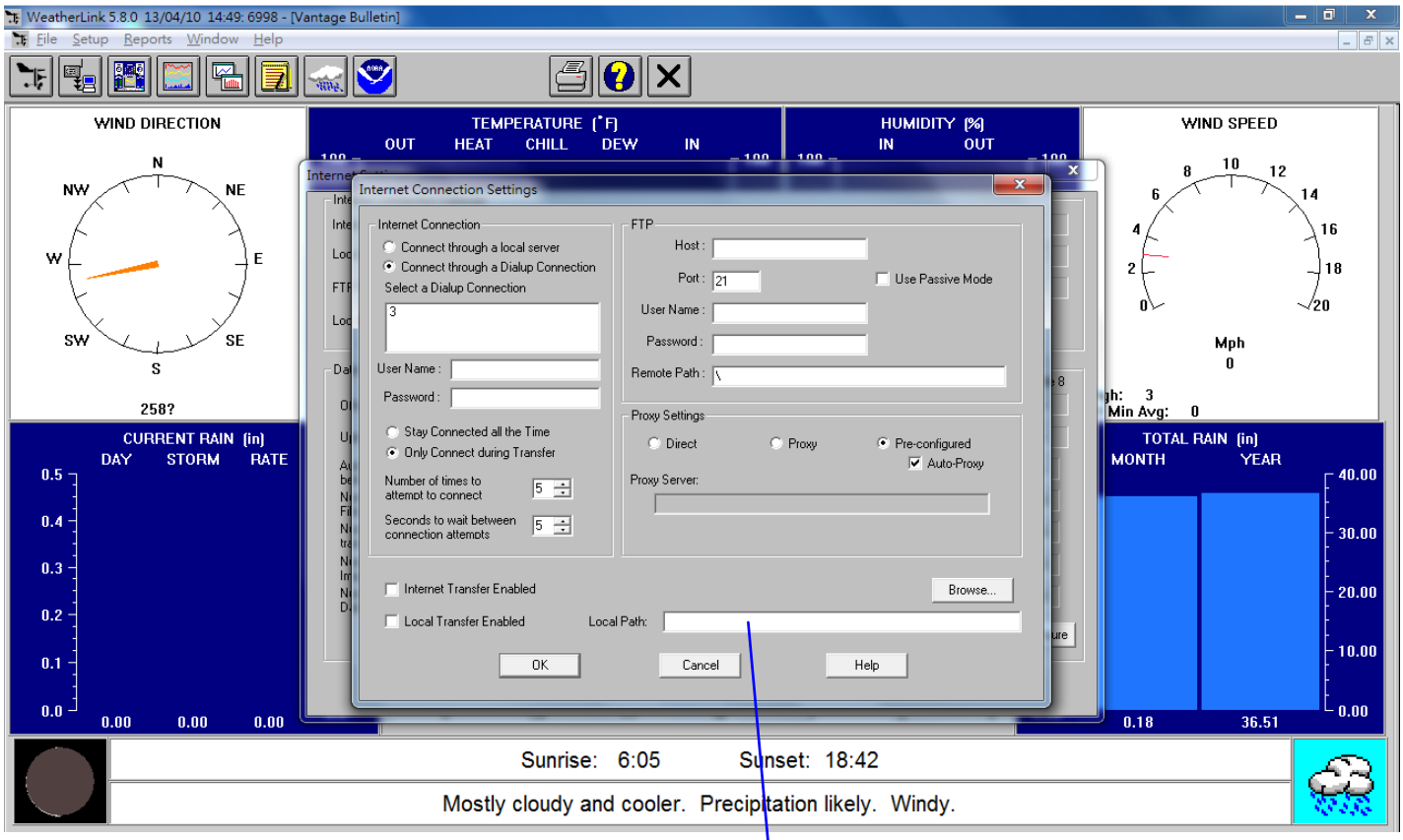
d) Internet Settings

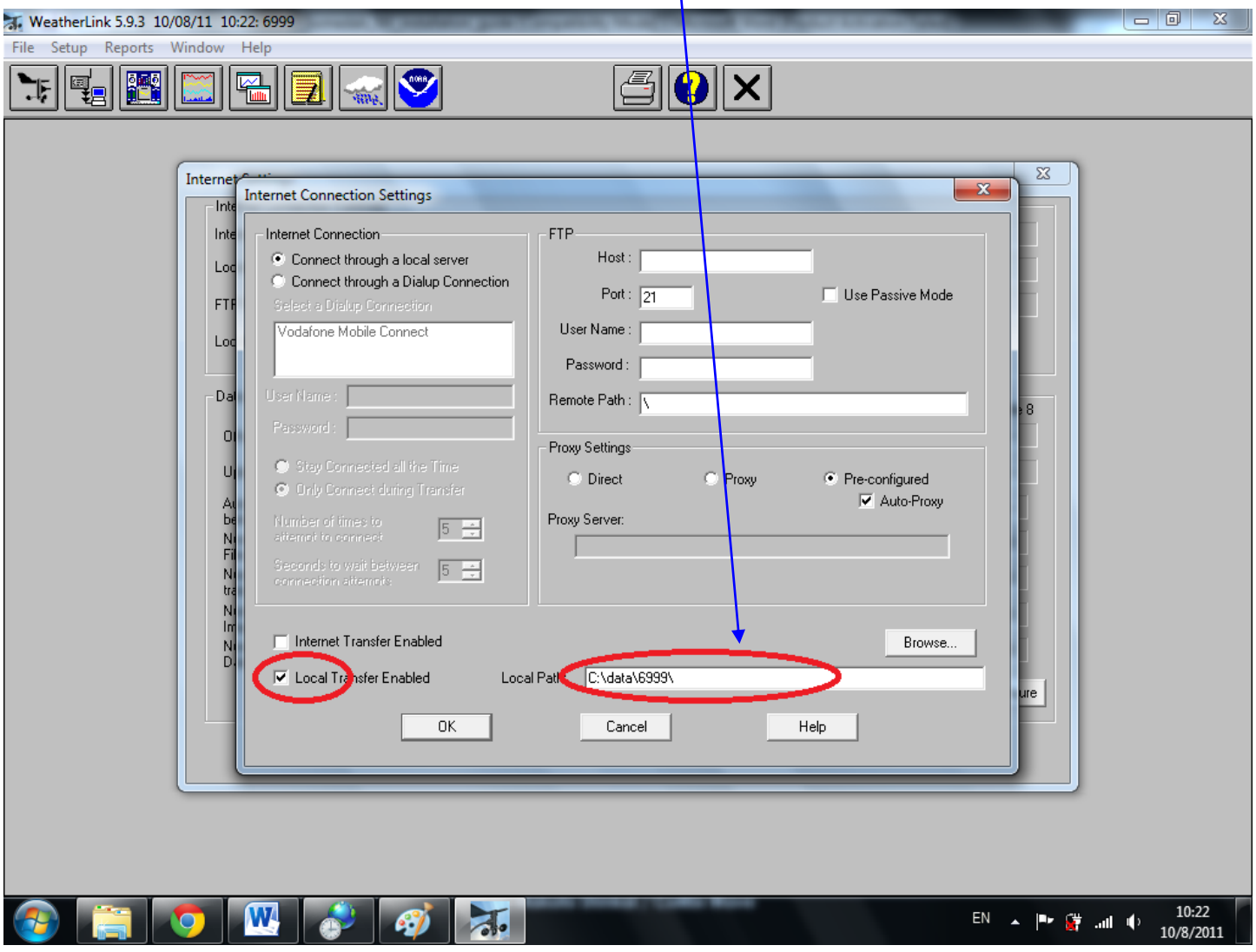
Click “Internet Settings”



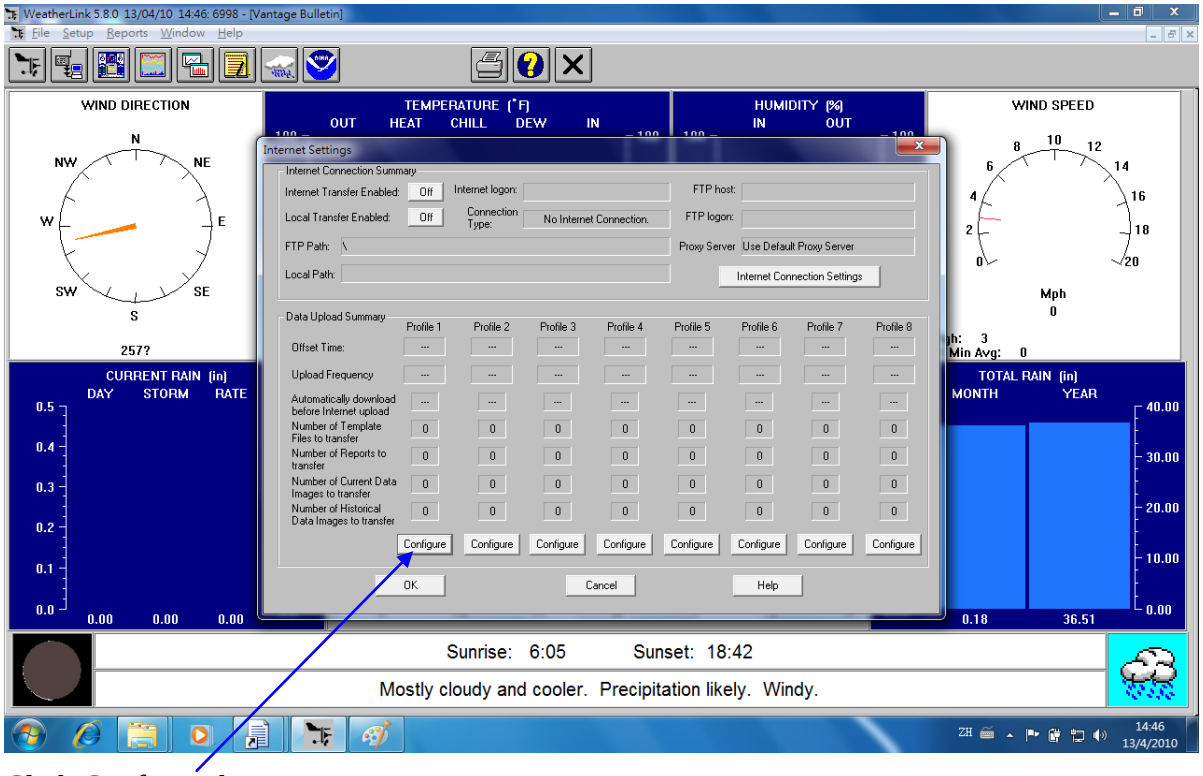
Click “Internet Connection Settings”




WeatherLink 5.8.0 13/04/10 14:49: 6998 - [Vantage Bulletin]
File Setup Reports Window Help
WIND DIRECTION
TEMPERATURE (°F)
OUT HEAT CHILL DEW IN
HUMIDITY (%)
IN OUT
WIND SPEED
Internet Connection Settings
Internet Connection
Connect through a local server
Connect through a Dialup Connection
Select a Dialup Connection
User Name :
Password :
Stay Connected all the Time
Only Connect during Transfer
Number of times to attempt to connect
Seconds to wait between connection attempts
FTP
Host :
Port : 21
Use Passive Mode
User Name :
Password :
Remote Path : \
Proxy Settings
Direct Proxy Pre-configured
Auto-Proxy
Proxy Server:
Internet Transfer Enabled
Local Transfer Enabled
Local Path:
Browse...
OK Cancel Help
CURRENT RAIN (in)
DAY STORM RATE
TOTAL RAIN (in)
MONTH YEAR
Sunrise: 6:05 Sunset: 18:42
Mostly cloudy and cooler. Precipitation likely. Windy.

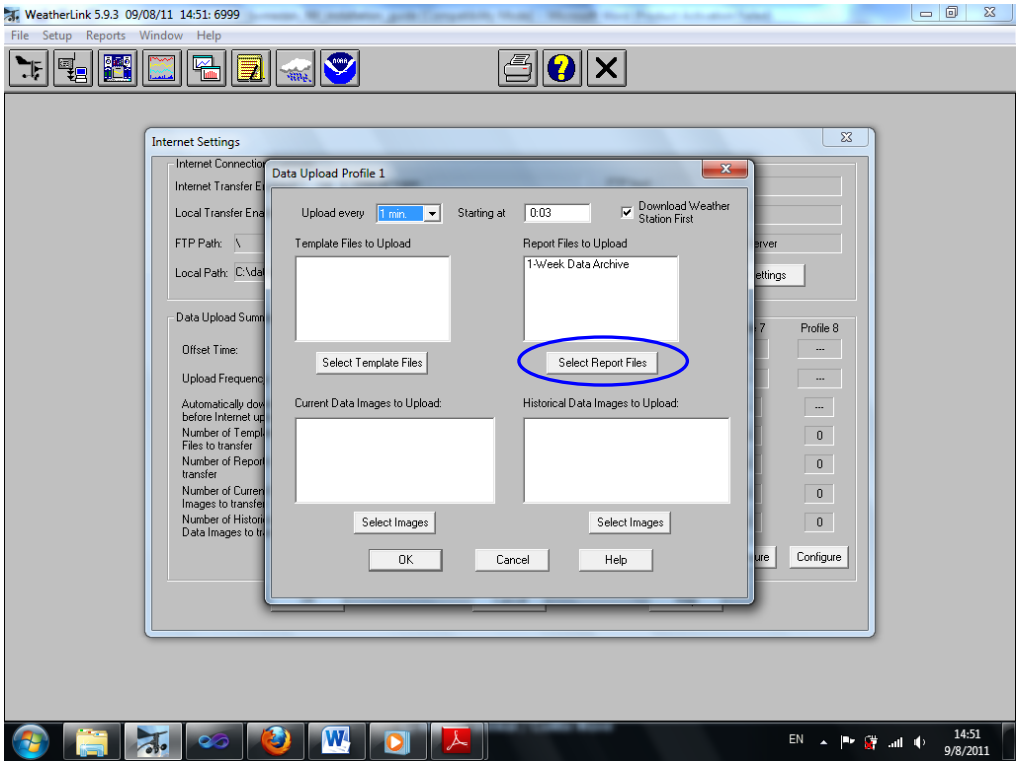

WeatherLink 5.9.3 10/08/11 10:22: 6999
File Setup Reports Window Help
Internet Connection Settings
Internet Connection
Connect through a local server
Connect through a Dialup Connection
Select a Dialup Connection
Vodafone Mobile Connect
User Name :
Password :
Stay Connected all the Time
Only Connect during Transfer
Number of times to attempt to connect
Seconds to wait between connection attempts
FTP
Host :
Port : 21
Use Passive Mode
User Name :
Password :
Remote Path : \
Proxy Settings
Direct Proxy Pre-configured
Auto-Proxy
Proxy Server:
Internet Transfer Enabled
Local Transfer Enabled
Local Path: C:\data\6999\
Browse...
OK Cancel Help
EN 10:22 10/8/2011

Click OK button. (Note: When the “Local Transfer Enabled” checkbox is selected, this will cause WeatherLink to create a file called downld08.txt, which is the data text file SWMEDALS_NV uses to read the required weather data to send to Co-WIN data centre. This downld08.txt file will be generated under two locations: (1) the WeatherLink station directory, and (2) the directory specified in the Local Path textbox in the Internet Connection Settings dialog. When we configure the SWMEDALS_NV in later steps, we’ll put the WeatherLink station directory in a config file in SWMEDALS_NV, so from the perspective of SWEMDALS_NV it does not matter what directory you put in Local Path textbox, as long as the “Local Transfer Enabled” checkbox is selected so that WeatherLink knows that it needs to generate the downld08.txt file. In this example we provided our WeatherLink station directory in the Local Path textbox, but you are put any directory you like there.)

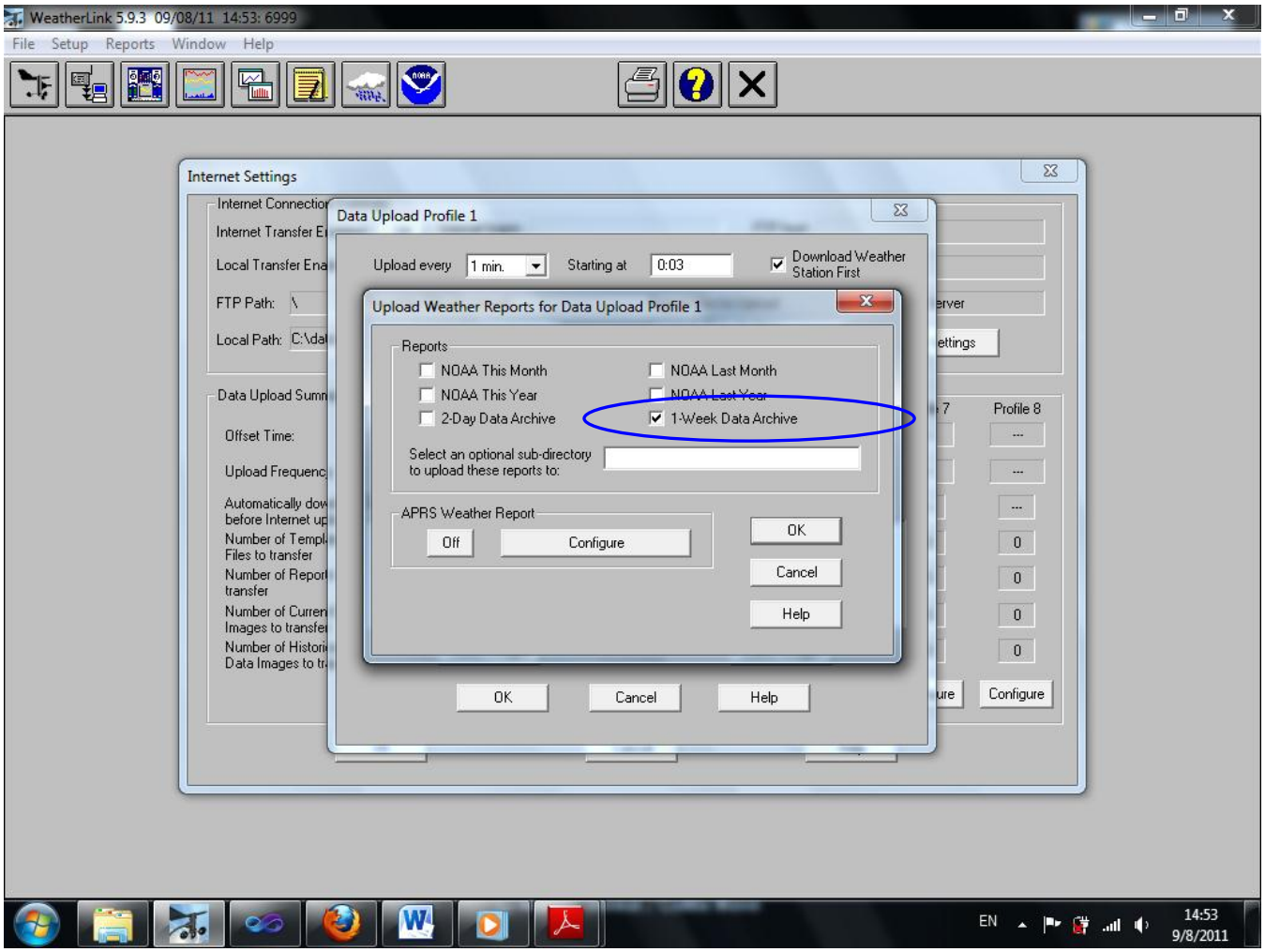


Click Configure button.

Click Select Report Files button.



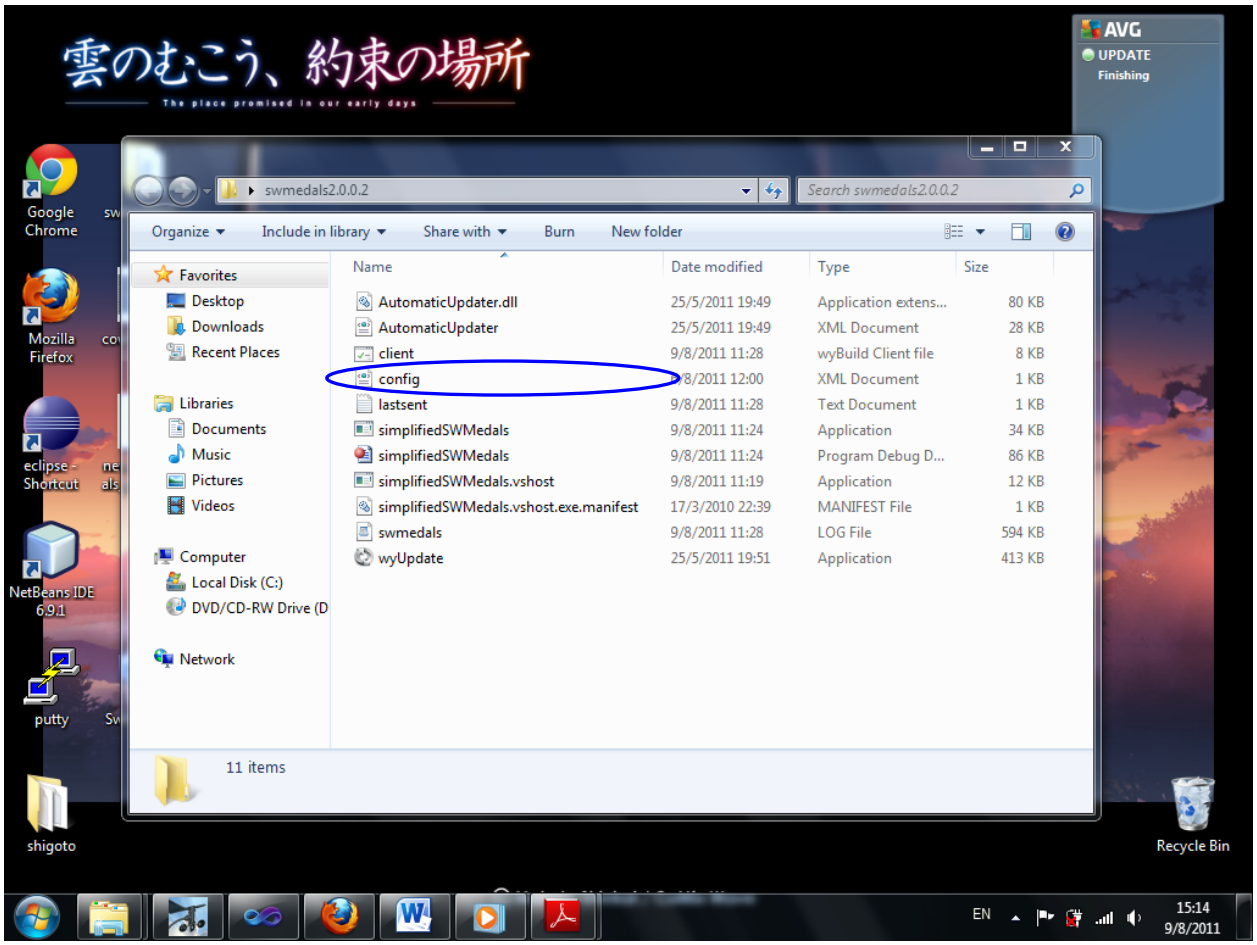
Select checkbox 1-Week Data Archive. Then click OK. We have now finished the necessary configuration of WeatherLink and are now ready to proceed with configuring and running SWMEDALS_NV.



(Note: WeatherLink® will generate a data text file called downld08.txt per minute Medals under the station directory and under the Local Path directory. This file is read by SWEMDALS_NV.)

Step 5: SWMEDALS_NV Setting

In the extracted directory of the SWMEDALS_NV, open the config.xml file using notepad.



Configure the following tags in the config.xml file. **Remember to save the file when done.**

area_code: assigned by Co-WIN when you first purchased the SWMEDALS_NV

station_id: assigned by Co-WIN

WLPROGDIR: directory where your WeatherLink® program is located (i.e. the directory containing your WeatherLink.x.x.x.exe executable file (where x is an integer).

WLDATADIR: directory where your WeatherLink®-generated data text file (downld08.txt) is located.

WLcomm: whether the WeatherLink® uses USB or IP for connection with the DAVIS Vantage™ console (value is either **USB** or **IP**).

hasProxy: whether your computer uses proxy server for connection with internet (Y or N)

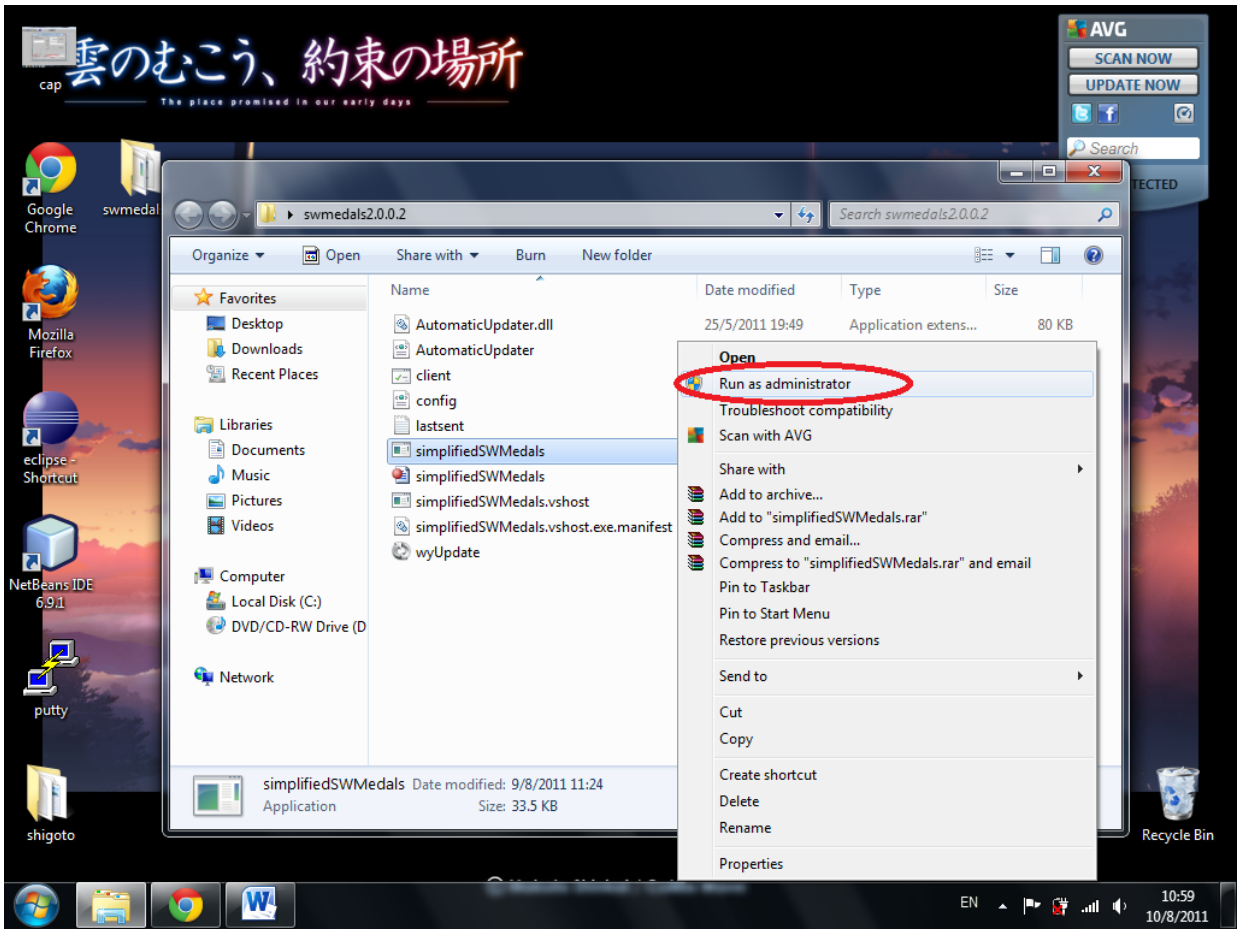
ProxyUri: URI of the proxy server your computer is connected to for internet (leave blank if you have N for **hasProxy** field)

ProxyUsername: proxy username (leave blank if you have N for **hasProxy** field)

ProxyPassword: proxy password (leave blank if you have N for **hasProxy** field)

Below is a sample of the config file used at the PolyU weather station. You should provide the area_code and station_id of your own weather station assigned by Co-WIN. Also, since we have installed WeatherLink at C:\Program Files\WeatherLink, and our WeatherLink station directory is created at C:\data\6999, we have set the WLPROGDIR and WLDATADIR parameters accordingly. You should adjust those parameters according to where you installed WeatherLink and created the WeatherLink station directory.

<info>
<area_code>852</area_code>
<station_id>6999</station_id>
<WLPROGDIR>C:\Program Files\WeatherLink\</WLPROGDIR>
<WLDATADIR>C:\data\6999\downld08.txt</WLDATADIR>
<WLcomm>USB</WLcomm>
<debug>N</debug>
<hasProxy>N</hasProxy>
<ProxyUri></ProxyUri>
<ProxyUsername></ProxyUsername>
<ProxyPassword></ProxyPassword>
</info>

Step 6: Running SWMEDALS_NV

Now we are ready to run SWMEDALS_NV. To do so, right-click on simplifiedSWMedals.exe and click "Run as administrator". (SWMEDALS_NV involves a module that automatically checks for disconnected USB connection between WeatherLink and the Vantage console and reconnect the USB connection when necessary. This operation requires administrator right. If SWMEDALS_NV is not being run as administrator, it will still read and transmit data to Co-WIN data centre properly, but it will not be able to reconnect lost USB connection between WeatherLink and Vantage console.)