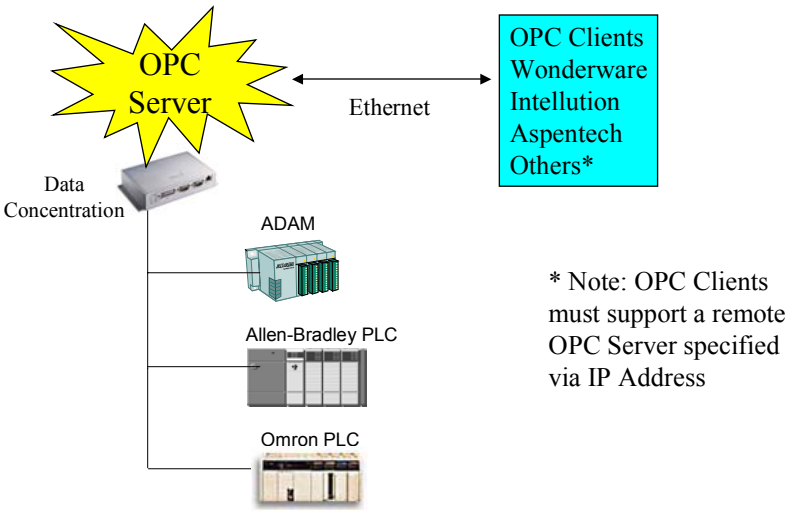
Using the New Features of AStudio V5.0

1. What are the major new features of AStudio V5.0?
AStudio V5.0 introduces several new features: OPC server, Modem dial-in/out, ActiveSync support, Enhanced graphic objects, and Email with file attachments. This document provides a detailed description on using the OPC server, modem, and ActiveSync features of Astudio V5.0. The new graphic objects (push-button, list box, smart message) and the e-mail functions are described in the V5.0 AStudio Technical Reference Manual.

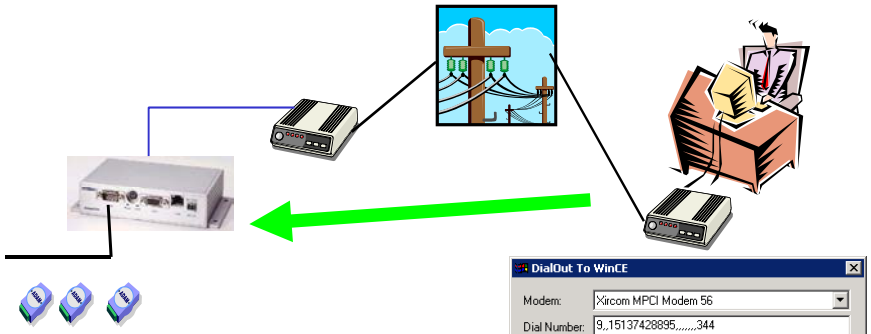
2. How do I set up the OPC server and use it in a project?
Below is a diagram showing an example configuration using the WebLink. As shown in the diagram, WebLink along with AStudio V5.0, acts as a "data concentrator" by handling I/O communications to ADAM, A-B, and Omron PLC. For example, Wonderware can act as a remote OPC client and access the data from these devices through the OPC server interface provided by WebLink running AStudio.



Please refer to the OPC_Setup.pdf document for detailed instructions on how to use the OPC server feature of the AStudio V.5.0 with an example OPC client.

3. How do I set up the modem dial-in/out feature and use it in a project?

Below is a diagram showing an example of using the modem dial-in/out feature of AStudio V5.0. This example illustrates a scenario in which the user wants to view AStudio web pages using a peer-to-peer dial-up connection rather than an Internet connection. Using the Advantech DialOut.exe utility on the user's PC, the user's PC and WebLink establish a server initiated peer-to-peer TCP/IP connection over the dial-up line. Once the connection has been established, data (in the form of web pages) on WebLink can be viewed using Internet Explorer on the user's PC.



1. User launches Dial Out Utility on his PC
2. Utility dials the WebLink
3. WebLink authenticates User and hangs up
4. WebLink dials back out to User's phone number
5. User's PC is configured for Remote Access Services and answers the phone
6. RAS assigns WebLink an IP address and creates network
7. Browsing now is enabled!!!

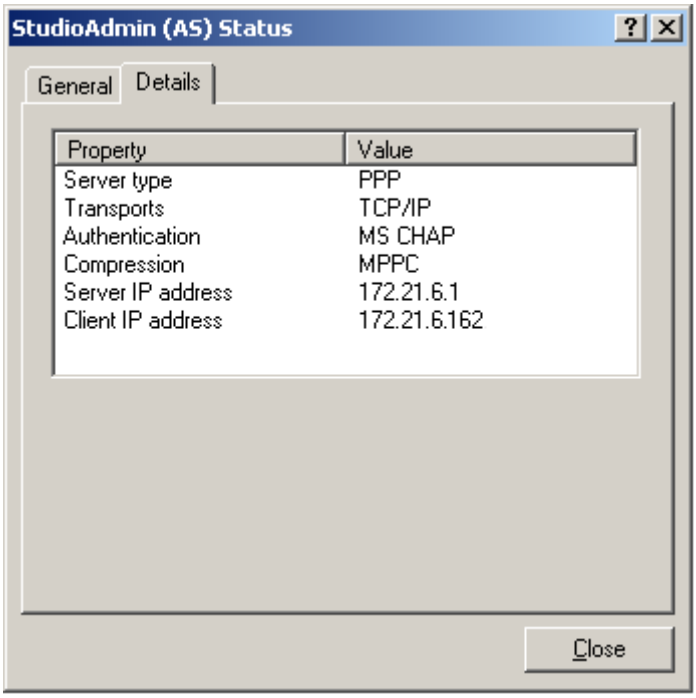
Before dialing to WebLink, the user's PC running Windows 98(SE)/NT 4.0/2000 must be configured as Remote Access Service (RAS) server. This setup varies depending on the operating system. To proceed with the RAS server setup specific to the operating system on the user's PC, please click on one of the following linksWin98_RAS.pdf, WinNT_RAS.pdf, Win2K_RAS.pdf.

The WebLink device must be setup to process the server-initiated connection. Please follow the WebLink setup instructions provided in the WinCE_RAS.pdf for the setup procedure.

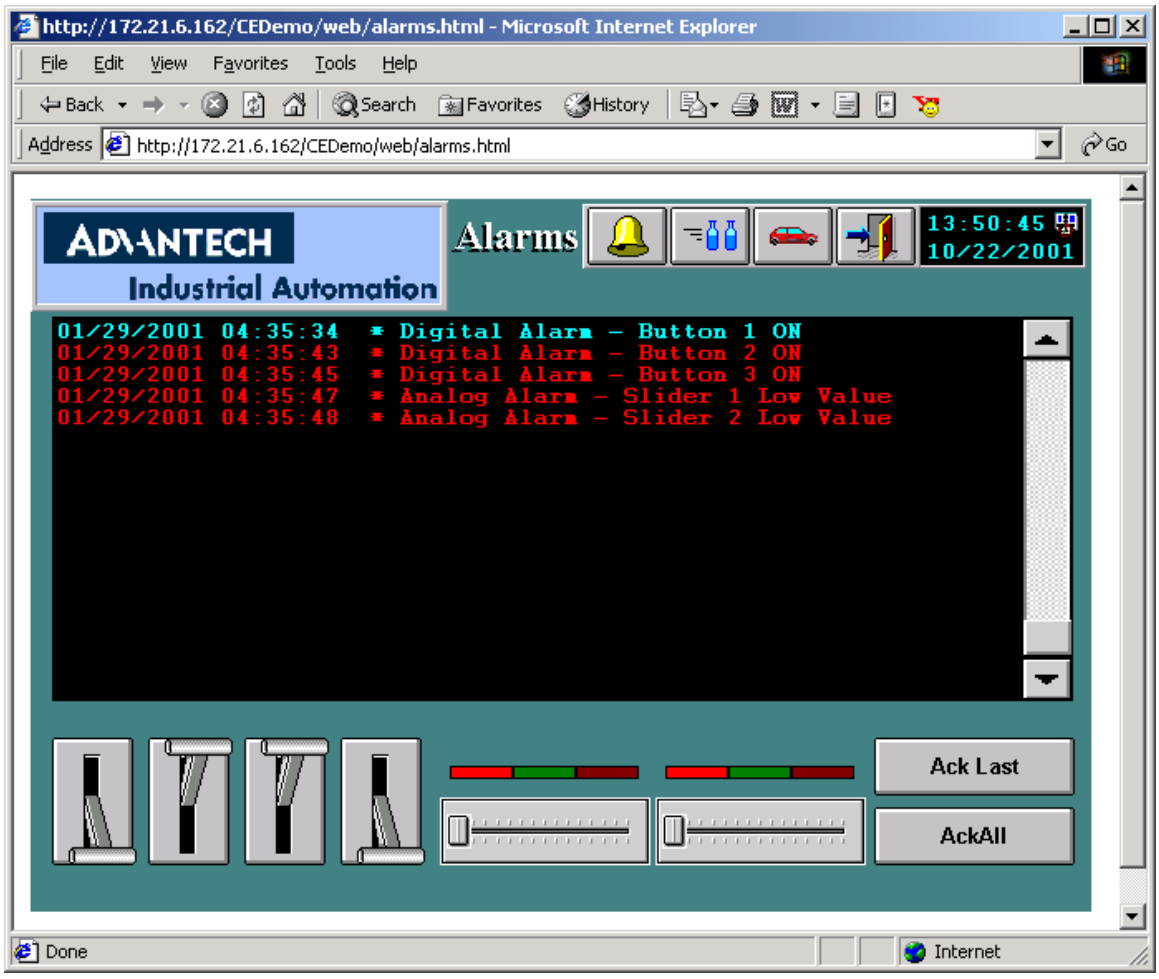
Once the WebLink (RAS client) and user's PC (RAS server) are configured, use the DialOut.exe on the user's PC to trigger peer-to-peer dial up connection. Once the connection is established, the WebLink becomes a part of the private dual-computer network. The addressing of the WebLink is done using the IP address

assigned by the user's PC (RAS server). The picture below shows the icon on the system tray that appears when the peer-to-peer connection is established.

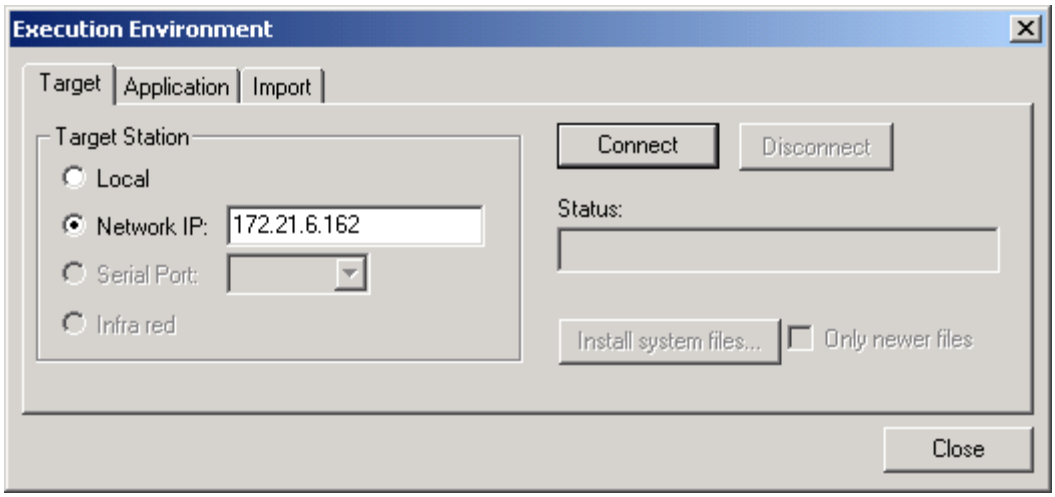
By double clicking on the icon and selecting the "Details" tab, the user can view connection properties as shown on the picture below.



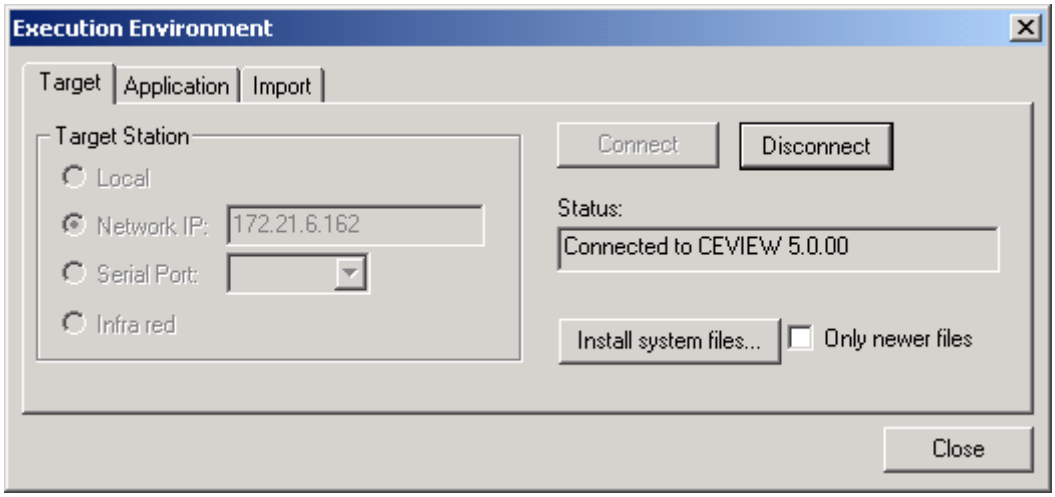
Here is a short example on how to use Internet Explorer (running on the user's PC) to browse the web pages located on the WebLink. The URL for the web pages is http://<IP address>/path , where <IP address> is the address of the WebLink device and path is the path to the desired web page. The picture below shows a snapshot of a web page viewed using Internet Explorer. The URL to the web page is http://172.21.6.162/CEDemo/web/alarms.html



Advantech Studio development software can be used to update or make modifications to the applications running on a WebLink device. In order to perform this operation, the Advantech Studio Execution Environment must be used to connect to the WebLink. A snapshot involving use of the Advantech Studio Execution Environment to update the WebLink device is shown below.

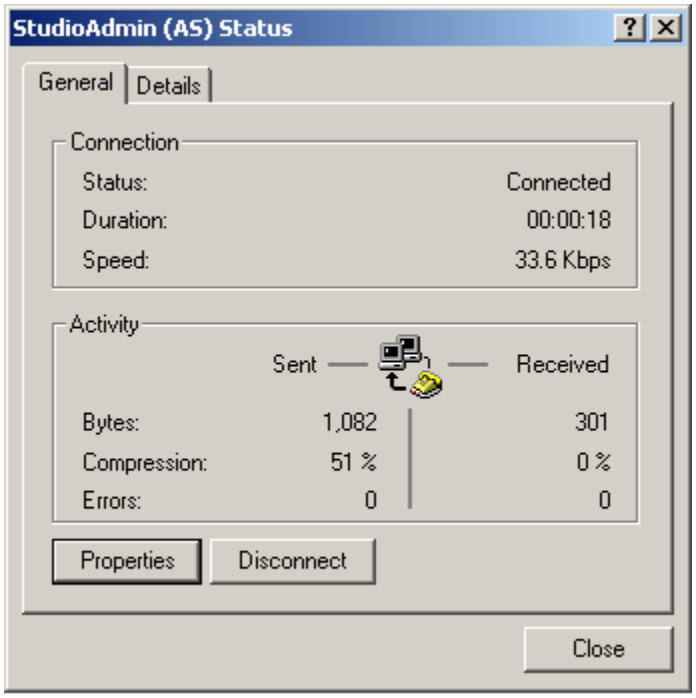


As illustrated in the above picture, the IP address of the WebLink device must be entered in the “Network IP” field. On clicking the “Connect” button (shown in the picture below) the user’s PC will establish connection with the WebLink device. Please refer to the connection status in the Execution Environment to ensure that the connection with the WebLink has been successfully established.



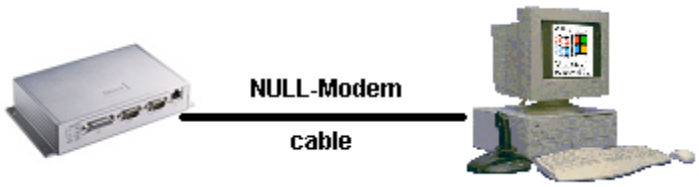
After completing all the AStudio operations, the user must disconnect from the Advantech Studio Execution Environment by pressing the “Disconnect” button.

After completing all the browsing operations, the user must disconnect from the WebLink by double clicking the  icon and pressing the “Disconnect” button on the connection status window as shown on the picture below.



4. Why is ActiveSync important? How do I use it?

ActiveSync is a feature of WinCE devices that allows a PC to copy files to the CE device through a direct serial connection as shown on the picture below. This is especially useful for devices without a display, such as WebLink, in cases where a change needs to be made to the default configuration or startup settings. Normally, ActiveSync will only be used as part of setting up a device (WebLink or WebOIT) for a specific project during application development, or at device installation.



To use ActiveSync, you need RS-232 serial (COM) port on your PC, a null-modem serial cable, and the ActiveSync software installed on your PC. ActiveSync software for the desktop PC is available to download free of charge from Microsoft at
http://www.microsoft.com/MOBILE/pocketpc/downloads/activesync35.asp

4.1 WebLink/WebOIT startup sequence

The default startup sequence of the WebLink/WebOIT devices is:

1. Power up
2. Wait for 20 seconds for all CE services to startup
3. Attempt ActiveSync connection on default COM port

4. After ActiveSync connection completed execution (either time out or disconnected from the desktop PC), Advantech Studio CE runtime is launched.

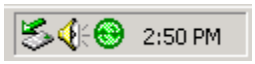
Default COM port on the WebLink/WebOIT devices to connect via ActiveSync is COM1. The exception is WebOIT-1000 (COM3).

4.2 ActiveSync connection

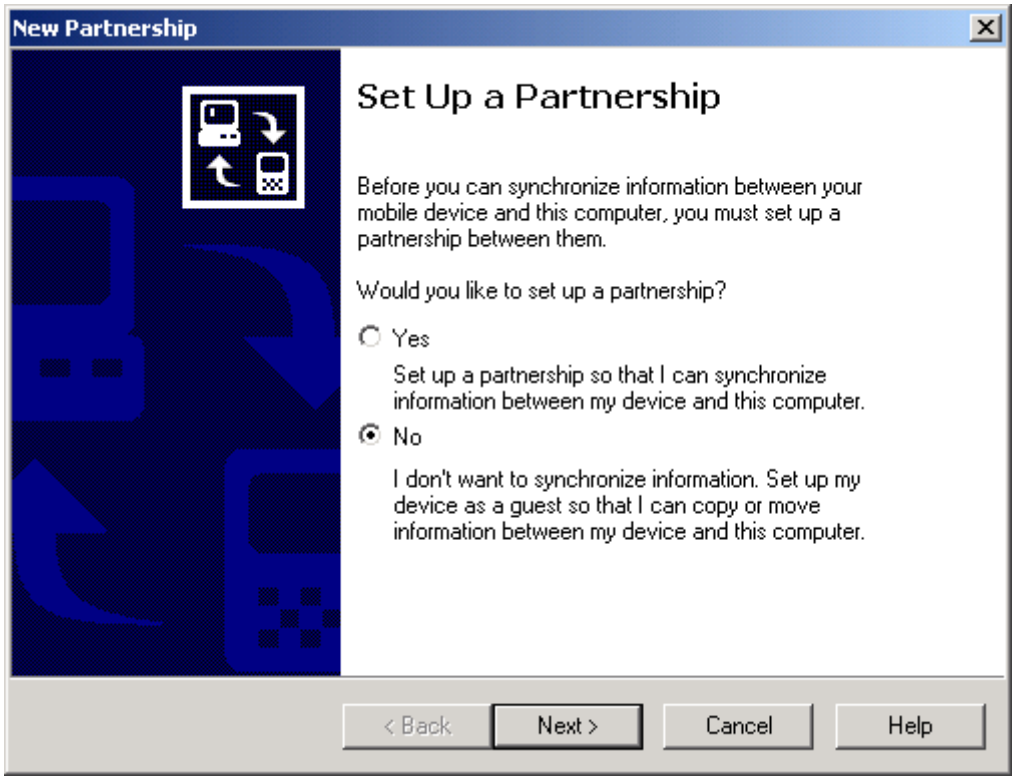
All the WebLink/WebOIT devices will attempt the ActiveSync connection on the default COM port within approximately 30 sec after power up. If connection was not established, WebLink/WebOIT device will proceed with completion of the normal startup sequence.

The picture below shows a system tray on the desktop PC with inactive ActiveSync icon  .

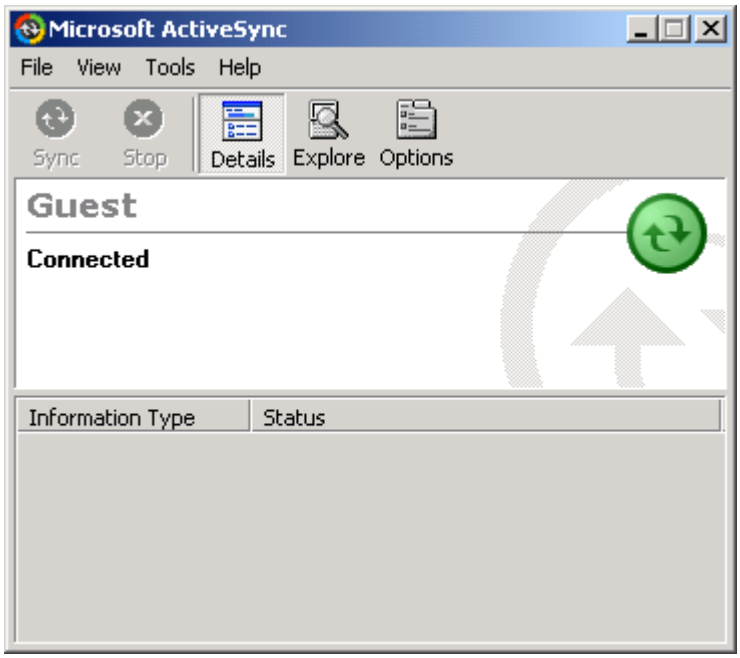
If the ActiveSync connection was established, the ActiveSync icon in the system tray of the PC will become apple green  and start spinning as shown on the picture below.



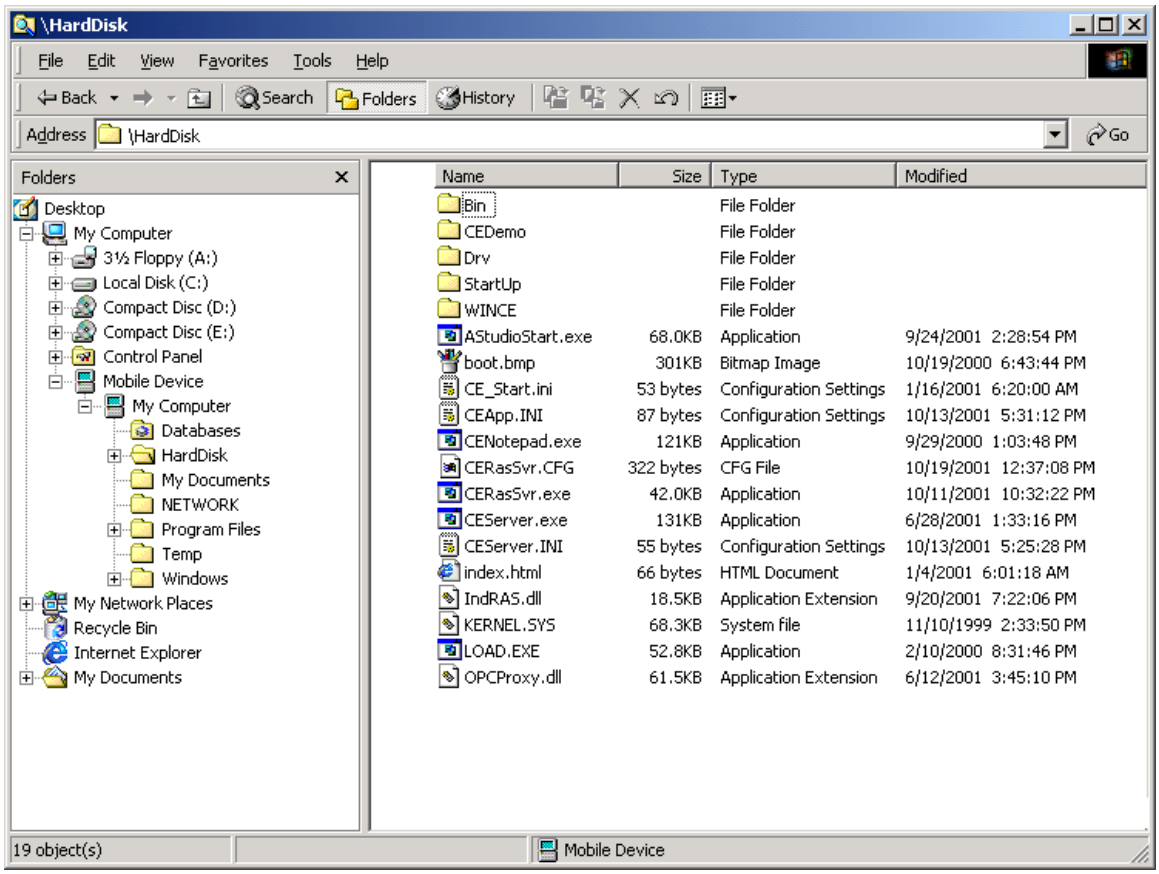
In a few seconds the “New partnership dialog box will appear” as shown on the picture below.



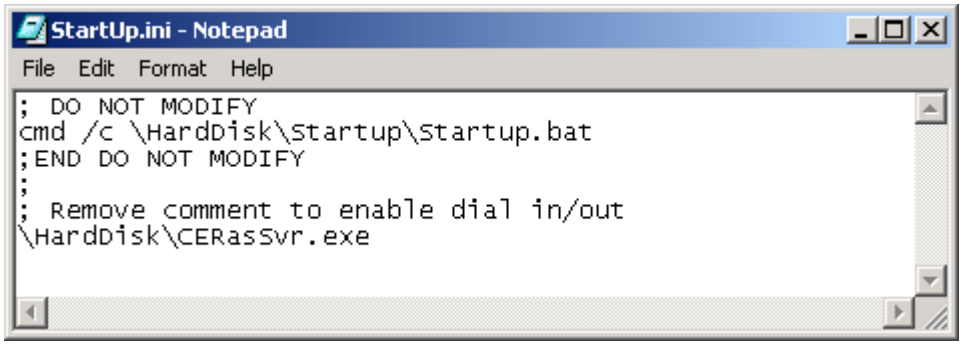
Check “No” and click “Next” button.
“Microsoft ActiveSync” window will appear as shown on the picture below.



Now the user can copy files from the WebLink/WebOIT device by using Windows Explorer on the desktop PC. The WebLink/WebOIT device will appear under the name “Mobile Device” of “My Computer” as shown on the picture below.



An example of using the ActiveSync is when the user wants to modify the startup sequence of the WebLink by adding the Advantech Dial in/out utility (CERasSvr.exe) to startup automatically after reboot. To do so the ActiveSync connection must be established. Using Windows Explorer on the desktop PC, copy file \Mobile Device\My Computer\HardDisk\Startup.ini to the C:\WebLink\Startup\ directory. The path is chosen as an example. Open C:\WebLink\Startup\Startup.ini file in the Notepad and edit it by removing the comment (semicolon) on the last line. The modified Startup.ini must look as shown on the picture below.

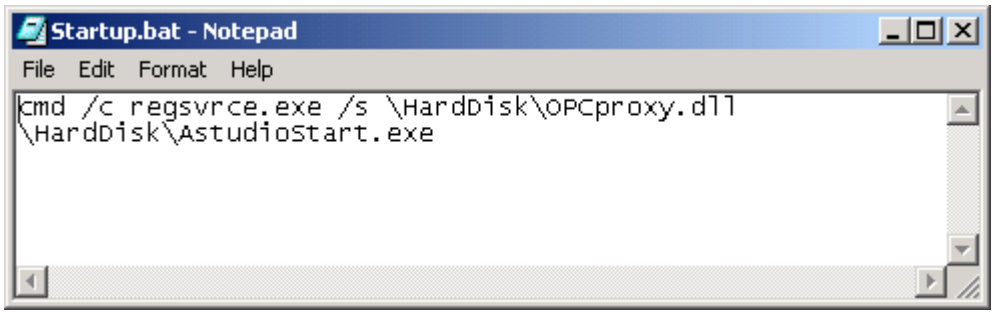


Save modified Startup.ini and copy it in the \Mobile Device\My Computer\HardDisk\Startup\ directory, overwriting the older file.

Disconnect the null-modem cable and reboot WebLink/WebOIT device. The new startup sequence will take effect.

Disabling ActiveSync

To disable ActiveSync connection on the WebLink/WebOIT device the user should delete the line “\Windows\repllog.exe” in the \Startup\Startup.bat file. The associated delay can also be removed as shown on the picture below.



5.0 Conclusion

The new features in AStudio V5.0 make it easier to use and more powerful than ever. For more detailed information on AStudio, please refer to the Technical Reference Manual on your install CD or on the web site www.e-automation.cc.