**eWON Application User Guide** 

AUG 001 / Rev 1.2

# eWON 2001 MPI-Teleservice How To





This guide will explain in a few steps how to configure your system to establish a remote connection to your S7-300 and/or S7-400 PLC using eWON 2001.

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### Hardware and software requirements

#### Hardware requirements

In order to follow this guide you will need:

- At least 1 Siemens PLC S7-300 or S7-400 with an MPI interface.
- 1 eWON MPI with integrated modem (for example : eWON 2001)
- 1 standard Profibus cable to link both equipments together
- 1 PC with internal or attached modem

#### Software requirements

#### eWON configuration software:

The eWON is configured through its embedded web server. So all you need is a standard Web Browser software like Internet Explorer<sup>i</sup> or Firefox<sup>ii</sup>.

Additionally we suggest you to download the eBuddy utility on our website : <u>http://www.ewon.biz</u> (Support/Download Software).

This utility allows to list all the eWONs on your network and to change the default IP address of an eWON to match your LAN IP address range. With eBuddy you can also easily upgrade the firmware of your eWON (if required).

#### Siemens programming software:

For the remote maintenance of your S7 PLC, you only need the Step7<sup>®</sup>iii software.

The version of the Step7<sup>®</sup> software must allow the use of the TCP/IP interface (automatically up from version 5.3).



### eWON IP address configuration

Every eWON<sup>™</sup> is shipped with the pre-configured IP address **10.0.0.53** and **adm/adm** as User Name/ Password.

Probably the network settings of your PC doesn't allow you to connect to the preconfigured IP address.

You can find on our website an utility called «eBuddy» that will allow you to change the IP address of the eWON even if your PC is not on the same IP address range.

eBuddy : <u>http://www.ewon.biz</u> (Support/Download Software)

To change the IP address of your eWON using eBuddy, follow the steps below:



- Launch the eBuddy application (eBuddy.exe)

- Click on the «Set IP address» link

IP Address Wizard	×
Welcome to the IP Address Wizard Which eWON would you like to configure?	<b>ewon</b>
≦erial Number:	Browse
< Rer	Next > Cancel
< <u>B</u> ack	Next > Cancel

Serial Number 🔺	Device Type	IP Address	OK
0508-0001-89	eWON 4002	10.0.120.70	
0508-0003-86	eWON 2001	10.0.120.72	Cancel
0508-0003-88	eWON 4001	10.0.120.11	
0508-0004-88	eWON 4001	10.0.120.71	
0517-0002-89	eWON 4002	10.0.10.92	<u>R</u> efrest
0537-0009-86	eWON 2001	10.0.100.27	
0608-0001-73	eWON 4101	10.0.100.91	
0610-0002-73	eWON 4101	192.168.1.5	
0616-0001-73	eWON 4101	10.0.120.101	
0633-0001-68	eWON 2001 MPI	10.0.120.53	
0638-0001-74	eWON 2005	10.0.120.105	



- Enter the eWON serial number in the **Serial Number** field if you know it, or click on the Browse button. In this case, the dialog box «Select an eWON» will appear showing you all the eWON existing on your Network.

IP Address Wizard	IP Address Wizard	×
Welcome to the IP Address Wizard Which eWON would you like to configure?	IP Address Here you can specify the new IP settings	<b>WON</b>
Serial Number: 0633-0001-68 Browse	Serial Number:         0633-0001-68           IP Address:         192 . 168 . 0 . 2           Subnet Mask:         255 . 255 . 255 . 0	
< Back Next > Cancel	< <u>B</u> ack	Next > Cancel

- Once the Serial Number entered, click Next.
- Set the new IP Address and the Subnet Mask.
- Click on Next to launch the update and wait for the eWON to reboot:

IP Address Wizard	×	IP Address Wizard	×
Update of remote device	<b>ewon</b>	Update of remote device	<b>ewon</b>
<ul> <li>Update request sent successfully.</li> <li>Please wait while the eWON reboots</li> </ul>		<ul> <li>Update request sent successfully.</li> <li>eWON updated successfully.</li> </ul>	
< <u>B</u> ack	[ Finish Cancel	< <u>B</u> ack	[ Finish Cancel

- When done, click on **Finish** to exit from the IP Address Wizard.



### **eWON** configuration for Remote Connection

The remote connection we will use in this example is a "Direct Phone Connection". This connection consists in calling the eWON using a standard modem to set up a PPP (point to point) connection. For this, we need to configure the eWON as PPP server. eWON will then pick up the phone, authenticate the caller and assign an PPP IP address to the eWON and to the PC for the remote connection.

For our example we will assume to have a layout and address settings as described in the following picture:





In this manual we explain the Teleservice using a direct phone connection. Just keep in mind that with eWON you can also make Teleservice using other connection types like Internet connection, GPRS connection, VPN connection or using Callback features.

#### Accessing your eWON

Accessing your eWON is very simple:

- Enter the IP address of your eWON in the address bar of your Web Browser (Internet Explorer, ...): <u>http://10.0.053</u> or <u>http://192.168.0.2</u> in our example.

Connect to 10	).0.0.53 <b>? ×</b>
<b>R</b>	G.
eWON	
User name:	<b>1</b>
Password:	
	Remember my password
	OK Cancel



- On the «Connect to» popup page enter adm (User Name) /adm (Password) then **OK**.

You are now navigating on your eWON2001.



The menu bar on the top of the main page allows you to navigate through the different display and configuration pages of your eWON.

### eWON PPP connection configuration

The eWON PPP configuration page can be reached on the web page (starting from the main page, see above) following the link:

Configuration  $\rightarrow$  System Setup  $\rightarrow$  Communication  $\rightarrow$ Network Connections  $\rightarrow$  Modem  $\rightarrow$  Incoming

ewon	Ta Seri	g Setup pt Setup	System Setup Users Setup		IO Server ( Pages L	Config .ist	Main Menu
General		Commu	nication		<u>Storage</u>		02/06/2006 15:48:23
COM Config     Second State     Second     Second State     Second State     Second State     Second St	PPP incoming Conn PPP Server Setup	ection			Server enabled		
- 📑 Eth1 (LAN)	eWON PPP server IF	o address	202.0.0.240				
E- 🗞 Network connections	PPP Client IP addres	5	202.0.0.1				
Ethernet	Enable protocol com	pression					
🖃 🐌 Modem	Use incoming for out	going				Connected client is	a gateway
Incoming	Number of rings bef	ore modem answers	1			Default = 0	
E-10 Outgoing	Idle time before han	ging up	240	seconds			
- B Server1	Reset eWON if no in	coming connection after	0	Hours		0 = disable watche	log.
📒 Server2 E 👢 Networking Config				Upd	ate		

- Check the Server enabled box for the PPP Incoming Connection.
- Set the eWON PPP server IP address to 202.0.0.240.
- Set the **PPP client IP address** to 202.0.0.1.
- Enable the protocol compression.
- Let the other items unchanged.
- Click Update.



### eWON MPI Interface configuration

To configure the eWON MPI Interface open the **S73&400 IOServer settings** page by following the link:

C	Configuration $\rightarrow$ IO Server Config					
<b>○</b> (¢		Tag Setup Script Setup	System Setup Users Setup	IO Server Config Pages List	Main Menu	
IO Server	MODBUS CEdit MEM EWON MODBUS NETMPI DFI FINS ABLOGIX \$738400 \$7200 QWAVE	Clear	<u>Global Config</u> Select an IO Server		02/06/2006 11:02:13	

- Select the **S73&400** in the IO Server list. The following page appears:

<b>WON</b>	Tag Setup	System Setup	IO	Server Config	Main Menu
awon ewon	Script Setup	Users Setup		Pages List	
IO Server: 5738400 💌 Edit	<u>Clear</u>	Global Conf	ia -		09/11/2006 04:12:04
573 & 400 IO Server & Gateway se	ettings				
Gateway Configuration					
Destination MPI Node:	destination MPI Node			0126,default: 2	
MPI Setup					
Baud Rate:	187500 💌	Default 187500			
Reply Timeout:	MS	5050000, default: 3000			
MPI Address:	0	Device address of eWON on MPI link (012	26, default: 0)		
MPI Highest Station Address:	31 💌	Default: 31			
Topic A :	Enabled				
Topic Name:	A				
Global Device Address:		MPI, destination MPI Node or ISOTCP, ISOTCP address			
Poll Rate	MS	Default: 2000			
Topic B :	Enabled				
Topic Name:	В				
Global Device Address:		MPI, destination MPI Node or ISOTCP, ISO	TCP address		
Poll Rate	MS	Default: 2000			
Topic C: Enabled					
Topic Name:	c				
Global Device Address:		MPI, destination MPI Node or ISOTCP, ISO	TCP address		
Poll Rate	MS	Default: 2000			
		Update Config	Cancel		

- Set the **Baud Rate** to the MPI transmission rate of your MPI Network (187500)
- Set the MPI address to the MPI address of your eWON on the MPI Network (0)
- Set the MPI Highest Station Address in relation to your MPI Network layout (31)
- Click the Update Config button on the bottom of the page

Your eWON MPI interface is now configured.



### eWON connection on the MPI Network

he MPI port of the eWON dentifiable by its blue squa urrounding the gender-cha	Power User Serial MDM Link Act	
Specification	Value	
Physical mode	MPI	HERN
Speed	<ul> <li>19.2 kBauds</li> <li>187.5 kBauds</li> <li>1.5 MBauds</li> </ul>	
Polarisation	680 Ohms (selectable)	
Termination	120 Ohms (selectable)	
	1	

Depending on the layout of your MPI network, you will have to activate or inactivate the polarization and termination of your eWON on the MPI network.

The configuration of the termination and polarization is done by a set of 4 dip switches located on the left side of the eWON housing.

Available dip switch positions:

Positions	Mode	
4 3 2 1 OFF ON	MPI WITH polarisation and termination resistors	all dip switches ON
4 3 2 1 OFF ON	MPI WITHOUT polarisation and termination resistors	dip switch 1 & 2: ON dip switch 3 & 4: OFF

To connect the eWON on your MPI Network:

- ➔ Power off the eWON
- → Connect the eWON MPI port to the MPI network using a standard Profibus cable
- $\rightarrow$  Power on the eWON.



## eWON MPI connection verification

To check if the eWON MPI interface is correctly configured and connected to your MPI network you can reopen the **S73&400 IOServer settings** page by following the link:

Configuratio	on $\rightarrow$ IO Server	Config		
<b>OWON</b>	Tag Setup	System Setup	IO Server Config	Main Menu
ewon	Script Setup	Users Setup	Pages List	
IO Server: MODBUS 🗨 Edit	<u>Clear</u>	<u>Global Config</u>		02/06/2006 11:02:13
MEM EWON MODBUS NETWFI DFI FINS ABLOGIX 57884000 57200 QWAVE		Select an IO Server		

- Select the **S73&400** in the IO Server drop down list. The following page appears:

<b>ewon</b>	Tag Setup	System Setup	IO Server Cor	fig Main Menu			
d ewon	Script Setup	Users Setup	Pages List				
IO Server: 5738400 💌	<u>Edit</u> <u>Clear</u>	<u>Global Conf</u>	ia	09/11/2006 04:13:20			
573 & 400 IO Server & Ga	573 & 400 ID Server & Gateway settings						
Gateway Configuration							
Destination MPI Node:	destination MPI Node		0126,de	fault: 2			
MPI Setup							
Raud Date:	187500	Default 187500					

- Click on the «destination MPI Node» link to open the «MPI Status Info» popup:

				Sta	atus	of ne	ighb	our N	1PI s	tatio	ns				
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127

This window will show you the different MPI devices detected by the MPI chip of the eWON. The detected MPI devices are represented with a green square.

If the status table displays only the MPI address of your eWON, then probably the eWON is not connected to the network.

If the table doesn't display any MPI addresses, then probably the MPI setup parameters for your eWON are not correct. Please check the baud rate settings and verify if eWON is not using an already used MPI address.



## **Step7<sup>®</sup> configuration for the eWON Teleservice**

In the Step7<sup>®</sup> program, open your existing project or create a new project and follow the explications below:

### Set the PG/PC Interface

Options $\rightarrow$ Set PG/PC Ir	nterface
Set PG/PC Interface	
Access Path	
Access Point of the Application:	
S70NLINE (STEP 7)> TCP/IP(Auto) ->	
(Standard for STEP 7)	
Interface Parameter Assignment Used: TCP/IP(Auto) -> Properties	
TCP/IP → AMD PCNET Family PCI     Diagnostics	
Copy  Copy  Copy  Dejete	
(Assigning Parameters for the IE-PG access to your NDIS CPs with TCP/IP Protocol (RFC-1006))	
Interfaces	
Add/Remove: Sele <u>c</u> t	
Cancel Help	

- Select the *TCP/IP interface* that you are using on your PC and click **OK**. In our example we chose the TCP/IP(Auto) interface.

- Click on the **Properties...** button to show up the properties of the selected interface.

Properties - TC	CP/IP(Auto) ->	×
TCP/IP network	IE-PG Access	
The IP address different subnet additional tempo	as listed here are needed by STEP7 if the node is in a than the local IP address for the PG. STEP 7 creates rary IP addresses on the local PG/PC for this purpose.	
Do not assigned	gn IP addresses automatically	
C Assign IP ac	ddresses unique to the project	
IP address S	lubnet mask   Network address   fint IP address   last	
<		
ОК	Cancel Help	

- Open the **IE-PG Access** tab and select **«Do not assign IP addresses automatically**».

- Click **OK** to close the properties page.
- Back on the «Set PG/PC Interface» window, click OK to set the PC/PG interface.





- Click OK to accept the changes.

### Define the eWON as Gateway in the Network Configuration

- 1) Download the «eWON gateway station file for STEP7®» (eWON.cfg) from our web site (http://www.ewon.biz (Support /Documentation /Technical notes -Miscellaneous)).
- 2) Open the Network Configuration (NetPro) window of your Step7® project :

	Options $\rightarrow$ Configure Network	
C	Image: State Stat	
	MPI(1) MPI SIMATIC 300(1) SIMATIC 400(1) CPU CP 314 343-1 5 2 2 2	Eind: Selection of the network PROFIBUS DP PROFIBUS PA PROFIBUS PA Stations Subnets

In our example there is one S7-300 and one S7-400 on the MPI network.

3) Insert the eWON gateway station file you downloaded just before.

	Edit $\rightarrow$ Import	
In	mport	X
	C Reference file	
	Export file of a station	
	Import File C:\TempIO\eWON.cfg	Browse
1	OK Cancel	Help

- Browse to select the eWON.cfg file and click OK.

The eWON gateway will now be displayed in your network layout:





If you have problems with the importation of the eWON.cfg file refer to appendix 1 of Technote 29 explaining how to create the **«eWON gateway station file for STEP7®»** from scratch.

4) Link the MPI interface of the eWON to the MPI network.

To do this, click on the red square of the eWON and drag it to the MPI network of your S7 PLC.



- Open the MPI interface of the eWON by a double-click on the red square and check if the MPI address, the transmission rate and the Subnet-ID are correctly set. (Use the Properties... button for details)



- Click OK to close the Properties window.
- 5) Configure the Ethernet Interface of the eWON Gateway.
  - Open the Ethernet interface of the eWON by a double-click on the green square.
  - Don't check the «Set MAC address / use ISO protocol»



Propriétés - Général I	IE	Objets de réseau
Général Options PRO	FINET Diagnostic	Dragniétáe Interface Ethornet Cánéral IE (80/84)
Désignation abrégée :	Général IE	
	Substitut d'un module Industrial Ethe Controller, ISO, TCP/IP, liaisons S7, NET CD 11/2003 SP1	Général Parametres
Référence/Firmware	IE_CP / V6.2.1	Adresse MAC :
Nom :	IE General	Protocole IP utilisé
Interface Type : Ethe Adresse : 202. Connectée : Oui	rmet 0.0.240 Propriétés	Adresse IP : 202.0.0.240 Masque 255.255.0 Sous-réseau : 255.255.0 Sous-réseau :
Commentaire :		··· Non connecté ···         Nouveau           Ethernet(1)         Propriétés
ОК		Effacer
		OK Annuler Aide

- In the **IP address** field, enter the IP address of the eWON which will be used for the remote connection.

**IMPORTANT** Because you will connect to the eWON using a dialup connection you must enter here the **PPP IP address** of your eWON: **202.0.0.240** (as defined in chapter 2).

- For the **Subnet mask** enter the mask corresponding to the IP address you specified for the eWON (255.255.255.0)

- Click OK.

6) Add a PG/PC Station to the network layout.



- Double-click on the PG/PC Station.



- MPI(1) MPI SIMATIC 400(1) SIMATIC 300(1) CPU 314 CPU 416-2 CP 343ì :**-**eWON 2 2 eWON Gateway Ethernet Industrial Ethernet PG/PC(1)
- The PG/PC will be added to the network:

- Right click the PG/PC and click on Object Properties...
- Select the Interfaces tab :

roperties -PG/PC	n   Accimum		
Name	Type	Address	Subnet
		o	5.44
<u>. N</u> ew	r'joperties	Igenerate LUB	Uejete
OK			Cancel Help

- Click New.





- Select the Industrial Ethernet, and click OK.

Properties - Ethernet interface	X
General Parameters	
Set MAC address / use ISO protocol	
MAC address:	If a subnet is selected, the next available addresses are suggested.
☑ IP protocol is being used	
<u>IP address:</u> 192.168.0.1	Gateway
Subnet mask: 255.255.255.0	C Use mitter
	Address: 192.168.0.1
Subnet:	
not networked eWON Gateway Ethemet	<u>N</u> ew
	P <u>r</u> operties
	Delete
ОК	Cancel Help

- Deselect the «Set MAC address / use ISO protocol»
- Set the IP address and the subnet mask of your PC.
- Check the **«Do not use router**» box.

- In the Subnet window on the bottom of the page select the network on which the eWON is connected to: **eWON Gateway Ethernet** 

- Click **OK** to close the Properties Ethernet interface window.
- Click **OK** to close the Properties PG/PC window.

Your network layout should now looks like this:



- 7) Assign the PG/PC interface.
  - Right click the PG/PC picture and click on Assign PG/PC

The Assignment tab of the Properties -PG/PC page will show up:



Configured Inter	faces:	Subast		
Ethemet port(1	I) Industrial Ethernel	t eWON Gateway	y Ethernet	
,				
Interface Param	eter Assignments in the	e PG/PC:		
TCP/IP(Auto)				
TCD (ID(A, A))	> 1004 Net Adapter		<u> </u>	
TCP/IP(Auto) TCP/IP(Auto)	-> 1394 Net Adapter -> Realtek RTL8139 F	a	<u>~</u>	
TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto)	-> 1394 Net Adapter -> Realtek RTL8139 F -> TAP-Win32 Adapter	a ∙V8	<ul> <li></li> <li></li> </ul>	<u>A</u> ssign
TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto)	-> 1394 Net Adapter -> Realtek RTL8139 F -> TAP-Win32 Adapter	ia ∙V8	<ul> <li>•</li> <li>•</li> </ul>	Assign
TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto)	-> 1394 Net Adapter -> Realtek RTL8139 F -> TAP-Win32 Adapter	ia rV8	×	<u>A</u> ssign Disconnect
TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto) Agsigned:	<ul> <li>&gt; 1394 Net Adapter</li> <li>&gt; Realtek RTL8139 F</li> <li>&gt; TAP-Win32 Adapter</li> <li>&gt; TAP-Win32 Adapter</li> </ul>	a v 8	S70nline a	<u>A</u> ssign Disconnect
TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto) Agsigned: Interface	<ul> <li>&gt; 1394 Net Adapter</li> <li>&gt; Realtek RTL8139 F</li> <li>&gt; TAP-Win32 Adapter</li> <li>&gt; March 12 Parameter ass</li> </ul>	ia rV8 ign Subnet	S70nline a	<u>A</u> ssign Disconnect
TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto) TCP/IP(Auto) Agsigned:	<ul> <li>&gt; 1394 Net Adapter</li> <li>&gt; Realtek RTL8139 F.</li> <li>&gt; TAP-Win32 Adapter</li> <li>Parameter ass</li> </ul>	ia rV8 ign Subnet	S70nline a	Assign

- In the **«Interface Parameter Assignments in the PG/PC**» select the TCP/IP interface you are using to connect to the Ethernet. (In our example **TCP/IP(Auto)**)

- Click the Assign button.

The following message could be displayed:



- Ignore the message and click OK

Properties -PG/PC				X
General Interfaces	Assignment			
Not Assigned Configured Interfact	es:			
Name	Туре	Subnet		
Interface Paramete	r Assignments in the F	G/PC:		
ISO Ind. Ethemet ISO Ind. Ethemet ISO Ind. Ethemet ISO Ind. Ethemet	<ul> <li>Realtek RTL8139</li> <li>TAP-Win32 Adapt.</li> <li>VMware Virtual Et</li> <li>VMware Virtual Et</li> </ul>	•••	<u>^</u>	Assign
A <u>s</u> signed:				Disconnect
Interface	Parameter assignm	Subnet	S7Online ac	
Ethernet port(1)	TCP/IP(Auto) ->	eWON Gat	Active	S70NLINE Access:
<	Ш		>	Active
ОК				Cancel Help

- Verify that the **Assigned** Interface is the Ethernet card and click **OK**.

Your network layout should now looks like this:





8) Compile and save the network layout

Network $\rightarrow$ Save and Compile					
Save and Compile					
Compile C Compile and check gverything C Compile changes only					
OK Cancel H	Help				

- Select the «Compile changes only» option.
- Click OK.

After compilation a popup will be displayed to inform you if the compilation was done with success or not.

The network layout should now looks like this:

MPI(1) MPI		
SIMATIC 300(1) CFU CP 343-1 5	SIMATIC 400(1) CPU 1DP H15-2 DP 2 2	eWON IEE CPU DP MPI/DP General 412-2
eWON Gateway Ethernet Industrial Ethernet		0 0
		PG/PC(1)

9) Close the NetPro window



### Establish the remote connection

On your PC you will need to create a Dial-up connection.

You can create a standard Dial-up connection in Windows using the «New Connection Wizard» or you can use eCatcher, a free downloadable program on our Website.

With eCatcher you can create and manage easily your different remote connections. For example with eCatcher you can configure your Dial-up connection to launch automatically the corresponding Step7<sup>®</sup> project once the Dial-up connection established.

eCatcher : <u>http://www.ewon.biz</u> (Support/Download Software)

#### Using the Windows Dial-up connection

- Click on your Dial-Up connection to open the «Connect» window:

Connect eWO	N_Gateway
<u>U</u> ser name:	adm
<u>P</u> assword:	•••
Save this us     Me only     Anyone v	er name and password for the following users: who uses this computer
D <u>i</u> al:	0238919999
Dial	Cancel Properties Help

- In the **User name** and **Password** fields enter a valid eWON user and password (adm/adm for example)

- Enter the phone number of the eWON and click on Dial

Connec	Connecting eWON_Gateway							
3	Dialing 0238919999							
	Cancel							

Once the connection established, the status of your Dial-up connection becomes connected.



### **Using eCatcher**

To create a new Dial-up connection in eCatcher follow the steps below:

- Launch the eCatcher application (eCatcher.exe)

Secatcher 1.0	
🌏 Connect 📓 Disconnect 📔 Show Log 🛛	Properties 🗙 🛄 -
Site A Phone # or Host Address	Status
eWONs - VPN	
Add an eWON	
eWONs - Dial-up	
Add a Dial-up entry	
eSync Servers	
Add an eSync Server	

- Click on «Add a Dial-up entry»

Dial-UD Notes	Action
Notes	
Name:	Company XXXX - Production YYYY
Connect using:	Conexant Intl HSFi V92 MiniPCI Modem
Phone Number	
<u>A</u> rea code:	Phone Number:
02	1234567
C <u>o</u> untry/regi	on code:
Belgium (32)	~
✓ Use <u>d</u> ialin	g rules
Login	
User name:	adm
Password:	•••
Password:	•••

- On the «Dial-up» tab, enter following information:

Name: a name to identify the Dial-up connection

Connect using: choose the Modem you will use on your PC

Phone Number: enter the phone number of your eWON. You can use or not the dialing rules defined on your PC.

Login: enter a valid eWON user and password (adm/adm for example)

- Go to the «Notes» tab:

This window will allow you to encode some information that will be useful for the remote connection. For example, the name of the involved Step7<sup>®</sup> project or the addresses of the PLC which can be reached through the remote connection, ...





- Go to the «Action» tab:



This window will allow you to configure the action that will be performed once the remote connection established.

For example to start automatically Step7<sup>®</sup> with the concerned project:

- Action performed upon connection: Start an external program
- Program filename: Use the «...» button to chose the Step7® program (S7tgtopx.exe)
- Program arguments: /e & full path of your Step7® project
- (for our example: /e "c:\program files\siemens\step7\s7proj\ewon\_mpi\ewon\_mpi.s7p"
- Click «OK» to close the Properties window

The Dial-up connection you created will now appear in the list of «eWONs -Dial-up».



Secatcher 1.0	
Connect 📓 Disconnect 📋 Show Log	Properties 🗙 🛄 -
Site 🔺	Phone # or Host Address Status
eWONs - VPN	
Add an eWON	
eWONs - Dial-up	
Add a Dial-up entry	
Company XXXX - Production YYYY	+32 (02) 1234567
eSync Servers	
Add an eSync Server	

#### To start the remote connection follow the steps below:

- Double-click on the eWON – Dial-up you want to open (Company XXXX – Production YYYY)

Connect	t Company X	XXX - Production YYYY 🛛 🔀
A	User name: Password:	adm •••
	Dial: Dialing from:	0 0 2 1234567 My Location
	Dia	al Cancel

- Click the «Dial» button to start dialing.

Once the PPP connection established, the Step7® project will start automatically.

In eCatcher, the active Dial-up connection will be checked in green color and the Status column will indicate the PPP server address (Connected: 202.0.0.240).

🍓 eCatcher 1.0 - Connected: Company XXXX - Production YYYY (202.0.0.240)							
🔇 Connect 🗾 Disconnect 📔 Show Log	Properties 🗙 🛄 -						
Site A	Phone # or Host Address	Status					
eWONs - VPN							
Add an eWON							
eWONs - Dial-up							
Add a Dial-up entry							
Company XXXX - Production YYYY	+32 (02) 1234567	Connected: 202.0.0.240					
eSync Servers							
Add an eSync Server							



## **Online Viewing**

In Step7<sup>®</sup> open your project and go Online.

#### $\textbf{View} \rightarrow \textbf{Online}$

SIMATIC Manager - eWON_N	SIMATIC Manager - eWON_MPI_Teleservice								
File Edit Insert PLC View Optic	e Edit Insert PLC View Options Window Help								
De Ba Xee	] 😰 跳 🖉 🖄 🖳 💁 🖳 🖫 📰 💼 < No Filter> 💽 🍞 跳 🗑 അ⊟ 🖿 😢								
🞒 eWON_MPI_Teleservice	🞒 eWON_MPI_Teleservice C:\Program Files\Siemens\Step7\s7proj\eWON_MPI								
eWON_MPI_Teleservice	SIMATIC 400(1)	SIMATIC 300	l(1) 🖳 eWON vay Ethernet	<b>ஹ்</b> PG/PC(1)	88 MPI(1)	😤 MPI(2)			
eWON_MPI_Teleservice -	- C:\Program Files	\Siemens\Step7	/\s7proj\eWON_MP						
eWON_MPL_Teleservice ■ SMATIC 400(1) ■ ST Program(1) ■ ST Program(1) ■ SMATIC 300(1) ■ ST Program(2) ■ SMATIC 300(1) ■ SMATIC 300(1)	System data           FC5           FC11           D8202           D8208           D8214           D8220           D8221           D8222           D8232           D8238           D8236           D8236           D8250           D8250           D8250           D8250           D8268           D8274           D8268           D8274           D8268           D8274           D8268           D8274           D8280           D8280           D8280           D8280           D8280           D8280           D8280           D8280           D8283           SFB4	OB1     OB1     OB1     OB203     OB203     OB203     OB204     OB204     OB204     OB227     OB223     OB223     OB225     OB251     OB255     OB25     OB255     OB255	<ul> <li>FC1</li> <li>FC2</li> <li>DB2</li> <li>DB210</li> <li>DB210</li> <li>DB222</li> <li>DB2240</li> <li>DB234</li> <li>DB234</li> <li>DB252</li> <li>DB256</li> <li>DB268</li> <li>DB288</li> <li>SFE0</li> <li>SFE032</li> </ul>	<ul> <li>□ FC2</li> <li>□ FC3</li> <li>□ D8100</li> <li>□ D8205</li> <li>□ D8231</li> <li>□ D8233</li> <li>□ D8247</li> <li>□ D8247</li> <li>□ D8247</li> <li>□ D8253</li> <li>□ D8253</li> <li>□ D8253</li> <li>□ D8253</li> <li>□ D8253</li> <li>□ D8265</li> <li>□ D8271</li> <li>□ D8265</li> <li>□ D8271</li> <li>□ D8283</li> <li>□ D8285</li> <li>□ D8285</li> <li>□ SF81</li> <li>□ SF851</li> <li>□ SF852</li> </ul>	<ul> <li>FC3</li> <li>FC3</li> <li>DB200</li> <li>DB200</li> <li>DB212</li> <li>DB214</li> <li>DB234</li> <li>DB236</li> <li>DB254</li> <li>DB254</li> <li>DB254</li> <li>DB254</li> <li>DB254</li> <li>DB272</li> <li>DB276</li> <li>DB272</li> <li>DB276</li> <li>DB272</li> <li>DB276</li> <li>DB278</li> <li>DB278</li> <li>DB236</li> <li>SFB2</li> <li>SFB2</li> <li>SFB53</li> </ul>	<ul> <li>□ FC4</li> <li>□ FC10</li> <li>□ DE201</li> <li>□ DE207</li> <li>□ DE213</li> <li>□ DE213</li> <li>□ DE233</li> <li>□ DE234</li> <li>□ DE244</li> <li>□ DE244</li> <li>□ DE245</li> <li>□ DE245</li> <li>□ DE245</li> <li>□ DE247</li> <li>□ DE273</li> <li>□ DE274</li> <li>□ DE273</li> <li>□ DE275</li> <li>□ DE273</li> <li>□ DE273</li> <li>□ DE274</li> <li>□ DE275</li> <li< th=""><th></th></li<></ul>			
	SFC6	SFC17	G SFC18	SFC19	SFC20	SFC21	~		



## **Tag Polling**

eWON disposes of several internal IOServers which allows you to poll tags on your PLC devices.

To poll a Tag on a S7-300 & 400 device, follow the steps below:

### Activate a Topic for IOServer S73&400:

- Open the S73&400 IOServer settings page by following the link:

C	onfigurati	on $\rightarrow$ IO Server	Config		
	EWON	Tag Setup Script Setup	System Setup Users Setup	IO Server Config Pages List	Main Menu
IO Server		<u>Clear</u>	Global Config		02/06/2006 11:02:13
	MEM EWON MODBUS NETMPI DF1 FINS		Select an IO Server		

- Select the S73&400 in the IO Server drop down list. The following page appears:

<b>WON</b>	Tag Setup		System Setup	IO	Server Config	Main Menu			
eWON	Script Setup		Users Setup		Pages List				
IO Server: 573&400 - Edit	<u>Clear</u>		Global Config		13/11/2006 10				
573 & 400 IO Server & Gateway se	573 & 400 ID Server & Gateway settings								
Gateway Configuration									
Destination MPI Node:	destination MPI Node				0126,default: 2				
MPI Setup									
Baud Rate:	187500 💌	Default	187500						
Reply Timeout:	MS	50.,500	00, default: 3000						
MPI Address:	0	Device a	ddress of eWON on MPI link (0126, default: 0)						
MPI Highest Station Address:	31 💌	Default:	31						
Topic A :	🗹 Enabled								
Topic Name:	A								
Global Device Address:	MPI,5	MPI, <u>de</u>	stination MPI Node or ISOTCP, ISOTCP address						
Poll Rate	1000 MS	Default:	2000						
Topic B :	Enabled								
Topic Name:	В								
Global Device Address:		MPI, <u>de</u>	stination MPI Node or ISOTCP, ISOTCP address						
Pol Rate	MS	Default: 2000							
Topic C :	Enabled								
Topic Name:	c								
Global Device Address:		MPI, <u>de</u>	stination MPI Node or ISOTCP, ISOTCP address						
Poll Rate	MS	Default: 2000							
			Update Config Cancel						

- Check the enable box for topic A
- Set the **Global Device Address** to MPI,# where # represents the MPI address of your PLC (MPI,5)
- Set the Poll Rate to 1000
- Click Update Config



### Create a Tag using IOServer S73&400

The creation of a Tag is done in the Tag Setup page.

<b>Configuration</b> $\rightarrow$ Tag Setup						
<b>NON</b>	Tag Setup	System S	Setup	IO Server Config	Main Menu	
a eWON	Script Setup	Users Setup		Pages List		
Delete Selected Tag	Create New Tag	(like first selected)	selected) Page: Default 💽 Update		01/06/2006 11:32:31	
🗘 L 🛛 Tag Name	Description	Туре	IO Server Topic		IO Address	
Select Crea	te New Tag					

The **Tag Setup** page appears. The page is composed of four parts that allow you to configure the Tag configuration fields (such as the Tag name and Tag Description, the Tag I/O Server Setup, the Tag visibility,...).

In this tutorial, we will only care about the Tag name and IO server.

CREWON ewon	Tag Setup Script Setup	System Setup Users Setup	IO Server Config Pages List	Main Menu
Identification				
Tag Name:	TestTag Page:	Default 💽		
Tag Description:			×	
I/0 Server Setup				
Server Name:	5738400 -	Topic Name:	A	
Address:	MWO	Туре:	Analog 🔹	Force Read Only:
eWCN value = IO Server Value * 1 + 0				

- Set the Tag Name to TestTag
- Set the Page to Default
- Set the Server Name to S73&400
- Set the Topic Name to A
- Set the Address to an accessible item address in your PLC (MW0)
- Set the **Type** to **Analog**
- Let the eWON value to 1 and 0

Click Add/Update Only

Now that we created the tag, we will check it's value.

Main Menu  $\rightarrow$  View I/O

The following page will be displayed:





To check if the new value has been correctly written to the PLC click on the **Page Update** button to read again the value in the PLC.



## Upload a program using Step7® and eWON MPI

To upload a program in Step7<sup>®</sup> using eWON MPI Teleservice you don't need to define the eWON first as Gateway in the Network Configuration (Netpro).

- 1) Start the Step7<sup>®</sup> application.
- 2) Create a new project in your Step7® application.

$\mathbf{File} \to \mathbf{New}$		
lew Project		l l
User projects Libraries Multi	projects	
Name	Storage path	<u> </u>
AXEL_PGM20060518	C:\Program File	es\Siemens\Step7\s7p
AXEL3	C:\Program File	es\Siemens\Step7\s7p
axel4	C:\Program File	es\Siemens\Step7\s7p
eWON 🛃	C:\Program File	es\Siemens\Step7\s7p
FMTest_MachineCoctail	C:\Program File	es\Siemens\Step7\s7p
FMTest_SiemensDemo	C:\Program File	es\Siemens\Step7\s7p
I EMTest SiemensDemo 1	P\Program File	Siamane\Stan7\e7r
Add to current multiproject		
Na <u>m</u> e:		<u>T</u> ype:
MyProject		Project
		E Libraru
Storage location		- Tennely
C:\Program Files\Siemens\Step7	^\s7proj	Browse
1		
OK	Ca	ancel Help

Enter the Name of the new Project and click OK.

3) Set the PG/PC Interface

#### **Options** $\rightarrow$ **Set PG/PC Interface**

Select the TCP/IP interface you are using to connect to the eWON and click OK. (In our example TCP/IP(Auto))



Set PG/PC Interface	
Access Path	
Access Point of the Application: S70NLINE (STEP 7)> TCP/IP(Auto) ->	
(Standard for STEP 7)	
Interface Parameter Assignment Used:	
TCP/IP(Auto) -> Properties	
Image: Point of the state of the	
(Assigning Parameters for the IE-PG access to your NDIS CPs with TCP/IP Protocol (RFC-1006))	Warning
Interfaces	The following access path(s) was (were) changed:
Add/Remove: Select	S7ONLINE (STEP 7) => TCP/IP(Auto) ->
Cancel Help	Cancel Help

Click **OK** to confirm the changes

4) Establish the remote connection to the eWON

Use eCatcher for example to dial the eWON2001.

5) Upload the program in Step7®

$PLC \rightarrow$	Upload	Station	to PG

Select Node A	ddress			×	
Which module do you want to reach?					
<u>R</u> ack: <u>S</u> lot:	0 ×				
Target Station	Target Station: C Local C Can be reached by means of gateway				
Enter conne	ction to target station:		1st gateway		
Туре	Address	S7 subnet ID	IP address		
MPI	2	0045-0001	10.0.120.40		
Accessible No	des				
		⊻iew			
ОК	]		Cancel Help		

- Set the Rack and Slot number corresponding to the CPU of the PLC to reach (**Rack**:0, **Slot**:2)

- Check the Target Station «Can be reached by means of gateway» option.



- Fill the «Enter connection to target station» with following values:

- Type: MPI
- Address: MPI address of your PLC (2)
- S7 subnet ID: the MPI Subnet ID of your PLC (0045-0001)
   Fill the «1<sup>st</sup> gateway» with following value:
- IP address: the eWON Dial-up (PPP) address = 202.0.0.240

- Click **OK** to start the upload

After upload is completed, the following window will appear:

SIMATIC Manager - MyProject					
File Edit Insert PLC View Option	s Window Help				
D 😂 📰 🐖 🙏 🖻 🛍 🖻 💁 📴 🎬 🏥 主 < No Filter > 💽  🛂 😫 🗐 😭					
MyProject C:\Program Files\Siemens\Step7\s7proj\MyProjec					
<ul> <li>→ MyProject</li> <li>→ SIMATIC 300(1)</li> <li>→ CPU 312C</li> <li>→ S 27 Program(1)</li> <li>→ Sources</li> <li>→ Blocks</li> </ul>	System data	<ul> <li>OB1</li> <li>DB1</li> <li>DB5</li> <li>DB9</li> <li>DB13</li> <li>DB23</li> </ul>	<ul> <li>OB35</li> <li>DB2</li> <li>DB6</li> <li>DB10</li> <li>DB14</li> <li>DB52</li> </ul>	<ul> <li>OB40</li> <li>DB3</li> <li>DB7</li> <li>DB11</li> <li>DB17</li> </ul>	

For the Online connection Step7<sup>®</sup> will use by default the last configured path to connect to the S7 PLC.

That's why you don't need to setup the Network configuration in this case.

Thus, to view your program Online, just open the Online view in Step7<sup>®</sup>.

 $View \rightarrow Online$ 



Revisions	_ /	
Revision Level	Date	Description
1.0	2008-05-05	First release.
1.1	2008-09-23	Template Update
1.2	'2013-01-17	Snapshot updated page 14 (IP address mismatch)

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