



**GETTING STARTED
WITH
DEVICETESTER FOR
NTCIP**

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Getting Started With DeviceTester for NTCIP

To install DeviceTester for NTCIP do the following:

1. Insert the CD into the CD-ROM drive.
2. Select **Start**.
3. Select **Run**.
4. Select **Browse**.
5. Select the **CD-ROM** drive from the “**Look In**” drop down list.

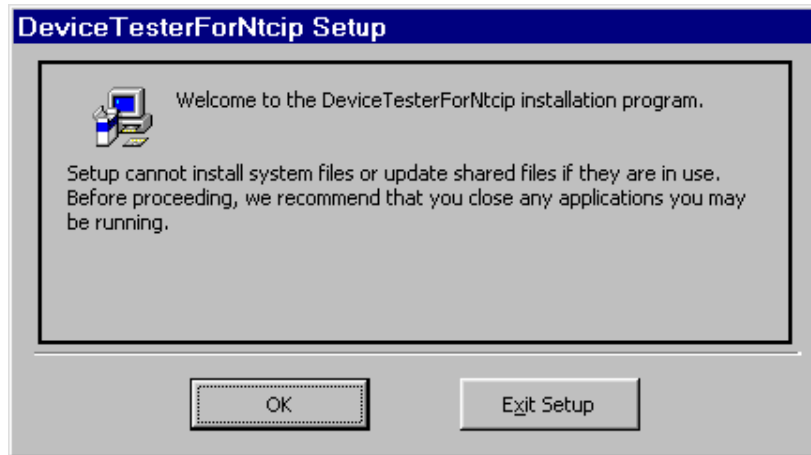
- If you have Microsoft Access version 2000 or later installed on your computer, you may choose to install DeviceTester without Access Runtime. Intelligent Devices, Inc. suggests that you install DeviceTester without Access Runtime first, and then check to see if DeviceTester is working properly. You will find instructions on installing DeviceTester without Microsoft Access Runtime in this manual under the heading **Installing DeviceTester for NTCIP Without Microsoft Access Runtime** below. You will find instructions to verify that DeviceTester is working properly under the section **After Installing DeviceTester for NTCIP**.
- If you have a prior version of Microsoft Access or Microsoft Access is not installed on your computer, you must install DeviceTester with Access Runtime. You will find instruction on installing DeviceTester with Access Runtime below.
- If you are installing DeviceTester for NTCIP on a computer that uses Windows® 2000 or Windows® 1998, you must install **MDAC_typ version 2.7**, which is included on the Device Tester installation disk. Installing **MDAC_typ version 2.7** will update your system files and allow DeviceTester to work properly. You will find instructions on installing MDAC_typ version 2.7 below. It is suggested that you install this first, before installing DeviceTester.
- DeviceTester works best on a 1024x768 screen resolution.

Installing DeviceTester for NTCIP without Microsoft Access Runtime:

1. Select **Start**.
2. Select **Run**.
3. Select **Browse**.
4. Select the **CD-ROM** drive from the “**Look In**” drop down list.
5. Select **NoRuntime build 1-6**.
6. Click **Open**.
7. Select **Setup.exe**.
8. Click **Open**.
9. Click **OK**.

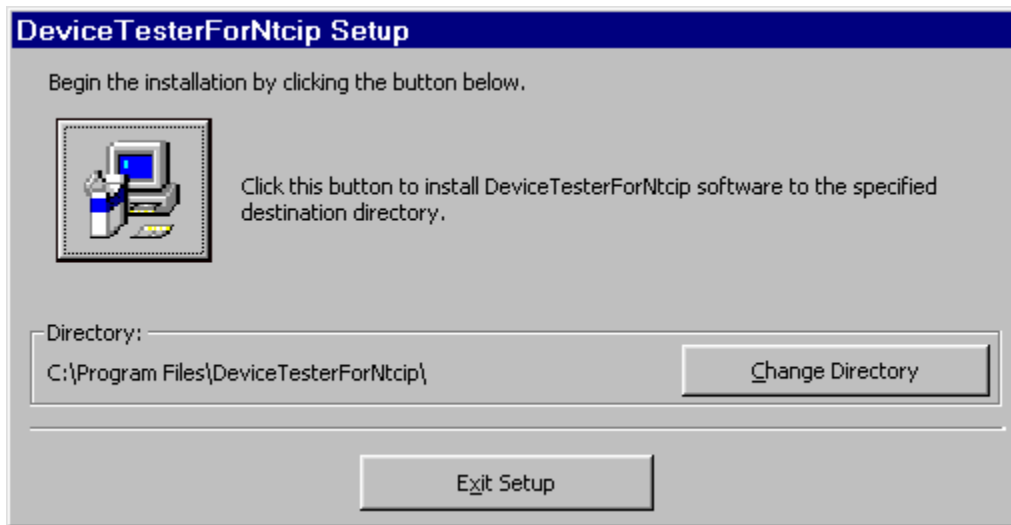
At this point, the DeviceTester for NTCIP installation process should begin on your computer. Follow the on screen prompts to complete the installation process.

Screen Prompt #1



Close any applications you have running and click **OK**.

Screen Prompt #2



Begin the installation of DeviceTester for NTCIP by clicking on



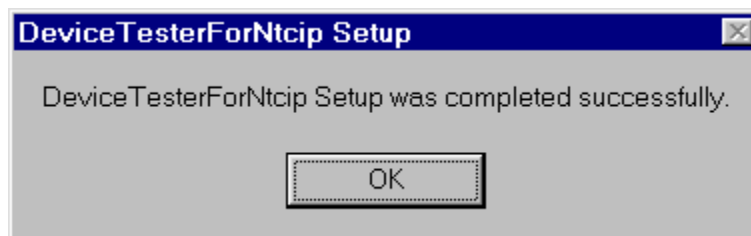
Screen Prompt #3



Click on **Intelligent Devices DeviceTester** to add DeviceTester to the appropriate Program Group box.

Click **Continue**.

Screen Prompt #4



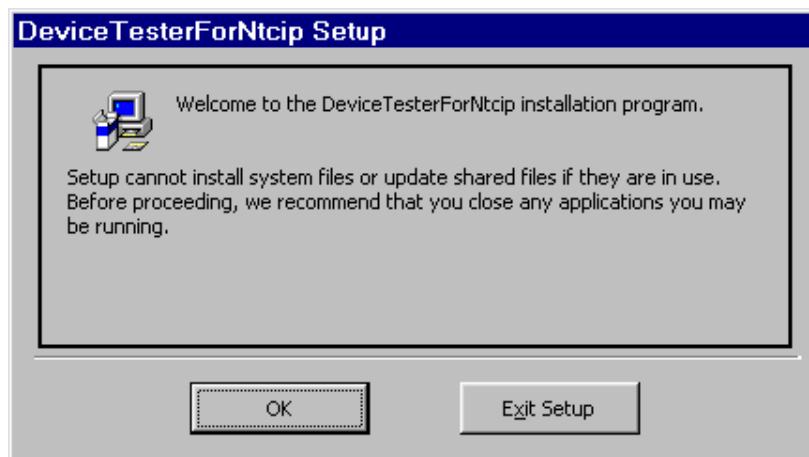
Click **OK** here to acknowledge that DeviceTester for NTCIP was installed successfully on your computer.

Installing DeviceTester for NTCIP with Microsoft Access Runtime

1. Select **Start**.
2. Select **Run**.
3. Select **Browse**.
4. Select the **CD-ROM** drive from the “**Look In**” drop down list.
5. Select **Runtime build 1-6**.
6. Click **Open**.
7. Select **Setup.exe**.
8. Click **Open**.
9. Click **OK**.

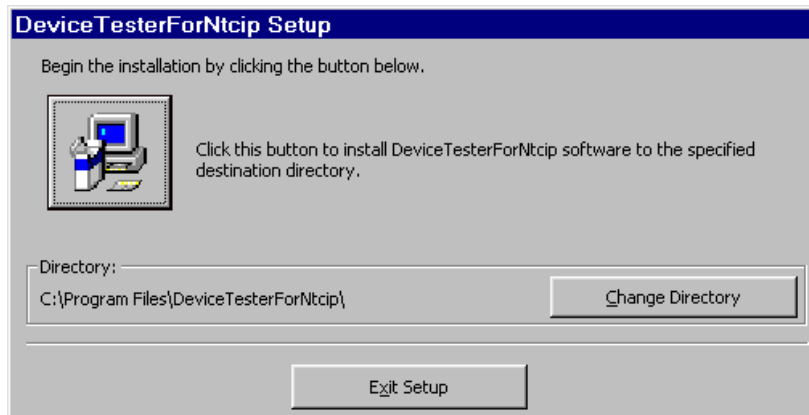
At this point, the DeviceTester for NTCIP installation process should begin on your computer. Follow the on screen prompts to complete the installation process.

Screen Prompt #1



Close any applications you have running and click **OK**.

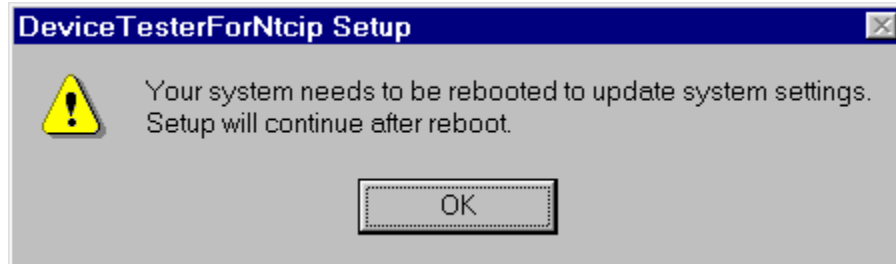
Screen Prompt #2



Begin the installation of DeviceTester for NTCIP by clicking on

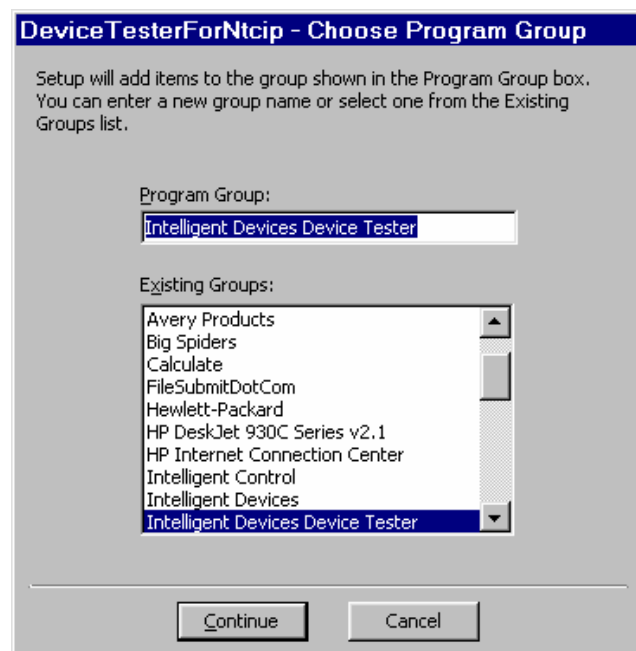


Screen Prompt #3



Click **OK** here and allow your computer to reboot to update your system settings. This may happen several times on Windows® 98 systems.

Screen Prompt #4

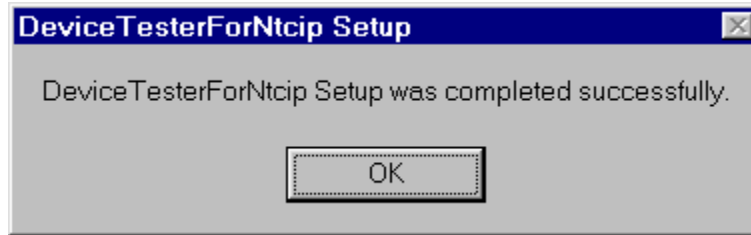


Click on **Intelligent Devices DeviceTester** to add DeviceTester to the appropriate Program Group box.

Click **Continue**.

→ If you are installing DeviceTester on a Win98 or Win2000 system, you may get a Runtime Error 75 Path/File access error. If this happens simply bypass the error by clicking OK. The DeviceTester setup will then tell you that DeviceTester was not properly installed, however this message can be ignored.

Screen Prompt #5



Click **OK** here to acknowledge that DeviceTester for NTCIP was installed successfully on your computer.

Installing MDAC typ Version 2.7

Click **Start**.

Click **Run**.

Click **Browse**.

Select the **CD-ROM** drive from the “**Look In**” drop down list.

Select **MDAC**.

Click **Open**.

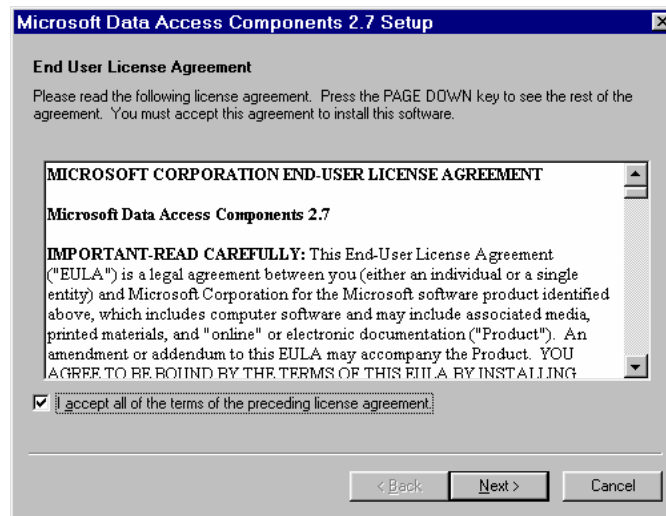
Select **MDAC_TYP2.7Refresh.EXE**.

Click **Open**.

Click **OK**.

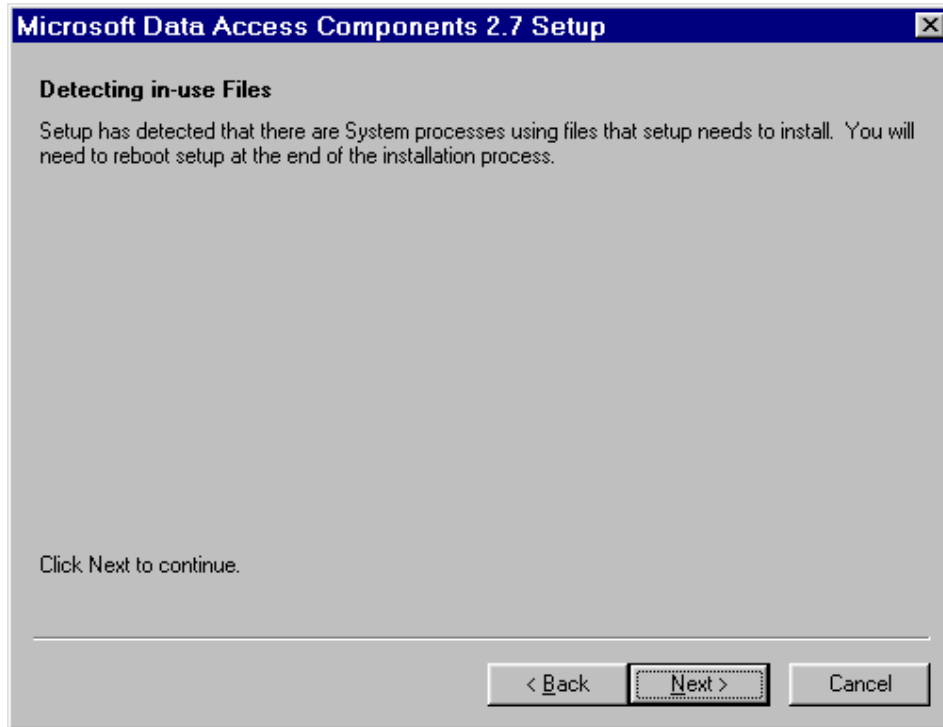
At this point, the MDAC installation process should begin on your computer and you will follow the on- screen prompts to complete the installation process.

Screen Prompt #1



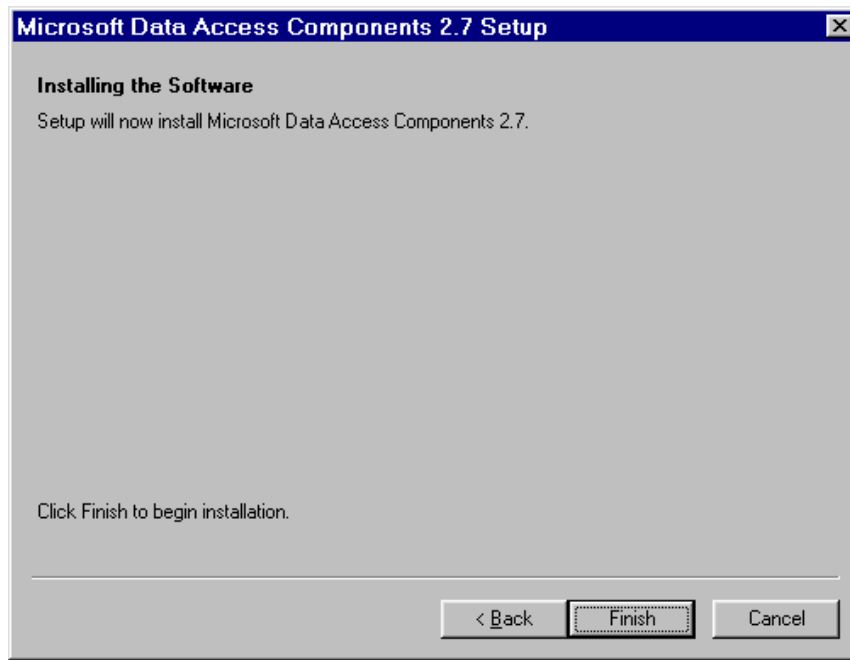
Click in the box provided beside “I accept all of the terms of the preceding license agreement”, and then click **Next**.

Screen Prompt #2



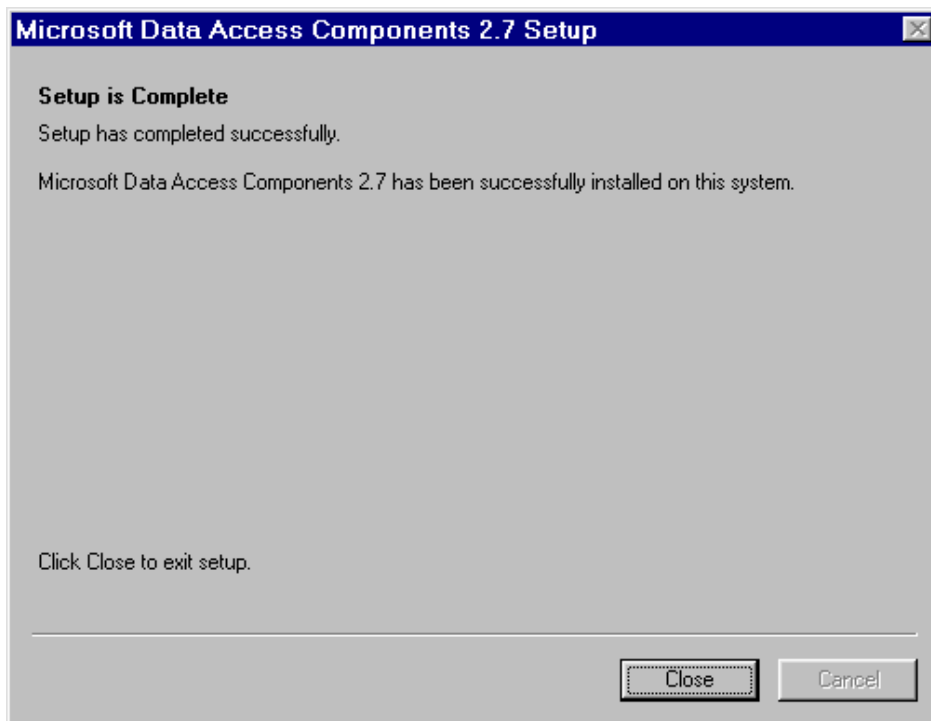
Click **Next** to continue setup.

Screen Prompt # 3



Click **Finish** to install MDAC_typ Version 2.7.

Screen Prompt #4



Click **Close** to acknowledge that MDAC_typ version 2.7 was installed successfully on your computer.

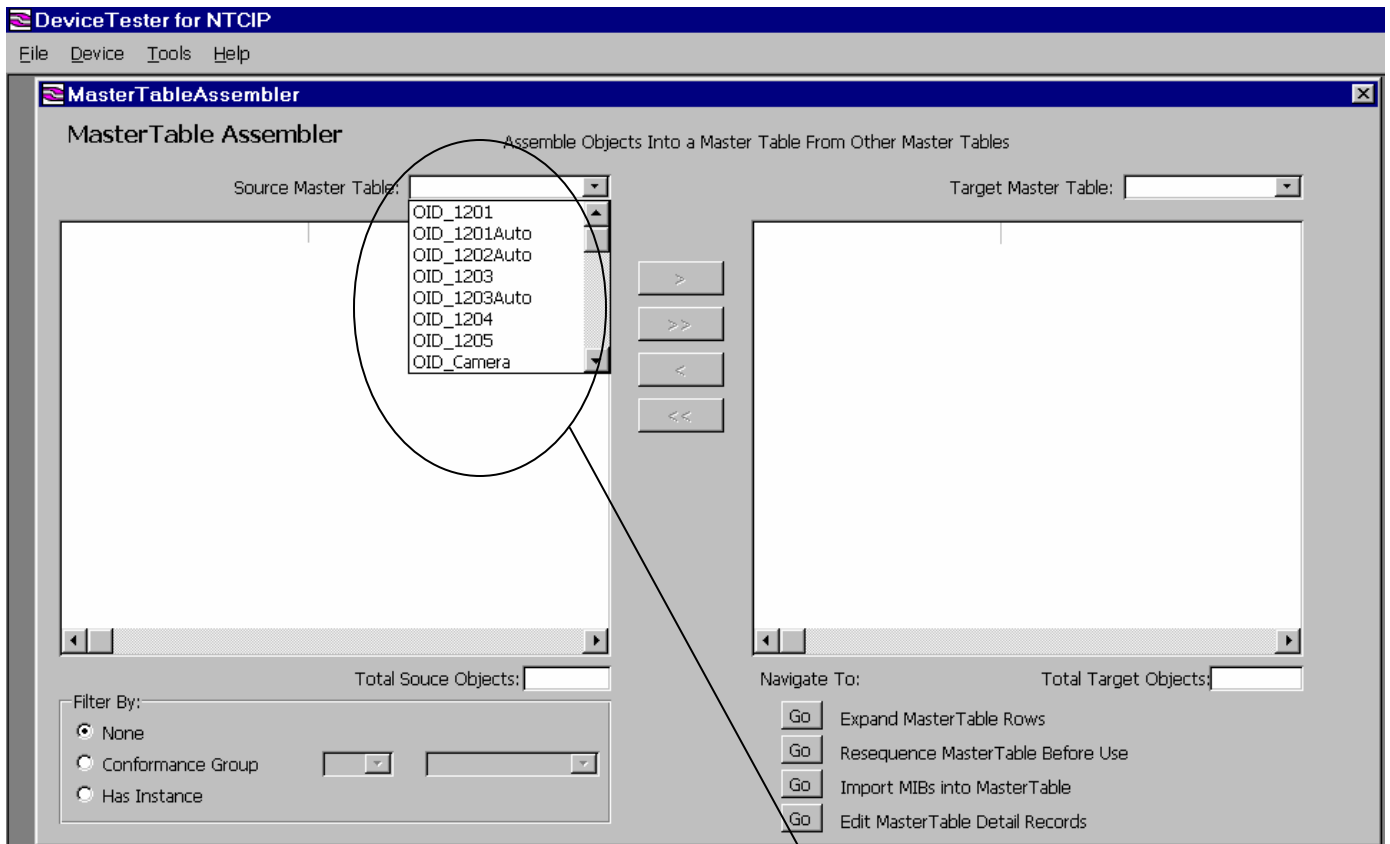
Restart your computer to refresh your system.

After Installing DeviceTester for NTCIP

It is important that you take the time to be sure that you have correctly installed DeviceTester for NTCIP on your computer. As a quick check, please follow the three easy steps listed below.

1. From the Main Menu Bar select **Tools**.
2. Select the **Make Master Tables** menu item.
3. Click the ▼ (down) arrow at the option **Source Master Table**.

→ If you do not see a list of tables, you probably have not installed DeviceTester for NTCIP correctly. You will need to exit out of DeviceTester and update your system files by installing **MDAC_typ version 2.7**, which is included on the DeviceTester CD.



Provided you see a list of table names, DeviceTester is working properly here.

Starting DeviceTester for NTCIP

Once DeviceTester is installed correctly on your computer, you will be able to access the software by clicking the shortcut on your desktop to open the program.

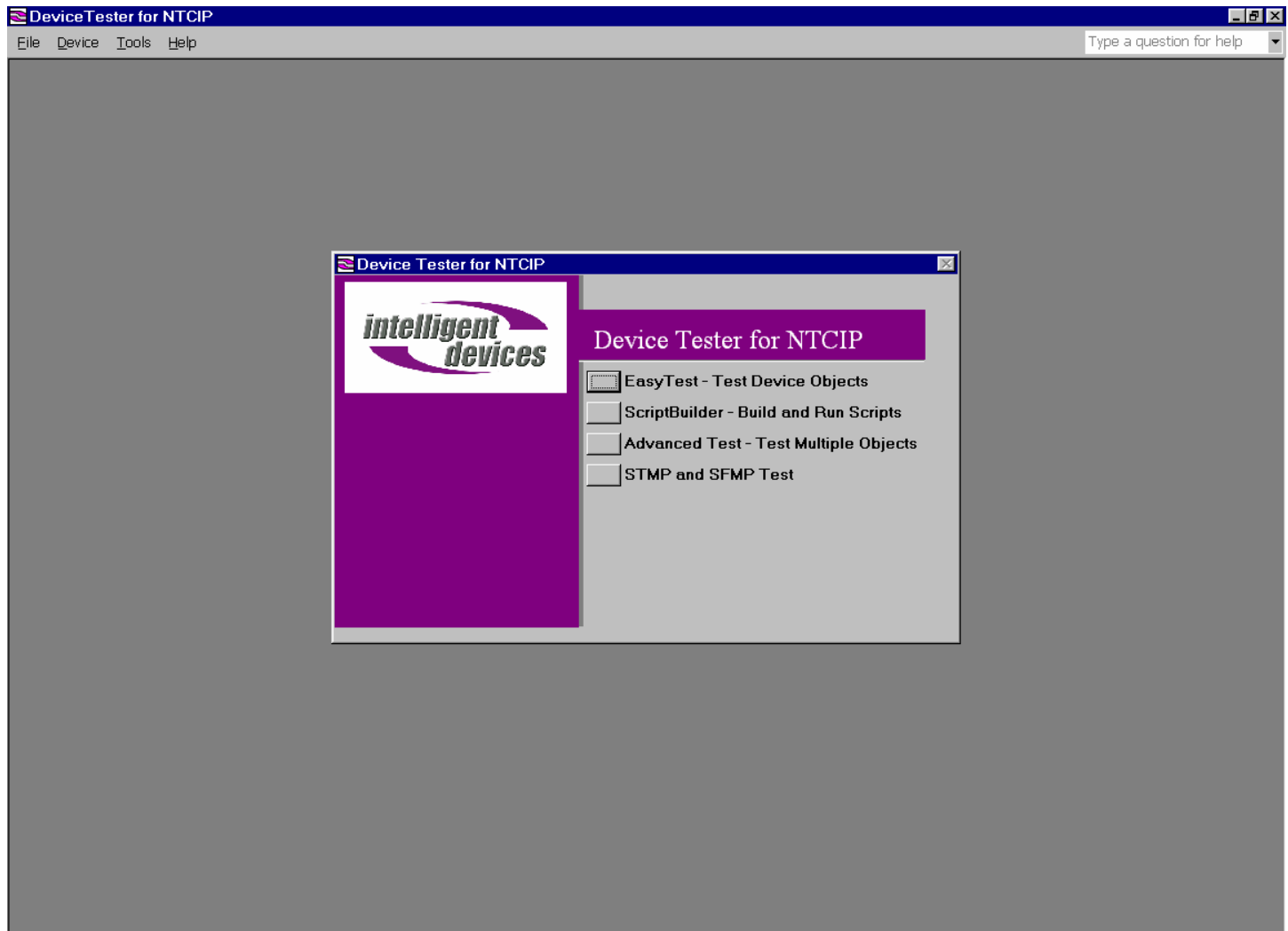
The DeviceTester icon looks like this:



Device Tester for NTCIP.Ink

Click on this icon to open DeiveTester for NTCIP.

You will be presented with the following screen:



Utilizing the Easy Test to Test Device Objects

You may select the Easy Test form using one of two methods:

1. Single-click on the selection box on the main screen beside Easy Test-Test Device Objects.
2. From the Main Menu, select Device, then select Easy Test.

The purpose of the Easy Test form is to allow you to interrogate Objects in a remote Device. It provides an environment where you can pick an Object from the entire list of Objects that the Device is configured for.

You can check the characteristics and attributes of the Objects as well as “get” and “set” Objects from and to the Device and/or Database.

Review the screen shots provided on the next pages to get a general idea of how the Easy Test will work.

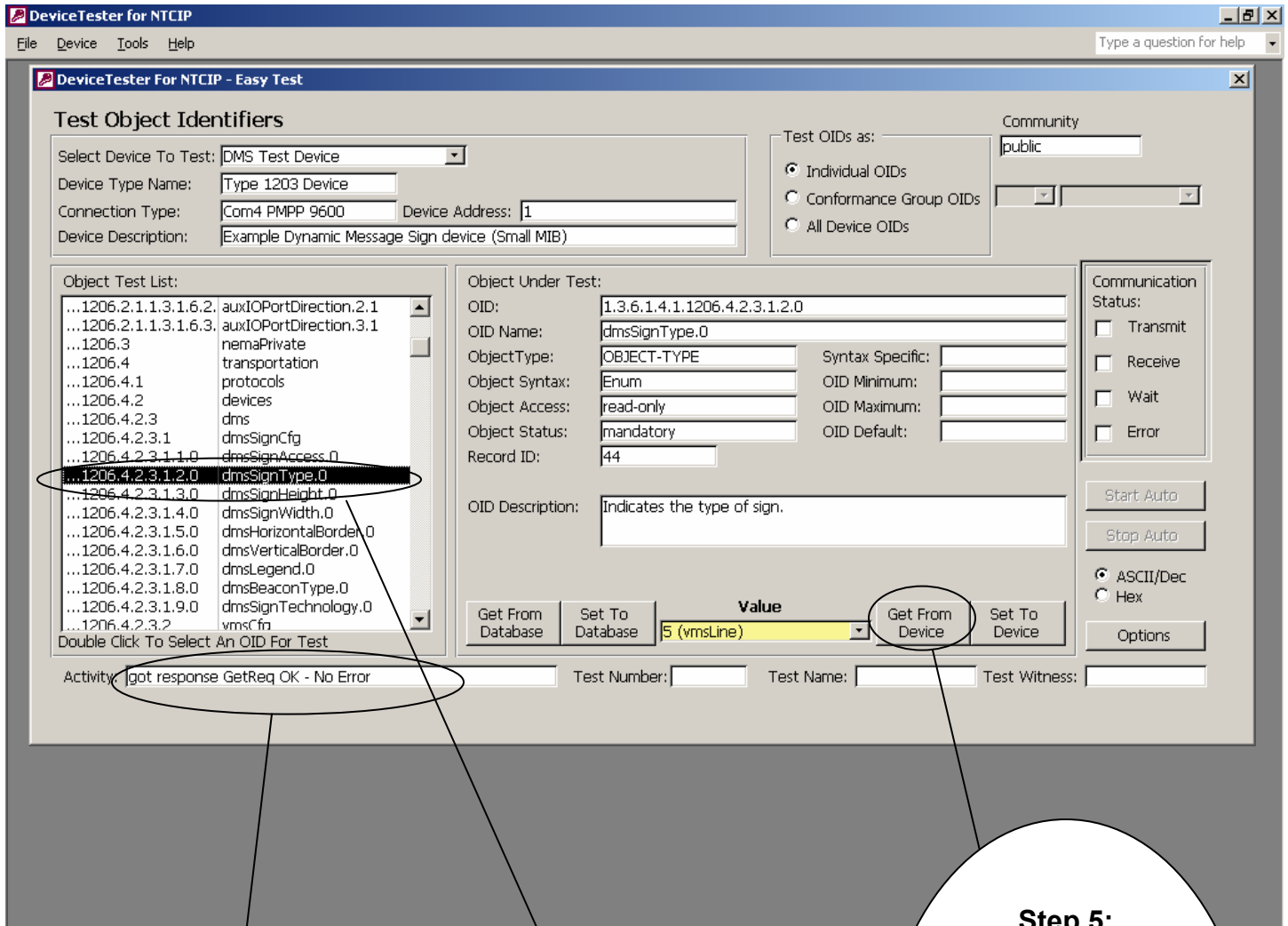
Step 1:
Select the Device you wish to test here

Step 2:
Make sure this is how the Device is connected. If this is not correct, refer to the section titled TESTS of the User Guide or place your cursor here and press F1.

Step 3:
Make sure the Device Address is correct. If this is not correct, refer to the section titled TESTS of the User Guide or place your cursor here and press F1.

The screenshot shows the 'Easy Test' window with the following fields and controls:

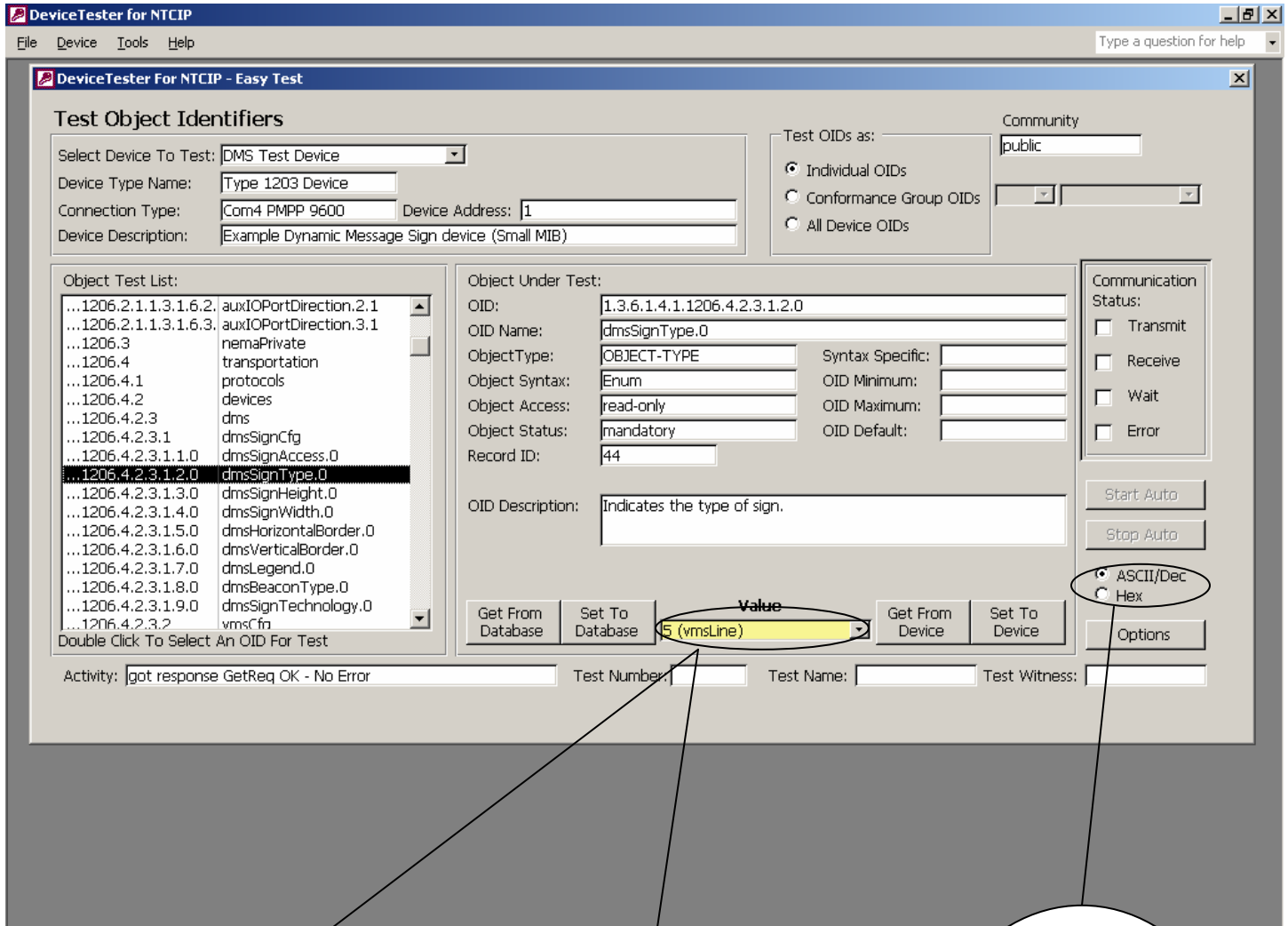
- Test Object Identifiers:**
 - Select Device To Test: SMS Test Device
 - Device Type Name: Type 1203 Device
 - Connection Type: Com4 PMPP 9600
 - Device Address: [Empty]
 - Device Description: Example Dynamic Message Sign device (Small MIB)
- Object Test List:**
 - ...1206.2.1.1.3.1.6.2. auxIOPortDirection.2.1
 - ...1206.2.1.1.3.1.6.3. auxIOPortDirection.3.1
 - ...1206.3 nemaPrivate
 - ...1206.4 transportation
 - ...1206.4.1 protocols
 - ...1206.4.2 devices
 - ...1206.4.2.3 dms
 - ...1206.4.2.3.1 dmsSignCfg
 - ...1206.4.2.3.1.1.0 dmsSignAccess.0
 - ...1206.4.2.3.1.2.0 dmsSignType.0
 - ...1206.4.2.3.1.3.0 dmsSignHeight.0
 - ...1206.4.2.3.1.4.0 dmsSignWidth.0
 - ...1206.4.2.3.1.5.0 dmsHorizontalBorder.0
 - ...1206.4.2.3.1.6.0 dmsVerticalBorder.0
 - ...1206.4.2.3.1.7.0 dmsLegend.0
 - ...1206.4.2.3.1.8.0 dmsBeaconType.0
 - ...1206.4.2.3.1.9.0 dmsSignTechnology.0
 - ...1206.4.2.3.2 vmsCfm
- Object Under Test:**
 - OID: 1.3.6.1.4.1.1206.4.2.3.1.2.0
 - OID Name: dmsSignType.0
 - ObjectType: OBJECT-TYPE
 - Object Syntax: Enum
 - Object Access: read-only
 - Object Status: mandatory
 - Record ID: 44
 - OID Description: Indicates the type of sign.
- Communication Status:**
 - Transmit
 - Receive
 - Wait
 - Error
- Buttons:** Get From Database, Set To Database, Start Auto
- Value:** 5 (vmsLine)
- Activity:** got response GetReq OK - No Error
- Test Number:** [Empty]



Note 6:
This is the window to watch for activity between DeviceTester and the Device.

Step 4:
Double click on an Object to select it. It will appear in the "Object Under Test" windows when selected.

Step 5:
Click this button to send a Get request to the Device. Look in the Activity window for results, and look in the Value window for the value returned by the Device.

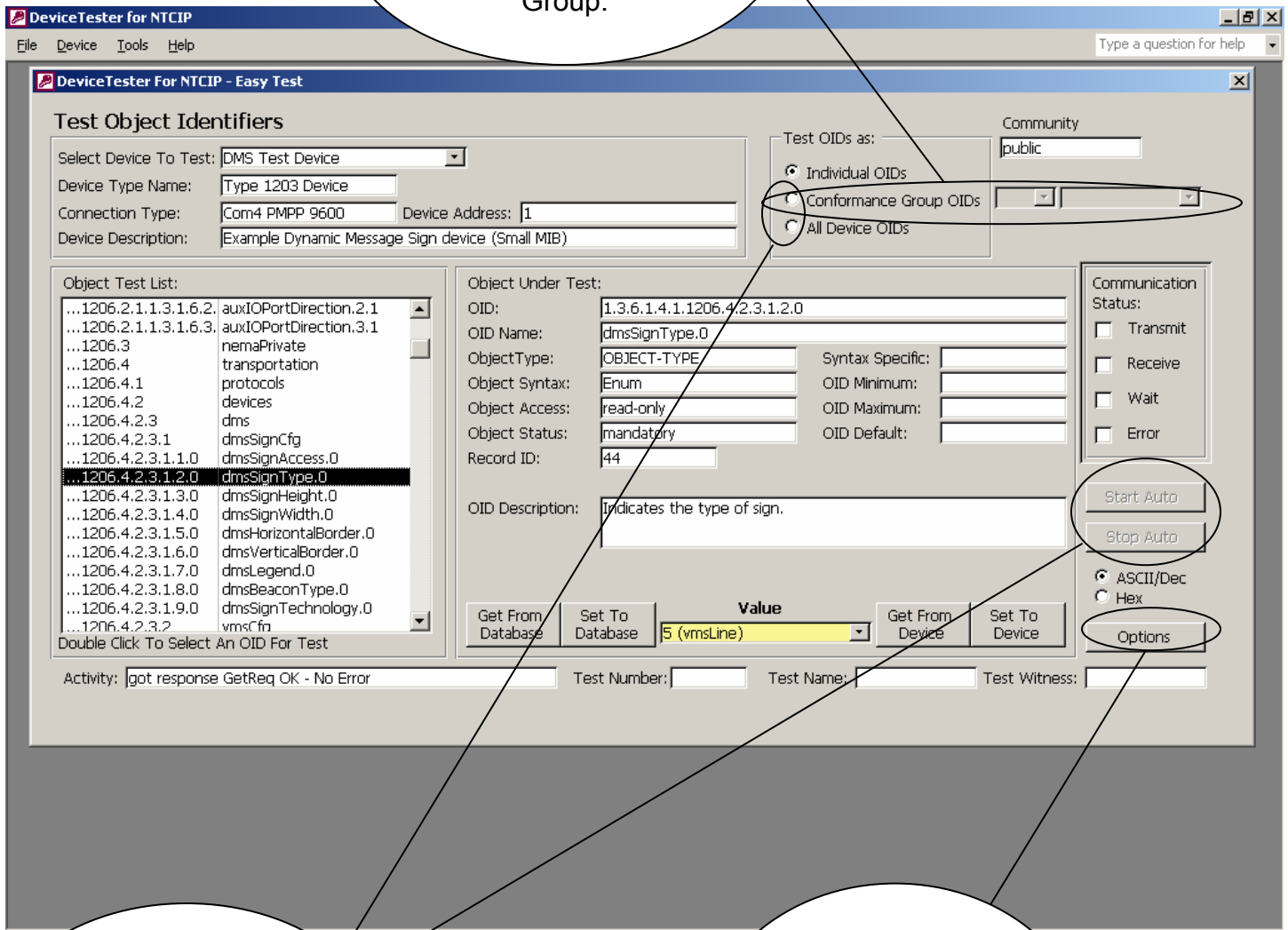


Note 7:
This is the window where values from the Device appear.

Note 8:
For enumerated items (type Enum) use this drop down box to see valid Enum values, and their meaning.

Note 9:
Use these buttons to switch between normal and Hex View. (note: some objects with unprintable characters will only display in Hex)

Note 10:
Use these controls to filter by specification and/or Conformance Group.



Note 11:
Use these controls, in conjunction with Options, to carry out automatic testing.

Note 12:
Use these Options to set up the parameters of Auto Test, and to erase the Log File.

Utilizing Script Builder to Build and Run Scripts

You may select the Script Builder form using one of two methods:

1. Single-click on the selection box on the main screen beside ScriptBuilder-Build and Run Scripts.
2. From the Main Menu, select Device, then select Script Builder.

The purpose of the Script Builder is to allow you to create or “build” Scripts (series of tests ran or commands grouped together that can be executed one by one), as well as Import and Export Scripts.

DeviceTester comes complete with a working sample of Scripts that can be utilized right away for thorough Device testing.

The screen shots provided on the next few pages will give you a general idea of how Script Builder works, and how to run pre-defined Scripts.

Step 1:
Select a Device to Test.

Step 2:
Check the Connection Type and Device Address as illustrated before in Easy Test.

Step 3:
Use these buttons to navigate between Scripts like turning pages in a book.

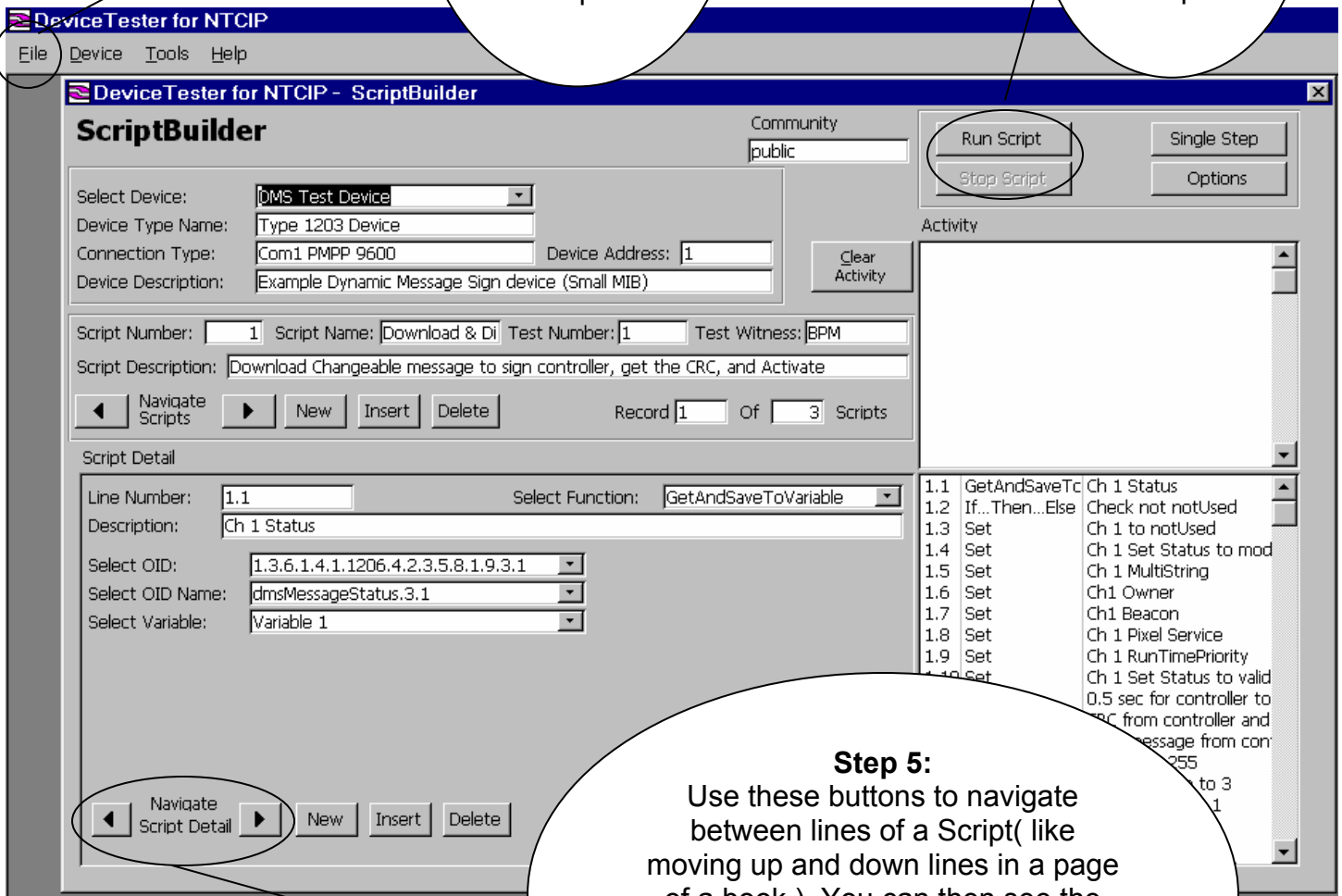
The screenshot shows the 'ScriptBuilder' window with the following details:

- Device Selection:** A dropdown menu is set to 'DMS Test Device'.
- Device Information:** Name: Type 1203-Device, Connection Type: Com1 PMPP 9600, Device Address: 1.
- Script Information:** Script Number: 1, Script Name: Download & Di, Test Number: 1, Test Witness: BPM.
- Navigation:** Buttons for 'Navigate Scripts' (left and right arrows) and 'New', 'Insert', 'Delete'.
- Script Detail:** A table showing script steps:

Line Number:	1.1	Select F...
Description:	Ch 1 Status	
Select OID:	1.3.6.1.4.1.1206.4.2.3.5.8.1.9.3.1	
Select OID Name:	dmsMessageStatus.3.1	
Select Variable:	Variable 1	
- Script List:** A list of script steps on the right side, including: 1.1 GetAndSaveTc, 1.2 If...Then...Else, 1.3 Set, 1.4 Set, 1.5 Set, 1.6 Set, 1.7 Set, 1.8 Set, 1.9 Set, 1.10 Set, 1.11 Delay, 1.12 GetAndSaveTc, 1.13 Get, 1.14 SetVariable, 1.15 SetVariable, 1.16 SetVariable, 1.17 ActivateMsg(V, 1.18 Get.

Step 6:
From the Main Menu, select File, then Import Scripts to change to a new set of Scripts.

Step 4:
Press these buttons to Start and Stop a Script.



Step 5:
Use these buttons to navigate between lines of a Script(like moving up and down lines in a page of a book.) You can then see the parameters defined for each line in the Script.

Utilizing The STMP And SFMP Test

You may select the STMP and SFMP Test form using one of two methods:

1. Single-click on the selection box on the main screen beside STMP and SFMP Test.
2. From the Main Menu, select Device, then select STMP and SFMP Test.

The purpose of the STMP and SFMP Test is to test NTCIP using the STMP and SFMP protocols. These are more complex protocols than the standard SNMP but give more efficient encoding for low band width applications. These protocols use the traffic industry specific OER encoding in the place of the internet standard BER encoding.

The screen shots provided on the next few pages will give you a general idea of how this test works, and how to utilize it in your application.

Step 1: Select Device as before. Make sure Device supports dynamic objects.

Step 2: Select STMP for dynamic objects.

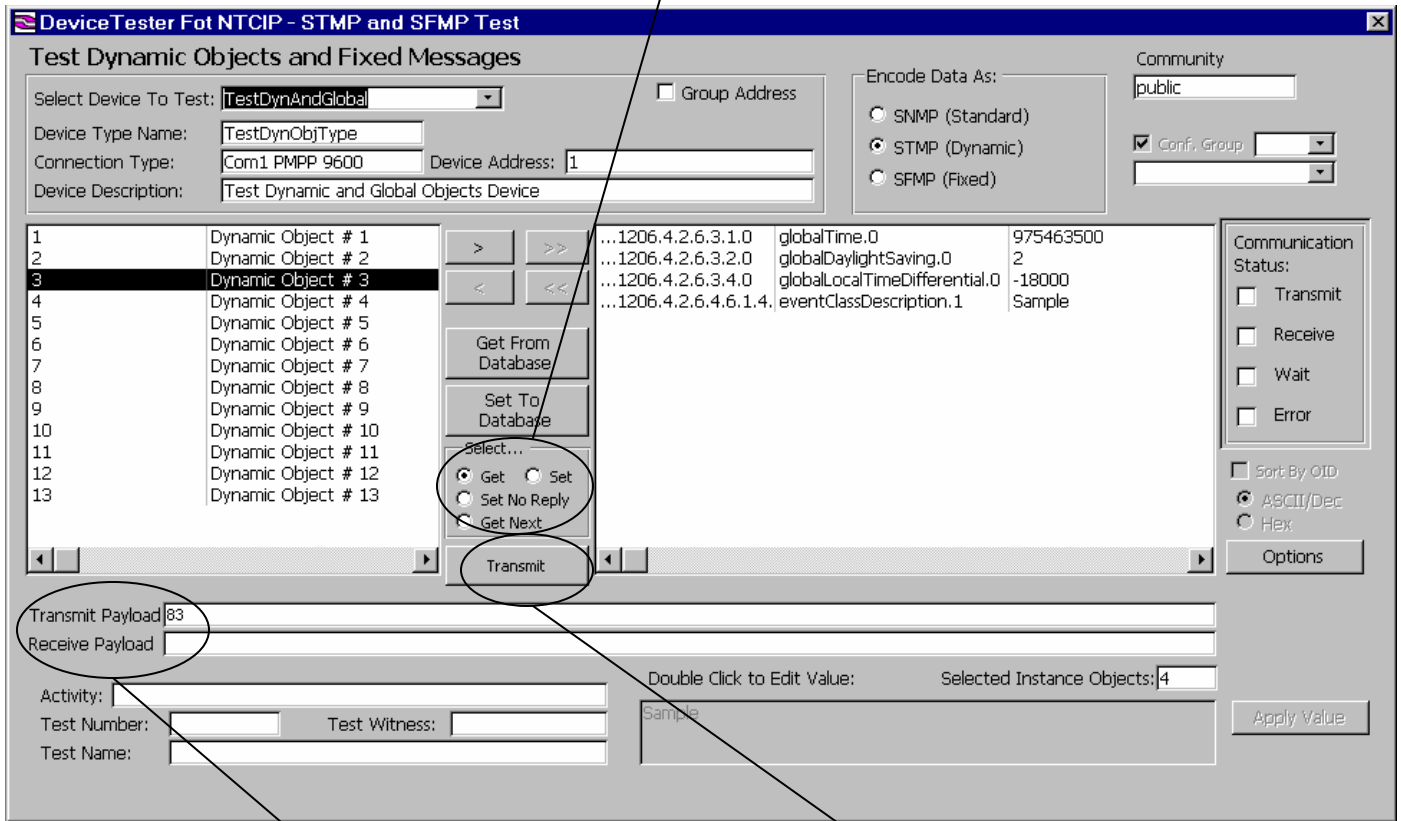
Step 3: Double click, or select to select dynamic object #3.

Step 4: These objects are currently configured as part of dynamic object # 3. Inspect object dynObj Variable using SNMP or SFMP to see which dynamic objects are configured. Dynamic objects can be configured using Script Builder with the sample Dynamic Object Script.

The screenshot shows the 'Test Dynamic Objects and Fixed Messages' window. The 'Select Device To Test' dropdown is set to 'TestDynAndGlobal'. The 'Device Type Name' is 'TestDynObjType'. The 'Connection Type' is 'Com1 PMPP 9600' and 'Device Address' is '1'. The 'Encode Data As' section has 'STMP (Dynamic)' selected. The 'Community' is 'public'. A table of dynamic objects is visible, with row 3 selected. The table contains the following data:

1	Dynamic Object # 1	...	1206.4.2.6.3.1.0	globalTime.0	975463500	
2	Dynamic Object # 2	>	...	1206.4.2.6.3.2.0	globalDaylightSaving.0	2
3	Dynamic Object # 3	>>	...	1206.4.2.6.3.4.0	globalLocalTimeDifferential.0	-18000
4	Dynamic Object # 4	<	...	1206.4.2.6.4.6.1.4	eventClassDescription.1	Sample
5	Dynamic Object # 5	<<				
6	Dynamic Object # 6					
7	Dynamic Object # 7					
8	Dynamic Object # 8					
9	Dynamic Object # 9					
10	Dynamic Object # 10					
11	Dynamic Object # 11					
12	Dynamic Object # 12					
13	Dynamic Object # 13					

Step 5:
Select Operator.



Step 7:
OER encoded request,
and reply are shown here.

Step 6:
Transmit request.

For detailed help on these or any other section of DeviceTester for NTCIP, refer to the User Guide which is included on the DeviceTester disk, or place your cursor in any field and press F1 for online help.