How To Connect ASPIC 3.30 and MS Excel

Contents

ASPIC 3.30 as DDE Client

The scheme of communication between ASPIC 3.30 (DDE client) and MS Excel (DDE server)

A) Setup of Aspic

1. Server's setup

1. Open the **Servers Setup** dialog from the menu **Setup/Setup Servers...**

2. **Add** new data source (e.g. named *Excel*) and set its properties:

a) Set **Server type** as **Common DDE server**.

b) Select server's location (**Network**, **Local** or **Both**).

Note: Enter the name of <u>network DDE</u> application (definned on the target remote computer – see the Settings of Network DDE Communication) into the **DDE Share** option.

c) Fill the **Server** name according to Excel version used:

for MS Excel 2000:   *Excel*

for MS Excel 97:   *Excel.Sheet.8*

for MS Excel 95:   *Excel.Sheet.7*

d) Enter the pathname to the *Excel.exe* into the **Exe File** field or use a button **Browse Exe File** for searching of this file.
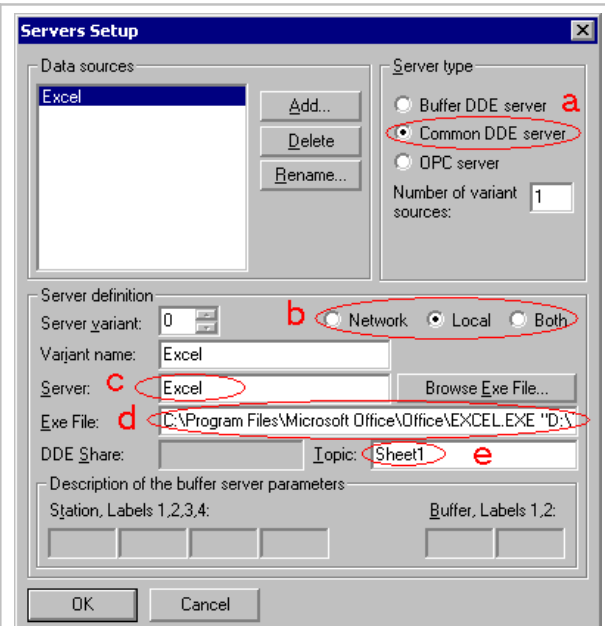In case you want to work with existing *xls* file, add its pathname in quotation marks after the *Excel.exe* pathname.

E.g. *C:\Program Files\Microsoft Office\Office\Excel.exe "D:\ASPIC330\Project\example.xls"*

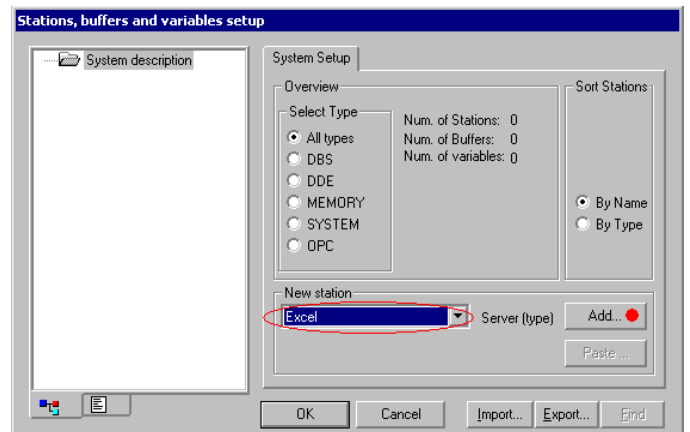e) Fill the **Topic** field according to Excel version used:

for MS Excel 2000:   Name of MS Excel sheet in file. e.g. *Sheet1*

for MS Excel 9x: *{path to file} *.xls*

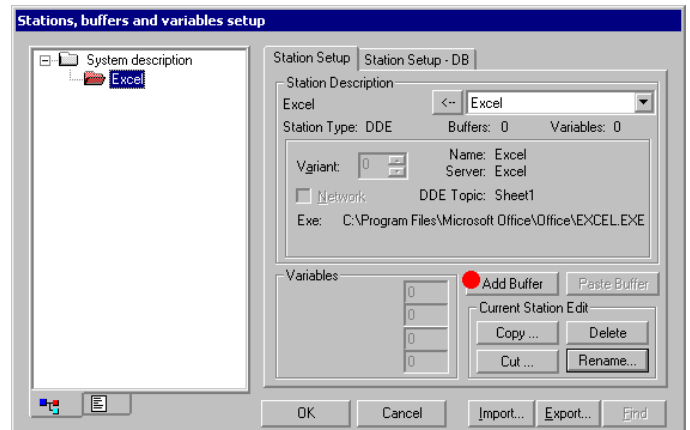|	
1. Press ![button] button to open Aspic's configuration dialog (**Stations, buffers and variables setup**). 2. Select the **Excel** server in the **New station** combo-box. 3. Press the **Add** button for adding of a station. Enter its name (cannot contain characters: /*-+:;\"\'(){}[]@,<>!%&|=#\\). 4. In the left tree, select the **Station** level.	![Stations, buffers and variables setup dialog — System Setup tab]
5. Press the **Add Buffer** button for adding of a buffer. 6. Select the **Buffer** level. **Note:** Check **Network** option for communication with <u>remote computer</u> and select the target computer (using **Browse** button). ⚠️ **Note:** If you change the server parameters in the **Servers Setup** dialog box (**Setup/Setup Servers** menu item) and if you keep the server name, you should update the station setup by pressing the " ←" button.	![Stations, buffers and variables setup dialog — Station Setup tab]
7. Press the **Add Variable** button for adding variables. 8. Select the **Variable** level.	![Stations, buffers and variables setup dialog — Data Buffers tab]
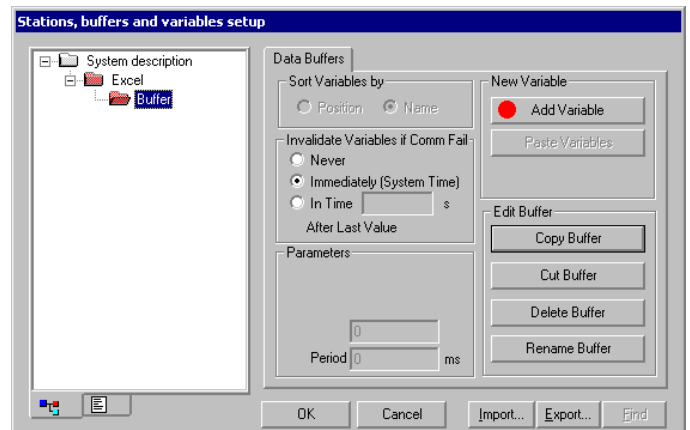
9. Set Variable's properties. On the **Types** tab enter one from following possibilities into the **DDE Item** option – choose the Excel version.
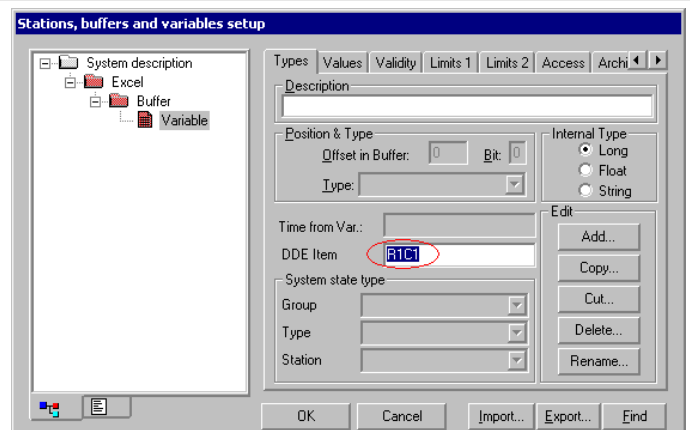
MS Excel 2000	MS Excel 9x
The cell number for MS Excel specified by the cell row number (R) and the cell column number (C). e.g. *R1C1*	The cell number for MS Excel specified by the sheet name, the cell row number (R) and the cell column number (C). e.g. *Sheet1!R1C1*

![Stations, buffers and variables setup dialog — Types tab]

**Data transfer from DDE client to server
(ASPIC 3.30 → MS Excel)**

1. In the Aspic's development mode insert a Value object from object library.

2. Check its property **Input / Control**.

3. In the Aspic's monitoring mode enter data into the object Value.

OR

In the Aspic's monitoring mode open the **Input/Overview** dialog and enter data into the **Value** box. Press the **Commit** button or check the **Autocommit** option for setting of the new value.
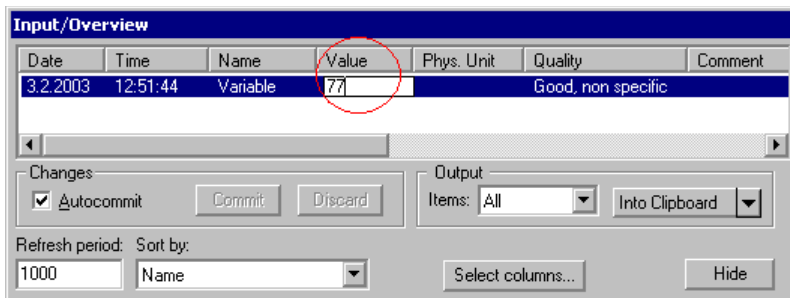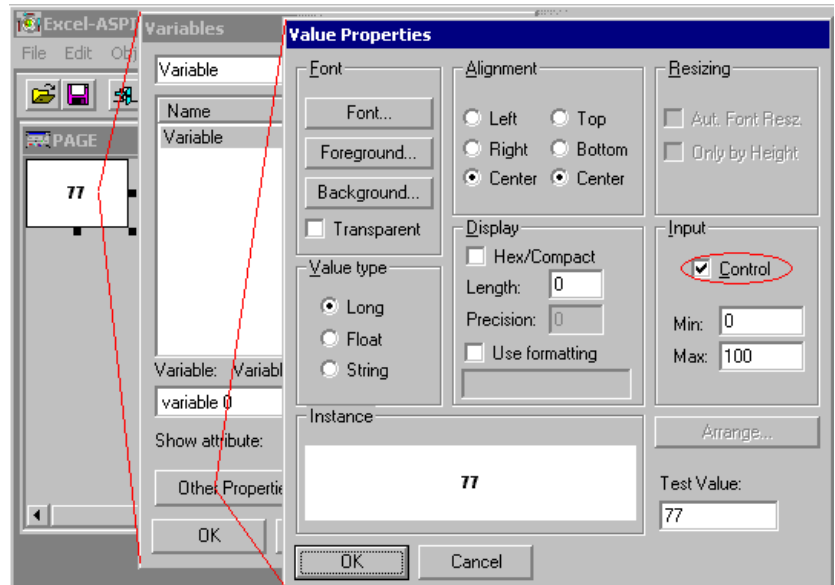
B) Setup of MS Excel

Any special setup of MS Excel isn't necessary.

C) Running of communication

Press the 🔘 button for starting Aspic's monitoring mode. The Excel file specified in Aspic will be opened automatically and data entered in specified cells will be transferred into Aspic.

ASPIC 3.30 as DDE Server

The scheme of communication between ASPIC 3.30 (DDE server) and MS Excel (DDE client)

A) Setup of Aspic

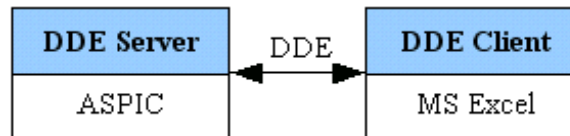### Items' setup

1. Press button to open Aspic's configuration dialog (**Stations, buffers and variables setup**). 2. Select the **_System** or **_Memory** server type in the **New station** combo-box. 3. Press the **Add** button for adding of a station. Enter its name (cannot contain characters: /*-+:;\"\'(){}[]@,<>!%&|=#\\). 4. In the left tree, select the **Station** level. 📁 **MEMORY stations** contain variables for Aspic math module (for entering values and storing calculated results). 📁 **SYSTEM stations** contain variables, whose values are set directly by Aspic. These variables contain various types of information about the monitoring system status (such as system time, disk usage, system errors).	
5. Press the **Add Buffer** button for adding a buffer. 6. Select the **Buffer** level.	
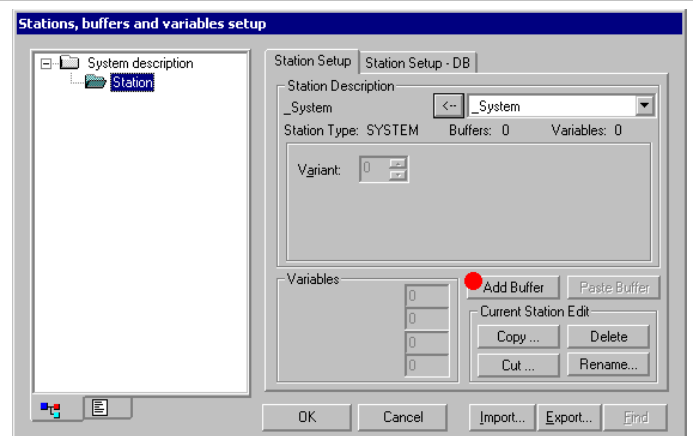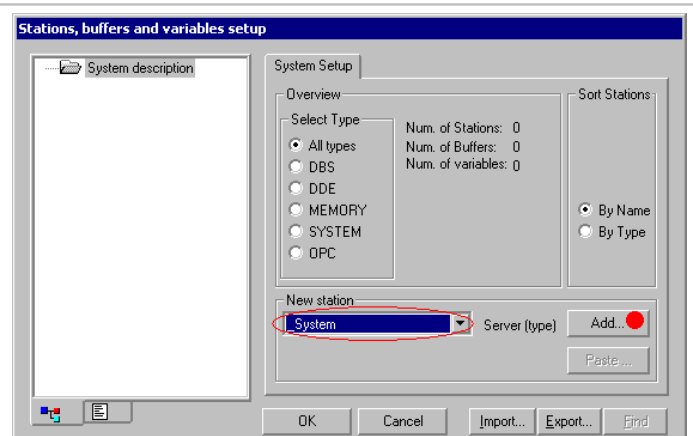
7. Press the **Add Variable** button for adding of a variable. 8. Select the **Variable** level.	
9. Set Variable's properties. On the **Types** tab select type of system variable from the **Type** combo box (only for **_System** server type).	
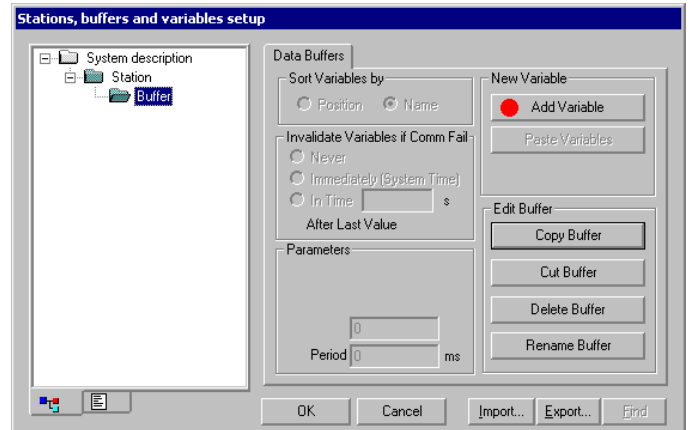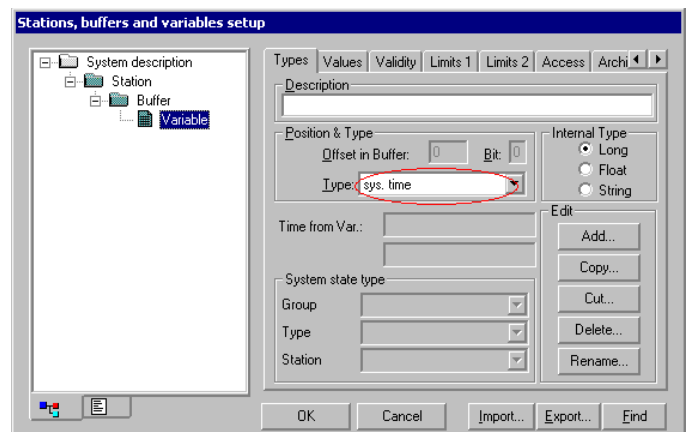
Identification of the Aspic DDE server

Application:	ASPIC
Topic:	Parameter
Communication Format:	CF_TEXT
Format of Communicated Data:	Corresponds to the output type of the variable in the Aspic program that is in role of DDE server. Float – signed floating point (real) value having the form [sign] d.ddd [E [sign] ddd] Long – signed decimal integer String – non-formatted string of characters

B) Setup of MS Excel

Local communication – ASPIC 3.30 and MS Excel on the same computer

Select a cell in MS Excel, where you want to receive values from Aspic.
Enter the following formula in this cell:

`=ASPIC|Parameter!Variable`

where `Parameter` is a name of topic used by MS Excel for connection with Aspic,
`Variable` is a variable name in Aspic. If the name contains spaces, it must be included
in apostrophes (e.g. `'Variable 1'`). Otherwise it is not necessary.

Network communication – ASPIC 3.30 and MS Excel on different computers in a network

Select a cell in MS Excel, where you want to receive values from Aspic.
Enter the following formula in this cell:

`='\\COMPUTER\NDDE$'|ASPIC!Variable`

where `COMPUTER` is the name of the remote computer
`ASPIC` is a share name, under which the computer offers Aspic to be shared in the network
`Variable` is a variable name in Aspic. Names with spaces must be included in apostrophes.

Please follow the Network DDE Communication – Necessary Settings chapter to setup network DDE communication.
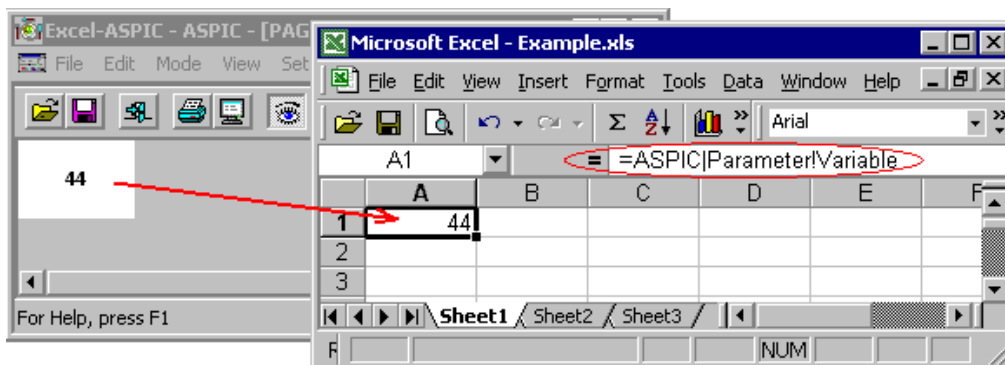
Example of data transfer from ASPIC to MS Excel

Data communication from DDE client to server (MS Excel → ASPIC 3.30)

To establish two-way communication between MS Excel and ASPIC 3.30 (DDE server) setup the one-way communication as described above and then follow these rules.

1. Create Macro

Create a macro of the following script in MS Excel using Visual Basic Editor (**Tools/Macro/Visual Basic Editor**). You will be able to send a value from a MS Excel cell into Aspic. To enter more values, repeat 4th and 5th lines of macro and change the cell's address and Aspic's variable name.

```
Sub SetValue()
Dim Chan As Integer
Chan = DDEInitiate("ASPIC", "Parameter")
Set rangeToPoke = Worksheets("Sheet1").Range("A1")
DDEPoke Chan, "Variable", rangeToPoke
DDETerminate Chan
End Sub
```

where   `SetValue` is the macro's name;
　　　`Sheet1` is the name of the sheet where the cell (called `A1` in the script above) is found from which the data are communicated;
　　　`Variable` it the name of the variable in Aspic.

2. Create Button

You can create a button to start the macro easily:

* Select the **Command Button** object on the the **Control Toolbox** bar.

* MS Excel is switched into **Design Mode** (![icon] button). You can now work with objects (create, edit etc.).

* Define the button's shape using mouse button.

* You can edit the button's size and text if you go to **Edit/CommandButton Object/Edit** in the menu while the object (the button) is selected.

* Open the script in MS Visual Basic Editor with the newly created section by double clicking on the button created. Enter the name of the macro for data transfer (SetValue is used in this example). The other part of the script looks perhaps like this:

```
Private Sub CommandButton1_Click()
SetValue
End Sub
```

* Save the script in VB editor and after terminate the **Design Mode** in MS Excel (click the ![icon] button)

* Now you can use the "Set Value" button to data transfer from a MS Excel cell into Aspic.

Note:　　We recommended you to consult User Guides for MS Excel and MS Visual Basic Editor for more detailed description about working with these programs.
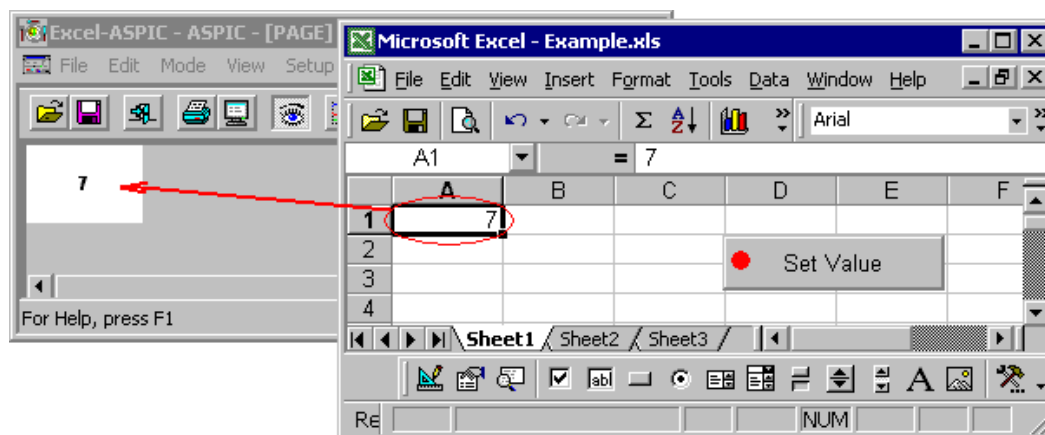
Example of data transfer from MS Excel to ASPIC

C) Running of communication

Press the ![icon] button for starting of Aspic's monitoring mode (Aspic as DDE server isn't started-up automatically after first client connection). Start MS Excel and update values.

For data communication from MS Excel to ASPIC 3.30 start both programs, enter values into cells defined in Visual Basic's macro and press created button.

D) Troubleshooting

Aspic cannot be started from MS Excel

Symptom: When MS Excel is started as first program, the "*Remote data not accessible. Start application 'Aspic.EXE'?*" message appears. Pressing the Yes button opens the "*Cannot run 'Aspic.EXE'. The program or one of its components is damaged or missing.*" message.

Reason: MS Excel is not able to start DDE server (Aspic).

Remedy: Start firstly Aspic in communication mode and after that open .XLS file.

Data are not transferred into MS Excel

Symptom: Data transmission to MS Excel does not take place on starting the Aspic in communication mode.

Reason: MS Excel is not able to detect Aspic's communication mode.

Remedy: a) Update the link using the **Edit / Link** menu in MS Excel or

b) Close and reopen the .xls file or

c) Open the .xls file while Aspic's communication mode is on.

Network DDE Communication – Necessary Settings

Correct DDE network communication can be established if sharing via network (NetDDE) is defined. Use the standard DDESHARE.EXE program. This program can be started, for example, using the **Run** dialog box in the Start Menu, where you type the program name (DDESHARE) and press **OK**.

Setting up a DDEShare for Windows 95/98

To ensure correct operation, **NETDDE.EXE** program, which has been started from the command line, must be run. The user himself can always choose the Share Name. To maintain clarity it is recommended to use the standard sample:

Share Name:	*ASPIC*
Application name:	*ASPIC*
Topic Name:	*Parameter*
Sharing Option:	check
Access Type:	*Full*

Setting up a DDEShare for Windows NT/2000

To ensure correct operation, Windows NT **Network DDE** services (Control Panel / Services) must be run.

Share Name	*ASPIC*	
	Application Name	**Topic Name**
Old Style	*ASPIC*	*Parameter*
New Style	*ASPIC*	*Parameter*
Static	*ASPIC*	*Parameter*
Check	**Allow start application**	
Select	**Grant access to all items**	
Check	in section **Trust Share** for **Share Name** *ASPIC*:	

– **Start Application Enable**

– **Initiate to Application Enable** (when needed)

Note: If you don't succeed connecting to ASPIC over a network through NetDDE, please contact your network supervisor to check user settings. In **User Manager for Domains** (Windows NT 4.0) (in **Start Menu/Programs/Administrative Tools**), the user logon restriction has to be set to **unrestricted** for all stations (not restricted to just some stations) on the network server.