

## Facon Server DDE Interface

(Doc. V1.0 05/06/2003)

Class	Property Name	Type	Access	DDE notation		
				<i>Application</i>	<i>Topic</i>	<i>Item</i>
System	<a href="#">Connect</a>	Bool	R/W	FaconSvr	System	Connect
Channel	<a href="#">Active</a>	Bool	R	FaconSvr	Channel	Active
	<a href="#">Type</a>	String	R	FaconSvr	Channel	Type
	<a href="#">Parameter</a>	String	R/W	FaconSvr	Channel	Parameter
Station	<a href="#">Sleep</a>	Bool	R	FaconSvr	Channel.Station	Sleep
	<a href="#">WriteCount</a>	Int	R	FaconSvr	Channel.Station	WriteCount
Group	<a href="#">Priority</a>	Byte	R/W	FaconSvr	Channel.Station.Group	Priority
	<a href="#">Update</a>	Int	R	FaconSvr	Channel.Station.Group	Update
	<a href="#">UpdateTime</a>	Int	R	FaconSvr	Channel.Station.Group	UpdateTime
	<a href="#">Status</a>	Byte	R/W	FaconSvr	Channel.Station.Group	Status
	<a href="#">RefreshCount</a>	int	R	FaconSvr	Channel.Station.Group	RefreshCount
Item	<a href="#">ItemName</a>		R/W	FaconSvr	Channel.Station.Group	ItemName

Note:

1. The strings in the shadow area of Application, Item column are system reserved word.
2. The formula for the Excel data cell linked by the DDE can be expressed as

**=Application|Topic!Item**

There are some built in data items associate with the System, Channel and Group and can be accessed by application program. These items are designed to reflect the current operating status of the Facon server. The functions of these items are described at below.

**System.Connect**

This item can be both read and written. When read, it reflects the online status of server. If the value is '1' then Facon server is online otherwise is offline. Write this item can control the facon server offline or online directly.

**Channel.Active**

This type of item can only be read, which reflects the current status of specific channel device. If the device is successful online then this value is '1' otherwise means connection error or not online.

**Channel.Type**

This type of item can only be read, which indicates the device name of specific channel device.

Device Type	Device Name
RS232	"RS232"
MODEM	"MODEM"
UDP	"UDP"
TCP	"TCP"

**Channel.Parameter**

This type of item can be both read and written, which indicates the parameter of specific channel device.

The content of this item is device dependent. When the device is RS232 then the content is the port number of PC to connect. Write the new value to this item can change the parameter as new one.

Note: When change the new parameter, the server will first disconnect the channel then reconnect with new parameter.

Device Type	parameter	Description of parameter
RS232	"COM1"	Communication port
MODEM	"56784321"	Dial out number of modem
UDP	"192.168.1.1"	IP of connected channel
TCP	"192.168.1.1"	IP of connected channel

**Channel.Station.Sleep**

This type of item can only be read, which indicates if the station is connected. If the value is '0' means active otherwise the station is not accessible.

**Channel.Station.WriteCount**

This type of item can only be read, which indicates if the write requests to the station are all processed. If the value is 0 then all previous write attempts to the specific station were processed OK.

**Channel.Station.Group.Priority**

This type of item can only be read, which indicates the priority of specific data group.

Priority	value
Highest	0
Normal	1
Lowest	2

### **Channel.Group.Update**

This type of item can only be read, which indicates the refresh time (unit in ms) of specific data group.

### **Channel.Group.UpdateTime**

This type of item can only be read, which indicates the latest data updated time of specific data group.

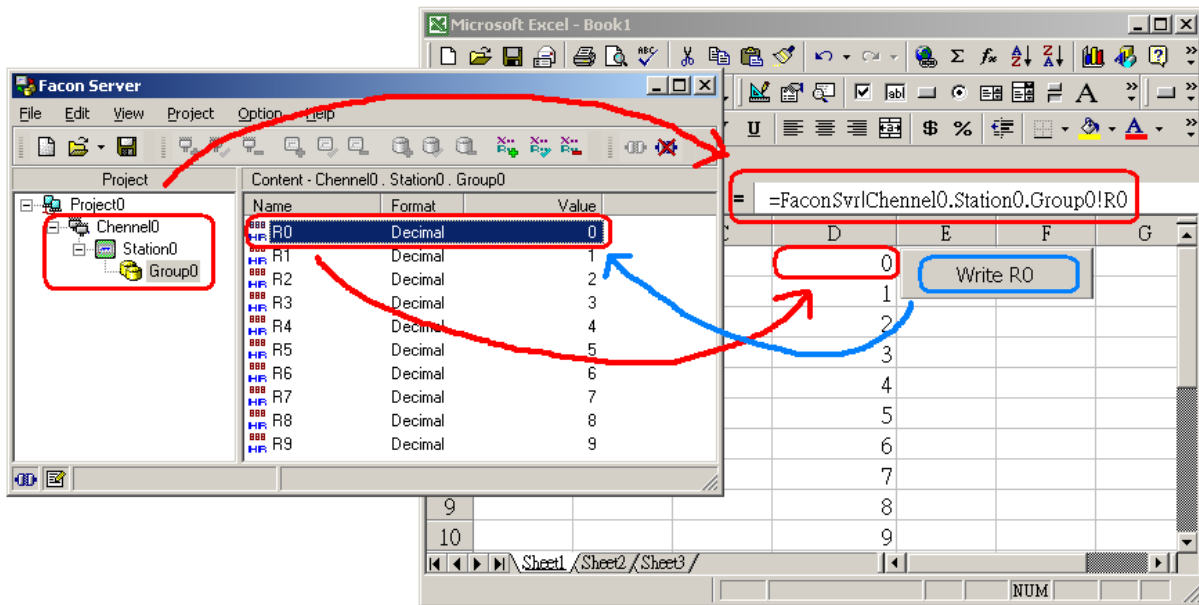
### **Channel.Group.Status**

This type of item can be both read and written, which indicates if the specific data group is in the refresh list. If the value is '1', means this data group is in the list and its value will be updated periodically. Otherwise it will not. Write this item can control if the data group refresh or not.

### **Channel.Group.RefreshCount**

This type of item can only be read, which indicates the total refresh times of specific data group since it started to refresh.

## DDE Example



### Retrieve the data

It's very easy to link the PLC data item into the data cell of Excel application via DDE interface. In this example we want to get the 'R0' value of PLC. The 'R0' item is grouped in data group 'Group0'. The PLC's station is 'Station0' and is connected thru device 'Channel0'. The data cell formula can be expressed as follow:

```
=FaconSvr|Channel0.Station0.Group0!R0
```

### Write the data

To write the PLC data in Excel application via DDE interface is much complicate than read the data. In contrast to retrieve the data, simply just fill in a formula in the data cell, it need to write a few lines of code with VBA language in order to change PLC data via DDE interface.

The following example use one button located in one cell and one cell to store the written value. The click event subroutine associated with the button can be written as follow:

```
Private Sub CommandWrite_Click()  
    Cells(1, 1) = "100" "Put the written value at cell (1,1)"  
    Channel = DDEInitiate("FaconSvr", "Channel0.Station0.Group0") "Setup the data linkage"  
    DDEPoke Channel, "R0", Cells(1, 1) "Write the cell(1,1) data to the PLC"  
    DDETerminate (Channel) "Close the data group"  
End Sub
```