HIRATA
DDE
Server

for Microsoft Windows
and InTouch Applications

User Manual
Ver 1.x Rev 1.2
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HIRATA DDE Server

The **HIRATA DDE Server** is a Microsoft Windows application program that acts as a DDE (Dynamic Data Exchange) *Server* and allows other Windows application programs to communicate with the HIRATA Robots (hereafter also referred as the Robots) using the RS-232C serial interface. The HIRATA DDE Server runs on the IBM PC or compatible computer used as a host processor connected to the Robot(s).

The *Server* is primarily intended for use with **Wonderware InTouch**, but it may be used by any Microsoft Windows (NT, 2000, XP or 95 (98)) program that is capable of acting as a DDE *Client* .

What is DDE?

DDE is a complete communication protocol designed by Microsoft to allow applications in the Windows environment to send/receive data and instructions to/from each other. It implements a *client-server* relationship between two concurrently running applications. The *server* application provides the data and accepts requests from any other application interested in its data. Requesting applications are called *clients*. Some applications such as **InTouch** and Excel can simultaneously be both a *client* and *server.*

To obtain data from another application the *client* program opens a channel to the *server* application by specifying three things: the *server* ***application name***, the ***topic name*** and the specific ***item name***. For example, in the case of Excel, the application name is "Excel", the topic name is the name of the specific spreadsheet that contains the data and the item name is the specific cell on the spreadsheet. With **InTouch** the application name is *"View"*, the topic name is the *Topic Name* defined in Window Maker "DDE Access Name Definition" section and the item name is the *DDE Item name* specified for some tag included in the **InTouch** Data Dictionary.

When a client application sets up a link to another DDE program, it requests the *server* application to *advise* the client whenever a specific item's value changes. These data links will remain active until either the *client* or *server* program terminates the link or the conversation. They are a very efficient means of exchanging data because when the link has been established no communication occurs until the specified data value changes. **InTouch** uses DDE to communicate with DDE Servers and other DDE application programs.

Accessing a Remote DDE Item from HIRATA

The DDE protocol identifies an element of data by using a three-part address, including: ***Application***, ***Topic*** and ***Item***.

Application refers to the name of the Windows program (server) that knows how to access the data element. For the HIRATA DDE Server the application portion of the DDE address is **HIRATA**.

Topic is an application-specific sub-group of data elements. The HIRATA DDE Server considers each Robot to be a separate topic. The user creates a meaningful name for each Robot and uses this name as the topic name for DDE references.

Item indicates a specific data element within the specified topic. For the HIRATA DDE Server, an item is an individual point in the Robot. (The item/point names are described in the ***Item (Point) Naming*** section.)
Note: *In some cases, the term "point" is used interchangeably with the term "item".*

Installing the HIRATA DDE Server

The HIRATA DDE Server installation package can be supplied:

1. As a self-extracting archive 24010xxx.EXE if downloaded from Klinkmann's web site (the xxx is the current (latest) version of the Server).
2. From installation on CD.
3. On two or three distribution disks (floppies).

To **install** the HIRATA DDE Server from the self-extracting archive, run the 24010xxx.EXE and proceed as directed by the HIRATA DDE Server Setup program.

To **install** the HIRATA DDE Server from CD or distribution disks (floppies), on MS Windows (NT, 2000, XP or 95 (98)):

1. Insert the CD with Klinkmann Software into CD drive or insert HIRATA Disk1 into a floppy drive A: or B:.
2. Select the **Run** command under the **Start** menu.
3. Run STARTUP.EXE if installing from CD or SETUP.EXE if installing from distribution disks (floppies).
4. If installing from CD: select "Protocol Servers (DDE, SuiteLink, OPC)", find "HIRATA DDE Server" and click on "Setup…".
5. Proceed as directed by the HIRATA DDE Server Setup program.

When installation is finished, the subdirectory specified as a folder where to install the HIRATA DDE Server will contain the following files:

HIRATA.EXE	The HIRATA Server Program. This is a Microsoft Windows 32-bit application program.

HIRATA.HLP The HIRATA Server Help file.

HIRATA.CFG An example configuration file.

LICENSE.TXT Klinkmann Automation software license file.

WWCOMDLG.DLL Dynamic Link Library necessary for HIRATA Server.

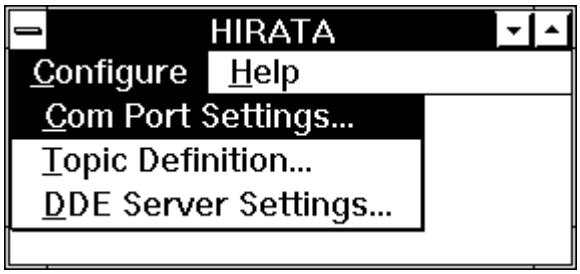
To **uninstall** the HIRATA Server, start Control Panel, select “Add/Remove Programs” and select the “HIRATA DDE Server” from the list of available software products. Click on “Add/Remove…” and proceed as directed by the UnInstallShield program.

Note:
The HASP key is needed for full time running of HIRATA Server. The HASP Driver setup is performed during the Server setup. Without HASP Driver installed, the HIRATA Server will run only 1 hour (with all features enabled).

Configuring the HIRATA DDE Server

After the HIRATA DDE Server is initially installed, a small amount of configuration is required. Configuring the Server automatically creates a **HIRATA.CFG** file which holds all of the topic definitions entered, as well as the communication port configurations. This file will automatically be placed in the same directory in which **HIRATA.EXE** is located unless the path where the configuration file will be placed is specified through the */Configure/DDE Server Settings...* command.

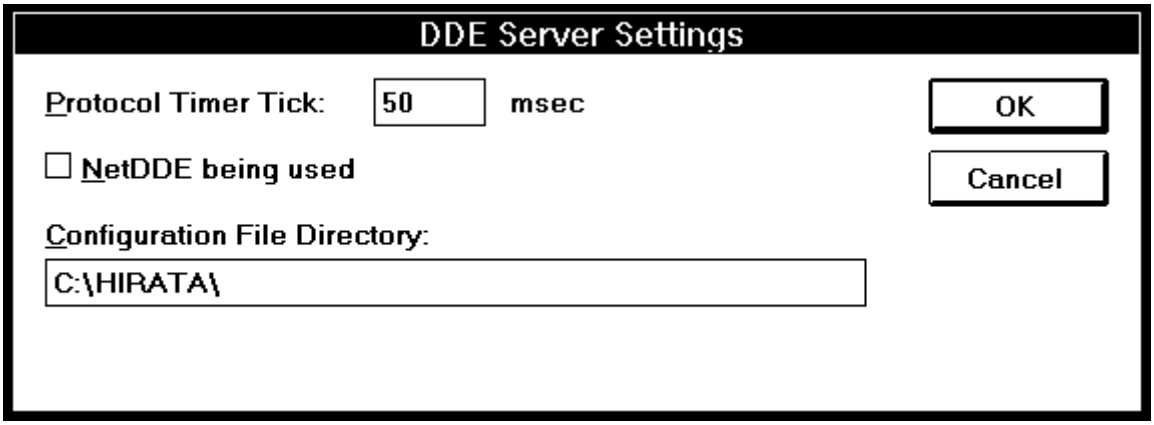
To perform the required configurations, start the HIRATA program. If the Server starts up as an icon then double-click on the icon to open the server's window. To access the commands used for various configurations open the */Configure* menu:



DDE Server Settings Command

A number of parameters that control the internal operation of the Server can be set. In most cases, the default settings for these parameters provide a good performance and do not require changing. However, they can be changed to fine-tune the Server for a specific environment.

To change the Server's internal parameters, invoke the */Configure/DDE Server Settings...* command. The "DDE Server Settings" dialog box will appear:



The following describes each field in this dialog box:

Protocol Timer Tick
This field is used to change the frequency at which the Server is continuously activated (the Server checks for work to perform). This should be approximately 2 to 4 times faster then the rate desired to update data from Robots. For Windows 3.1x if computer is very busy or some other Windows application is taking over the computer then the Server is activated rarely than setting in the **Protocol Timer Tick**. ***Note:*** *The default value is 50. This it the minimum value for Windows 3.1x. If the value lower than 50 is entered, the Server uses 50 milliseconds.*

NetDDE being used
Select this option if you are networking using NetDDE.

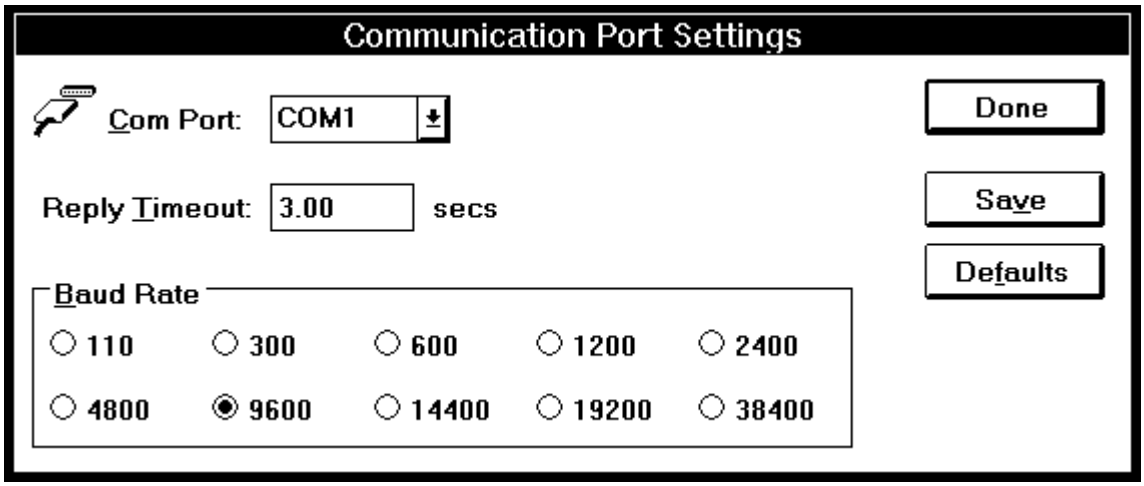
Configuration File Directory
The first field is used to specify the path (disk drive and directory) in which HIRATA will save its current configuration file. HIRATA will use this path to load the configuration file the next time it is started.

Note: *Only the "path" may be modified with this field. The configuration file is always named* ***HIRATA.CFG.***
Note: *There is no limit to the number of configuration files created, although each must be in a separate directory. When using the HIRATA DDE Server with* ***InTouch****, it is a good practice to place the configuration file in the application directory.*

When all entries have been made, click on **OK**.

Com Port Settings Command

This command is used to configure the communication port that will be used to communicate with Robots. Invoke the */Configure/Com Port Settings...* command. The "Communication Port Settings" dialog box will appear:



The following describes each field in this dialog box:

Com Port
This field is used to select the communication port to change or view the settings.

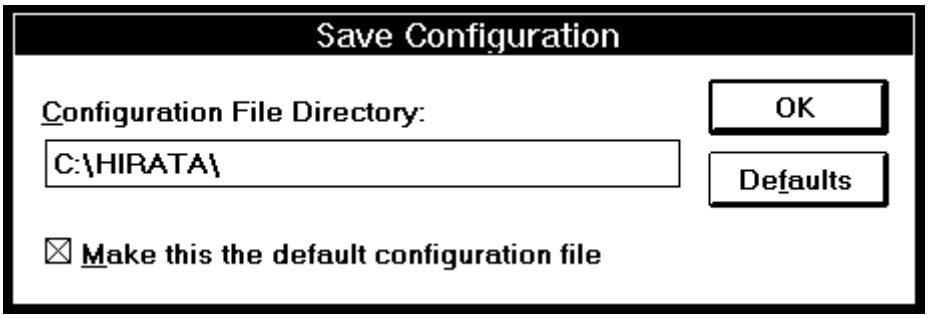
Reply Timeout
This field is used to enter the amount of time (in seconds) all Robots using the selected communication port will be given to reply to commands from the Server.
Note: *The default value of 3 seconds should be sufficient for most configurations.*

Baud Rate
The selected Baud Rate must match the settings used in all connected Robots.
Note: *The default Baud Rate is 9600.*

When all entries have been made, click on **Done** to process the configuration for the communication port. To reset to the default values, click on **Defaults**.

Saving HIRATA Configuration File

If the configuration file does not currently exist, or a new configuration path has been specified, the Server will display the "Save Configuration" dialog box:



This dialog box displays the path where the Server is going to save the current configuration file. If necessary, path may be changed. Also, the path can optionally be recorded in the **WIN.INI** file by selecting the **"Make this the default configuration"** option. Doing so it will allow the HIRATA DDE Server to find the configuration file automatically each time it is started.

Configuration File Location

When the HIRATA DDE Server starts up, it first attempts to locate its configuration file by, first checking the **WIN.INI** file for a path that was previously specified. If the path is not present in the **WIN.INI** file, the Server will assume that the current working directory is to be used.

To start the Server from an application directory configuration file other than the default configuration file a special switch **(/d:)** is used. For example, invoke the **File/Run** command in **File Manager** or **Program Manager** and enter the following:

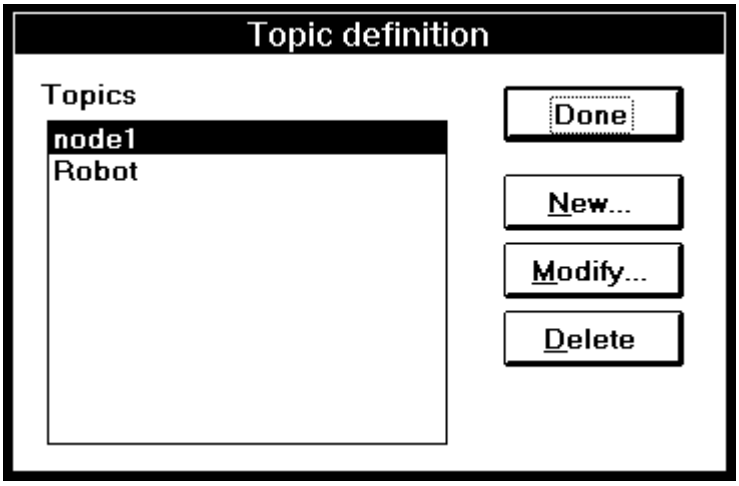
HIRATA /d:c:\directoryname

Note: *There is no limit to the number of configuration files that may be created, although each must be in a separate directory.*

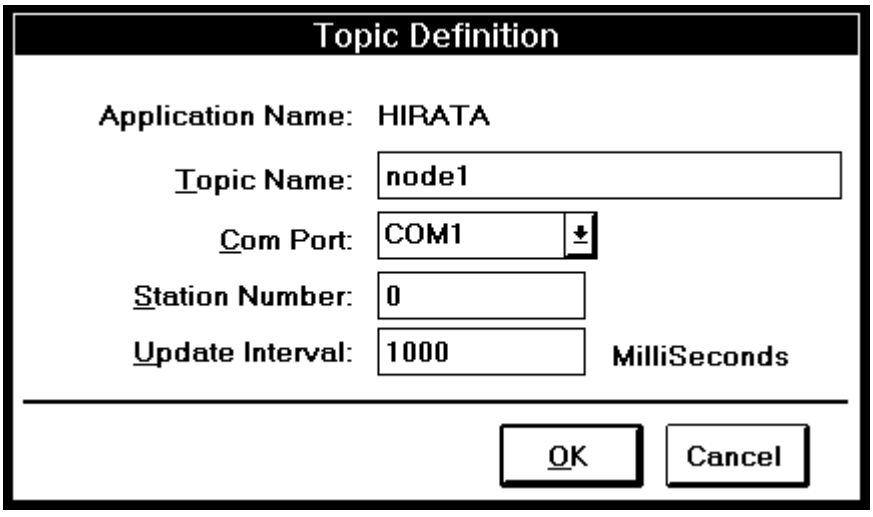
Configure Topic Command

The user provides each connected Robot with an arbitrary name that is used as the DDE topic for all references to this Robot.

To define the Topics (Robots) connected invoke the */Configure/Topic Definition...* command. The "Topic Definition" dialog box will appear:



To modify or examine an existing topic, select the topic name and click on **Modify**. To define a new topic, click on **New**. The "HIRATA Topic Definition" dialog box will appear:



The following describes each dialog field in this dialog box:

Topic Name
Enter the **Topic Name** which corresponds to the DDE Topic Name (The DDE Topic Name is entered in the "DDE Access Name Definition" dialog box described in the **Using the HIRATA DDE Server with InTouch** section).

Com Port
Select the **Com Port** to associate it with the topic. Additional topics may be associated with the same Com Port later.

Station number
Enter the **Station number** for this Robot.
Note: *Each Robot must have a unique address from 0 to 999.*

Update Interval
Set the **Update Interval** field to indicate the frequency the items/points on this topic will be read (polled).

When all entries have been made, click on **OK** to process the configuration for the Topic. The "Topic Definition" dialog box will appear again.

Select **Done** when configuration for all Topics has been performed.

Item (Point) Naming

The HIRATA DDE Server supports the following DDE item/point naming system for accessing to the Hirata robot data.

Mode switch items

These items are used to switch Hirata robot to THROUGH mode and to NOT-THROUGH mode.

MODE - DDE Integer, Read Only, used to query the HIRATA robot's mode. 1 = NOT-THROUGH mode , 2 = THROUGH mode, 0 = mode unknown.

MODE_T_S - DDE Integer, Write Only, used to start the THROUGH mode. When switched to **n** the Server starts the THROUGH mode at COM port **n** and stops current jobs (**>** command sent to the robot). If **n** is -1 the COM port number is omitted.

MODE_T_N - DDE Integer, Write Only, used to start the THROUGH mode. When switched **n** the Server starts the THROUGH mode at COM port **n** and does not stop current jobs (# command sent to the robot). If **n** is -1 the COM port number is omitted.

MODE_NT - DDE Discrete, Write Only, used to start the NOT-THROUGH mode. When switched to 1 the Server starts the NOT-THROUGH mode (**MC** or **MN** command sent to the robot). The Server changes this item value back to 0.

NOT THROUGH mode items

Memory items

MBa Memory bit - DDE Discrete
MDa Memory byte - DDE Integer
MWa Memory word - DDE Integer
MTa Memory timer - DDE Real
where:
a - address: for bits, bytes and words - 0...255, for timers - 0...31;

Input/Output data items

IBa Input bit - DDE Discrete
IDa Input byte - DDE Integer
OBa Output bit - DDE Discrete
ODa Output byte - DDE Integer
where:
a - address: for bits - 0...255, for bytes - 0...31;
Inputs are Read Only, Outputs are Read/Write.

Examples: **MB0**, **MW125**, **MT5**, **IB4**, **OD28**.

Robot status

See Robot status in THROUGH mode items.

THROUGH mode items

Robot position data

Read is performed by **LD** command. Write is performed by **SD** command. The **p** is a position address, value range from 0 to 1023.

(1) The Read/Write DDE items which values are read by **LD** command and new values written by **SD** command where other item values are omitted by "_":

D_Xp, **D_Yp**, **D_Zp**, **D_Wp** - axis data, DDE Reals;
D_L_Rp - arm direction, DDE Discrete;
D_CSp - coordinates system data, DDE Integer;
D_Mp, **D_Fp**, **D_Sp** - M, F and S data, DDE Integers.

(2) The DDE items used for setting of all position data (direct values) at once:

D_ALL - all data for LD command, Write Only DDE Message (string) item; this item value can be created e.g. by InTouch script or manually. The format of this string should correspond to the format used in **LD** command, the data inside the string can be separated by spaces or commas; this string should contain the following data:

Address, X data, Y data, Z data, W data, L/R, CS, M, F, S

D_ALL_DO - DDE Integer, Read/Write item used to execute the **LD** command. When this item value is switched from 0 to 1 then **LD** command containing the item **D_ALL** data is sent to the robot. The Server changes this item value back to 0 after command execution and to -1 if command execution failed. If Server does not know the item **D_ALL** value (item is not activated) then **LD** command is not executed and error message is logged to WWLogger.

(3) The DDE items used for setting of position data of other address to specified address or for setting of current position data to specified address:

D_SPC - the specified address, Write Only DDE Integer, value range from 0 to 999.
D_ORG - the original address, Write Only DDE Integer, value range from 0 to 999.

D_CPY - DDE Discrete, Write Only item used to execute the setting of position data of original address (item **D_ORG** value) to specified address (item **D_SPC** value). When this item value is switched from 0 to 1 then **LD** command containing the current values of items **D_ORG** and **D_SPC** is sent to the robot. The Server changes this item value back to 0. If Server does not know the values of items **D_ORG** and **D_SPC** (items are not activated) then **LD** command is not executed and error message is logged to WWLogger.

D_SET - DDE Discrete, Write Only item used to execute the setting of current position data to specified address (item **D_SPC** value). When this item value is switched from 0 to 1 then **LD** command containing the item **D_SPC** current value is sent to the robot. The Server changes this item value back to 0. If Server does not know the item **D_SPC** value (item is not activated) then **LD** command is not executed and error message is logged to WWLogger.

Examples: **D_X0**, **D_L_R170**, **D_F1000**, **D_CPY**.

Robot hold status

The hold status of the robot is read by **LH** command and written by **GH** command. The following Read/Write DDE Discrete items are used:
H_X, **H_Y**, **H_Z**, **H_W** .

Robot current position

The current position of the robot is read is by **LR** command and stored in the following Read Only DDE items:

R_X, **R_Y**, **R_Z**, **R_W** - axis data, DDE Reals;
R_L_R - arm direction, DDE Discrete;
R_CS - coordinates system data, DDE Integer.

Robot status

The status of the robot is read is by **LS** command In THROUGH mode and **RZ** in NOT-THROUGH mode. The status also is returned by many write commands. The status is stored in the following Read Only DDE items:

S_ERR - error, DDE Discrete, contains 0 if the robot is in the normal status and 1 if robot is in abnormal status;
S_S1, **S_S2**, **S_S3**, **S_S4** - status data, DDE Integers;
S_E1, **S_E2** - error codes, DDE Integers, filled only if robot is in abnormal status;
S_X, **S_Y**, **S_Z**, **S_W** - axis data, DDE Reals, filled only if robot is in abnormal status.
S_PORT - port, DDE Integer, used in NOT-THROUGH mode to specify COM port;

Perform A-CAL

B - DDE Discrete, Write Only item. The A-CAL (automatic origin calibration) is performed (**GB** command sent to the robot) when item's value is switched from 0 to 1. The Server changes this item value back to 0.

Stop motion

D - DDE Discrete, Write Only item. The robot motion is stopped (**GD** command sent to the robot) when item's value is switched from 0 to 1. The Server changes this item value back to 0.

Linear motion

The following Write Only DDE items are used to perform the linear motion (**GL**) command:

L_ACC - accuracy, DDE Integer;
L_POS - position (memory address), DDE Integer, range of values from 0 to 999;
L_X, **L_Y**, **L_Z**, **L_W** - axis data, DDE Reals;

L_M, **L_F**, **L_S** - M, F and S data, DDE Integers;
L_ADR - DDE Discrete, Write Only item used to execute the linear motion specified by memory address; when this item value is switched from 0 to 1 then GL command containing the current values of items **L_ACC** and **L_POS** is sent to the robot. The Server changes this item value back to 0. If Server does not know the values of items **L_ACC** and **L_POS** (items are not activated) then **GL** command is not executed and error message is logged to WWLogger.

L_DAT - DDE Discrete, Write Only item used to execute the linear motion specified by coordinate data and M, F, S parameters. When this item value is switched from 0 to 1 then **GL** command containing the current values of items **L_ACC**, **L_X**, **L_Y**, **L_Z**, **L_W**, **L_M**, **L_F** and **L_S** is sent to the robot. The Server changes this item value back to 0. If Server does not know the values of items **L_ACC**, **L_X**, **L_Y**, **L_Z**, **L_W**, **L_M**, **L_F** and **L_S** (some of items are not activated) then **GL** command is not executed and error message is logged to WWLogger.

Manual motion control

The following Write Only DDE items are used to perform the manual motion (**GZ**) command:

Z_X, **Z_Y**, **Z_Z**, **Z_W** - axis data, DDE Integers;
Z_T, - motion type, DDE Integer;
Z_F, - motion speed, DDE Integer;

Z_DO - DDE Discrete, Write Only item used to execute the manual motion. When this item value is switched from 0 to 1 then **GZ** command containing the current values of items **Z_T**, **Z_F**, **Z_X**, **Z_Y**, **Z_Z** and **Z_W** is sent to the robot. The Server changes this item value back to 0. If Server does not know the values of items **Z_T**, **Z_F**, **Z_X**, **Z_Y**, **Z_Z** and **Z_W** (some of items are not activated) then **GZ** command is not executed and error message is logged to WWLogger. To keep the robot in motion this command must be re-sent at least in every 0.5 seconds.

Special items

STATUS - DDE Discrete, Read Only; indicates the state of communication with this Topic. This item is set to 0 when communication with the Topic fails and set to 1 when communication is successful.

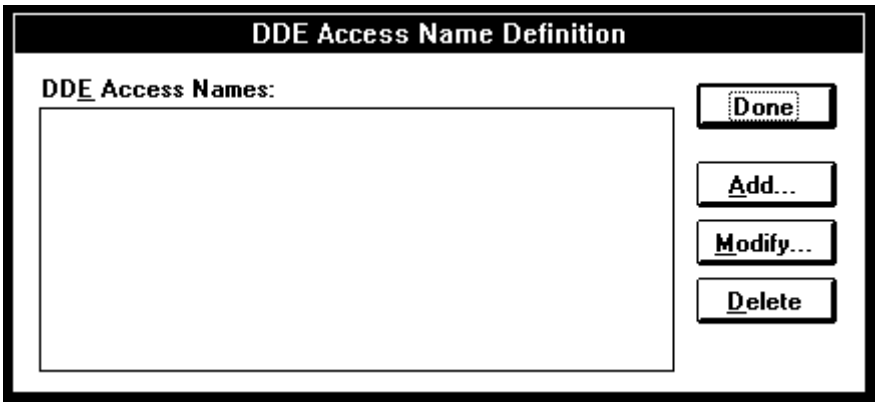
Notes:
1. Both uppercase and lowercase letters can be used in all DDE item names.

Using the HIRATA DDE Server with InTouch

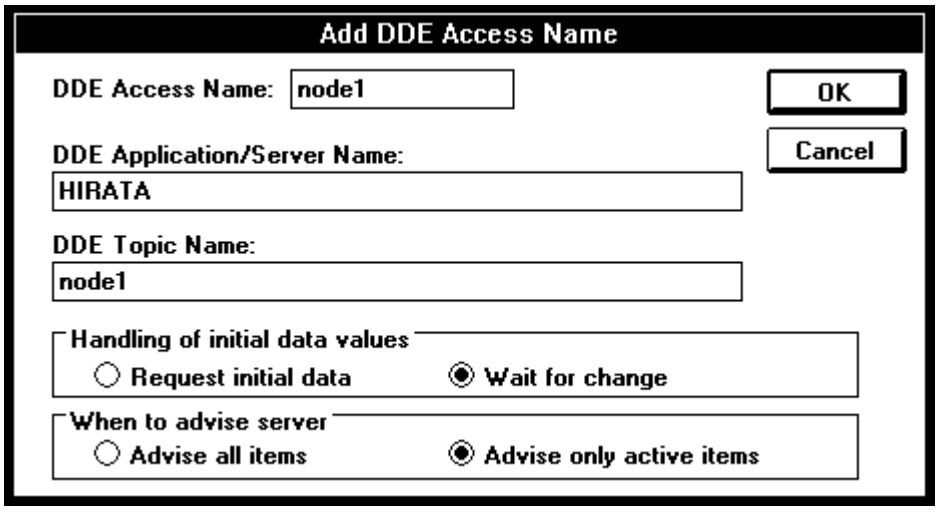
To access to items/points on the Robot from **InTouch**, the DDE Access names and Tag names should be defined in **Window Maker.**

Defining the DDE Access names

To define the DDE Access Names in Window Maker invoke the */Special/DDE Access Names...* command. The "DDE Access Name Definition" dialog box will appear.



Click on **Add**. The "Add DDE Access Name" dialog box will appear:



***Note:** This dialog box will be blank when it initially appears. Data has been entered here to illustrate the entries which are made.*

The following three fields are required entries when entering a DDE Access Name Definition:

DDE Access Name
Enter an arbitrary name which will be used in **InTouch** tag name definitions to refer to the topic (Robot). For simplicity, it is recommended that the name defined for the topic in HIRATA DDE Server also should be used here.

DDE Application/Server Name
Enter the application name, **HIRATA**, which is the DDE Server to be used to access the Robots.

DDE Topic Name
Enter the name defined for the topic in HIRATA DDE Server to identify the Robot that will be accessed by the DDE Server. This will usually be the same as the "DDE Access Name", but if desired they may be different. However, the **DDE Topic Name** must be the same name used when the *Topic* was configured in the HIRATA DDE Server.

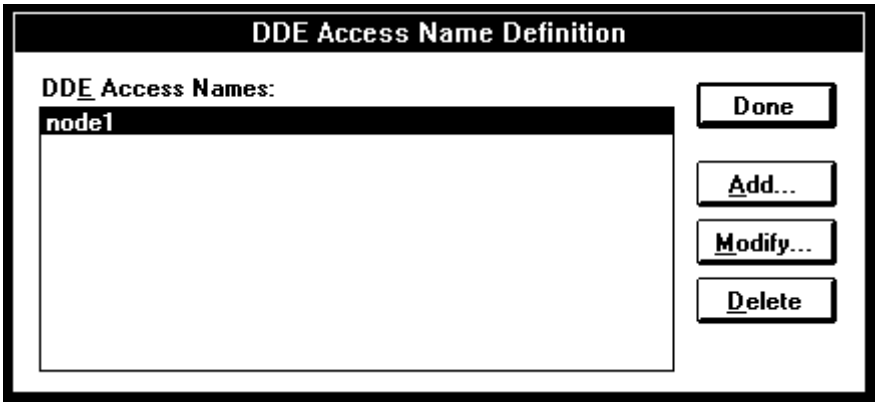
Request Initial Data
This option may be selected if the Server is other than a Wonderware DDE Server and the Server does not return data values immediately when a window is displayed. This option is not applicable to the HIRATA DDE Server.

Wait for Change
This option should be selected when the DDE application is the HIRATA DDE Server.

Advise all Items
This option may be selected if the Server is to poll for all data whether or not it is in visible windows, alarmed, logged or trended. The use of this option is not recommended.

Advise only active Items
Selecting this option will cause the HIRATA DDE Server to poll only points in visible windows and points that are alarmed, logged or trended.

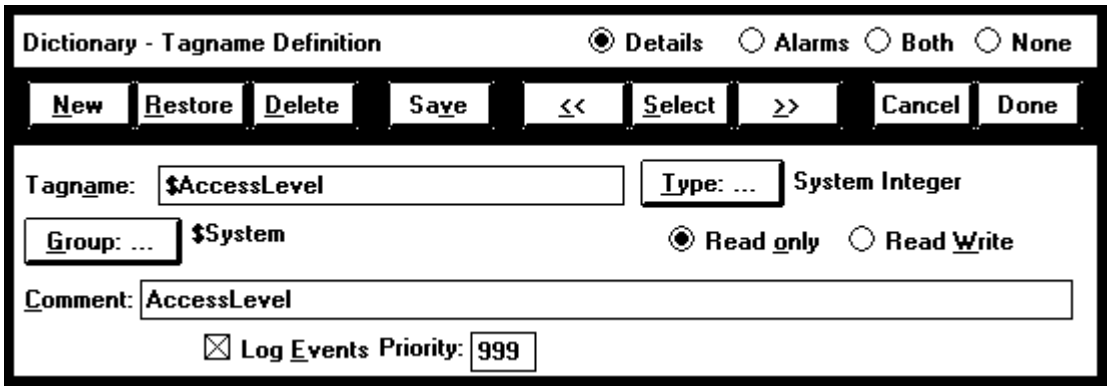
When all entries have been made, click on **OK** to return to the "DDE Access Name Definition" dialog box:



Click on **Done** to accept added DDE Access name.

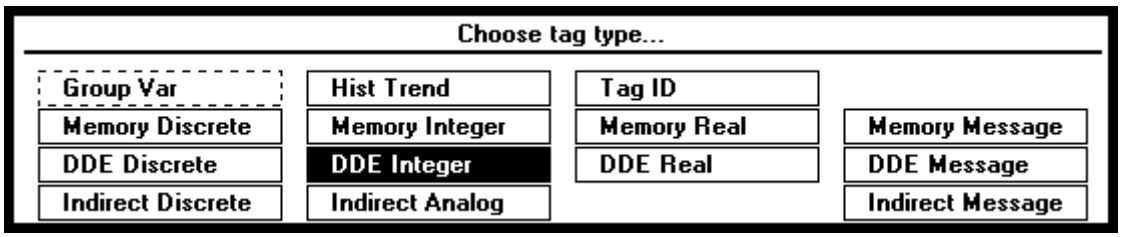
Defining the Tag names

To define the Tag names associated with the new "DDE Access Name", invoke the */Special/Tag Name Dictionary* command (in **Window Maker**). The "Dictionary - Tag Name Definition" dialog box will appear:



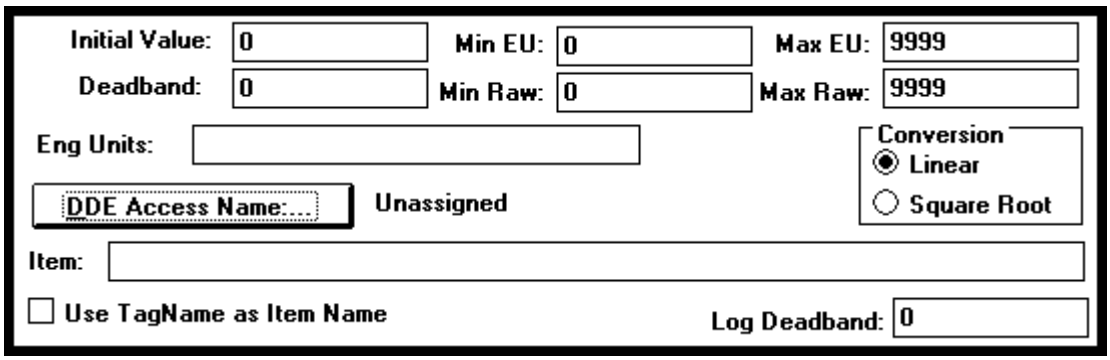
Click on **New** and enter the **Tag Name**. (The tag name defined here is the name **InTouch** will use. The HIRATA DDE Server does not see this name.)

Select the tag type by clicking on the **Type:...** button. The "Choose tag type" dialog box will appear:

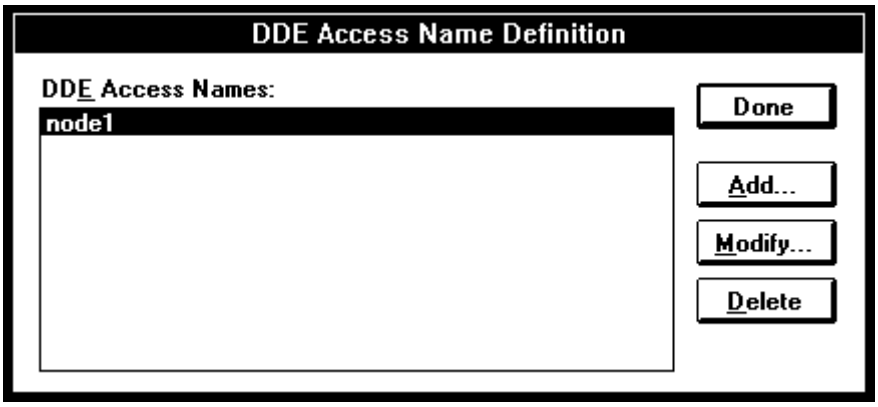


To access HIRATA items, the type must be **DDE Discrete** or **DDE Integer**. Select the DDE type.

The "Details" dialog box for the tag name will appear:

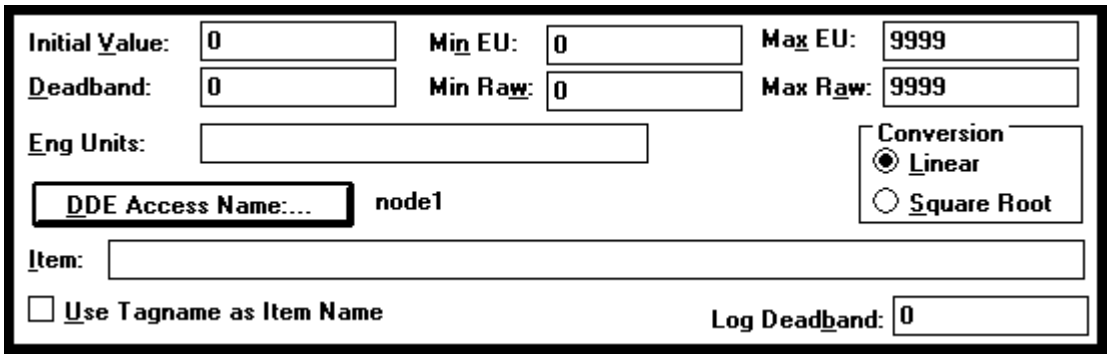


Select the HIRATA topic by clicking on the **DDE Access Name**... button. The "DDE Access Name Definition" dialog box will appear:



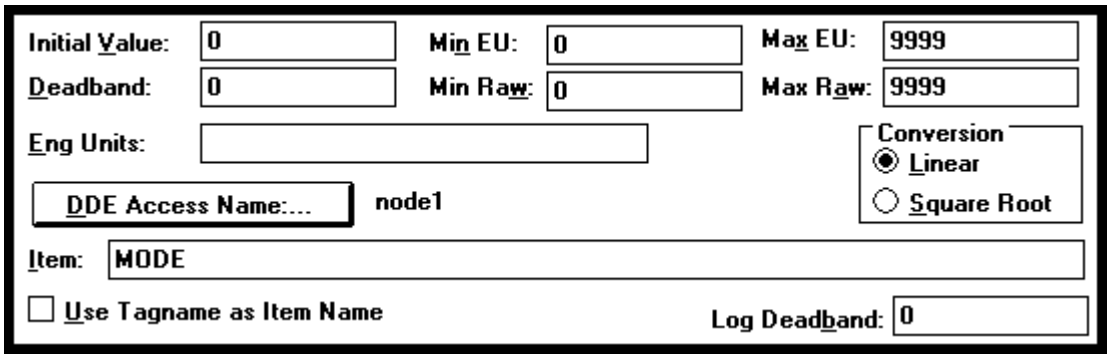
Select the appropriate topic name and click on **Done**. (If the DDE Access Name has not been defined as previously described, click on **Add...** and define the DDE topic now.)

The "Details" dialog box will appear displaying the selected DDE Access Name:



For integers fill the **Min EU**, **Max EU**, **Min Raw** and **Max Raw** fields. These fields control the range of values which will be accepted from the server and how the values are scaled. If no scaling is desired, **Min EU** should be equal to **Min Raw** and **Max EU** equal to **Max Raw**.

Enter the HIRATA item/point name to be associated with this tag name in the **Item** field in the "Details" box:



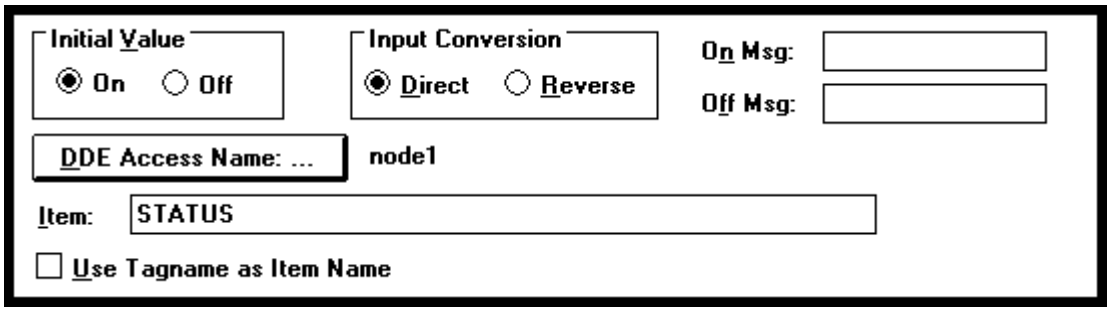
(Refer to the **Item (Point) Naming** section for complete details.)

When all entries have been made, click on the **Save** button (in the top dialog box) to accept the new tag name. To define additional Tag names click on the **New** button. To return to the **Window Maker** main screen, select **Done**.

Accessing the "STATUS" Item

For each Topic there is a built-in discrete item (**STATUS**) which indicates the state of communication with the Robot. This discrete item is set to **0** when communication with the Robot fails and set to **1** when communication is successful.

From **InTouch** the state of communication with the Robot may be read by defining a DDE Discrete tag name and associating it with the topic configured for the Robot and using **STATUS** as the *Item* name.



Notes on Using Microsoft Excel

Data from HIRATA topics may be accessed from Excel spreadsheets. To do so, enter a formula like the following into a cell on the spreadsheet.

=HIRATA|topic!item

Sometimes, Excel requires the topic and/or item/points to be surrounded by apostrophes.

In the formula, **topic** must be replaced with one of the valid topic names defined during the Server configuration process. Replace **item** with one of the valid item/point names described in the **Item (Point) Naming** section.

Reading Values into Excel Spreadsheets

Values can be read directly into Excel spreadsheets by entering a DDE formatted formula into a cell, as shown in the following examples:

=HIRATA|Robo1!MW0
=HIRATA|Robot!LH
=HIRATA|Robot!LS

The status item can be read by entering the following formula in a cell:

=HIRATA|topic!STATUS

Note: *Refer to the Microsoft Excel manual for complete details on entering Remote Reference formulas for cells.*

Writing Values to HIRATA Points

Values may be written to the HIRATA Server from Microsoft Excel by creating an Excel macro that uses the **POKE** command. The proper command is entered in Excel as follows:

channel=INITIATE("HIRATA","topicname")
=POKE(channel,"itemname", Data_Reference)
=TERMINATE (channel)
=RETURN()

The following describes each of the above **POKE** macro statements:

channel=INITIATE("HIRATA","topicname")
Opens a channel to a specific topic name (defined in the Server) in an application with name HIRATA (the executable name less the .EXE) and assigns the number of that opened channel to **channel.**

Note: *By using the* ***channel=INITIATE*** *statement the word* ***channel*** *must be used in the* ***=POKE*** *statement instead of the actual cell reference. The* ***"applicationname"*** *and* ***"topicname"*** *portions of the formula must be enclosed in quotation marks.*

=POKE(channel,"itemname", Data_Reference)
POKEs the value contained in the **Data_Reference** to the specified item name (actual location in the HIRATA robot) via the **channel** number returned by the previously executed **INITIATE** function. **Data_Reference** is the row/column ID of the cell containing the data value. For **"itemname"**, use some of the valid item names described in the ***Item (Point) Naming*** section.

=TERMINATE(channel)
Closes the channel at the end of the macro. Some applications have a limited number of channels. Therefore they should be closed when finished. **Channel** is the channel number returned by the previously executed **INITIATE** function.

=RETURN()
Marks the end of the macro.

The following is an example of Excel macro used to poke value from cell B2 to topic **Robot1** item **MW0**:

```
PokeMacro -Ctrl a
=INITIATE("HIRATA","Robot1")
=POKE(A2," MW0",B2)
=ON.TIME(NOW()+0.01,"TerminateDDEChannel")
=RETURN()

TerminateDDEChannel
=TERMINATE(A2)
=RETURN()
```

Note: R*efer to the Microsoft Excel manual for complete details on entering Remote Reference formulas for cells.*

Troubleshooting

WIN.INI entries

The first time you run the HIRATA DDE Server configuration, most of the items in the following list will automatically appear in the WIN.INI file. It is usually in the C:\WINDOWS directory. It is an ASCII file and can be altered manually if you wish with any text editor, e.g. Windows Notepad (*do not use a program that formats text, such as Word or Write unless the file is saved as DOS text*). The following is a typical entry for the HIRATA DDE Server:

[HIRATA]
ProtocolTimer=50
ConfigurationFile=C:\HIRATA
WinIconic=0
WinFullScreen=0
WinTop=112
WinLeft=0
WinWidth=200
WinHeight=168
DebugMenu=1
ShowSend=0
ShowReceive=0
ShowErrors=1

Troubleshooting menu

The following debugging choices are appended to the Server's System Menu (the menu that appears when you click the "-" box in the upper left hand corner of the Server window):

Suspend Protocol / Resume Protocol - these choices permit you to turn protocol processing on and off, what means that you can suspend access to the Robot.

Show Send - if checked then all outgoing data is logged in hexadecimal format.

Show Receive - if checked then all incoming data is logged in hexadecimal format.

Show Errors - if checked then all information about errors is logged.

Dump - logs all information about opened ports, active topics and data items.

All debug is logged via the Wonderware Logger, which must be active for these commands to work.
Warning: if you check **Show Send** and/or **Show Receive** debug output grows very fast.

KLINKMANN AUTOMATION
HIRATA DDE Server
Revision History

Mar 97	Rev 1.0	First Release.
Aug 97	Rev 1.1	Robot axis' manual motion control added. Robot status monitoring in NOT-THROUGH mode added. Behavior of D_ALL_DO item changed. Manual file name changed.
Mar 2002	Rev 1.2	Installation from CD information added.