

Dynamic Data Exchange (DDE)

Dynamic Data Exchange or DDE is a Windows feature that allows Windows applications to communicate with each other. DDE is based on the messaging system built into Windows. Two Windows programs can carry on a DDE "conversation" by posting messages to each other. These two programs are known as the "server" and the "client". A DDE server is the program that has access to data that may be useful to other Windows programs. A DDE client is the program that obtains this data from the server.

Slick! for Windows as DDE Server

Slick! can function as a DDE server. It must be active before the client application can initiate a conversation with it. If it is not active, most client applications have an "application execute" command that can be used to run Slick!. For example, if you are using WordPerfect 6.0 for Windows, you can issue the following command to run Slick!.

```
APPEXECUTE("c:\slickwin\slickwin")
```

Normally, the client application need to use only three types of DDE commands to converse with Slick!. These are:

INITIATE	to initiate the DDE conversation
EXECUTE	to send commands to Slick!
TERMINATE	to terminate the conversation

Note: Applications may differ in the naming of the above commands but the usage is the same. For example, WordPerfect for Windows 6.0 uses the command DDEINITIATE.

To initiate a conversation with Slick!, the client application must use SLICK.GFX as the service application name and SYSTEM as the topic name. For example:

```
INITIATE("SLICK.GFX";"SYSTEM")
```

DDE execute commands

The format of the Slick! execute command string is:

```
[command parameter1 parameter2 ... parameterN]
```

The following example tells Slick! to open a specific file:

```
EXECUTE(chnl;"[OPEN d:\acad\dwgs\pump.dwg]")
```

In general, the command string must be delimited by brackets []. However, macros being written for some Windows applications may not require the brackets and in some instances will cause an execution error if included. If this is the case, simply remove the brackets from the macro statement.

Every execute string should start with a valid Slick! DDE command defined in the tables below. A single space character is required to separate the command from its parameters if any. Multiple parameters are also separated from each other by a single space character.

Note: Commands and parameters that are capitalized must be entered exactly as shown. A "point" parameter expects two numbers separated by a comma (for example, 12.4,10)

Sample Visual Basic Microsoft Access Interface

The following code will start Slick! as an external drawing viewer and passes to it the folder and filename of the drawing to be viewed.

```
Private Sub cmdRunApp_Click()  
    'Routine to start external drawing viewer (slick 7)with selected  
    file  
  
    On Error GoTo Err_cmdRunApp_Click  
    Dim stExecutable As String  
    Dim stAppName As String  
    Dim FolderName As String  
    Dim FileName As String  
  
    'Change the following folder location to reflect actual installed  
    folder  
  
    stExecutable = "C:\Drafting\Slick\slickwin.exe"  
  
    'The actual names of the text boxes in my form  
  
    FolderName = Me!Dwg_Location  
    FileName = Me!Electronic_file_name  
    stAppName = stExecutable & " " & FolderName & "\" &  
    FileName  
    Call Shell(stAppName, 1)  
  
Exit_cmdRunApp_Click:  
    Exit Sub  
  
Err_cmdRunApp_Click:  
    MsgBox Err.Description  
    Resume Exit_cmdRunApp_Click  
  
End Sub
```

Sample VBA macro for Excel '97

If the Excel spreadsheet cell contains the complete path of a file you wish to open with Slick!, this macro will execute Slick! and open that file.

```
Sub CallSlick()  
    Dim ddeChannel As Long  
    'Slick! must be running before a DDE conversation can be started;  
    'To check if Slick is running, you may use a function like  
    FindWindow();  
    'If Slick is not running then you may run Slick from a shell as  
    shown 'below  
    'Shell Pathname:="D:\slickv80\slickwin.exe", _  
        WindowStyle:=vbNormalFocus  
  
    On Error GoTo DDEFailed  
    'Initiate DDE conversation with Slick  
    ddeChannel = DDEInitiate(App:="SLICK.GFX",  
Topic:="SYSTEM")  
    AppActivate "SLICK!", Wait:=True  
    'Open a drawing file. If the cell contains an entry for the complete  
    path 'name of a drawing that you want to open, get the string  
    value of the cell 'and concatenate it with the OPEN command to  
    create a new string,  
    ' then use this string instead as part of the DDEExecute command  
    DDEExecute Channel:=ddeChannel, _  
String:="OPEN d:\slickv40\demo.dwg"  
    MsgBox "Wait"  
    DDETerminate ddeChannel  
    Exit Sub  
  
DDEFailed:  
    MsgBox "DDE Failed"  
End Sub
```

Sample Visual Basic 6.0 Code

```
Private Sub Command1_Click()  
    'function to start Slick  
    Shell Pathname:="c:\slickv51\slickwin.exe", _  
        WindowStyle:=vbNormalFocus  
End Sub
```

```
Private Sub Label3_Click()  
    'Procedure to initiate a conversation with Slick  
    'Text1 contains a directory path  
    'Text2 contains a file name
```

```
Label3.LinkMode = vbLinkNone  
Label3.LinkTopic = "SLICK.GFX|SYSTEM"  
Label3.LinkItem = "DDE_LINK"  
Label3.LinkMode = vbLinkManual  
'Concatenate Open with text1 and text2  
cmd$ = "OPEN " + Text1.Text + Text2.Text  
Label3.LinkExecute cmd$  
cmd$ = "PRINT AREA 8.0 10.5"  
Label3.LinkExecute cmd$  
cmd$ = "PRINT START"  
Label3.LinkExecute cmd$  
End Sub
```

GENERAL DDE COMMANDS

Command	Parameter	Purpose
CHANGEDIR	path	If you open a file for viewing using DDE, Slick will open the drawing directly without refreshing the file and directories windows! This is to save on processing time. If you wish to force a directory read, issue the change directory command CHANGE DIR. For example, "CHANGEDIR D:\NEWDWGS"
COPYIMAGE	none	Copy the current display to the Windows Clipboard as a bitmap image.
COPYVECTOR	none	Copy the current display to the Windows clipboard as a Windows Metafile.
LAYER	layername 0 or layername 1	Turns the given layer ON or OFF Ex. LAYER NOTES 0 turns off layer notes You must issue the REGEN command below to redraw the file with the new layer settings.
OPEN	filename	Display a file. Include extension if present. Ex: OPEN d:\acad\dwgs\test.dwg
ZOOM	E	Display the current file to its extents.
ZOOM	W point point	Display a windowed portion of the file as specified by the two point parameters. The values for "point" should be the actual drawing coordinates in decimal representation. Ex: ZOOM W 0,0 8.5,11
MOVEWINDOW	X Y width height	Change the position and dimensions of the Slick! window on the Windows desktop. The parameters are measured in screen pixels with the upper left screen corner at 0,0. X specifies the position of the left side of Slick!'s window. Y specifies the top position. Width and height give the dimensions of the Slick! window
TOPWINDOW	none	Makes the Slick! window topmost on the Windows desktop
REGEN	none	Redraws the graphics image after AutoCAD layers are turned on or off with the LAYER command.
FILESPEC	new file string	Example: *.DWG, *.PLT, *.TIF
WINDOW HIDE		Hides the Slick! window
WINDOWSHOW		Shows the Slick! window
WINDOWMINIMIZE		Minimizes the Slick! window
WINDOWMAXIMIZE		Maximizes the Slick! window
WINDOWRESTORE		Restores the Slick! window
QUIT	none	Terminates Slick!

DDE Print Commands		
PRINT	AREA x y	Sets the maximum printable area. 'x' inches wide by 'y' inches high. Ex. PRINT AREA 8.0 10.5 (A-size paper)
PRINT	DBINFO 0 or DBINFO 1	Turn on or off the print database record option. Ex. PRINT DBINFO 1 (print the db record)
PRINT	FIT 0 or FIT 1	Turn on or off the plot to fit option. Ex. PRINT FIT 0 (plot to user set scale)
PRINT	ORIGIN x y	Moves the print origin by 'x' inches horizontally and 'y' inches vertically. Ex. PRINT ORIGIN 1.0 -1.0
PRINT	SCALE d_unit p_unit	Establishes print scaling. Each drawing unit (d_unit) will be plotted to each print inch (p_unit). For example, PRINT SCALE 2.0 1.0 (print at a 2 to 1 scale) Note: Make sure PRINT FIT is off for this to take effect.
PRINT	START	Prints the current file. Make sure you have set all desired print options before issuing this command.
PRINT	TOFILE 0 or TOFILE 1	Turn on or off the plot to a file option. Ex. PRINT TOFILE 1 - send the output to a plot file. The plot filename is the same as the drawing name with an extension of .PLT