IO_CppExample

Description

The TcpipClient directory contains an example of a IO-Handler connecting to an RTDB based application as a client of RTDB tcp/ip server. This example is written in C++ under Visual Studio 2008. The code demonstrate the use of functions available in the TcpipClient.dll. The dll file has been copied into the Windows/system32 directory during installation.

The example is written for a simple StateWORKS specification project named IO_Example.

To make it simple the example uses the implicit call of the dll. Therefore the project contains the TcpipClient.lib. The code demonstrates the following:

- `InitializeRTDBServerConnection()` using the function **`Initialize():`**
  - initializes the callback function `RepEv()` that is called by events coming from the RTDB server;
  - connects to RTDB server using the function **`Connect()`**,
  - registers as a client of outputs RawData property in the RTDB using the **`AdviseStart().`**
- The callback function `RepEv()` may receive the RawData values of Do:001 and No:001 or the information that the RTDB server exited.
- The `OnBnClickedCheckDi1()` and `OnEnKillfocusEditNi1()` use the function **`Poke()`** to write correspondigly the RawData value of digital input Do:001 and numerical input No:001 into the RTDB.
- The `OnDestroy()` uses the **`DisConnect()`** while terminating the application.

The example shows the use of commonly used dll functions. The other functions are:

`Receive()` which delivers the requested value. Its use is straigtforward: at any time we can use the function to get a certain property from the RTDB.

`AdviseStop()` is seldom explicitly used; it is used inside the function Disconnect().

Test

To test the IO_CppExample you have to start the *SWExecStandard.exe*.

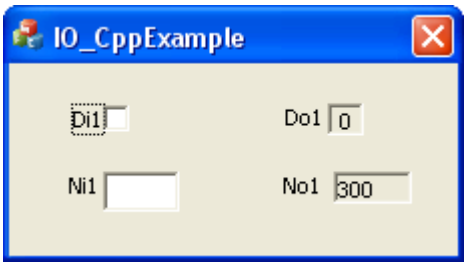

Fig. 1: IO_CppExampleI dialog window

Starting this program the first time you will be asked to enter the specification file to be executed. For the purpose of that example enter the

C:\Programme\SWSoftware\StateWORKS Studio Basic 7.2\Projects\Examples-

Web\IO_Example\Conf\IO_Example.swd

The path and the file is stored in the file *.RTDB_Conf.par* and on consecutive starts the program will use the specification file stored there. If you want to start the program with another specification file delete the *.RTDB_Conf.par* or start the program with a -cName parameter.

Now you may start the IO-Handler file *IO_CppExampleI.exe*. The dialog window as in Fig. 1 appears. The window shows a digital input Di1, a digital output Do1, a numerical (analog) input Ni1 and a numerical (analog) output No1.

You will need to use the SWMon for testing. After startng this set it to display the interesting inputs and outputs. Setting inputs Di1 and Ni1 you watch the effects in SWMon and vice-versa – changes of Do1 and No1 in SWMon are displayed in IO_CppExample window.