Sharing the Argos database

Sharing the same database between several Argos users

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1   Principles of using a shared database in Argos

Argos can be configured so that several users can use a common database. All data in the database can thus be shared between more than one user. In that way fires, building component, detectors and other templates in Argos only have to be entered in a single database. Security is enhanced, since back-up is only necessary on one computer (the server).

Note: Sharing the database has nothing to do with the licensing method used for Argos. This can be single user license or floating licenses.

1.1   Description

Argos is constructed as a so-called client-server system, where the programme is separate from the data. The actual Argos programme, Argos.exe, is the client part. All the data is in the *Server* part. Argos can only gain access to the data by asking the server. Argos's server is based on the SQL[1] database, **Firebird**. Other SQL-databases are, for example, Oracle.

1.2   Argos installed on one computer

When Argos is installed, both the client and server parts are placed on the same computer. They communicate using software, which sends queries from the client Argos to the database. (The software is an Firebird API, called GDS32.DLL). The principles are shown below.
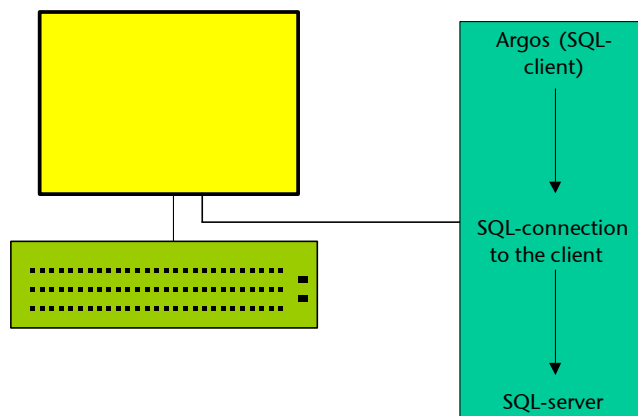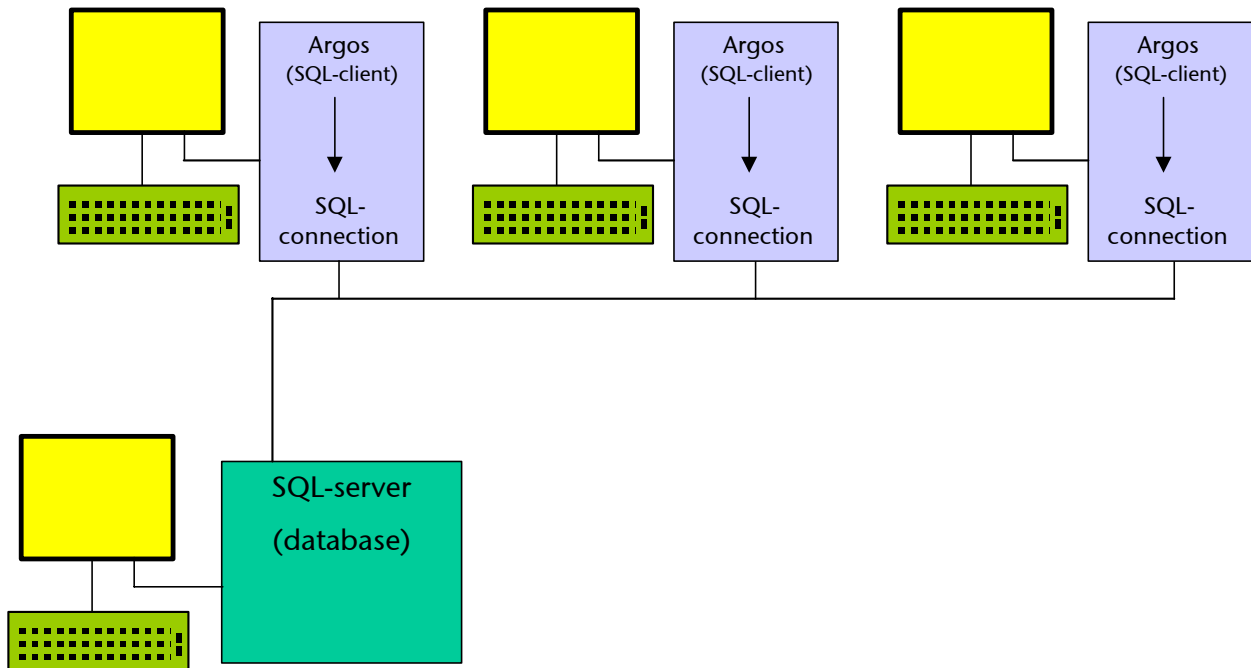

Argos installed on one computer with
client and server on the same computer

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[1] **S**tructured **Q**uery **L**anguage

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1.3 Argos installed on several computers

If Argos is installed on several computers, then all the Argos users can gain access to the same data by using a common server, as shown below.

Several computers (clients) using a common server

Argos can also be run on the computer functioning as the server.

Note: If all users are to have uninterrupted access to the data, the server has to be working all the time.

There are no restrictions as to which computer is the server. It is an advantage if the computer selected is relatively fast, since it has to take up a multi-user load.

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2   How to set up a common database server

Requirements:
All the computers have to be connected by a network to the computer which is to function as the Server. Network protocol **TCP/IP** (as used on the Internet) must be installed. Argos must be installed on <u>all</u> the computers, including the server. The server does not need a dongle, unless the Argos client (the simulation program itself) is run on the server.

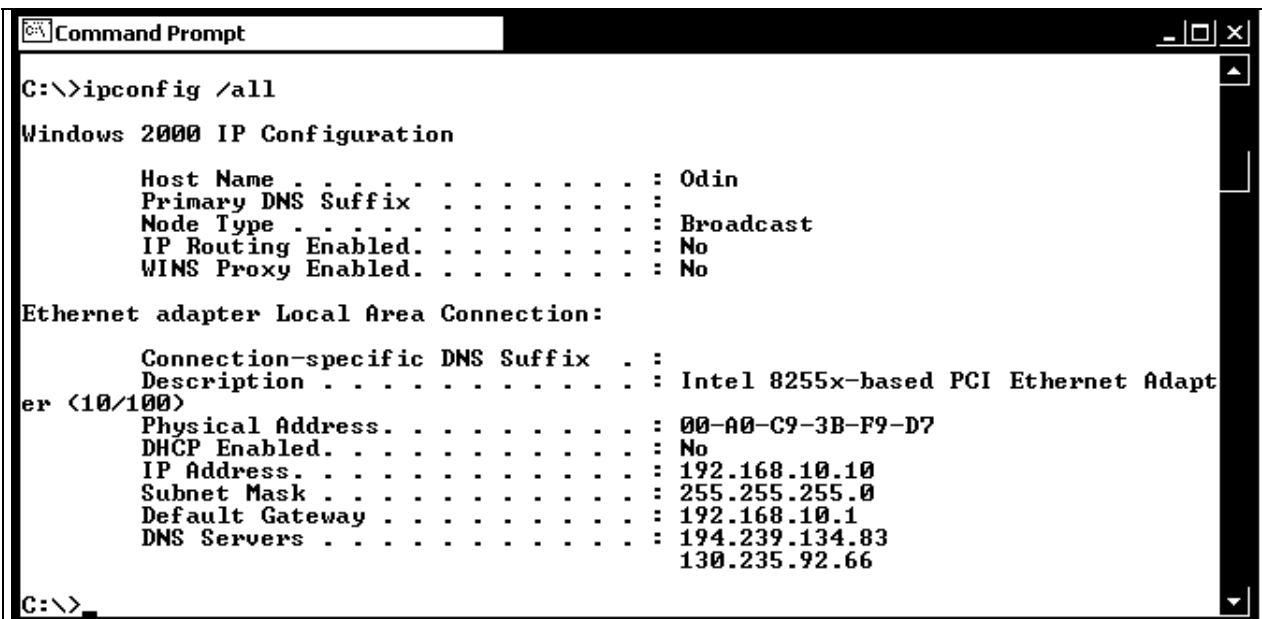*Procedure to set up a common server:*
1. One computer is dubbed the server (this is where the common database is installed).
2. Install Argos on the server.
3. Check that Argos will run on the server, remembering to use a dongle. The dongle can be removed afterwards, if the Argos client (the simulation program itself) is not run on the server.
4. Find the host name of the server (see sec. 2.1)
5. Enter the host name of the server in the registry database on the client (see sec. 2.2)

2.1   How to find the host name of the server

The computer name of the server is found by:
1. Opening a command prompt window on the server
2. Typing **IPCONFIG /all** and pressing enter

The table produced shows the name of the computer under *Host Name*. This is shown below, where the name of the server is **Odin**.

```
C:\>ipconfig /all

Windows 2000 IP Configuration

        Host Name . . . . . . . . . . . . : Odin
        Primary DNS Suffix  . . . . . . . :
        Node Type . . . . . . . . . . . . : Broadcast
        IP Routing Enabled. . . . . . . . : No
        WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . :
        Description . . . . . . . . . . . : Intel 8255x-based PCI Ethernet Adapt
er (10/100)
        Physical Address. . . . . . . . . : 00-A0-C9-3B-F9-D7
        DHCP Enabled. . . . . . . . . . . : No
        IP Address. . . . . . . . . . . . : 192.168.10.10
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.10.1
        DNS Servers . . . . . . . . . . . : 194.239.134.83
                                            130.235.92.66

C:\>
```
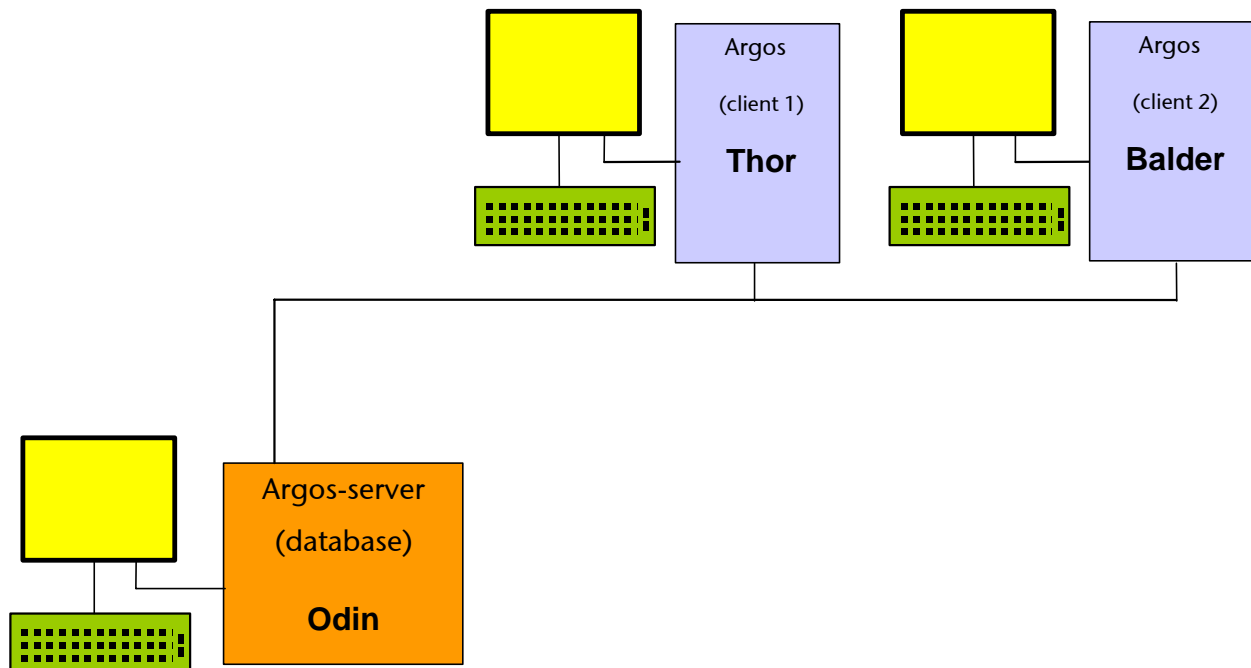
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## *2.2   How to set the host name of server on the clients*

Here is an example with three computers named **Odin**, **Thor** and **Balder**. The name of the server is **Odin**. **Thor** and **Balder** are clients.

The two client computers have to be told the name of the server and the path to the database file **Argos.gdb** on the server. The name of the server has to be added in front of the path to the database in the system registry on the client computers, as shown below.

Procedure for setting the path on a client:
1. Close Argos on the client, if the program is running (or else changes to the system registry will not be saved).
2. Click the Start button in Windows and then click Run.
3. Write **regedit** in the white field in the small window and click OK.

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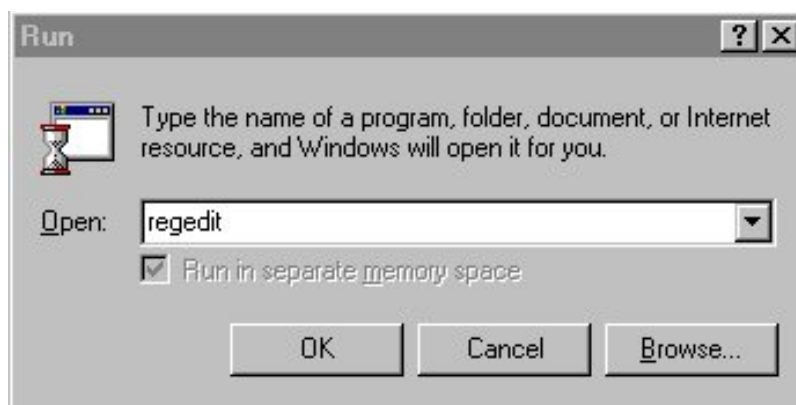
This starts the system registry editor, which contains all the set-up information for each computer. Be careful not to erase anything. Taking a back-up of the registry is advised (click file, export).
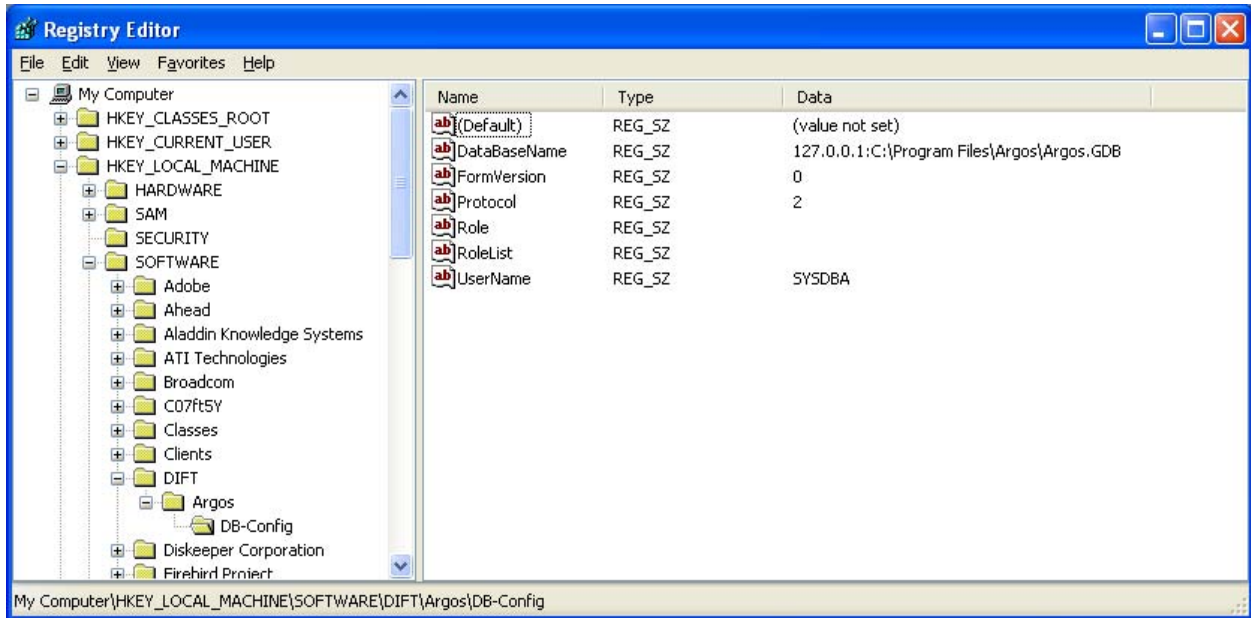

Figure 1 *System registry before changes*

The following changes have to be made to the system registry on the client computers:

1. First, move down the file hierarchy by clicking:

HKEY_LOCAL_MACHINE
SOFTWARE
DIFT
Argos
DB-config

(The path is HKEY_LOCAL_MACHINE\SOFTWARE\DIFT\Argos\DB-Config)

2. Double click on the key **DataBaseName** to change it to the following values:

Server (Odin)
No changes are necessary here, but here the path to the Argos database can be seen
DataBaseName = 127.0.0.1:C:\Program Files\Argos\Argos.GDB

Client 1 (Thor)
Configuration of THOR
Set DataBaseName = Odin:C:\Program Files\Argos\Argos.GDB

Client 2 (Balder)
Configuration of BALDER
Set DataBaseName = Odin:C:\Program Files\Argos\Argos.GDB

In this example, "**Odin:**" had to be added to the path to the database on the two client computers. The registry on both client computers should then look as in figure 2.
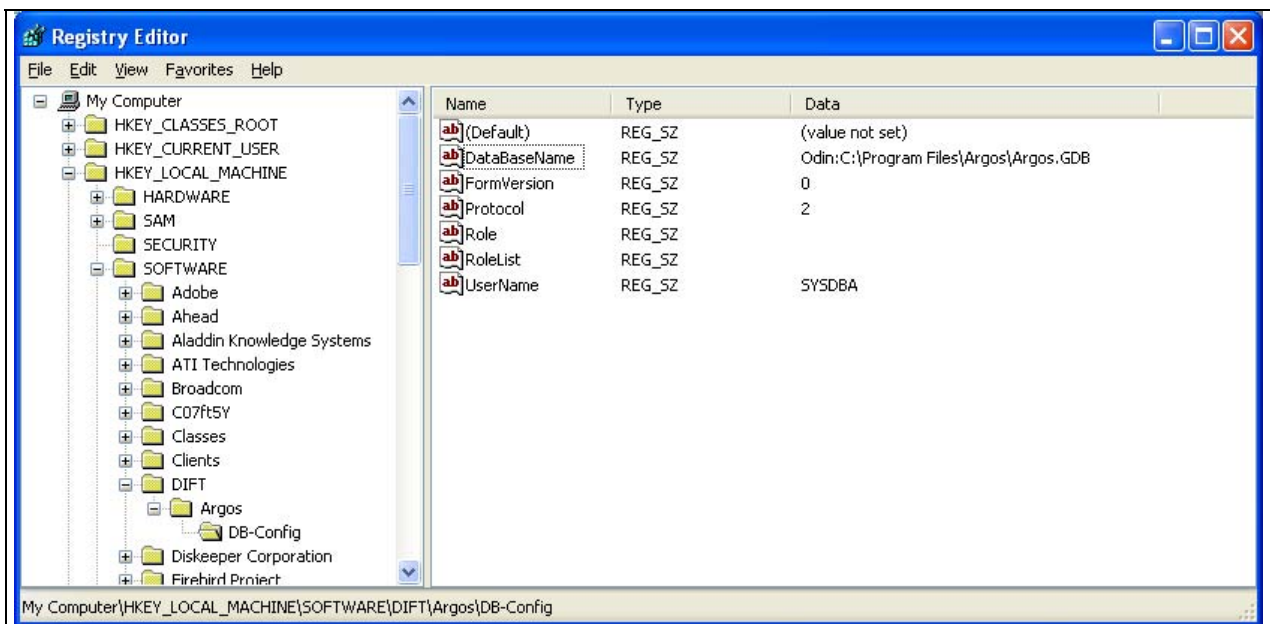

Figure 2 *System registry after changes*

2.3 If path on client computer is different from path on server

In a mixed environment, perhaps consisting of US Windows on the server and DK Windows on the clients, the paths to the programmes are different.
But it is always the path on the server, which has to be entered in the registry on the clients.

For example:
Path on server (Odin):   127.0.0.1:c:\program files\argos\argos.gdb

Path on Client before changes: 127.0.0.1:c:\programmer\argos\argos.gdb

Path on Client after changes: Odin:c:\program files\argos\argos.gdb

2.4   Verification

To check which database your local computer is connected to, or to verify that the information has been entered correctly in the system registry:

1. Start Argos on the client computer you want to check.
2. Open the Help menu, and click on "Path to database".

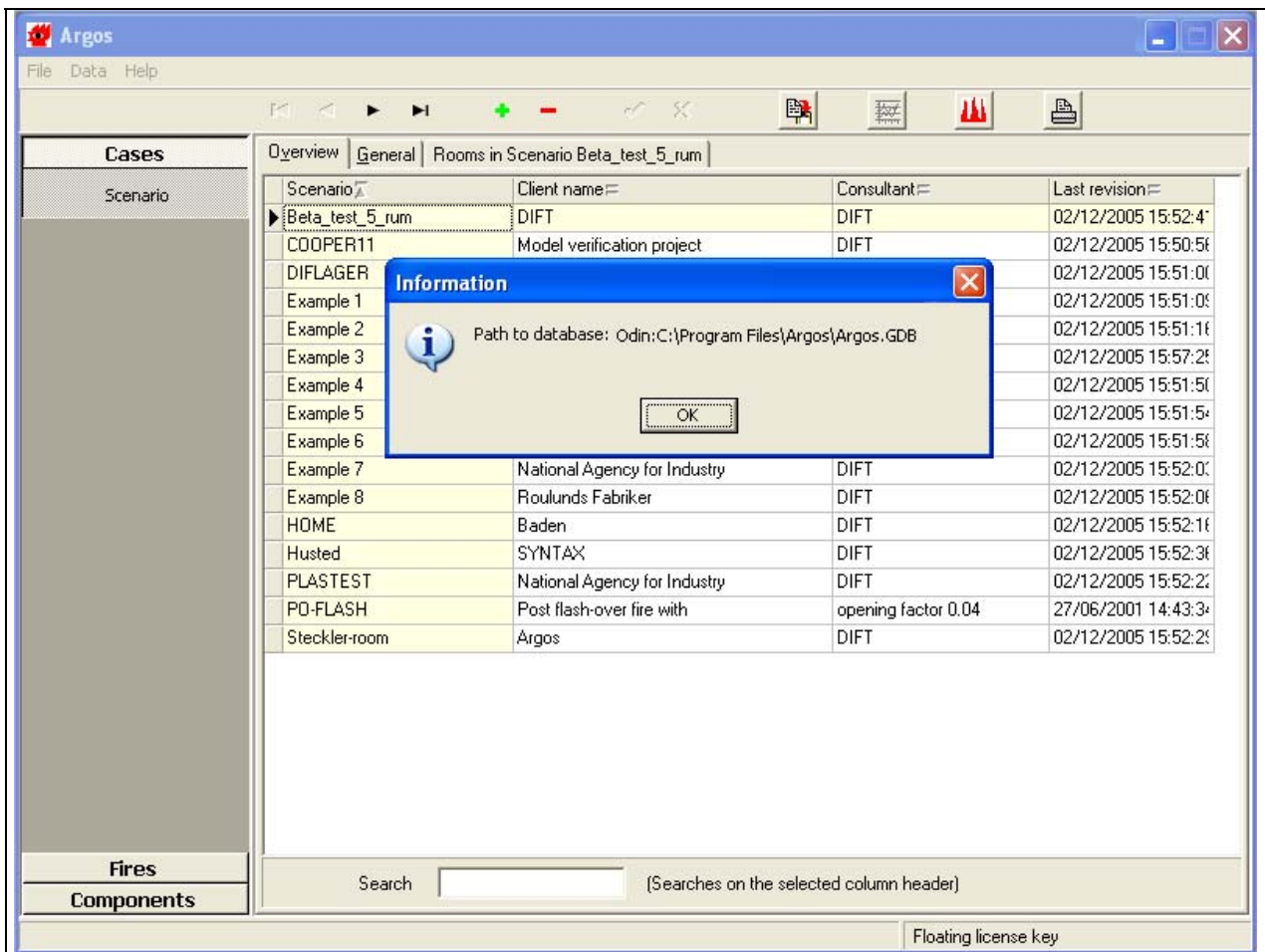This brings up the window shown below, which shows the path to the database.

Figure 3 Verification of path to database

3 Saving memory and CPU operations on the clients (can be omitted)

The client computer doesn't use the database on the local computer any more and so it can be shut down. This saves about 6 Mb in RAM-memory.

Closing the local database server on the local computer also ensures that the user doesn't log on to the wrong database by accident.

Procedure:
The Firebird database has its own control panel, which can be used to control the start-up of the server.

- Click Start, Settings, Control Panel and **Firebird Server Manager**. Click Stop.
- In Start, choose Manual.

The control panel should appear as below.

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4 Questions or problems

If you have any questions about the above or problems, please contact:

Danish Institute of Fire and Security Technology
Jernholmen 12
DK-2650 Hvidovre
Denmark

Tel. - +45 36349000
Fax. - +45 36349001

Email: argos@dift.dk
Web: www.argos.dk