T7T Driver Test User Guide
IGSS Version 8.0

Chapter 1: Introduction

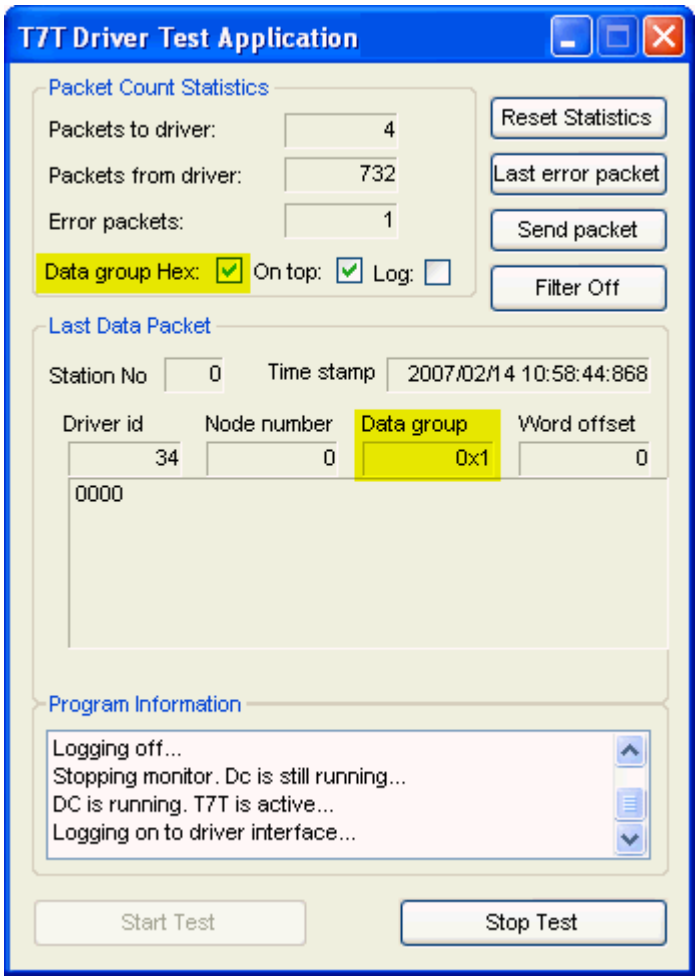
1.1 Introducing the IGSS Driver Test module, T7T

The purpose of T7T is to monitor the communication between IGSS and the PLC driver.

This is very useful for testing and troubleshooting the PLC communication.

T7T can also be used to read data from a PLC.

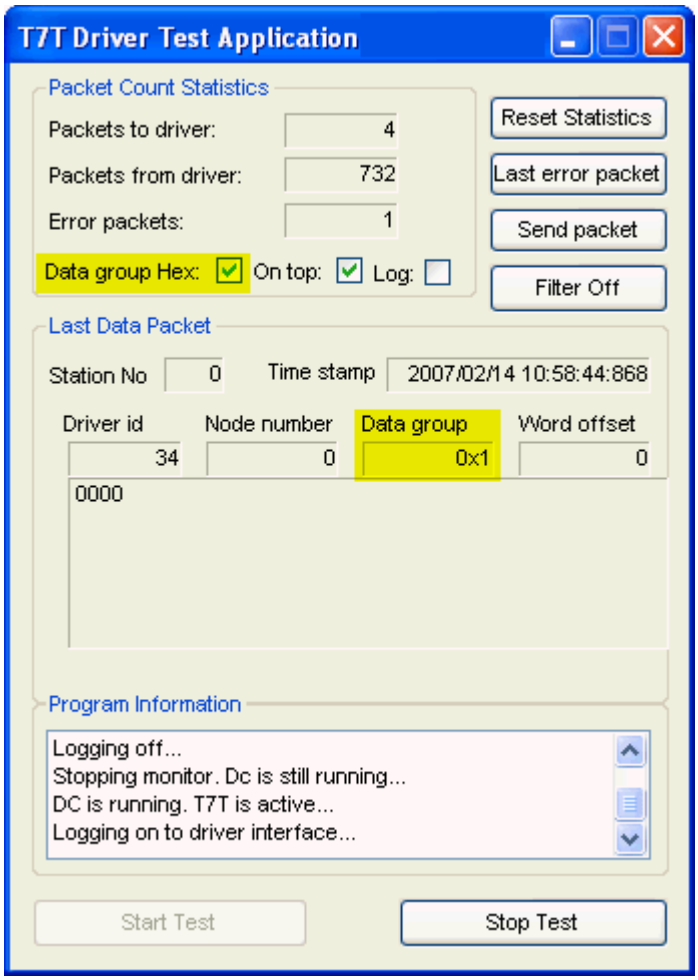
T7T has a very simple user interface which looks like this.



Chapter 2: Functionality

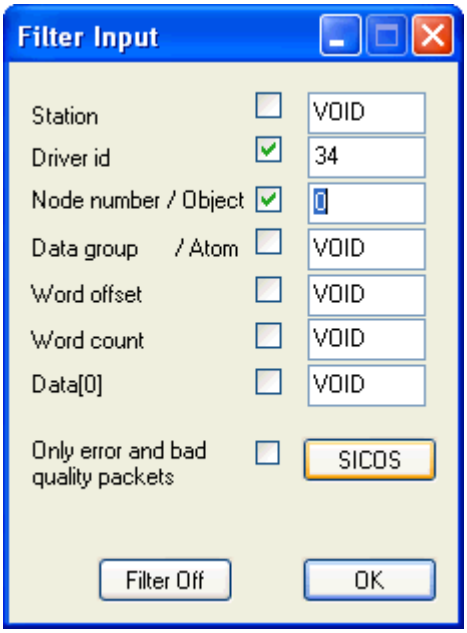
2.1 Data group Hex

In the T7T main window, choosing **Data group hex** changes the **Data group** in **Last Data Packet** to be displayed in hexadecimal.



2.2 Filter

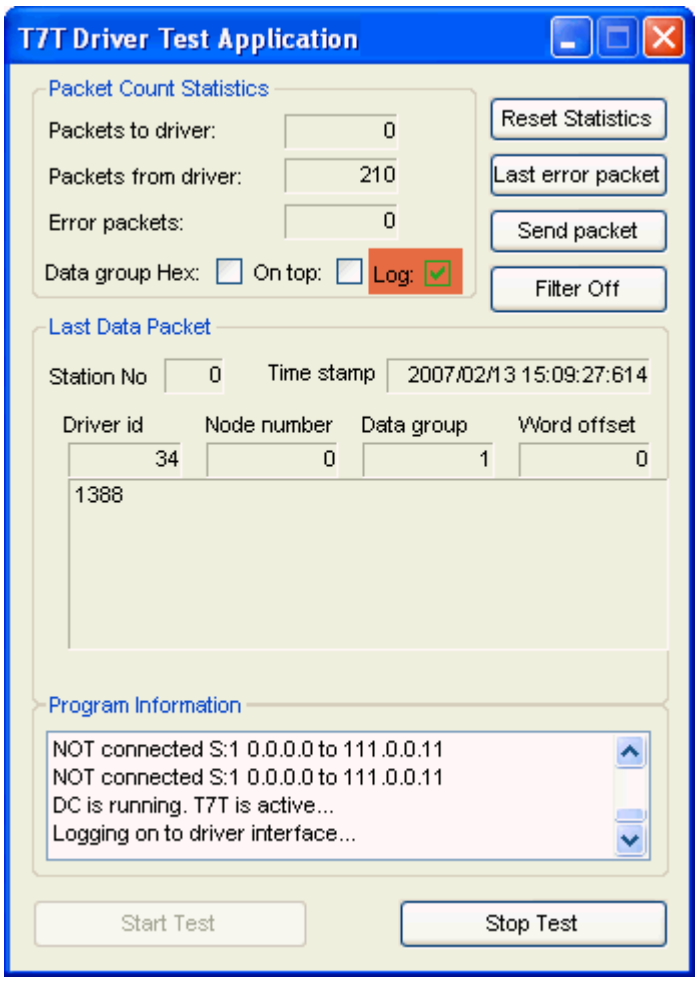
1. If you wish to filter the shown data, click **Filter Off** in the main T7T window.
2. In the **Filter Input** dialog box, you can choose which data you want to see.
3. In this example, we are looking at data from **Driver Id 34 (Generic TCP/IP Driver)** and **Node number 0**.
4. Choose **Filter Off** to reset to default values.



2.3 Log

Choose **Log** to write the monitored data to a log file. The default name of the log file is **T7T.SCN** and will reside in the configuration's **report folder**.

The log file cannot be read in a text editor, but can be read by using the IGSS utility **prscan**.



2.4 Monitoring of PLC communication

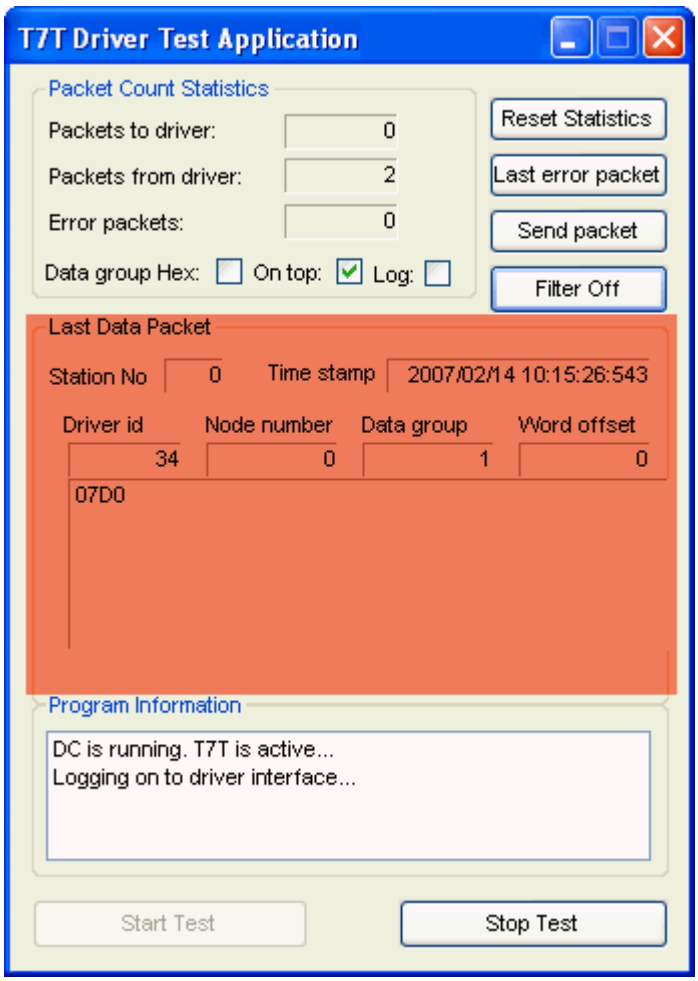
1. Click **Start Test** to start the monitoring of the PLC communication.

Result: The application will connect to the driver(s) activated in the **System Configuration** program.

In the **Last Data Packet** area, you will see the following information:

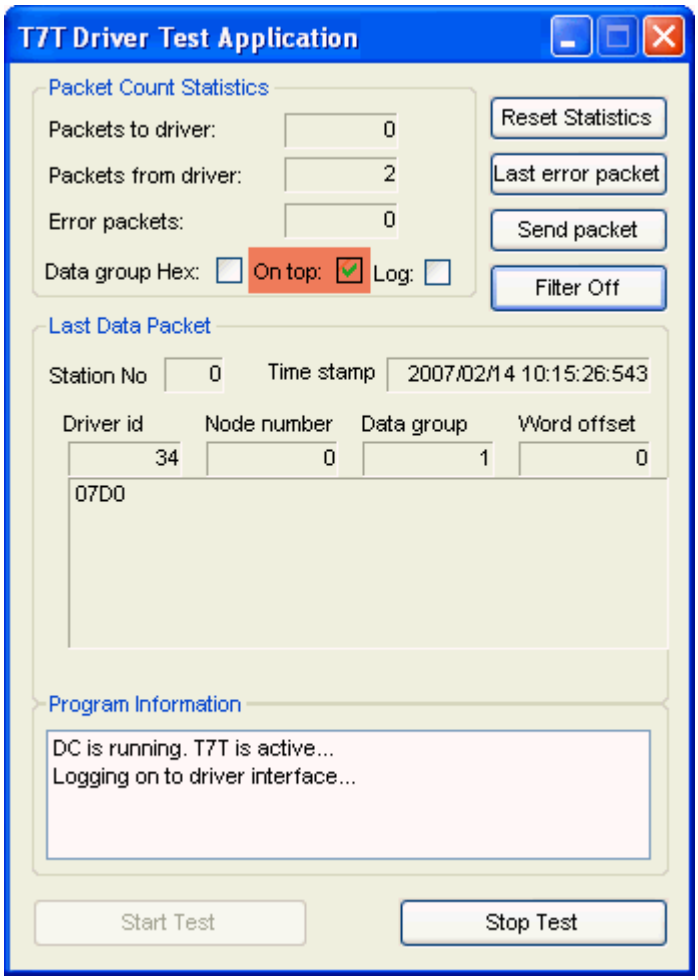
- Station number
- Time stamp
- Driver ID (found in the System Configuration program)
- Node number
- Data group
- Word offset

for the last packet sent to IGSS.



2.5 On top

Choosing **On top** changes the T7 window behavior to stay on top of other windows.

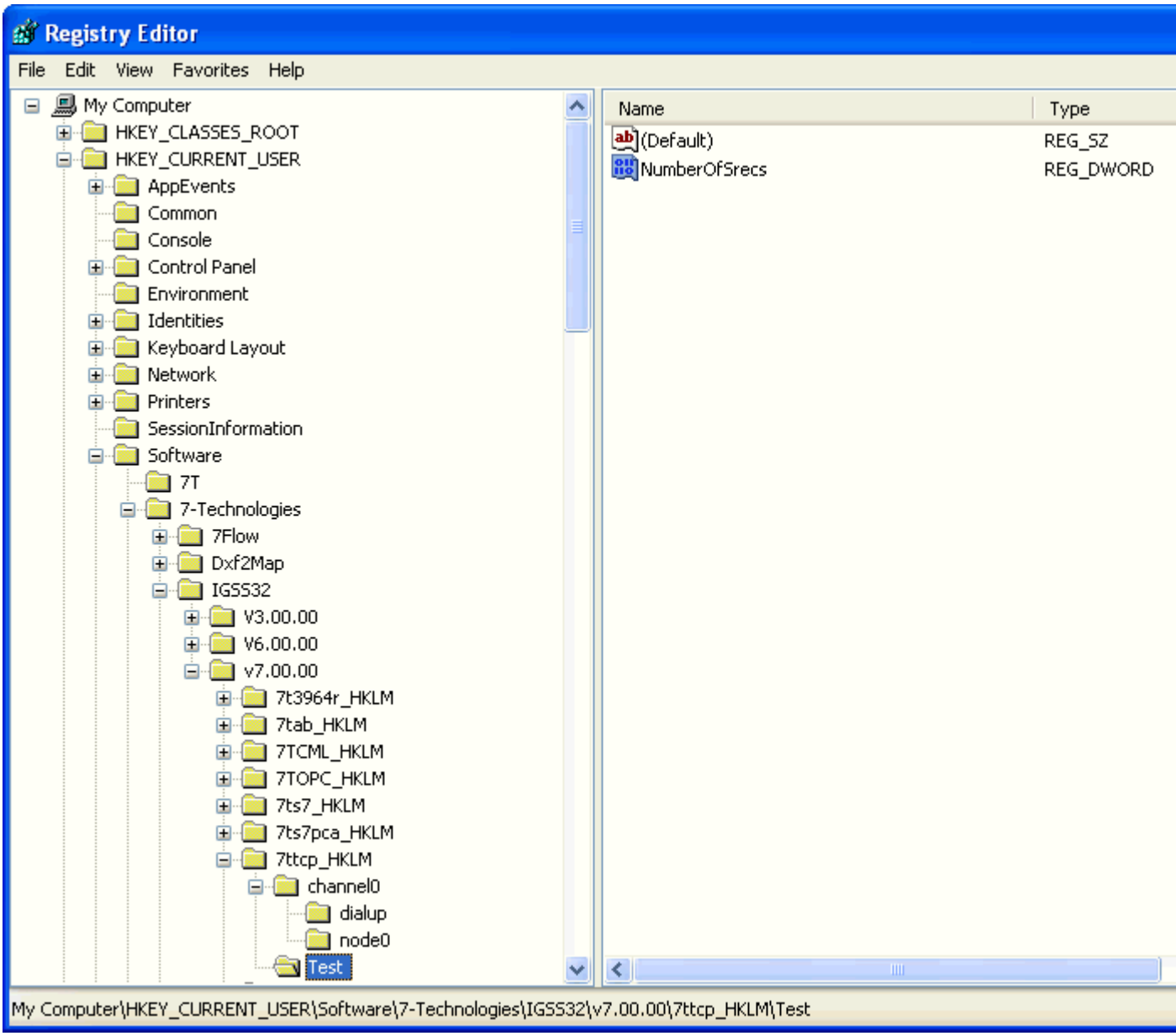


2.6 Reading data from a PLC

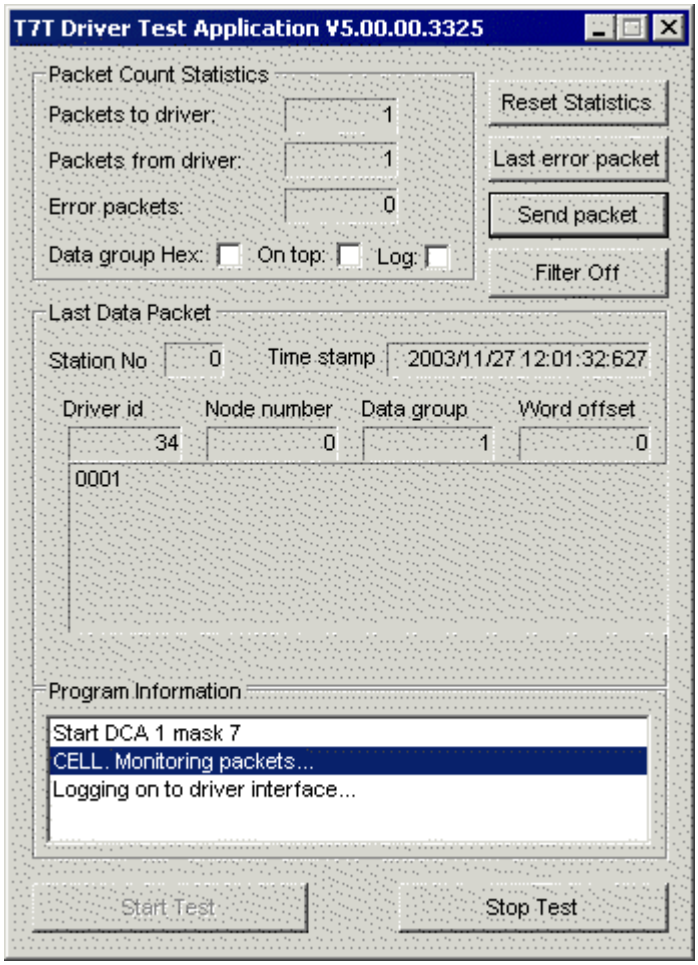
T7T can also be used to read part of the memory in a PLC. To be able to do that, it is required to follow the following procedure:

1. Before you can read the memory in the PLC, you must start the driver. This is simply done by starting the project from the IGSS Starter.
2. Activate T7T and click the **Start Test** button.
3. Then click **Stop Test**.
4. The registry key required for reading the memory in the PLC has now been created.
5. Open the Windows Registry Editor – regedit.exe - by selecting **Start -> Run > Regedit.exe**.
6. Choose the key **HKEY_CURRENT_USER\Software\7-Technologies\IGSS32\V8.00.00\7ttcp_HKLM\Test**.

7. Double click **NumberOfSrecs** and enter 1.
8. In T7T, click the **Start Test** button to read the specified memory area in the PLC.



9. In the **Registry Editor**, press **F5** to update the window. Click the **+** sign next to **Test** and choose **Srec0**. Double click **DataGroup** and enter the value **1**. Double-click **Interval** and enter the value **10**. Double-click **Length** and enter the value **1**.
10. Double-click **Node** and enter the value **0**. Double- click **Offset** and enter the value **1**. The data from the memory in the PLC is shown in the monitoring window of T7T.



If you have multiple drivers in your configuration, the "Test" key in the "Registry Editor" will appear for every driver activated.

2.7 Send packet

The T7T application can also be used to send data to a PLC.

1. If you want to use this functionality, start the application 7ttcpmon, which is a built-in soft PLC in IGSS. The filename is 7ttcpmon.exe and it is located in the **[IGSS InstallPath]\Gss** folder.

> **Tip:** You can make a shortcut to the soft PLC in the **User Programs** menu of the Supervise program.

2. Make an object in IGSS with 7TTCP as the driver, data type WORD and offset 0.
3. In T7T, click **Send Packet**.

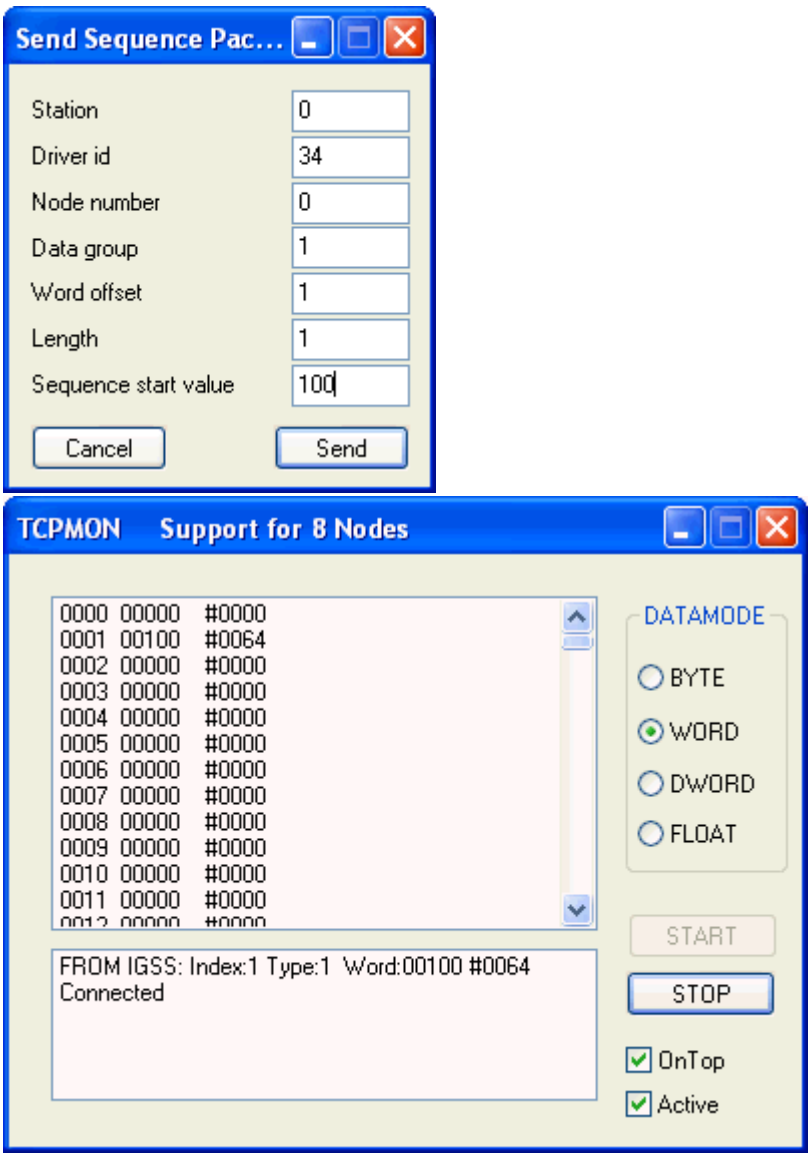
In the **Send Sequence Packet** dialog box, enter the following:

- Station = 0
- Driver ID = 34
  The ID of the 7TTCP driver
- Node = 0

- Data group = 1
  Means data type is Word. Data group must be specified as 0 = Byte, 1 = Word, 2 = DWORD and 3 = FLOAT
- Word Offset = 0
- Length = 1
- Sequence start value = 100

4. Click **Send** and the main window of the TCP Monitor should now show

   FROM IGSS: Index:1 Type:1 Word:00100 #0064



Chapter 3: Reference and Lookup

3.1 Conventions in this Manual

The following typographical conventions are used:

Convention	Description	Example
User interface element	When referring to labels and names in the user interface.	The **Data Management** tab.
User input	When the user has to type specific data in IGSS.	Type the following description: Incoming flow in Tank 2
Module name	When referring to a module in IGSS	Open the **Definition** module.
Note	A note emphasizes or supplements important points of the main text. A note provides information that may apply only in special cases.	By default, the timestamp is in universal time format, UTC[1]. This can be changed in the Driver Log Filters dialog box.
Tip	A tip suggests alternative methods that may not be obvious in the user interface. A tip also helps the user in working more effectively with IGSS. A tip is not essential to the basic understanding of the text.	Alternative to this simple find function, you can also filter on text in the messages in Driver Log Filters dialog box.
Warning	A warning is an important note that is essential for the completion of a task. In some cases, disregarding a warning may result in undesirable functionality or loss of data.	If you disregard the System alarm, you may risk loss of data in the LOG and BCL files.

3.2 Getting Help in IGSS

IGSS comes with a comprehensive help system designed to help both system designers and operators to get started with IGSS as quickly as possible.

Documentation overview

[1]Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.

The IGSS documentation includes the following items:

Documentation item	Description
Getting Started	An introduction to IGSS and its most fundamental terms and features. Getting Started is intended to get you up and running as fast as possible. The manual provides a system and architecture overview followed by a number of real-life use cases you can go through before building your first real IGSS project. The manual is available in Adobe Acrobat format (.pdf).
Module help	For each module there is a help file with the same name as the module itself, for example, Igss.chm for the Master module, Igss.exe. The help file is invoked by clicking the  in the upper right corner of the module. The Table of Contents will then allow you to browse through the topics.
Dialog box help☐	For each dialog box there is a help topic with the following standard information: • Overview • Preconditions • Where do I find it? • Field help Dialog box help is invoked by clicking the help button  in the upper right hand corner of the dialog box.
Thematic help	IGSS also provides thematic help. When there is a special theme that requires special attention from the user, a dedicated help file is provided. Examples include "Driver-Specific Help" and "Database Administration Help".

Where are the help files located?

The IGSS help files are located in the appropriate language folder under the [IGSS InstallPath]. The help files are available in English at release time.

The paths to the help files are:

Language	Path
English	[IGSS InstallPath]\ENG
Danish	[IGSS InstallPath]\DAN
German	[IGSS InstallPath]\DEU

Translated help files

Selected help files have been translated into Danish and German. If you require help files in your language, please contact 7T.

Help updates

The IGSS help files are continuously updated and improved. Check regularly with the **IGSS Update** module in the IGSS Start menu.

3.3 Version Information (IGSS Help System)

The IGSS help files are based on software build number 9212 (initial release)

English help files

To update the help files, you must activate the **IGSS Update** module in the IGSS Start menu. There must be a connection from the PC to the Internet. Every time **IGSS Update** is run, IGSS help files as well as IGSS system files will automatically be updated on the PC from the 7-Technologies web server.

You select the languages you want to update in the **Tools** menu of the **IGSS Update** module.

If you are not able to update the IGSS system directly via the Internet, the alternative is to download the updates from the 7-Technologies website as zip files. These can then be transferred onto a CD or USB memory stick, which is then the medium used to update on site.

> After running **IGSS Update**, the build numbers in various IGSS modules may change to a higher number. This signifies that the module in question has been updated with newer files. Build numbers consist of four digits, where the first digit represents the year and the last three represent the day number in the year in question. The build number can be seen in the **About** dialog box which can be activated from the **Help** menu.

An example:

Build number = 9212
9 = the year 2009
210 = The 210th day of the year

Chapter 4: Glossary

A

Application button
The Application button, nicknamed "doughnut", is located in the upper left corner of the module's window. Click the button to access the application menu. The menu contains items that were typically found in the File menu in previous versions of IGSS. In most modules, an "Options" item allows the user to define global module settings. The Application button is a new term introduced with the .NET platform and used in, for example, the Microsoft Office 2007 package.

atom

H

HDM
HDM is the abbreviation for Hour-Day-Month.

Q

Quick Access Bar
You can customize the Quick Access Bar to include the functions you use most frequently. Simply drag the relevant function from the ribbon to the Quick Access Bar.

R

Ribbon
The Ribbon is a new term/element in the Microsoft universe. The Ribbon replaces the well-known toolbars in applications. The Ribbon provides quick access to the most commonly used functions in the application. The Ribbon is divided into logical groups (the tabs) and each tab is divided into sections (the blocks in the tab). The Ribbon is context-sensitive which means that only relevant functions are accessible dependent on the current user action.

S

SCADA
Supervisory Control & Data Acquisition

U

UTC
Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.