



7T TCP Monitor User Guide
IGSS Version 8.0

Table of Contents

Chapter 1: Introduction and Setup	1
1.1 Introducing the IGSS Soft PLC, 7TTCPMON.....	1
1.2 Activating the Generic TCP/IP driver.....	2
1.3 Auto-starting the IGSS Soft PLC.....	3
Chapter 2: Functionality	5
2.1 DBInput.....	5
2.2 Sending an array.....	5
2.3 Sending a number.....	6
2.4 Sending a string.....	8
2.5 Scan / event.....	8
2.6 OnTop.....	9
3.1 Using 7ttcpmon.....	10
Chapter 3: Reference and Lookup	11
3.2 Conventions in this Manual.....	11
3.3 Getting Help in IGSS.....	12
3.4 Version Information (IGSS Help System).....	13
Chapter 4: Glossary	15

Chapter 1: Introduction and Setup

1.1 Introducing the IGSS Soft PLC, 7TTCPMON

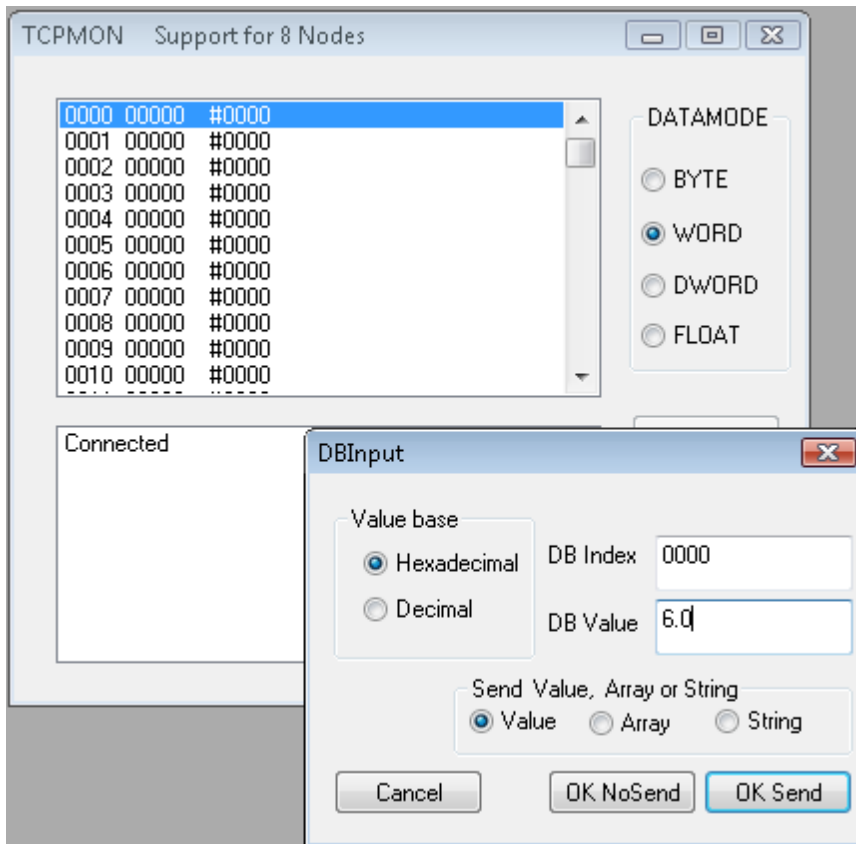
7TTCPMON is a software PLC which can be used to simulate a real PLC and test configurations.

The soft PLC works together with the Generic TCP/IP driver - ID 34.

The soft PLC has the following features:

- can send and receive values, arrays and strings to and from IGSS
- can send and receive alarm bits
- supports four different data modes - BYTE, WORD, DWORD and FLOAT
- supports up to 8 nodes
- simulates a real PLC allowing you to get real driver alarms

The soft PLC looks like this. In this case, the user has double-clicked on Word number 0 to send a value to IGSS.



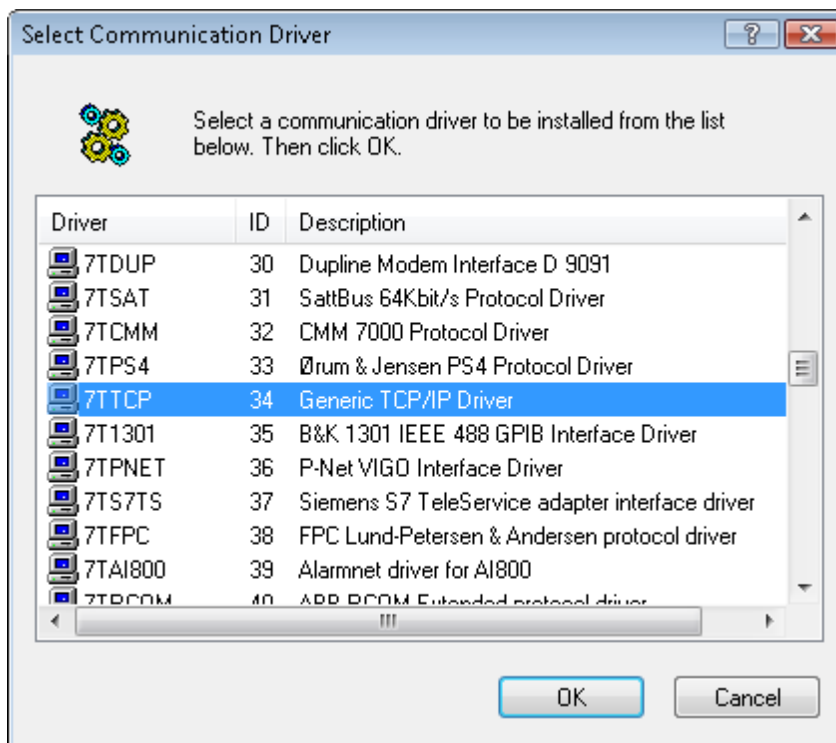
For a live example using 7T TCP Monitor, watch this video:

[IGSS OPC Client and Server](#)

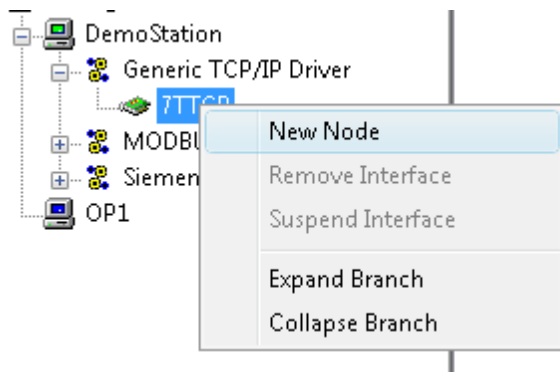
1.2 Activating the Generic TCP/IP driver

Before you can make use of the IGSS Soft PLC, you must activate the Generic TCP/IP driver, ID 34.

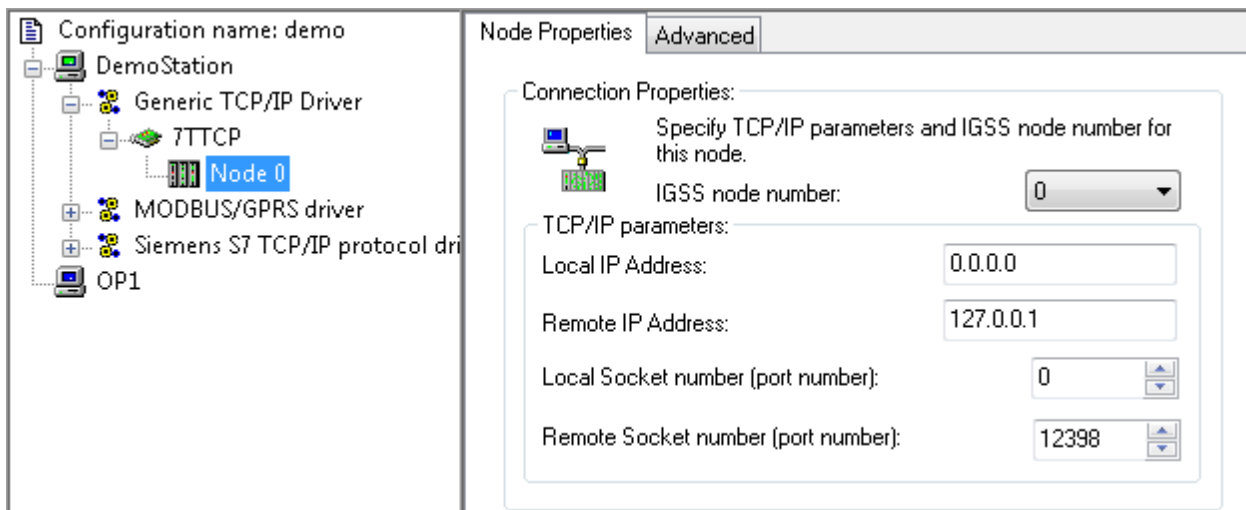
1. Open the **System Configuration** module.
2. Select the station from which you will be using the soft PLC.
3. Click the **Add Driver** icon in the toolbar or right-click the station and select **New Driver**.
4. Click the header of the **ID** column to sort by ID. Scroll down to find ID 34.
5. Double-click the driver as shown below.



6. Click the + sign beside the driver name and select the interface icon named **7TTCP**. Right-click and select **New Node**.



- By default, a node is set up to be running on the local host. This can be changed to a remote IP address, if required.



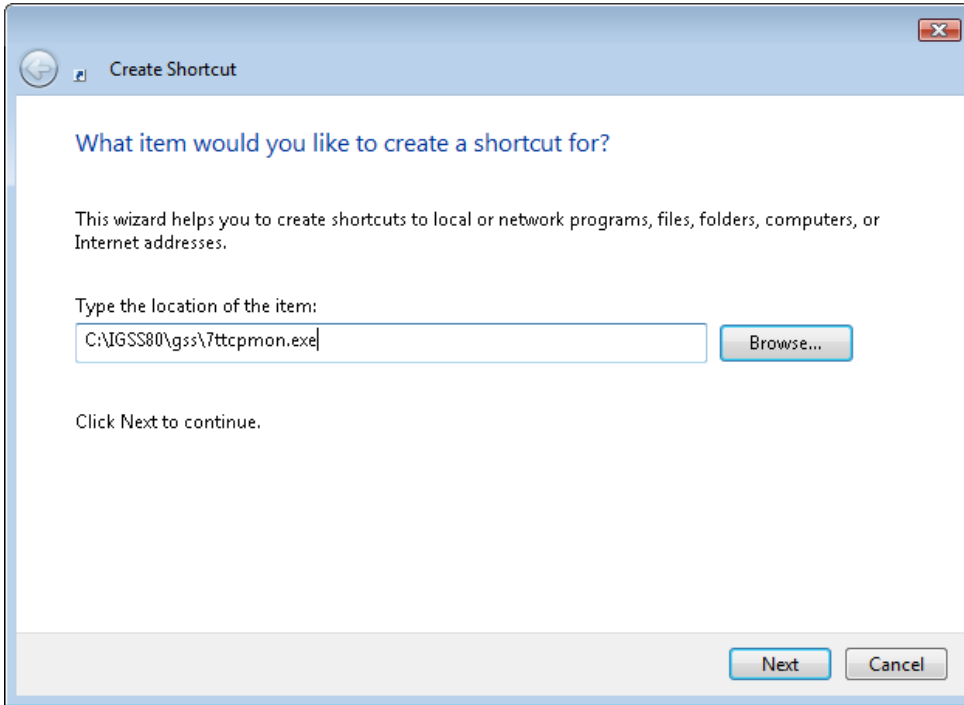
- If required, you can add as many as 8 nodes. The soft PLC supports up to 8 nodes.
- The driver is now activated and ready to run with IGSS Soft PLC. Make sure that **Run Simulated** is not selected on the **Data Collection** tab.
- In the **File** menu, select **Save and Exit**.
- Continue with the topic: [Auto-starting the IGSS Soft PLC.htm](#)

1.3 Auto-starting the IGSS Soft PLC

When you are using the soft PLC, you may want to auto-start it everytime you start the IGSS configuration. Do the following:

- Open Windows Explorer.
- Navigate to the folder containing the current IGSS configuration.

3. Create a subfolder named **Startup**.
4. In this folder, create a shortcut to the soft PLC executable:
[IGSS InstallPath]\Gss\7TTCPMON.exe



5. Assign a name to the shortcut, for example, **IGSS Soft PLC**.

IGSS will automatically activate all shortcuts located in the **Startup** folder when you start this configuration.

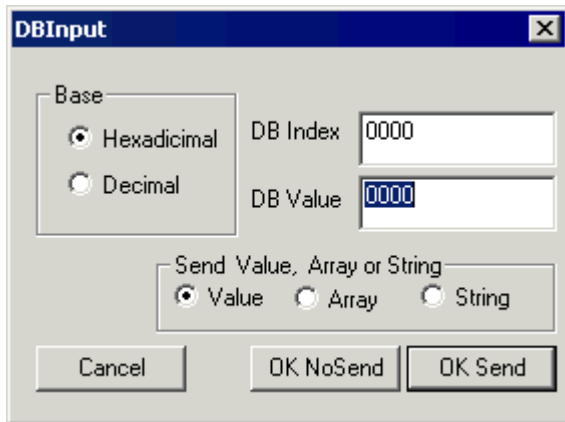
If you need to manually start the soft PLC, you have two options:

- Create a shortcut in the **User Programs** menu of Super-
vise
- Start the soft PLC from the **Utilities** subfolder of the **IGSS
Start menu**. The shortcut is named: **TCPMON Test Soft
PLC**.

Chapter 2: Functionality

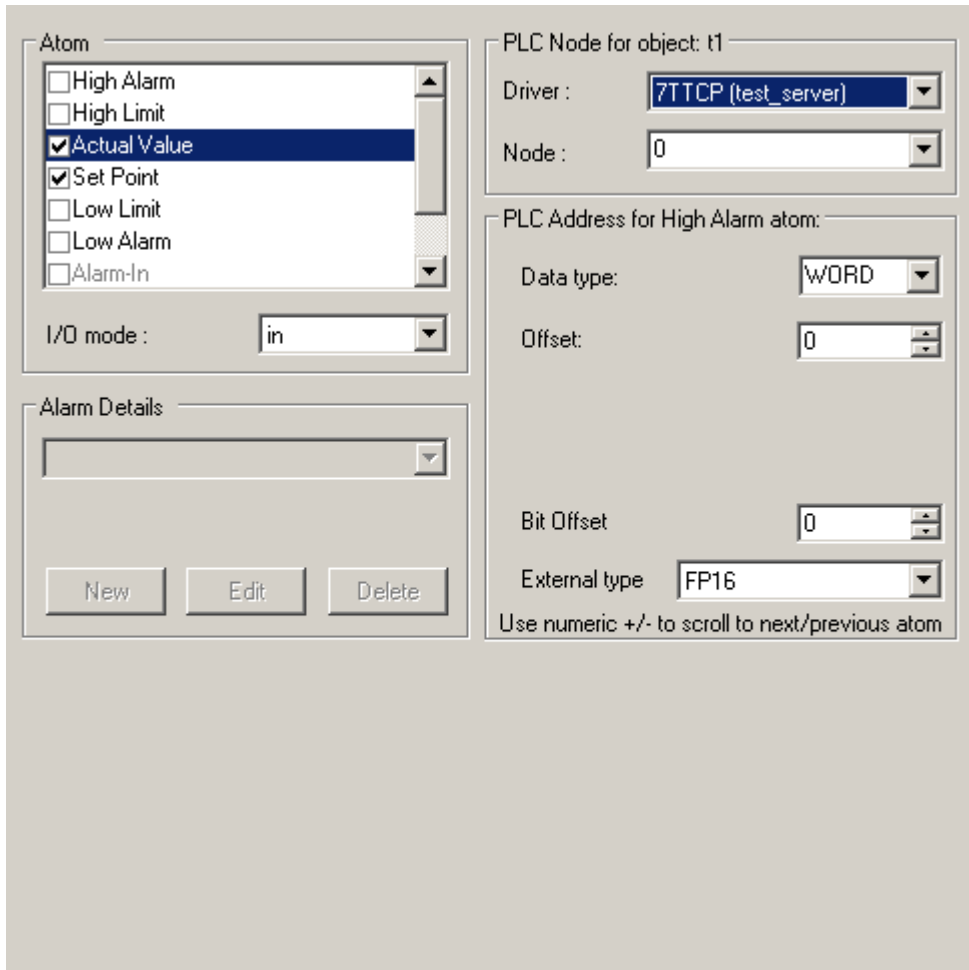
2.1 DBInput

In DBInput you can either choose hexadecimal or decimal as the basis. The type can either be a number, an array or a string.



2.2 Sending an array

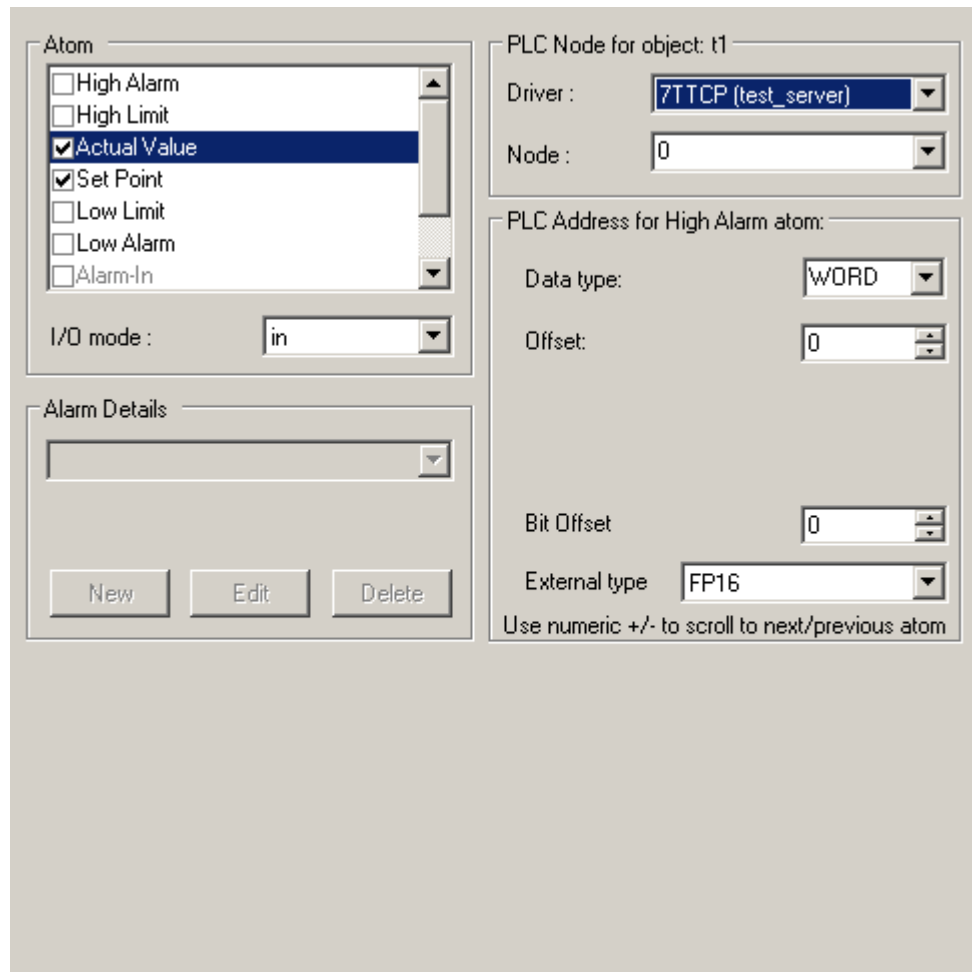
1. Make a test object in IGSS, for example a table object with three values, "Address type" WORD and offset 1. Choose **7TTCP** as driver on the **Edit Mapping** tab.



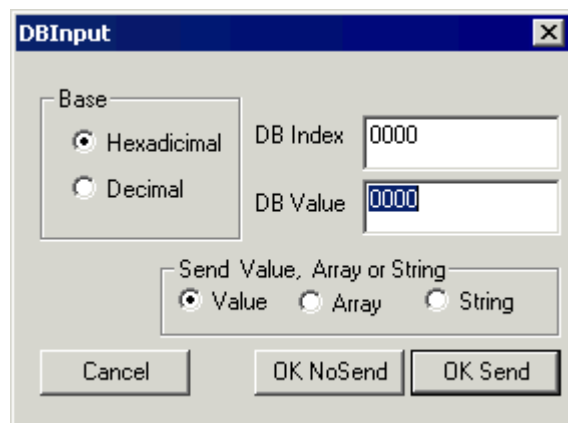
2. Double click element number 2 in 7T TCP Monitor and enter the value "1". Click **Ok NoSend**.
3. Double-click element number 3, enter "2" and **Ok NoSend**.
4. Double-click element number 4, enter "3" and **Ok NoSend**. Choose element number 2, choose "Array" and enter "3". Click **Ok Send**. Your table object should now show 1, 2 and 3.

2.3 Sending a number

1. Make a test object in IGSS, for example of the type Analog, and choose **7TTCP** as driver on the **Edit Mapping** tab.
2. Choose **Data type** Word and **Offset** 0. As default, the values in 7T TCP Monitor are sent to the object and hence there is no need to scan it.



3. Double click index 0 in 7T TCP Monitor. A dialogue, **DBInput**, appears. Set **DB value** to 1 and click **OK Send**. Your test object should show 1.



2.4 Sending a string

1. Make a new test object in IGSS of the type "String" with **Data type** WORD and **Offset** 2.
2. Choose **7TTCP** as driver on the **Edit Mapping** tab.

The screenshot shows the configuration dialog for a test object in the 7T TCP Monitor. The dialog is divided into several sections:

- Atom:** A list of alarm types with checkboxes. "Actual Value" and "Set Point" are checked. "High Alarm", "High Limit", "Low Limit", "Low Alarm", and "Alarm-In" are unchecked. Below the list is an "I/O mode" dropdown set to "in".
- Alarm Details:** A dropdown menu is empty. Below it are "New", "Edit", and "Delete" buttons.
- PLC Node for object: t1:** "Driver" is set to "7TTCP (test_server)" and "Node" is set to "0".
- PLC Address for High Alarm atom:** "Data type" is "WORD", "Offset" is "2", "Bit Offset" is "0", and "External type" is "FP16". A note at the bottom says "Use numeric +/- to scroll to next/previous atom".

3. Double-click element number 3 in 7T TCP Monitor, choose **String** as type and enter "Test". Click **Ok Send**. Your object in IGSS should show "Test".

2.5 Scan / event

As default 7T TCP Monitor is event driven and the objects do not need to be scanned. If you want to test the scanning of objects, this must first be chosen in IGSS.

1. Right-click an object, click the **Data Management Definitions** tab. For example, choose a **Scan interval** of 2000 msec.

2. In 7T TCP Monitor, double-click an element belonging to the object, which should be scanned. Choose a type and enter a value. Click "Ok NoSend" to send it to 7T TCP Monitor database. IGSS will scan the object for changes and copy the value to the object.

2.6 OnTop

This option can be used to maintain the Tcpmon window **On Top** of IGSS while testing.

3.1 Using 7ttcpmon

Chapter 3: Reference and Lookup

3.2 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.	<p>By default, the timestamp is in universal time format, UTC¹. This can be changed in the Driver Log Filters dialog box.</p>
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.	<p>Alternative to this simple find function, you can also filter on text in the messages in Driver Log Filters dialog box.</p>
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.	<p>If you disregard the System alarm, you may risk loss of data in the LOG and BCL files.</p>




¹Universal 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.

3.3 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

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: <ul style="list-style-type: none">• 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.

3.4 Version Information (IGSS Help System)

© 7-Technologies A/S, IGSS Version 8.0

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.