



Job Scheduler User Guide
IGSS Version 9.0

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Chapter 1: About Job Scheduler

1.1 What is Job Scheduler?

Definition

The **Job Scheduler** allows you to define and maintain a set of jobs that need to be automatically executed either at a given point in time, at a specified frequency or when a specific event occurs in IGSS. You can use it to execute an program or to just display a message to remind you of something.

Use

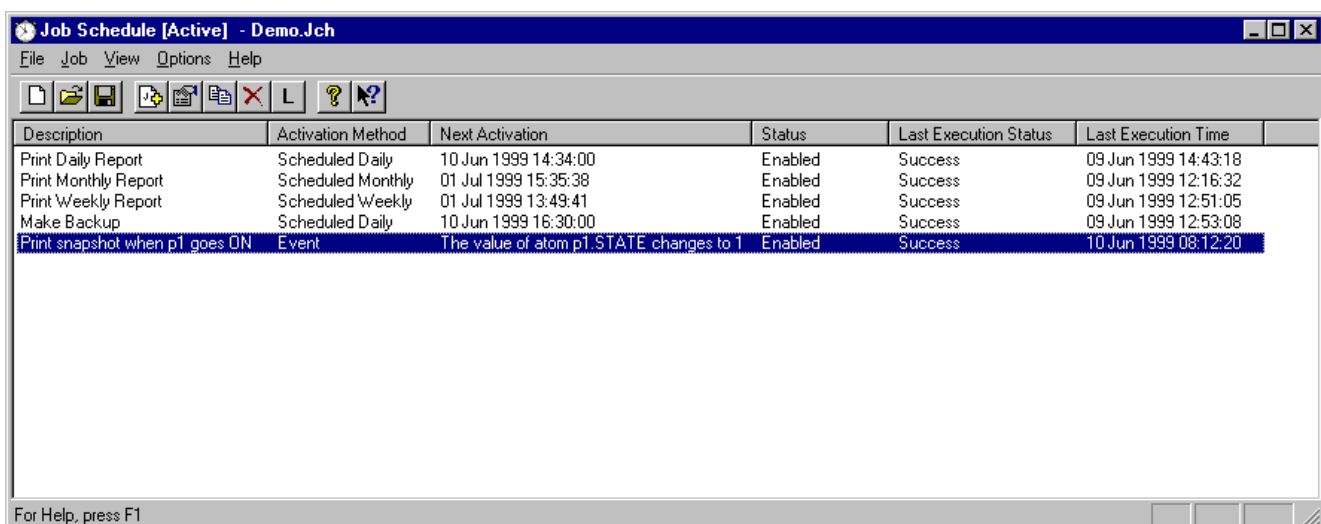
The list below shows you examples of what you can use **Job Scheduler** for:

- Print a daily report at 7:00 AM every day
- Print a weekly report every Monday at 7:00 AM
- Print a monthly report on the 1st day of every month
- Display a "Remember to back up files" message at 4:30 PM every day
- Print a snapshot report when a pump stops

The job list

One or more scheduled jobs make a job list. You can save a job list on the hard disk (**<filename>.jch**) and have **Job Scheduler** load this list and execute the list of jobs whenever you want. Note that only one job list can be active at a time. The figure below shows an example of a job list.

Note: By default, the active job list is the one that corresponds to the active IGSS configuration, **<MyConfig>.jch**.



The screenshot shows a window titled "Job Schedule [Active] - Demo.Jch" with a menu bar (File, Job, View, Options, Help) and a toolbar. Below the toolbar is a table with the following data:

Description	Activation Method	Next Activation	Status	Last Execution Status	Last Execution Time
Print Daily Report	Scheduled Daily	10 Jun 1999 14:34:00	Enabled	Success	09 Jun 1999 14:43:18
Print Monthly Report	Scheduled Monthly	01 Jul 1999 15:35:38	Enabled	Success	09 Jun 1999 12:16:32
Print Weekly Report	Scheduled Weekly	01 Jul 1999 13:49:41	Enabled	Success	09 Jun 1999 12:51:05
Make Backup	Scheduled Daily	10 Jun 1999 16:30:00	Enabled	Success	09 Jun 1999 12:53:08
Print snapshot when p1 goes ON	Event	The value of atom p1.STATE changes to 1	Enabled	Success	10 Jun 1999 08:12:20

At the bottom of the window, it says "For Help, press F1".

Job Scheduler in Startup group

Since Job Scheduler needs to be running for scheduling and running the jobs, you would like to include Job Scheduler in the Startup group of programs. Then, whenever you switch on the system and log on, Job Scheduler will ensure that the jobs in the active job list are executed at the scheduled time.

One job at a time

Job Scheduler will launch only one program or display one message at a time although you may have added a number of jobs to be executed at the same time. Thus, it is not possible to launch a second program when another program is running through Job Scheduler even if the second program's scheduled time is overdue.

- It is thus required that the jobs will finish automatically, otherwise they will prevent all other jobs from being executed.

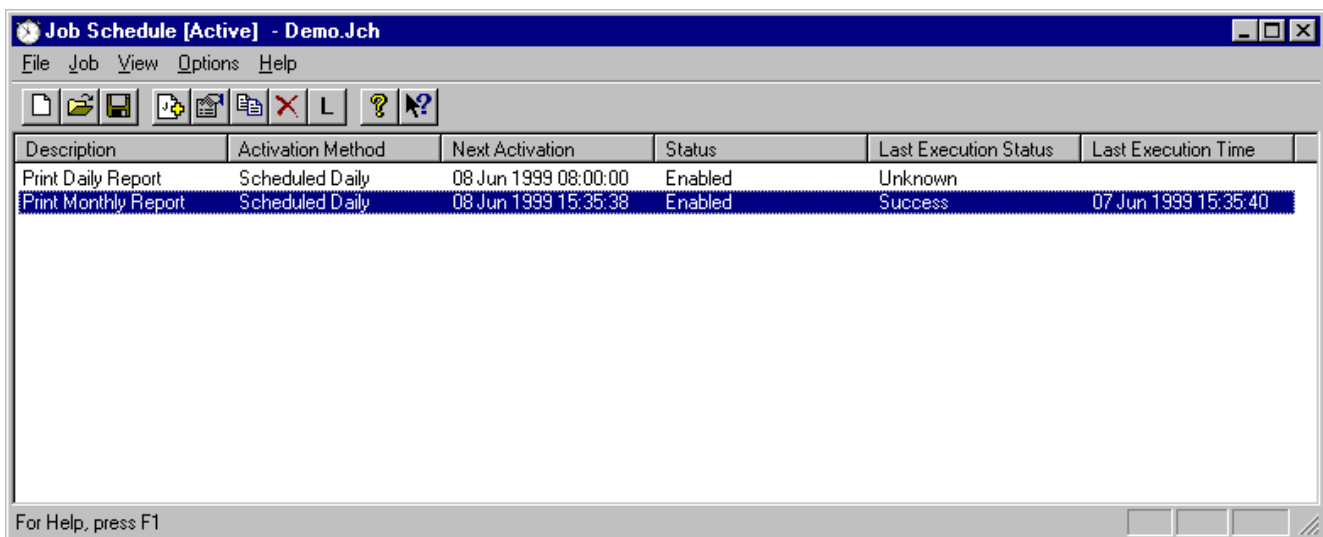
Chapter 2: The User Interface

2.1 Main window

The main window consists of four elements:

- The menu bar
- The toolbar area
- The job list area
- The status bar

Click on any part of the figure below for further information.



2.2 Menus

The following menus are available. To get a detailed description of each menu item, click one of the menus below.

[File menu](#)

[Job menu](#)

[View menu](#)

[Options menu](#)

[Help menu](#)

2.3 Toolbar

To see what a button does, click it in the following illustration.



2.4 System tray icon

You can always verify that **Job Scheduler** is running by looking at the system tray in the task bar. The small alarm clock is shown here when it is running.



You can double-click this icon to restore the Job Scheduler window when minimized.

Chapter 3: Overview of Features

3.1 The job list

Definition

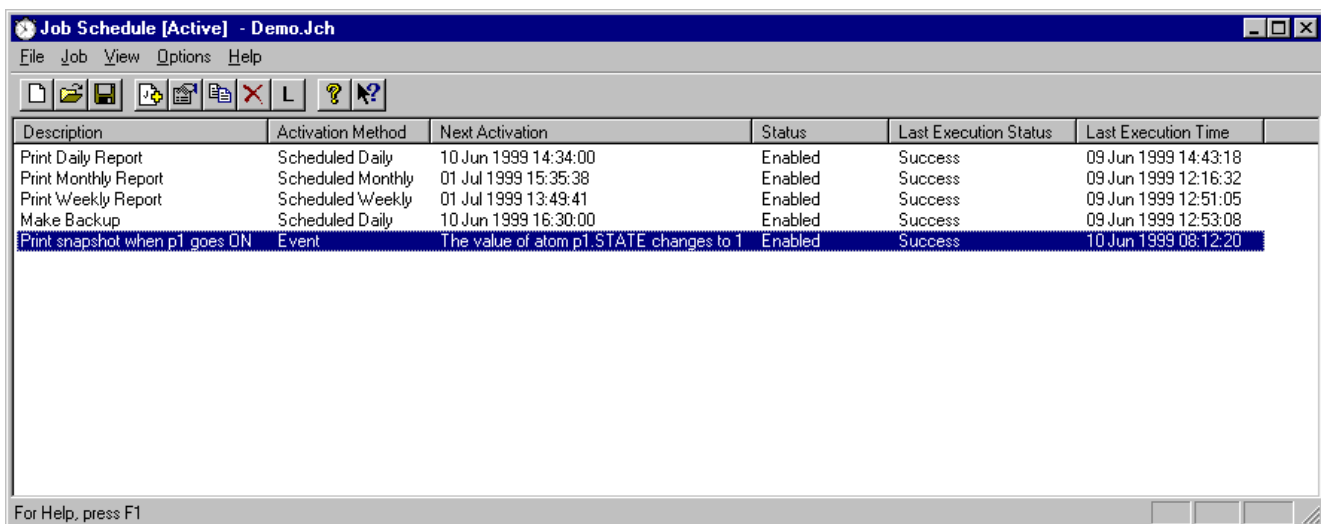
A job list is a set of scheduled jobs which can be automatically activated by Job Scheduler. You can have several job lists for a given configuration, but only one list can be active at a time. Each job list is saved in a Job Scheduler file (*.jch).

Note: When you launch Job Scheduler, it will automatically open a file with the same name as the [active configuration](#), **<MyConfig>.jch**. The file will be created if it does not exist.

Example

The example below shows a job list with a number of scheduled jobs. The first three ones automatically print standard reports from IGSS (daily, weekly and monthly). The fourth one displays a **"Back up files on harddisk"** message. The fifth one prints a [snapshot report](#) when **p1** changes from **OFF** to **ON**.

For details about the individual columns, [click here](#).



Description	Activation Method	Next Activation	Status	Last Execution Status	Last Execution Time
Print Daily Report	Scheduled Daily	10 Jun 1999 14:34:00	Enabled	Success	09 Jun 1999 14:43:18
Print Monthly Report	Scheduled Monthly	01 Jul 1999 15:35:38	Enabled	Success	09 Jun 1999 12:16:32
Print Weekly Report	Scheduled Weekly	01 Jul 1999 13:49:41	Enabled	Success	09 Jun 1999 12:51:05
Make Backup	Scheduled Daily	10 Jun 1999 16:30:00	Enabled	Success	09 Jun 1999 12:53:08
Print snapshot when p1 goes ON	Event	The value of atom p1.STATE changes to 1	Enabled	Success	10 Jun 1999 08:12:20

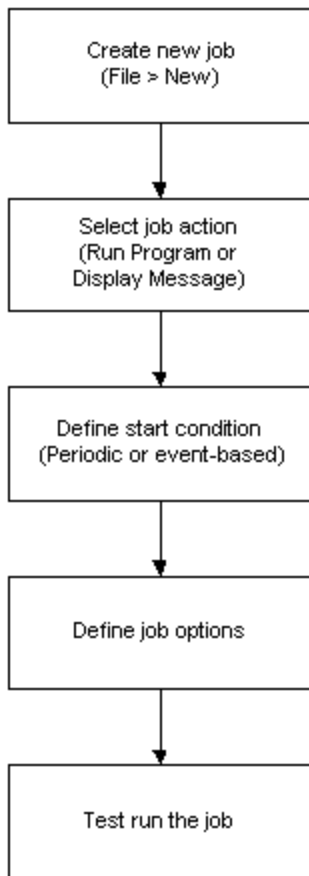
3.2 Scheduling jobs

Introduction

This topic gives you an overview of how you define jobs and the possibilities you have. To illustrate the functionality, a number of examples are included.

Creating a job

The flowchart below shows the steps involved in creating a job. Click on each box for further details.



3.3 The Event Log

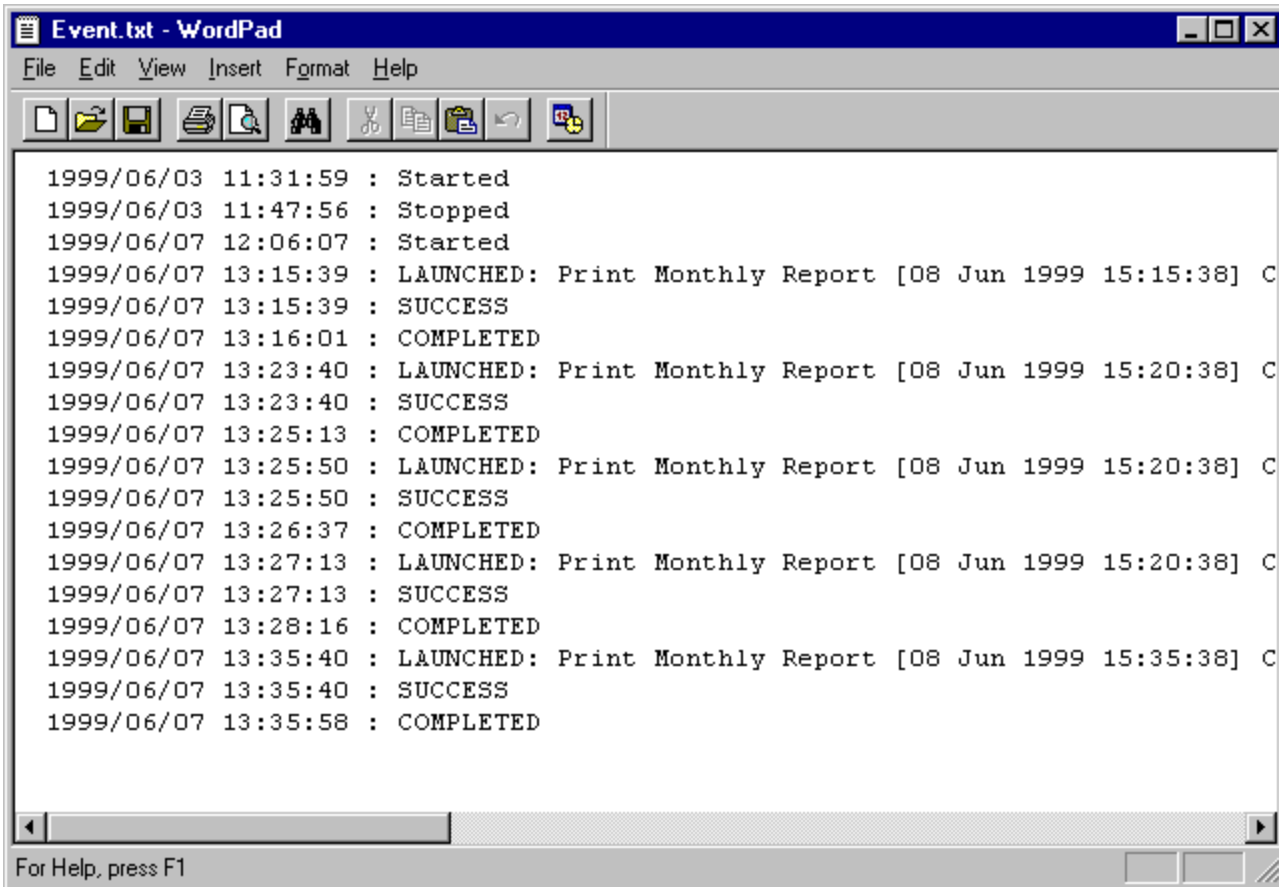
Introduction

The event log shows a complete log of all launched jobs indicating the exact time and status of each job. You can view the log by selecting **View** → **Event Log**.

Example

Here is the event log for the examples used in this Help file.

By default, WordPad is used as the log viewer and the filename is set to **Event.txt**. You can change this by selecting **Options** → **System Options**.



```
1999/06/03 11:31:59 : Started
1999/06/03 11:47:56 : Stopped
1999/06/07 12:06:07 : Started
1999/06/07 13:15:39 : LAUNCHED: Print Monthly Report [08 Jun 1999 15:15:38] C
1999/06/07 13:15:39 : SUCCESS
1999/06/07 13:16:01 : COMPLETED
1999/06/07 13:23:40 : LAUNCHED: Print Monthly Report [08 Jun 1999 15:20:38] C
1999/06/07 13:23:40 : SUCCESS
1999/06/07 13:25:13 : COMPLETED
1999/06/07 13:25:50 : LAUNCHED: Print Monthly Report [08 Jun 1999 15:20:38] C
1999/06/07 13:25:50 : SUCCESS
1999/06/07 13:26:37 : COMPLETED
1999/06/07 13:27:13 : LAUNCHED: Print Monthly Report [08 Jun 1999 15:20:38] C
1999/06/07 13:27:13 : SUCCESS
1999/06/07 13:28:16 : COMPLETED
1999/06/07 13:35:40 : LAUNCHED: Print Monthly Report [08 Jun 1999 15:35:38] C
1999/06/07 13:35:40 : SUCCESS
1999/06/07 13:35:58 : COMPLETED
```

3.4 Using Job Scheduler with Server Switch

When setting up operator stations in the **System Configuration** module, it's possible to enable a server switch parameter. The feature is found on the operator station tab called **Server & Backup** and is enabled with a check box at the bottom of the dialog box. It allows the operator station to switch back and forth between two or more IGSS servers in the network.

If the **Job Scheduler** program is used in the IGSS application together with the server switch function, problems will arise if **Job Scheduler** is run from an operator station configured with server switch.


When using server switch, make sure that **Job Scheduler** is running on the IGSS server or on an operator station not configured with server switch.

Chapter 4: Managing Job Lists

4.1 Create a new job list

1. Select [Create a new job list](#) **File** → **New** or click .

Result: An **Untitled** list appears.


2. Select **File** → **Save** or click  and give the list a descriptive name.
3. Create the jobs in the list.

 How?

When you open Job Scheduler, the job list file corresponding to the [active configuration](#), **<MyConfig>.jch**, will automatically open. If the file does not exist, it is automatically created.

Thus, if you create or open a file with another name for the same configuration, you must manually open it each time you launch Job Scheduler. Alternatively, you can specify the filename in the program shortcut by typing: `Jobsch.exe <filename>.jch`.


4.2 Open a job list

1. Select **File** → **Open** or click  and find the **Job Scheduler** file (*.jch) and click **Open**.

When you open Job Scheduler, the job list file corresponding to the [active configuration](#), **<MyConfig>.jch**, will automatically open. If the file does not exist, it is automatically created.

Thus, if you create or open a file with another name for the same configuration, you must manually open it each time you launch Job Scheduler. Alternatively, you can specify the filename in the program shortcut by typing: `Jobsch.exe <filename>.jch`.

4.3 Save a job list

1. Select **File** → **Save** or click .
2. Give the list a descriptive name.

When you open Job Scheduler, the job list file corresponding to the [active configuration](#), **<MyConfig>.jch**, will automatically open. If the file does not exist, it is automatically created.


Thus, if you create or open a file with another name for the same configuration, you must manually open it each time you launch Job Scheduler. Alternatively, you can specify the filename in the program shortcut by typing: `Jobsch.exe <filename>.jch`.

4.4 Delete a job list

1. Find [Delete a job list](#) the **Job Scheduler** file (*.jch) using Windows Explorer.
2. Delete the file.

Chapter 5: Creating and Launching Jobs


5.1 Create a new job

1. Select **Job** → **Add** or click . The **Job Properties** dialogue appears.
2. On the **Action** tab, define what you want the job to do. You can run a program or display a message.
3. On the **Start Condition** tab, define when you want the job to be launched. You can define a fixed interval (**Periodic**) or launch the job when a certain event occurs in the active configuration (**IGSS Event Occurrence**).
4. On the **Options** tab, you can limit the lifetime of the job and specify that you want the operator to confirm job execution.
5. Click **OK**. The job appears in the job list.

For details about a property in the **Job Properties** dialogue, click , then click the item.

5.2 Edit job properties

To edit job properties, do one of the following:

- Double-click the job
- Select the job and click 
- Right-click the job and select **Edit**

For details about a property in the **Job Properties** dialogue, click , then click the item.

5.3 Enable or disable jobs


Each job in the list can be enabled or disabled as follows:

1. Select the job in the list.
2. Select **Job** → **Enable** to toggle between the two states or right-click the job and select **Enable**.

5.4 Launch jobs manually

Once you have completed the definition of a job, it is recommended to launch it manually to test that it works as planned.

Do one of the following:

- Select the job and click 
- Select the job and select **Job** → **Launch**.

- Right-click the job and select **Launch**

A manual launch will not reschedule the job.

5.5 Suspend all jobs

To temporarily suspend the scheduling of all jobs in the list, do as follows:

- ▶ Select **Options** → **Suspend Scheduling**.

The title bar shows **Suspended**. No jobs will be launched in this mode.

Selecting the option again, returns **Job Scheduler** to normal mode. The title bar shows **Active**.

Chapter 6: Viewing the Event Log

6.1 View the event log

If you want to take a closer look at all [View the event log](#) the jobs which have been activated, use the event log.

Do as follows:

- ▶ Select **View** → **Event Log**.

By default, WordPad is used as the viewer and the filename is set to **Event.txt**. To change these settings, select **Options** → **System Options**.

Chapter 7: Command Line Interface

7.1 Overview: Command line interface

Job Scheduler allows you to manipulate some IGSS programs via their command line interface. The jobs you create can be activated at periodic intervals or based on IGSS events.

The command line parameters are inserted in the **Parameters** field on the **Action** tab of the **Job Properties** dialogue. Note that **Job Scheduler** has its [own set of parameters](#) that you can use in conjunction with these command line interfaces.

Here are some examples of what you can do:

- Print a daily report
- Print alarm information when an alarm occurs
- Print a daily graph

The following programs have a command line interface:

- [Alarm](#)
- [Job Scheduler](#)
- [Reports](#)
- [Supervise](#)

7.2 Job Scheduler: Command line interface

Introduction

The **Job Scheduler** program offers a number of parameters that you can include in any command line used by an IGSS program.

If you are running a command line from a command prompt, these parameters cannot be used.

Command line parameters

Some IGSS programs offer a \$ parameter in their command line interface to define an offset in time. In **Job Scheduler**, you can freely choose between that "native" \$ parameter or use the ones below.

Parameter	Examples
\$ (year)	\$(year-1) inserts the launch time of the job minus one year. If the job is launched on 01-01-2000, Job Scheduler inserts 01-01-1999.
\$ (month)	\$(month-1) inserts the launch time of the job minus one month. If the job is launched on 01-01-2000, Job Scheduler inserts 01-12-1999.

Parameter	Examples
\$(date)	\$(date-1) inserts the launch time of the job minus one day. If the job is launched on 01-01-2000, Job Scheduler inserts 31-12-1999.
\$(time)	\$(time-1) inserts the launch time of the job minus one hour. If the job is launched at 10:00:00, Job Scheduler inserts 09:00:00.

Rules

When using the parameters, the following rules must be observed:

- You can add (+) or subtract (-) a time unit from the launch time defined for the job.
- If you only write the parameter, it will be inserted as is. \$(year) will insert the current year, \$(month) the current month, \$(date) the current day and \$(time) the current time.
- You can combine the \$(time) parameter with \$(year), \$(month) and \$(date).
- You cannot combine \$(year), \$(month), \$(week) and \$(date).

Full example

This example shows you how to use the Job Scheduler \$(date) parameter to define a date offset for a periodical report. The command line will generate a daily report based on the **Periodical_Report** report format for the date one day before the launch time for the job \$(date-1). The output will be sent to the default printer. Local time will determine the launch time of the report.

```
RMSCMD STD FMT=Periodical_Report $(date-1) TYPE=DAY -LOCAL -PRINT
```



Chapter 8: Reference

8.1 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.

8.2 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.	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.

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.

Convention	Description	Example
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.	<div style="border: 1px solid gray; padding: 10px; text-align: center;"> <p>If you disregard the System alarm, you may risk loss of data in the LOG and BCL files.</p> </div>

8.3 Version Information (IGSS Help System)

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The IGSS help files are based on software build number 10305 (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 = 10305

10 = the year 2010

305 = The 305th day of the year

Chapter 9: Glossary

A

Application menu

The Application menu is the first ribbon in the IGSS Master module. Click the icon to drop down the 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 menu was introduced in the Microsoft Office 2010 package. It replaces the Application button (nicknamed Doughnut) which was introduced in IGSS V7 and V8.

D

descriptor

A descriptor is the graphical display of an object. IGSS includes many types of descriptors including: - Built-in standard symbols - Animated symbols (Symbol Factory library) - Graphics and animation - Drawing symbols - Windows controls - ActiveX controls An IGSS object can be represented with different descriptors on different diagrams.

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.