## STATPOINT, Inc.

# STATGRAPHICS<sup>®</sup> Mobile

# **User Guide**

# STATGRAPHICS® MOBILE USER GUIDE

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Reference as: STATGRAPHICS® Mobile User Guide

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Printed in the United States of America.

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## Preface

This book is designed to introduce users of STATGRAPHICS Mobile to the basic operation of the program and its use in analyzing data. STATGRAPHICS Mobile provides basic statistical analysis for Pocket PCs and compatible devices running the Microsoft Windows Mobile 5 operating system. It provides both graphical and numerical output, specifically formatted to fit on a small screen.

This manual provides a comprehensive overview of the system, including installation, data management, creating statistical analyses, and disseminating results. Additional documents describe each of the statistical procedures in detail.

StatPoint, Inc. May, 2006

# Chapter

# **Getting Started**

Installing STATGRAPHICS Mobile, launching the program, and creating a simple data file.

#### 1.1 System Requirements

In order to use STATGRAPHICS Mobile, you must have:

- 1. A Pocket PC, Pocket PC Phone Edition, or compatible device running Windows Mobile 5 with a screen having a resolution of at least 240 by 320. The executable requires approximately 900KB of storage memory. Several sample data files are also installed on the mobile device and require an additional 30 KB. When running, *STATGRAPHICS Mobile* uses about 120KB of program memory plus whatever space is needed to store your data and intermediate results.
- 2. A desktop or notebook computer running Windows 98 or later. The *STATGRAPHICS Mobile Assistant* and all documentation are stored on this computer. The files require about 5MB of storage space on your hard disk.
- 3. *Microsoft ActiveSync*. This program is used to transfer files between your mobile device and your desktop computer. It can also maintain mirror images of selected files on both machines.

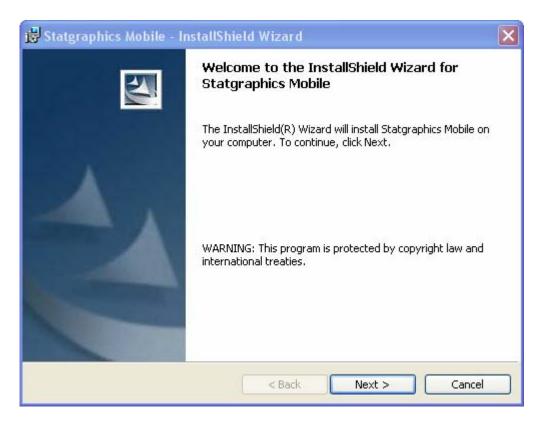
#### 1.2 Installation

The installation program consists of a single executable named *setup.exe*. You can download this executable to a desktop or notebook computer from the *Download* page at *www.statgraphics.com*, or you can request a CD containing the file. The setup program will install several items:

- 1. It will place the main STATGRAPHICS Mobile program on your mobile device, together with sample data files. It will also register files with the extension *.sgm* as STATGRAPHICS Mobile data files.
- 2. It will install the STATGRAPHICS Mobile Assistant on your desktop or notebook computer, together with PDF files documenting the program's behavior.

To install the program, first be sure that your Pocket PC or compatible device is connected to your desktop or notebook computer and that Microsoft ActiveSync is running and has synchronized the two computers. Then click on the *setup.exe* file that you have downloaded using Windows Explorer.

The first screen displayed welcomes you to STATGRAPHICS Mobile:



The second screen displays the license agreement for the program:

😼 Statgraphics Mobile - InstallShield Wizard	×
License Agreement Please read the following license agreement carefully.	4
IMPORTANT: READ BEFORE INSTALLING SOFTWARE	
WARRANTY AND LICENSE AGREEMENT FOR STATGRAPHICS® Mobile	
READ THE FOLLOWING TERMS AND CONDITIONS CAREFULLY BEFORE INSTALLING THE SOFTWARE. INSTALLATION AND/OR USE OF THE SOFTWARE INDICATES THAT YOU HAVE ACCEPTED THESE TERMS AND CONDITIONS.	*
I accept the terms in the license agreement     I do not accept the terms in the license agreement  InstallShield	
<pre>A statistics</pre>	

If you agree with the license agreement, select the corresponding radio button and press *Next*. Otherwise, press *Cancel* to abort the installation.

On the third dialog box, enter your name and organization:

记 Statgraphics Mobile - InstallShield Wizard	$\mathbf{X}$
Customer Information	4.
Please enter your information.	
User Name:	
Your Name	
Organization:	
Your Company	
Install this application for:	
<ul> <li>Anyone who uses this computer (all users)</li> </ul>	
Only for me (Test Platform X64)	
InstallShield	
< Back Ne	ext > Cancel

This information is used for the portion of STATGRAPHICS Mobile that runs on your desktop computer. You may also indicate whether anyone who uses your computer should have access to the STATGRAPHICS Mobile Assistant, or whether you are the only user who will have access to it.

The fourth dialog box indicates the location on your desktop where the STATGRAPHICS Mobile Assistant will be installed:

🙀 Statgra	phics Mobile - InstallShield Wizard 🛛 🛛 💽
	ion Folder xt to install to this folder, or click Change to install to a different folder.
	Install Statgraphics Mobile to: C:\Program Files (x86)\StatPoint, Inc.\Statgraphics Mobile\ Change
InstallShield -	< Back Next > Cancel

The default location will usually suffice.

The final dialog box summarizes the information you have provided:

🕏 Statgraphics Mobile - InstallShield Wizard 🛛 🔀
Ready to Install the Program
The wizard is ready to begin installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Current Settings:
Setup Type:
Typical
Destination Folder:
C:\Program Files (x86)\StatPoint, Inc.\Statgraphics Mobile\
User Information:
Name: Your Name
Company: Your Company
InstallShield
< Back Install Cancel

When you press *Install*, the STATGRAPHICS Mobile Assistant will be installed on your desktop.

When the desktop installation is complete, you will see the following message:

Application Downloading Complete	
Please check your mobile device screen to see if additional steps are necessary to complete this installation.	complete this installation.
(OK]	

This indicates that the STATGRAPHICS Mobile executable is now being installed on your Pocket PC. Before the program installs, you may see a warning message indicating that the STATGRAPHICS Mobile CAB file is from an unrecognized publisher. You may safely tell Windows Mobile 5 to proceed with the installation.

Once the program is installed, the following message should appear on your mobile device:

#### StatPoint Statgraphics Mobile.CAB was successfully installed on your device.

It may also indicate that the program was designed for a previous version of Windows Mobile software, which is not true. This is a quirk of the installation program and can be ignored.

#### 1.3 Running the Program

Once installation is complete, start the program by clicking on *Start* on your mobile device and selecting *Programs*. An icon will have been placed in the Programs group for *Statgraphics Mobile*. Clicking on that icon starts the program.

The first time you use the program, you will see the following message:



Statgraphics Mobile can be run for 10 days without purchasing a license in order to help you determine whether or not it meets your needs. There are no limitations to the functionality or the amount of data you can analyze.

When you press OK, The program will load and an empty datasheet will be displayed:



Data to be analyzed is first entered in this datasheet, as described in the next section. You may minimize the application at any time by pressing the X in the upper right corner.

## 1.4 Activating a Licensed Copy

When you are ready to purchase a permanent license to use the program, press *Menu* on the bottom toolbar and select *Tools* – *Activate*. This will display the following dialog box:

🏄 Statgrap			9:44 0
Your trial will exp To purchase a lin StatPoint: 1-800	censed co )-232-782	py, please 8 or 1-540	-364-0420
Or visit www.sta User name:	acgraphics	.com. The	n enter:
Organization:	-		
Product key:	B967-Q6	14-B541-2	Z301
Serial number:		- 19 Ma Deletation - 19	
Activation code:			
6			<u></u>

There are two steps required to activate the program:

- 1. When you purchase a license from StatPoint or one of its dealers, you will be given a serial number. Enter that serial number in the indicated field and press *OK*. A message will be displayed telling you that the serial number has been validated.
- 2. Within 10 days after entering the serial number, you must activate the program by entering an activation code. The activation code is tied to the *Product key* displayed on the above dialog box and is different for each Pocket PC. To obtain an activation code, you can use the STATGRAPHICS Mobile Assistant that was installed on your desktop computer. Under Help on the main menu for that program, you will see a selection titled "Activate...". Fill in the required information, including the product key, and follow the instructions to request an activation code. When given the code,

return to the *Activate* dialog box on your mobile device, enter the code, and press *OK* to activate your program. Note: this needs to be done only once.

#### 1.5 Entering Data

When *STATGRAPHICS Mobile* starts, it displays an empty datasheet into which data to be analyzed must be placed. As shown below, the datasheet consists of rows and columns, with a default name assigned to each column:

-0	Statgraphi		( ◀€ 9:52	×
	Col_1	Col_2	Col_3	1
1				=
2				-
3	2		/	
4	-	-		-
5				
6				
7	-			-
8 9	3	i	·	
10				
11	-			-
12	51. 			
•	11		•	
	New	HARRY CONTRACTOR	Menu	
-	6		-	_

In STATGRAPHICS Mobile, as in most statistics packages, columns correspond to variables and rows correspond to observations.

There are 3 ways to enter data into the datasheet:

- 1. **Type it in.** On devices such as that illustrated above, you can click on the keyboard icon in the bottom toolbar to display a keyboard beneath the datasheet. Enter data as you would into any spreadsheet.
- 2. **Read it from a STATGRAPHICS Mobile file**. Data that has been saved in a file with extension ".sgm" can be read back into the datasheet, together with its column properties.
- 3. Copy and paste data from other applications, such as Microsoft Excel Mobile.

#### 1.5.1 Entering Data via the Keyboard

When entering data via the keyboard, simply click on the cell where you wish to enter the data and begin typing. When you press *Enter* or an arrow key, the data will be placed in the cell and the active cell changed. You can use the selections on the *Edit* menu to copy and paste data or to move data columns.

Each column of the spreadsheet has various properties that you should define when entering data. To define these properties, either double-click on a column header or select the column to be defined by clicking on its header and then select *Edit – Properties* from *Menu*. The first page that will be displayed is labeled ID:

-		it <mark>x</mark> <b>-(</b> € 1:15
Attribute:	Properties	Cancel
Name:		1
Comment:		
Type:	Numeric	
Formula:		
Use:	Response (Y)	•
ID Scaling	j Dist. Specs SP	C Pred. Comp

Define the following properties of for each column:

• Name: a name for the column containing between 1 and 32 characters. Each column should have a unique name. Valid column names may contain any character except the following 19 characters:

٢	"		>	<	~	!	&	,	;
+	-	*	/	^	Ξ		(	)	

Column names may not begin with a numeric digit. Note: it is strongly recommended that you use short variable names so that they display well in the limited screen area.

- **Comment**: optional additional information about the data in the column. Enter up to 64 characters. This information is not used by STATGRAPHICS Mobile, but is gathered to be compatible with STATGRAPHICS Centurion.
- **Type**: the type of data permitted in the column. The choices are:
  - **Numeric** data consisting of valid numbers.
  - **Character** data containing alphanumeric symbols.
  - Integer data containing only integer numeric values.
  - **Date** dates in the form MM/DD/YY, such as 4/01/06.
  - **Month** dates in the form MM/YY, such as 4/06.
  - **Quarter** dates in the form QQ/YY, such as Q1/06.
  - Time times in the form HH:MM or HH:MM:SS, such as 16:40 or 16:40:52.
  - **Date-Time** combined date time information in the form *MM/DD/YY HH:MM* or *MM/DD/YY HH:MM:SS*, such as *04/01/06 16:40* or *04/01/06 16:40:52*.
  - **Fixed** data with a fixed number of decimal digits. The number of decimal digits may range from 0 to 9.
  - **Formula** data calculated from other columns using a STATGRAPHICS expression.

Note: You may change the separator characters and system date format by accessing *Program Options* as described in Chapter 3.

- **Formula**: for columns of type *Formula* only, the formula used to calculate the data values. Any valid STATGRAPHICS Expression may be entered. For information on valid expressions, see the PDF document titled *STATGRAPHICS Expressions*.
- **Use**: how the data in a column will be used. This is very important, since it determines which statistical methods can be applied to the data in the column. The choices are:
  - **Response (Y):** data containing observations on which statistics are to be calculated. This is the default type and is appropriate for most measurement data.
  - **Predictor (X):** data to be used in a regression model as a predictor of the response.

- **Count**: data containing counts. Such a column may be displayed as a barchart, Pareto chart, or mosaic plot. It can often serve as input for an attribute control chart.
- Attribute: data describing an observed attribute, such as "Defective" or "Not defective". Attribute data may be tabulated or used as a variable in a crosstabulation.
- **Sample size**: contains the size of each sample described by a row of the file. This is typically used in conjunction with a *Count* variable.
- **Time index:** data used to define the time period when an observation was collected. This type of column is used to scale the graphs in a control chart or when forecasting a time series.
- Label: data used to identify an observation, such as an individual's name.

After defining the properties of a column, press the *OK* button to return to the datasheet.

#### 1.5.2 Reading Data from a File

To read data from a file that has been previously saved, select *File – Open* from the main *Menu*. A dialog box will be displayed, allowing you to select the file to be read:

🏄 Statgra	phics +* <mark>x</mark>	<b>≼</b> € 10:01
Open		
Folder: All F	olders	▼ Cancel
Type: SG (	Data Files (*.so	im) 🗸
Name 🔺	Folder	Date
My file		4/11 6:00
<b>∢</b> ∭		
<b>∢</b>   111	in the second	

Currently, only files saved by STATGRAPHICS that have an extension *.sgm* may be read. These files contain both the data and all of the column properties.

Several sample data files are placed on your mobile device when STATGRAPHICS Mobile is installed. These files are used as examples in the system documentation and are located in the directory My *Documents Statgraphics*. Part of the contents of the sample data file *widgets.sgm* is shown below:



#### 1.5.3 Copying Data from Other Applications

To transfer data from another application such as Excel Mobile, first use that application to copy the data to the Windows clipboard. Within STATGRAPHICS, click in the cell at the upper left corner of the region into which the data is to be pasted. If the data to be pasted includes column names, be sure to click in the header row of the leftmost column. Then select *Edit* – *Paste* from the main *Menu*.

After pasting in the data, double-click on each column header to set its properties, as described in section 1.4.1.

### 1.6 Analyzing Data

To analyze data once it has been placed in the datasheet, you must first highlight the desired data. The selection may consist of:

- 1. One or more entire columns. Use the header row to highlight all of the data in a column.
- 2. A selected range of cells. Highlight only the data to be analyzed.

After highlighting the data, click on *Menu* and then *Stats*. Depending upon the type of data you have highlighted, you will then be given access to one or more of the following options:

- **Plot**: This option creates a basic scatterplot of the highlighted data.
- **Describe**: This option calculates descriptive statistics for the highlighted data. It includes histograms, box-and-whisker plots, quantile plots, probability plots, summary statistics, outlier tests, barcharts, and Pareto charts.
- **Compare**: This option compares the data in two or more numeric columns. It includes two-sample tests and a one-way ANOVA.
- **Relate**: This option estimates the relationship between two columns. It fits curves and tests for association in contingency tables.
- **Forecast**: This option forecasts time series data, i.e., data that is ordered sequentially over time or space.
- SPC: This option constructs control charts and performs a capability analysis.

The options that are available depend on the type of data that has been highlighted. The table below summarizes the available procedures and the titles of the relevant documents that describe them.

Type of data	Plot	Describe	Company	Relate	Forecast	SPC
highlighted One <i>Response</i> variable	(1) Plot – One or Two Numeric	(2) Describe – Response Variable	Compare	Kelate	(9) Forecast – Response Variable	(10) SPC – Response Variable
14114510	Variables	, anabie			, anabie	, anabie
Two	(1) Plot –	(3) Describe	(5) Compare			
<i>Response</i> variables	One or Two Numeric	- Multiple Response	– Two Response			
heria	Variables	Variables	Variables			
Three or more		(3) Describe - Multiple	(6) Compare			
<i>Response</i>		- Multiple Response	– Multiple Response			
variables		Variables	Variables			
One	(1) Plot –			(7) Relate –		
<i>Response</i> and	One or Two			Y and X		
one Predictor	Numeric					
variable	Variables					
One Count	(1) Plot –	(4) Describe				(11) SPC –
variable	One or Two Numeric Variables	– Attributes and Counts				Count Variable
Two <i>Count</i> variables	(1) Plot – One or Two					
	Numeric Variables					
Two or more <i>Count</i> Variables				(8) Relate – Attributes and Counts		
One Attribute		(4) Describe – Attributes				
Variable		– Attributes and Counts				
Two <i>Attribute</i> Variables				(8) Relate – Attributes and Counts		

There are also three statistical procedures under the *Tools* menu that are available at all times:

(12) *Hypothesis Tests* – calculates confidence intervals and performs hypothesis tests for one or two means, variances, rates, or proportions.

(13) *Expression Evaluator* – evaluates STATGRAPHICS expressions, including simple algebraic calculations. This procedure may also be used to find critical values for common statistical distributions.

(14) Six Sigma Calculator – converts between various Six Sigma indices, including Cpk, Z, DPM, and SQL.

As an example:

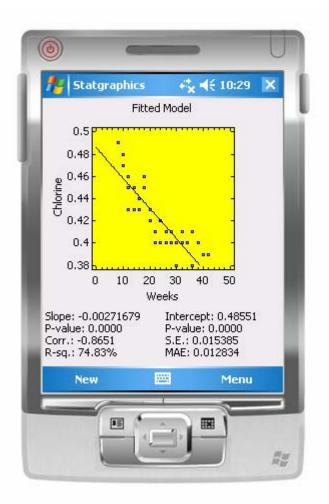
- 1. Select Menu File Open and load the sample data file named chlorine.sgm.
- 2. Highlight the columns named *Chlorine* and *Weeks*.

Chlorine         Weeks         Col_3           1         0.49         8         -           2         0.49         8         -           3         0.48         10         -	-
2         0.49         8           3         0.48         10	≡
<b>3</b> 0.48 10	
1 0 17	
4 0.47 10	
<mark>5</mark> 0.48 10	
<b>6</b> 0.47 10	
7 0.46 12	
8 0.46 12	1
9 0.45 12	1
<b>10</b> 0.43 12	1
<b>11</b> 0.45 14	1
12 0.43 14	F
< III >	
New 🔤 Menu	
	_

3. Press *Menu* and then click on *Stats*. This will indicate which of the statistical options are available for the type and combination of data you have selected:

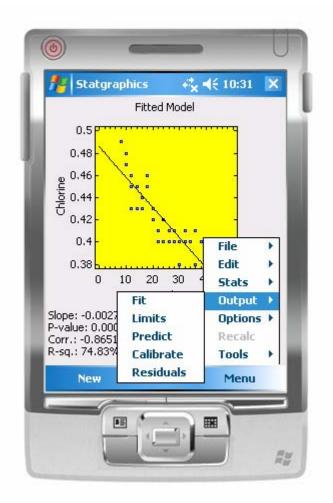


4. Select any of the available procedures, after which the first page of that analysis will be displayed. For example, selecting *Relate* generates the following:



Every page of output has a graph and a table of associated statistics. The above page shows the results of fitting a straight line relating *Chlorine* and *Weeks*.

5. Most procedures have more than one page of output. To list the other pages, press *Menu* and then select *Output*.



For the current procedure, there are five pages of output, including the initial Fit page.

## 1.7 List of Techniques

The following list shows the available statistical techniques and an indication of the procedures that contain them. The numbers refer to the following documents:

(1) Plot – One or Two Numeric Variables (2) Describe – Response Variable (3) Describe – Multiple Response Variables (4) Describe – Attributes and Counts (5) Compare – Two Response Variables (6) Compare – Multiple Response Variables (7) Relate -Y and X (8) Relate – Attributes and Counts (9) Forecast – Response Variable (10) SPC – Response Variable (11) SPC – Counts (12) Tools - Hypothesis Tests (13) Tools – Six Sigma Calculator Analysis of variance -(6)ARIMA models -(9)Autocorrelation function -(9)Barchart - (4) (8)Binomial distribution -(12)Box and whisker plot -(2)(3)(5)(6)Box-Pierce statistic -(9)C chart -(11)Calibration limits -(7)Capability analysis -(10)Chi-squared test - (8) (12) Confidence intervals -(2)(5)(6)(7)(12)Connected plot -(1)Contingency tables -(8)Control charts -(10)(11)Correlation coefficient -(1)(7)Cp - (10)Cpk - (10) (13)Cumulative distribution -(2)Curve fitting -(7)Defects - (13)

DPM - (10) (13)Extreme Studentized deviate -(2)F test -(5)(12)Fitted distribution -(2)(10)Forecasting -(9)Gamma - (8)Grubbs' test -(2)Histogram - (2) (10)HSD intervals -(6)Hypothesis tests -(2)(5)(12)Jittering -(6)K - (10)Kruskal-Wallis test - (6) Kurtosis -(2)Least squares estimates -(7)Levene's test -(6)Line plot -(1)Lognormal distribution -(2)LSD intervals -(6)MAPE - (9)ME - (9)Mean - (1) (2) (3) (5) (10) (12)Mean absolute error -(7)Means plot -(3)(5)(6)Median -(2)(5)Minimum and maximum -(2)(5)Mosaic plot -(8)MPE - (9)MR(2) chart – (10) Normal distribution -(2)(12)NP chart -(11)One-way ANOVA - (6)Outliers -(2)P chart -(11)Paired data -(5)Pareto chart -(4)Percentiles -(2)Poisson distribution -(12)Power normal distribution -(2)Pp - (10)Ppk - (10)

Prediction limits -(7)(9)Proportions -(11)(12)Q-Q plot - (2) Quantile plot -(2)Quartiles -(2)R chart -(10)R-squared -(7)Range -(10)Rates -(11)(12)Regression analysis -(7)Residuals -(5)(6)(7)(9)RMSE - (9)Runs tests - (10) (11) S chart -(10)Sample size -(1)(2)Scatterplot - (1) (3) (5) (6)Shapiro-Wilks test -(2)Sigma quality level -(10)(13)Six Sigma – (13) Skewness -(2)Standard deviation -(1)(2)(5)(10)(12)Standard error -(7)Standard error bars -(6)Studentized residuals -(7)t test - (5) (12)Time series analysis -(9)U chart -(11)Uncertainty coefficient -(8)X chart -(10)X-bar chart -(10)Variance -(12)Yield - (13)z test - (12)Z-score – (13)

2

# **Setting Column Properties**

Setting confidence levels, distributional assumptions, default scaling, and other column attributes.

#### 2.1 Column Properties Dialog Box

Every column in a data sheet has associated with it a number of important properties that affect how it is analyzed. Section 1.4.1 described several properties, including the column name, comment, type and use. Additional properties are specified using other pages of the *Column Properties* dialog box.

To set the properties of a column, either:

(1) Double-click on a column header; or

(2) Highlight the column to be modified by clicking on its header and then select Edit – *Properties* from *Menu*.

Then tab through each of the pages on the dialog box.

The following pages give a brief description of each option. More detailed information is included in the procedure documentation where the options are used.

#### 2.2 Scaling

The *Scaling* page specifies the default scaling to be used when a variable is plotted, and the size of the groups into which it should be tabulated when a histogram is created:

	itgraphics ↔ 🙀 📢 11:27 ok
Colum	n Properties Cancel
Axis Scal	ling
From:	0
To:	300
By:	50
Tabulatio	on
Bin size:	25
ID Scalir	ng <mark>Dist. Specs SPC Pred. Comp.</mark>
ID Scalin	

Axis Scaling: specify the first ticmark, the last ticmark, and the space between the ticmarks. Bin size: specify the width of the classes that will be formed when a histogram is created.

#### 2.3 Distribution

The *Dist.* page specifies the distribution assumed for the data when analyzed by procedures that assume a continuous distribution.

Column Properties       Cancel         Distribution       Image: Concel         Image: Normal       Image: Concel         Image: Lognormal       Power normal - power: 0.5         Parameters (after transformation)         Mean: Sigma: Concel         Alt hyp: NE Image: Concel	
Normal     Lognormal     Power normal - power: 0,5 Parameters (after transformation) Mean:	
C Lognormal Power normal - power: 0.5 Parameters (after transformation) Mean: Sigma:	
Power normal - power: 0.5 Parameters (after transformation) Mean:	
Parameters (after transformation) Mean: Sigma:	
Mean: Sigma:	
Alt hyp: NE - Alt hyp: NE -	
ID Scaling Dist. Specs SPC Pred. Com	
	<b>P</b> • [

**Distribution**: Select between a normal, lognormal, and power distribution. If a lognormal distribution is selected, the logarithms of the data are assumed to follow a normal distribution. If a power normal distribution is selected, the data are assumed to follow a normal distribution after being raised to the indicated power.

**Parameters**: Specify values to be used for the null hypothesis when hypothesis tests are conducted and to set control limits for Phase II control charts. Also set the type of alternative hypotheses for tests of the mean and variance.

### 2.4 Specifications

The Specs. page sets the options to be used in a capability analysis.

78 Stat	graphics	≓ <mark>x</mark> <b>4</b> € 11:46	o ok
Column	Properties	Car	icel
Specificat	ions		
Lower limit	:		
Nominal:			
Upper limit	:		
Capability			
♥ Ср ♥ Рр	Cpk V Ppk V	K 🗸	DPM
ID <mark>Scaling</mark>	) Dist. Specs S	PC Pred. Co	omp.

**Specifications**: Enter the lower specification limit, the nominal or target value, and the upper specification limit.

Capability Indices: Select the indices to be calculated.

#### 2.5 Statistical Process Control

The SPC page sets options to be used when control charts are created.

Note: Statgraphics	+ <b>*</b> x <b>4</b> € 11:55 ok
Column Properties	Cancel
Control Charts	
Control to stand.	🖊 Use average size
X-bar limits: Both 👻	🖲 R Chart
R & S limits: Upper 👻	🔵 5 Chart
Count limits: Upper 👻 Apply runs rules Si	
	td count: 10
	Std rate: 0.1
ID Scaling Dist. Specs	
io jocaling joist, jopecs	

**Control to Stand.:** Check this box to create a Phase II control chart. By default, a chart is created.

**Use average size**: Check this box to create control limits using the average subgroup size. Otherwise, individual sample sizes will be used.

X-bar, R&S, Count limits: Specify the type of control limits to plot.

R Chart/S Chart: Specify the desired chart to be created for measurement data.

**Apply runs rules**: Check this box to apply standard runs tests and specify the run length to be used by the tests.

Std count and rate: Specify standard values for Phase II attribute charts.

### 2.6 Predictions

The *Preds*. page sets the options to be used when constructing confidence intervals and making predictions.

0			U
fe Statgra Column Pre		x ◀€ 11:50 Car	
Predictions Confidence Percentiles: ARIMA: p d 1 0 0 0	95 ▼ 95 9 9 0 0 0 0 0 0	CONTRACTOR OF THE STATE	t 🔹
	st. Specs SP	C Pred. Co	omp.

**Confidence**: Set the percentage level for confidence intervals.

**Percentiles**: Set the percentage level for prediction limits, forecast limits, and percentiles. Also choose between two-sided limits and one-sided bounds.

**ARIMA**: Specify the order of the autoregressive (p,P) and moving average (q,Q) terms, the order of differencing (d,D), the level of seasonality (s), and the inclusion of a constant term.

### 2.7 Comparisons

The Comp. page sets the options to be used when comparing two or more samples.

	Statgraphics + 12:00 ok Column Properties Cancel
F	-test: NE 🕶 -test: NE 🕶 Means plot: HSD Intervals 💌
I	D <mark>Scaling Dist. Specs SPC Pred.</mark> Comp.

**t-test**: Specify the alternative hypothesis for a t-test to compare two means.

F-test: Specify the alternative hypothesis for an F-test to compare variances.

**Means plot**: Specify the type of interval to display when plotting sample means. You may choose between Tukey's HSD intervals, Fisher's LSD intervals, confidence intervals, or standard error bars.

## **Program Options**

Setting numeric and date formats.

There are several global program options that affect how output is displayed. These settings may be changed by clicking on *Menu* and selecting *Options – Program*. A tabbed dialog box will be displayed.

#### 3.1 Format Tab

The format tab controls how dates and numeric values are displayed. The fields on this page are shown below:

for the state of t	
Program Options	
Format	
Decimal separator:	▼
Format	

**Decimal separator**: Select the character to use as a decimal separator when displaying numeric values. You may choose to display numeric values in a form such as 3.14 or 3,14.

**Time separator**: Select the character to use as a separator when displaying time. You may choose to display time in a form such as 12:14 or 12.15.

**Date separator**: Select the character to use as a separator when displaying dates. You may choose to display dates in a form such as 4/2/06, 4.2.06, or 4-2-06.

**Date format**: Select the format to be used when displaying dates. April 2, 2006 may be displayed in any of the following ways:

M/d/yy - 4/2/06

MM/dd/yy - 04/02/06 d/M/yy - 2/4/06 dd/MM/yy - 02/04/06 yy/M/d - 06/4/2 yy/MM/dd - 06/04/02

**4-digit years**: Check this box when displaying years using 4 digits rather than 2 digits. Because of space limitations, the use of 4-digit years is not recommended.

## Working with Graphs

Setting graphics options, zooming and rescaling.

## 4.1 Graphics Options

When graphs are first displayed, default titles, scaling and other attributes are used to generate the graph. You can modify the features of any graph by:

- 1. Clicking on Menu and selecting Options Graphics; or
- 2. Hold down your stylus on any graph, wait for a popup menu to appear, and then selecting *Graphics Options*.

Both methods display a *Graphics Options* dialog box with several tabs. If you change the settings of any item, these become the new settings for the current graph and also the default settings for future graphs.

The pages of the Graphics Options dialog box are described below.

#### 4.1.1 General

The General tab specifies colors and other features for basic graphics components.

Graphics Options Cancel   General   Border:   Background:   Ticmarks:   In   Grid:   Text:     In     In
Border:
Background:

Border: Select the color to be used for the area surrounding each graph.

Background: Select the color to be used for the area within the axes.

Ticmarks: Select the color and direction for the axis ticmarks.

Grid: Select the type and color of the grid, if any.

Text: Select the color and size for all graphics text.

#### 4.1.2 Items

The Items tab specifies colors and other features for lines, points and fills.

<u> </u>		¢ <b>*</b> χ <b>≼</b> € 12:16 ο
Grap Items	hics Options	Cancel
		ze: 1 🚔
		▼ Square
Fills:	First 🔻	<b>-</b>
Gene	al Items <mark>Titles Sca</mark>	aling
	0	

**Lines**: Specify the width and color of any lines. Different lines may be assigned different colors according to their most common use.

**Points**: Specify the type and color of any point symbols. Different points may be assigned different colors and types according to their most common use.

Fills: Specify the color of any filled areas. Ten colors may be specified.

#### 4.1.3 Titles

The *Titles* tab specifies the text for the top and axis titles.

-	Statgraphics ↔ 🛠 ◀< 12:19 ok
Gra Title:	phics Options Cancel
Top1	: Fitted Model
Top2	
X: Y:	Weeks Chlorine
Gene	eral Items Titles Scaling
Gene	eral  Items   Titles  Scaling

These titles apply only to the current graph, but are remembered until you exit the current procedure. Not all titles can be changed on every graph.

#### 4.1.4 Scaling

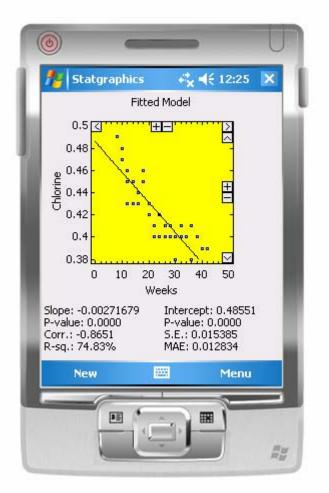
The Scaling tab specifies the scaling for the X and Y axes.

file Statgraphics	- + <b>*<sub>X</sub> =(</b> € 12:21 ok
Graphics Options	Cancel
Scaling	
x	Y
From: 0	0.38
To: 50	0.5
By: 10	0.02
General Items Titles	
(	

This scaling applies only to the current graph, but is remembered until you exit the current procedure. Some graphs do not permit you to rescale certain axes.

### 4.2 Zooming and Translation of Graphs

Once a graph has been created, you may zoom in or out on selected areas or shift the axes in any direction. To do so, hold your pointer down on any part of the graph until a popup menu appears and then select *Show nav. buttons.* 



The + and – buttons will zoom in or out. The arrow buttons will shift the graph in the indicated direction.

#### 4.3 Drill-Down Point Identification

To display information about a point on any graph, hold your pointer on that graph until a message box appears.

0.5       0.48       0.48         0.48       0.48       0.48         0       Statgraphics Mobile       ok         0       Statgraphics Mobile       ok         0       Row #17 Weeks=18       ok         0.38       0       10       20       30       40       50         0       10       20       30       40       50       Weeks         Slope:       0.000271679       Intercept:       0.48551       P-value:       0.0000       S.E.:       0.015385         P-value:       0.0000       S.E.:       0.012834       MAE:       0.012834	🏄 Statgra	phics 🤹	( ◀€ 12:27
Statgraphics Mobile       ok         Row #17 Weeks=18       Row #17 Weeks=18         Chlorine=0.46       Row #17 Weeks=18         0.38       Row #17 Weeks=18         0.38       Weeks         0       10       20       30       40       50         Weeks       Weeks       Weeks       Slope: -0.00271679       Intercept: 0.48551         P-value: 0.0000       P-value: 0.0000       S.E.: 0.015385       R-sq.: 74.83%	Second Second	•	
0       Chiorine=0.46         0.38	etator		e ok
0.38 0 10 20 30 40 50 Weeks Slope: -0.00271679 Intercept: 0.48551 P-value: 0.0000 P-value: 0.0000 Corr.: -0.8651 S.E.: 0.015385 R-sq.: 74.83% MAE: 0.012834			
Slope: -0.00271679 Intercept: 0.48551 P-value: 0.0000 P-value: 0.0000 Corr.: -0.8651 S.E.: 0.015385 R-sq.: 74.83% MAE: 0.012834			Sund
New 🔤 Menu	P-value: 0.000 Corr.: -0.8651	1679 Interd 0 P-valu S.E.:	ue: 0.0000 0.015385
	New		Menu

## **Using the Session Log File**

Saving screen images to the session log; accessing the session log on a PC.

## 5.1 Creating a Session Log File

The session log file is a file with the extension *".sgl"* in which you may save output pages created in STATGRAPHICS Mobile. The session log file can be uploaded to a notebook or desktop computer, where a special executable will convert the file into RTF format. Once converted, images may be printed or copied to applications such as Microsoft Word or PowerPoint.

To create a log file, select Menu – File - Create Session Log.

Open ses	graphics 4 <sup>*</sup> x 4€ 12:29 ssion log file
Name:	My log file
Folder:	None 🗸
Туре:	Session Log Files (*.sgl) 🔹
Location:	Main memory 👻
	Save Cancel

Select a name and location for the file. If you select a file name that already exists, output will be added to the file without erasing the current contents.

### 5.2 Adding Output to the Session Log File

After the file has been opened, you can then copy any statistical output to it by selecting Menu - File - Add to Log File. A copy of the current output page will be saved in the session log.

Chapter 5 explains how to manipulate the session log file using the STATGRAPHICS Mobile Assistant.

# The STATGRAPHICS Mobile Assistant

Manipulating session log files; accessing documentation; obtaining an activation code.

The STATGRAPHICS Mobile Assistant is an application that is installed on your desktop or notebook computer at the same time that STATGRAPHICS mobile is installed on your Pocket PC. It will assist you in several important functions.

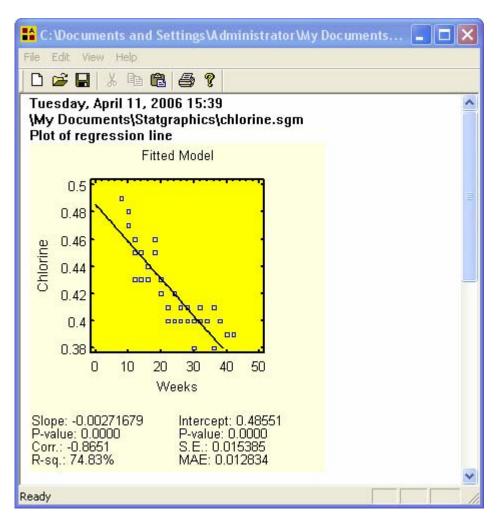
To launch the STATGRAPHICS Mobile Assistant, click on the shortcut that was installed on your desktop.

#### 6.1 Manipulating Session Log Files

As explained in Chapter 4, all output created on your mobile device may be saved in a session log file. The *STATGRAPHICS Mobile Assistant* can print the contents of a log file or assist you in copying it to other applications.

To open a saved session log file on your desktop computer:

- 1. Be sure that you have placed the log file in a directory that Microsoft ActiveSync has synchronized between your desktop computer and mobile device.
- 2. Select *File Open* from the STATGRAPHICS Mobile Assistant menu and open the desired log file. Log files have the extension "*.sgl*".



The log file will be displayed in a rich edit text control:

You can then:

- Select *File Save* to save the file in RTF format. An RTF file can be read directly into Microsoft Word.
- Highlight any section of the output and select *Edit Copy* to place it on the Windows clipboard. You can then paste it into programs such as Word, Excel, or PowerPoint.
- Select *File Print* to send the output to your printer.

#### 6.2 Accessing Program Documentation

An electronic copy of this User Guide can be accessed by selecting *Help* – *User Guide* from the main STATGRAPHICS Mobile Assistant menu. Since the documentation is in PDF format, you must have Adobe Acrobat reader on you desktop to read the file. The reader can be downloaded free of charge at *www.adobe.com*.

Each procedure described in the system also has a PDF file associated with it that gives details about the output and various options. To display these documents, select Help - On-line Manuals from the main menu and select the desired document.

#### 6.3 Obtaining an Activation Code

As explained in Chapter 1, you must obtain an activation code within 10 days of purchasing a license for STATGRAPHICS Mobile or the program will stop functioning until you do. To obtain an activation code, select *Activate* from the *Help* menu of the STATGRAPHICS Mobile Assistant. Complete the following dialog box:

#### STATGRAPHICS Mobile Registration

А

StatPoint, Inc.

You must enter an Activation Code within 15 days of first using STATGRAPHICS Mobile, or the program will stop functioning until you do. To obtain an Activation Code, provide us with the information below by one of the following methods:

E-mail us at activate@statgraphics.com (use the E-Mail button below).

<ol> <li>Call us at 1-800-232-7828 or 1-540-364-0420.</li> </ol>				
3. Print the ir	nformation and fax it to us at 1-	540-364-0421.		
*Last name:	Smith	*First name:	John	
*Organization:	ABC Corporation			
*E-Mail:	jsmith@abc.com			
*Address:	123 Main St.			
Address:				
*City:	Middletown	*State:	Texas	
*Country:	USA	*Postal Code:	56789	
*Phone:	555-123-4567	Fax:		
*Purchased F	rom			
StatPoint				
C Other				
*Seriel number: [		 	cate activation, explain reason:	

We will return the Activation Code as soon as we verify the information submitted.

Print for faxing

Be sure to enter both your Serial Number and the Product Key for your copy of STATGRAPHICS Mobile. This information can be found by selecting Menu - Tools - About SG Mobile when running the program on your mobile device.

Done

Help

You may then press Submit via e-mail to send this information to StatPoint, or print the information to fax to us. Your activation code will be returned to you via e-mail. You can then select Menu – Tools – Activate while running STATGRAPHICS Mobile on your mobile device and complete the activation process.

\*Serial number: xxxxxxxxxxxx

Submit via e-mail

\*Product Key: 50000.00000.00000

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