

STATGRAPHICS®

Mobile

Statistics in Your Pocket™

Statistics software for Pocket PCs and other mobile devices.

Presented by

Dr. Neil W. Polhemus
Chief Technology Officer
StatPoint, Inc.

Mr. Seth Wyatt
Director of Support Services
StatPoint, Inc.

Prepared for the Institute of Industrial Engineers
2006 Annual Conference

Statgraphics Mobile

Designed for Pocket PC, Pocket PC Phone Edition, and compatible mobile devices.



Requirements

- **Pocket PC, Pocket PC Phone Edition, or compatible device** running Windows Mobile 5 or Windows Pocket PC 2003. Minimum screen resolution: 240 by 240. Approximately 1.1 MB of storage memory required to install program. While running, requires 120KB of main memory plus space for data and intermediate results.
- **Desktop or notebook computer** running Windows 98, 2000, NT, ME, XP or later. 5 MB of hard disk storage required to install documentation and the STATGRAPHICS Mobile Assistant.
- **Microsoft ActiveSync** for program installation and synchronization of data files.

History

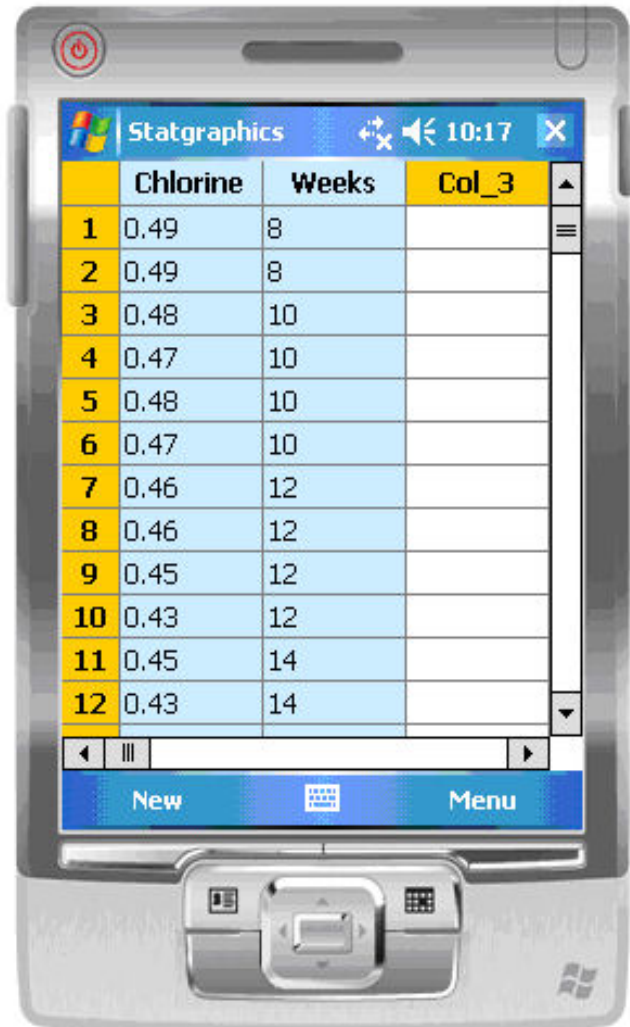
- 1982-1990: Statgraphics Plus for DOS (9 versions)
- 1990-2005: Statgraphics Plus for Windows (5 versions, with Manugistics)
- 2005: Statgraphics Centurion XV (StatPoint, Inc.)
- 2006: Statgraphics Mobile

Two Scenarios

1. May be used as a standalone application.
2. May synchronize data with
STATGRAPHICS Centurion on a desktop or
notebook computer.

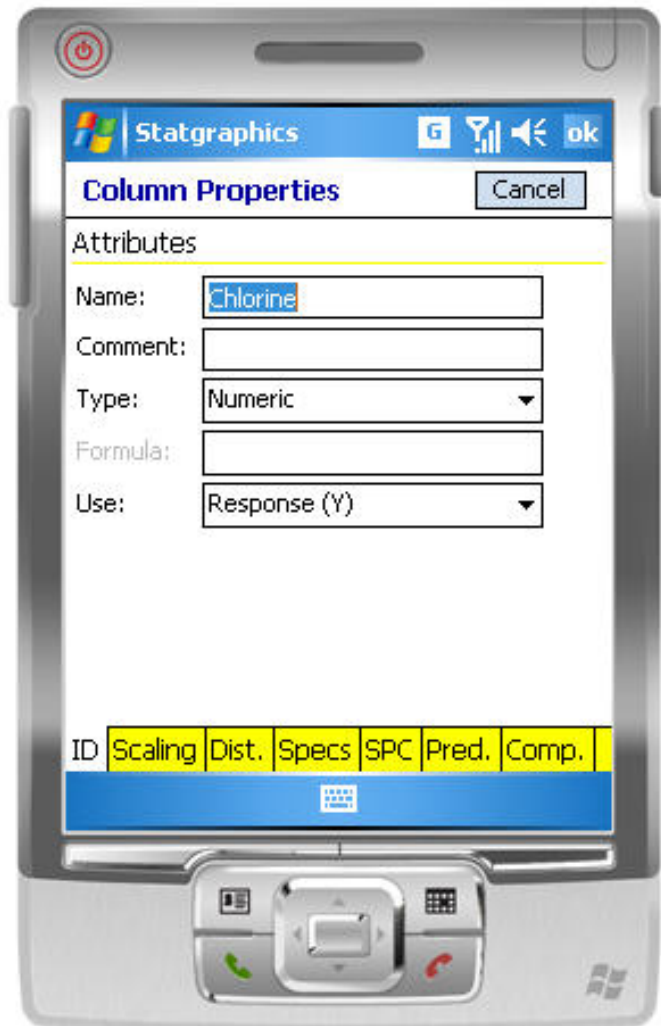


Data Entry



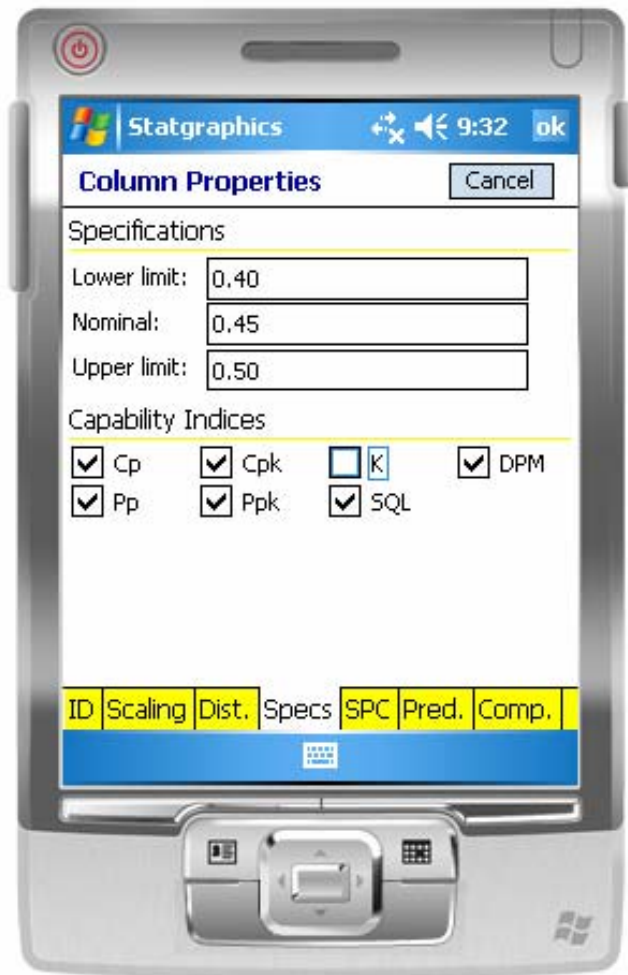
- Enter data by hand
- Copy from Excel Mobile
- Synchronize with desktop

Column Properties



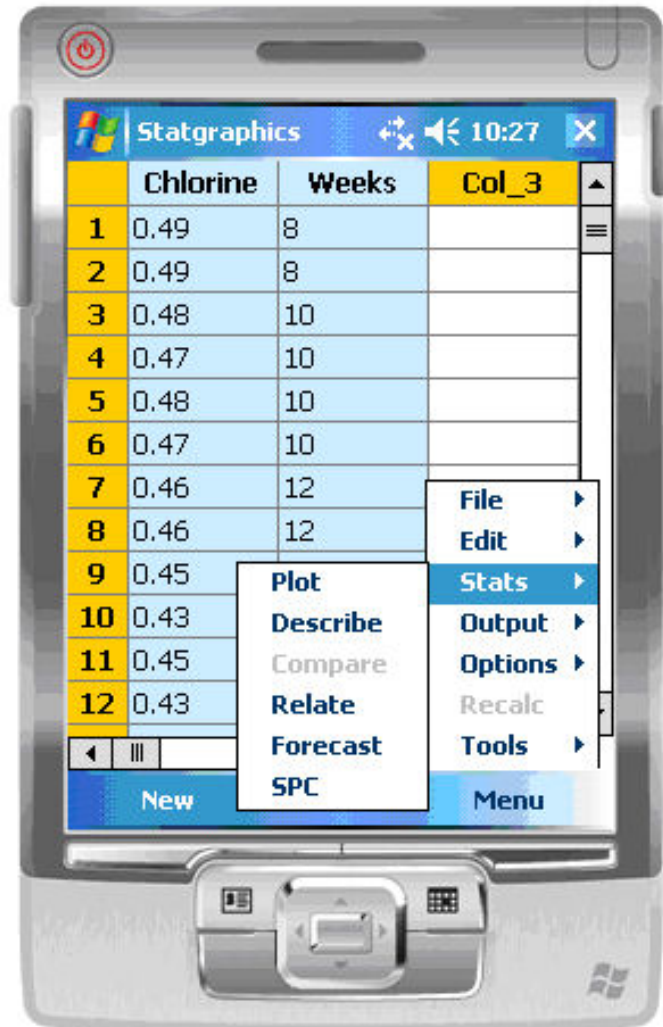
- *Type* determines allowable entries
- *Use* affects how data will be analyzed

Column Properties



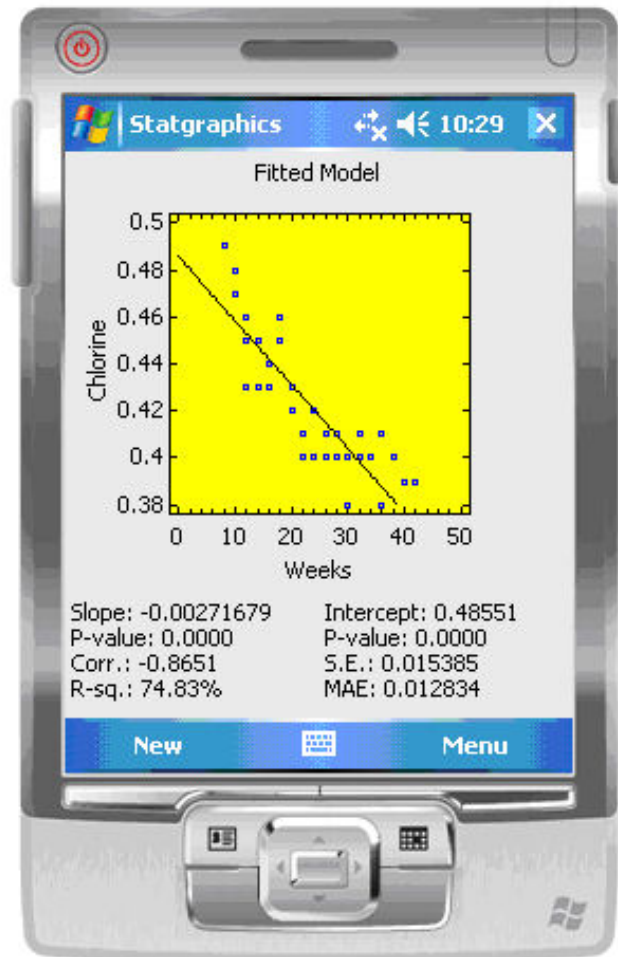
- Also stores information such as desired scaling, specification limits, and other system options.

Selecting a Statistical Procedure



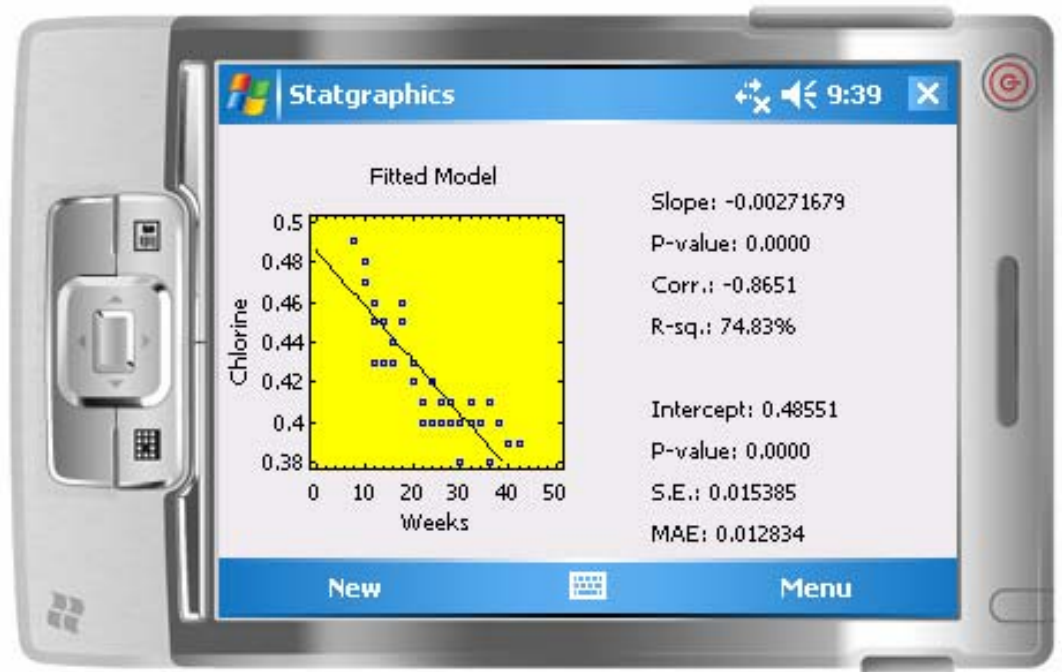
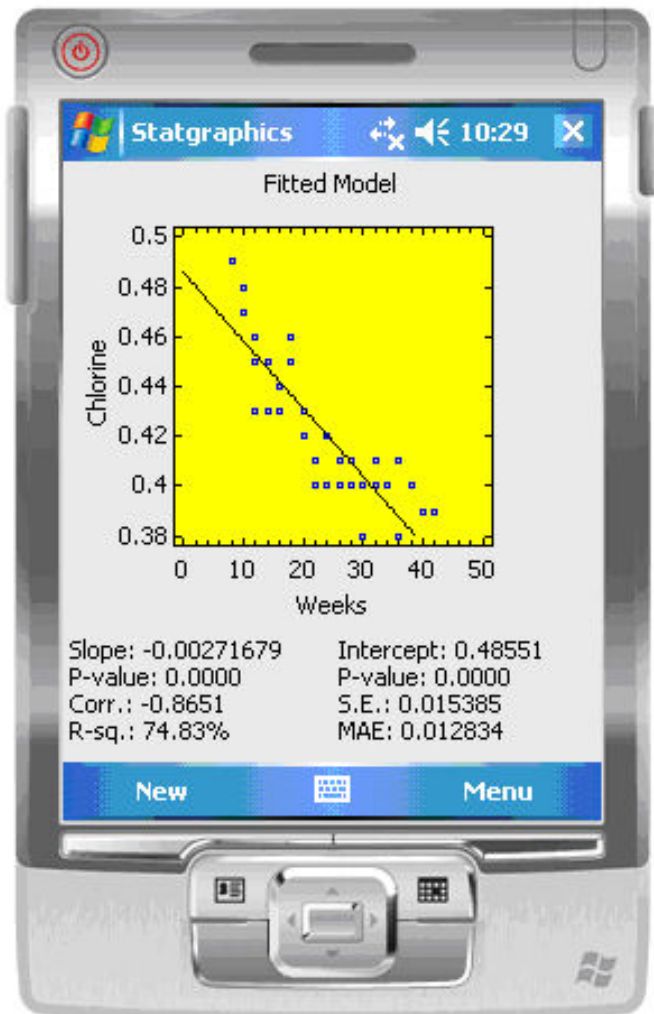
- Highlight the data to be analyzed.
- Select from *Menu – Stats* options.

Output Pages

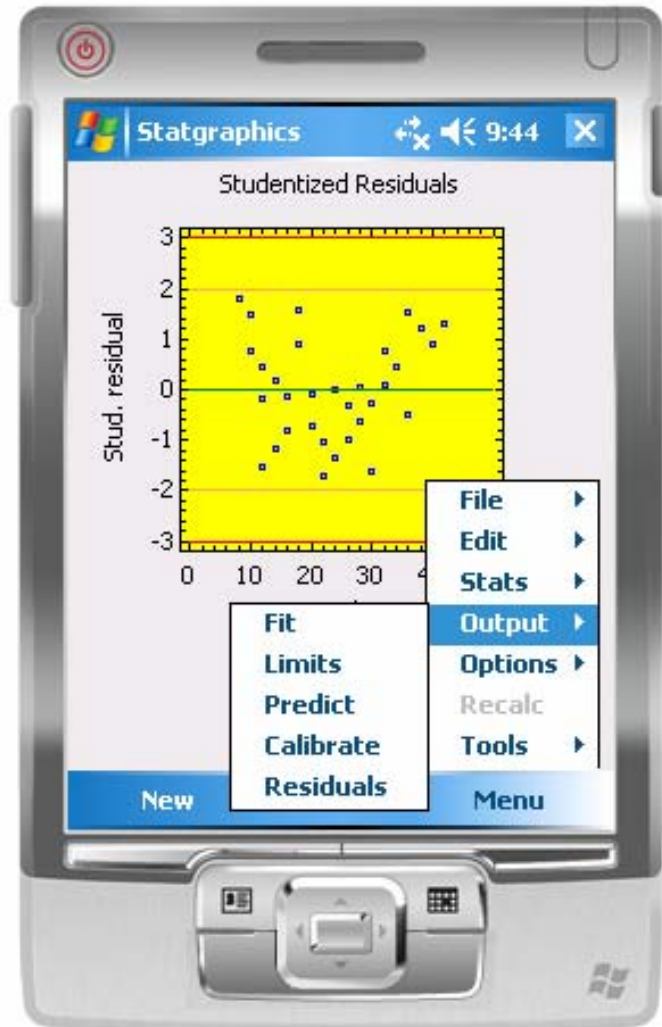


- Both text and graphics output.
- No scrollbars if resolution is at least 240 by 320.

Portrait or Landscape Mode



Additional Output Pages



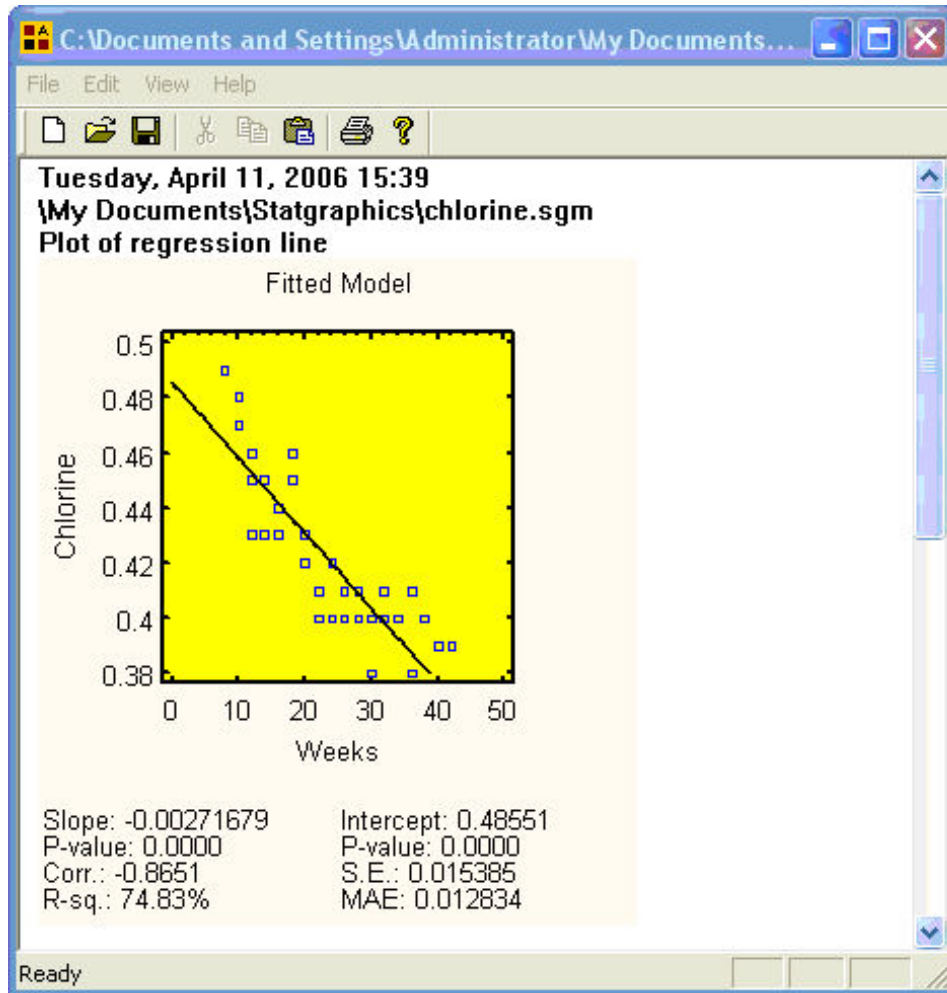
- Each statistical procedure has additional pages accessible by selecting *Output*.

Drill-Down Point Identification



- Select a point with the stylus to display information about it.

Session Log Files

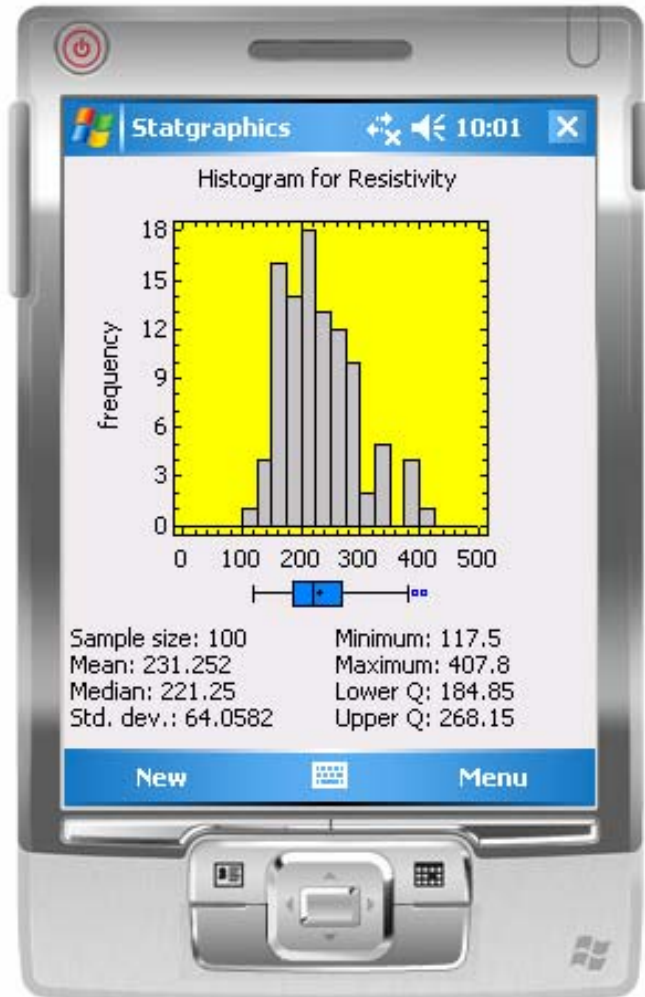


- Output may be placed in log files for transfer to your desktop or notebook computer.
- The *STATGRAPHICS Mobile Assistant* will display, print, or convert log files to RTF format.

List of Procedures

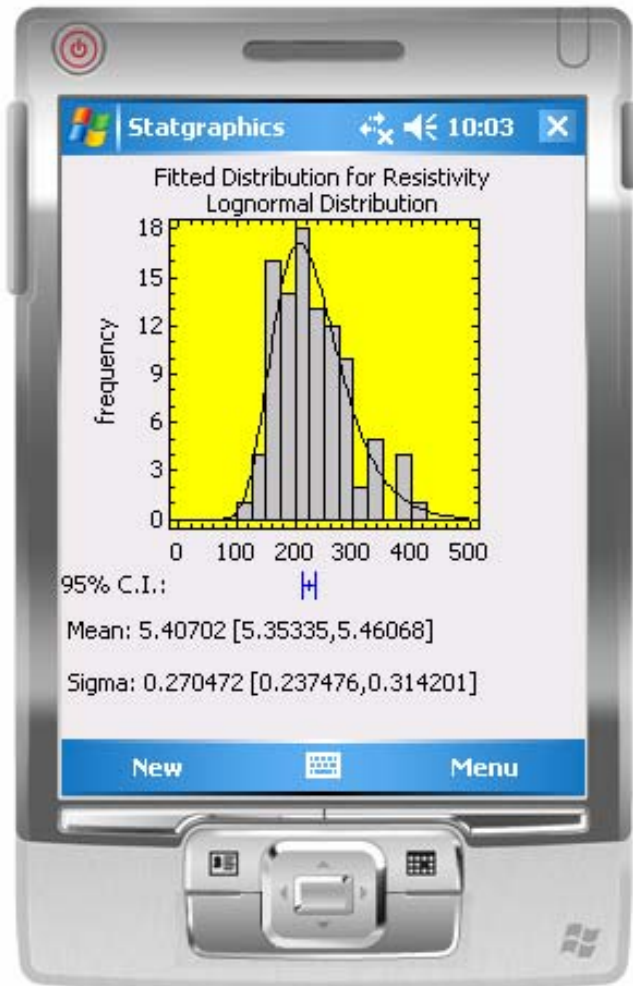
- ❑ Descriptive statistics
- ❑ Confidence intervals
- ❑ Hypothesis tests
- ❑ Outlier identification
- ❑ Two sample comparisons
- ❑ Multiple sample comparisons
- ❑ One-way ANOVA
- ❑ Curve fitting
- ❑ Calibration
- ❑ Control charts for variables
- ❑ Control charts for attributes
- ❑ Process capability analysis
- ❑ ARIMA time series forecasting
- ❑ Six Sigma calculator

Descriptive Statistics



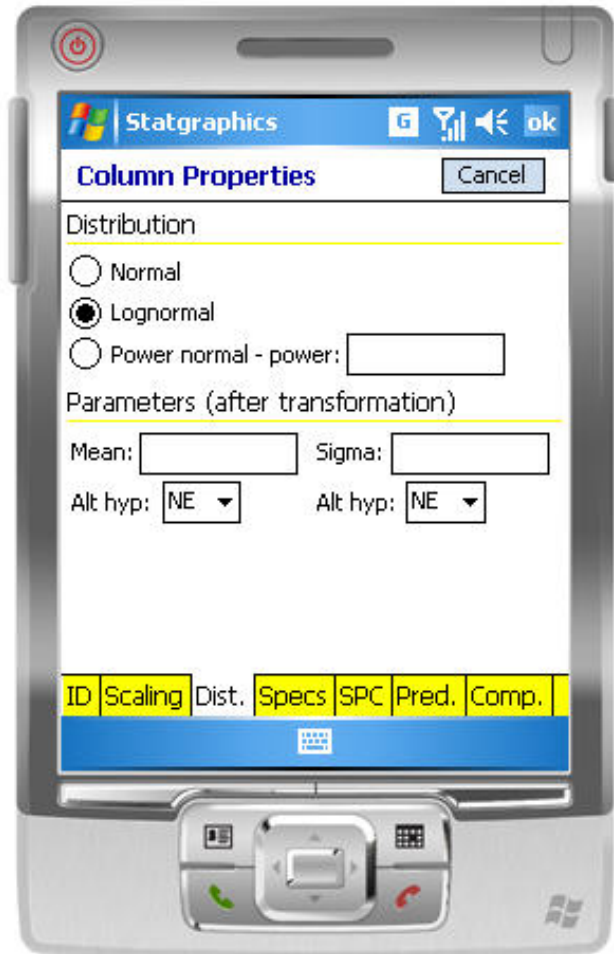
- Histogram
- Box-and-whisker plot
- Summary statistics

Distribution Fitting



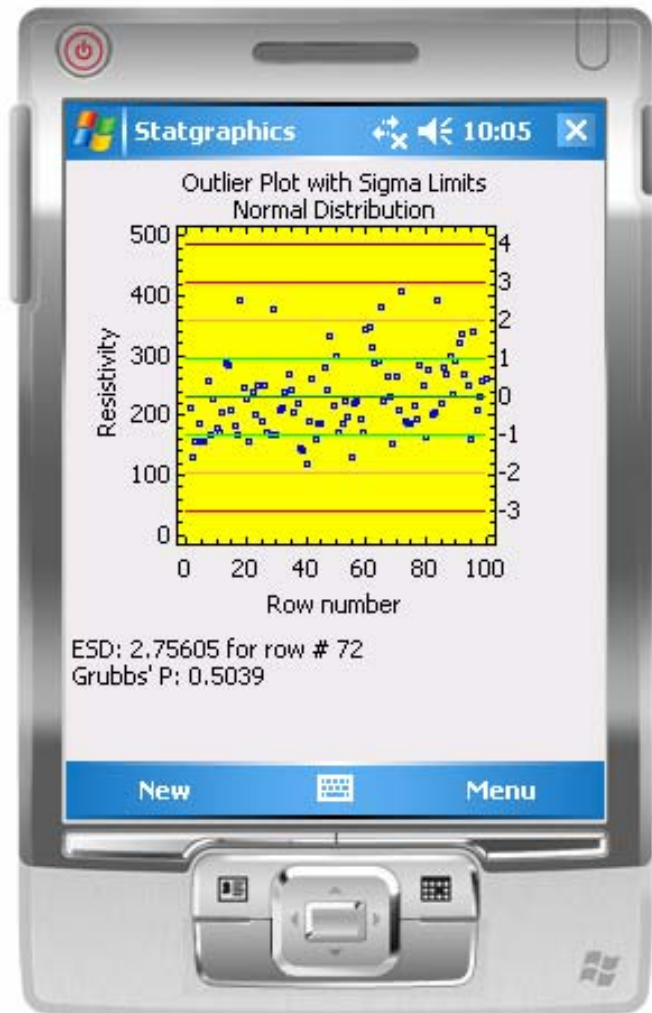
- Normal, lognormal or power normal
- Q-Q plots
- Shapiro-Wilks test for goodness-of-fit

Column Properties



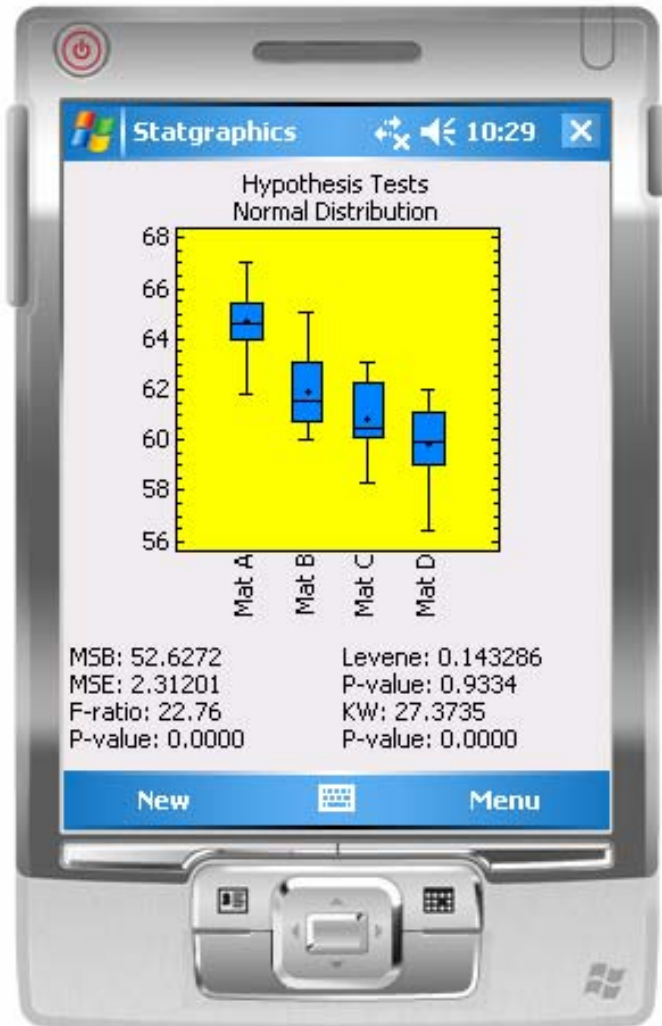
- Specifies the desired distribution
- May also be used to enter values for the hypothesized mean and standard deviation

Outlier Identification



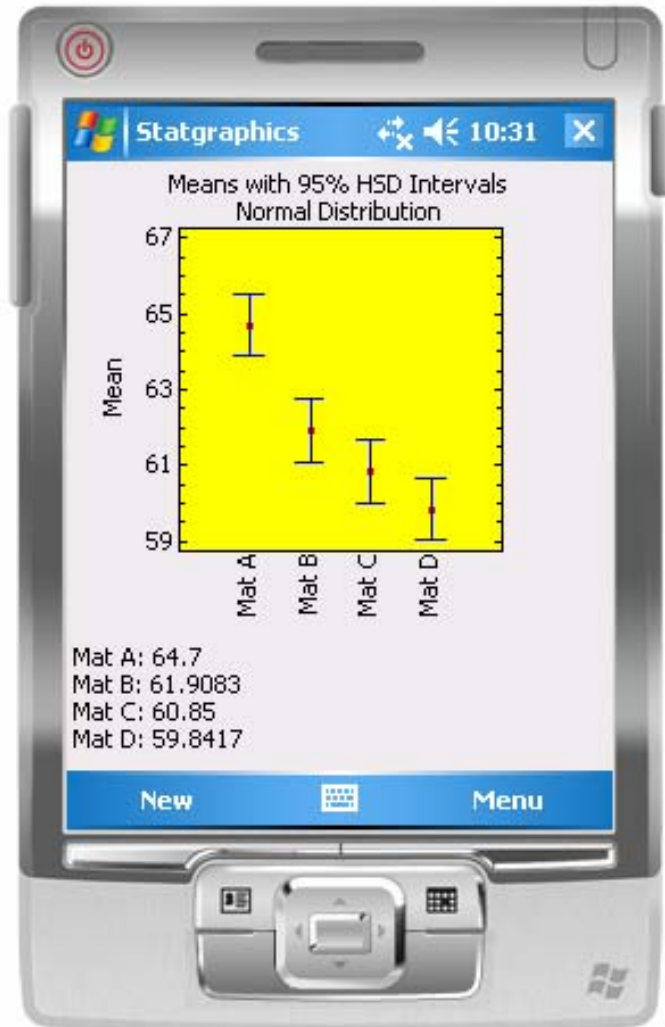
- Plots data with 1, 2, 3 and 4 sigma limits
- Grubbs' test gives P-value for the ESD (Extreme Studentized Deviate)

Multiple Sample Comparison



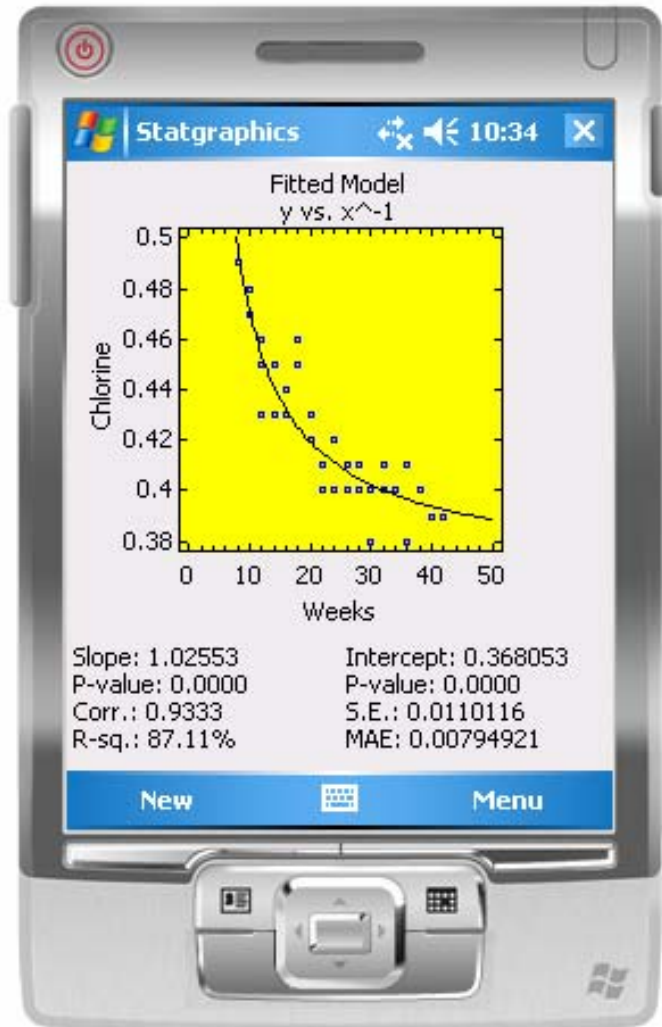
- ❑ Compares means using one-way ANOVA
- ❑ Compares sigmas using Levene's test
- ❑ Compares medians using Kruskal-Wallis test

Multiple Comparisons



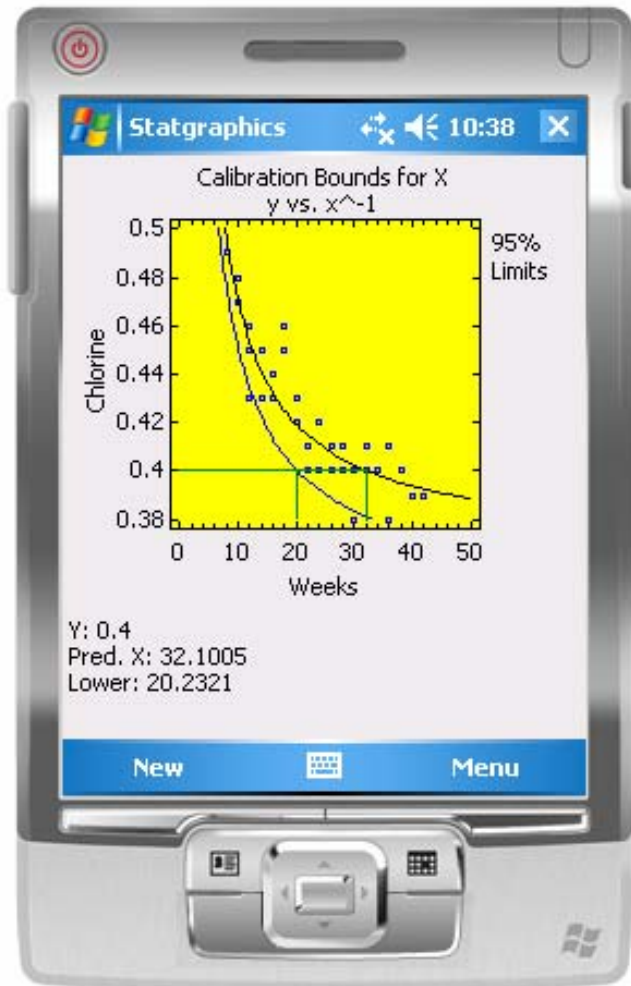
- Means plot may be based on Fisher's LSD or Tukey's HSD intervals

Curve Fitting



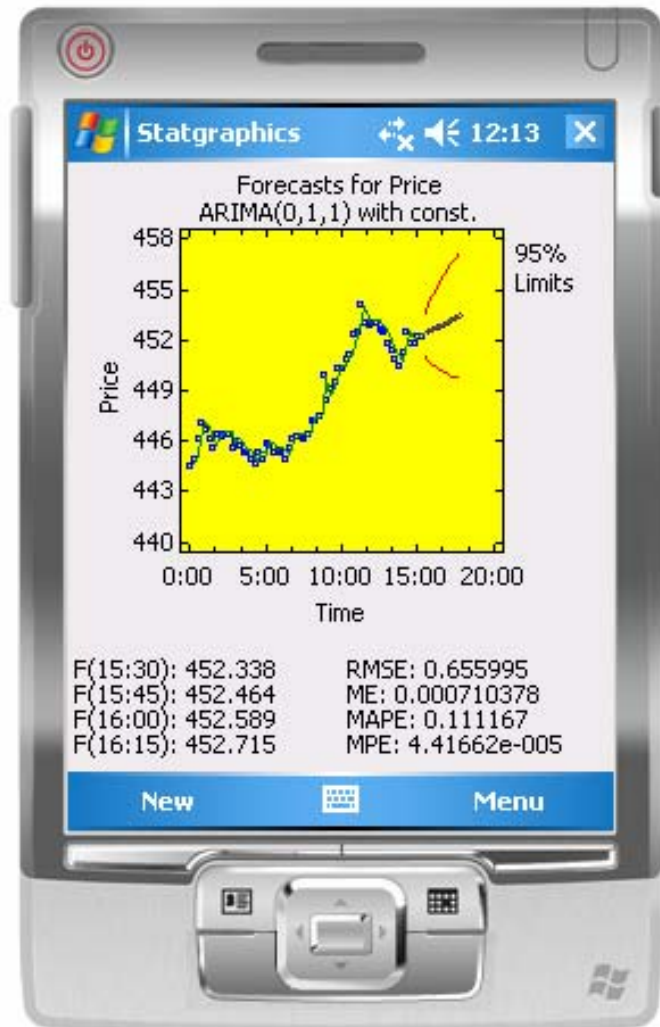
- May fit linear or nonlinear models

Calibration Problems



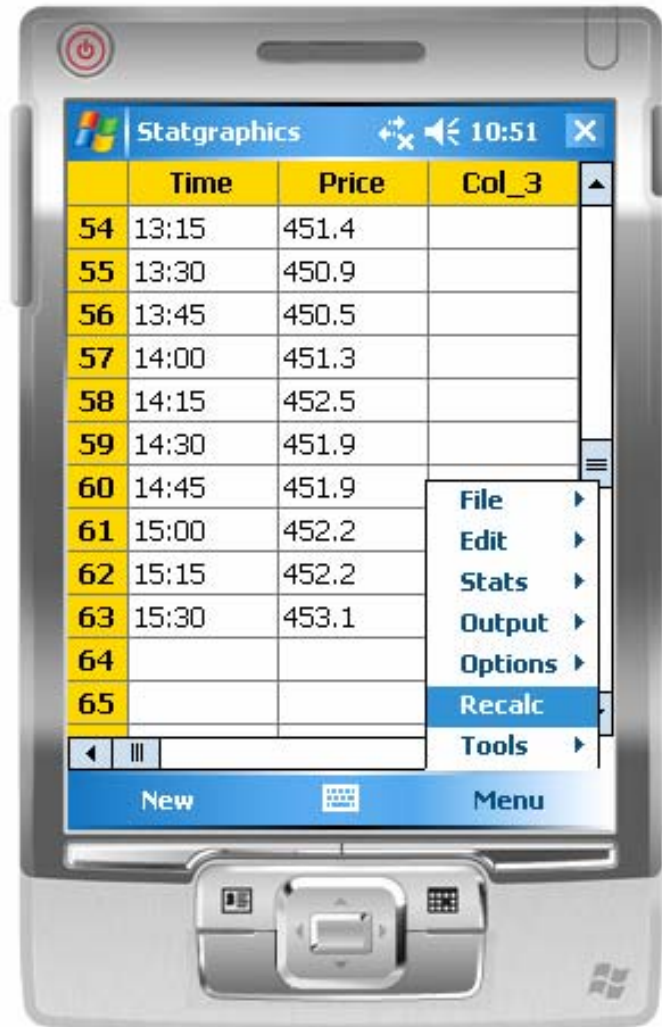
- May predict either Y from X or X from Y
- Supports one-sided bounds for stability studies

Time Series Forecasting



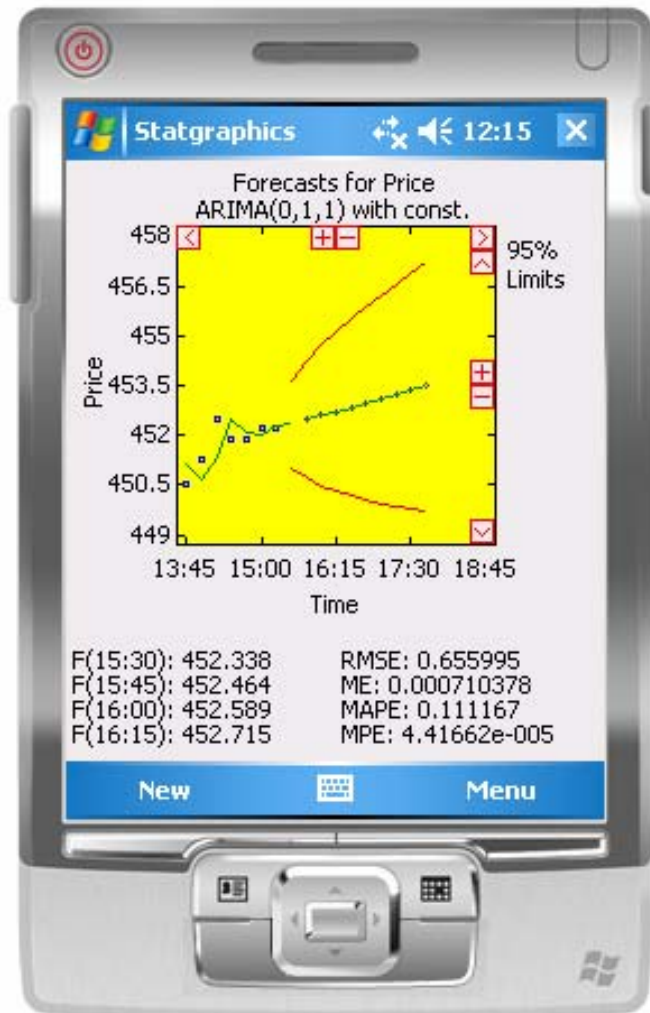
- Fits seasonal and nonseasonal ARIMA models
- Includes standard error statistics for comparing models

Recalc Button



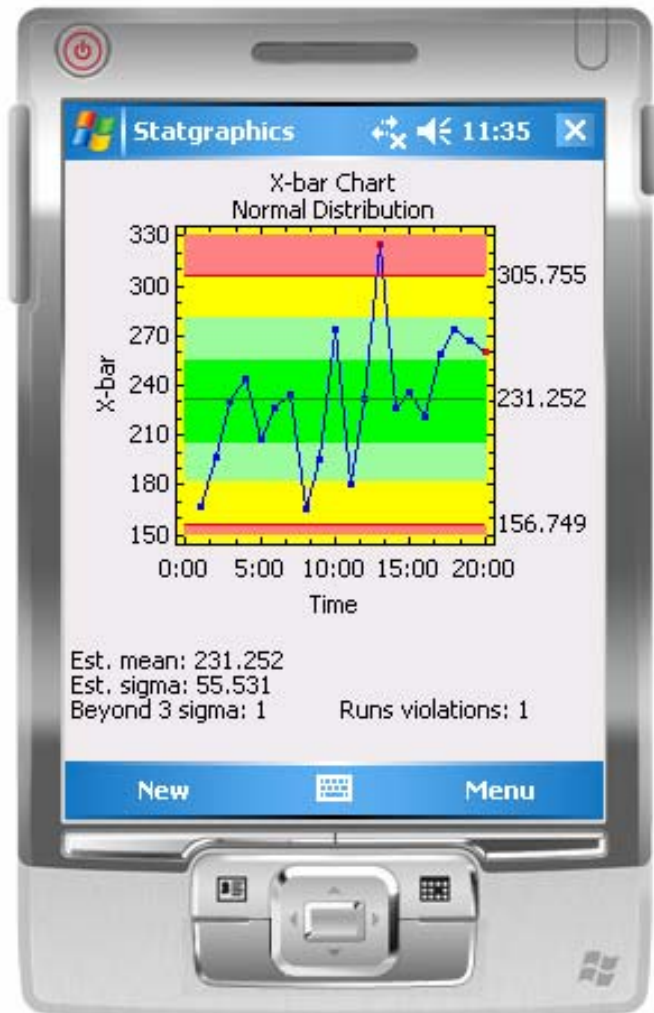
- To update forecasts, add new data to the bottom of the datasheet
- Then select *Menu - Recalc*

Zoom and Translate



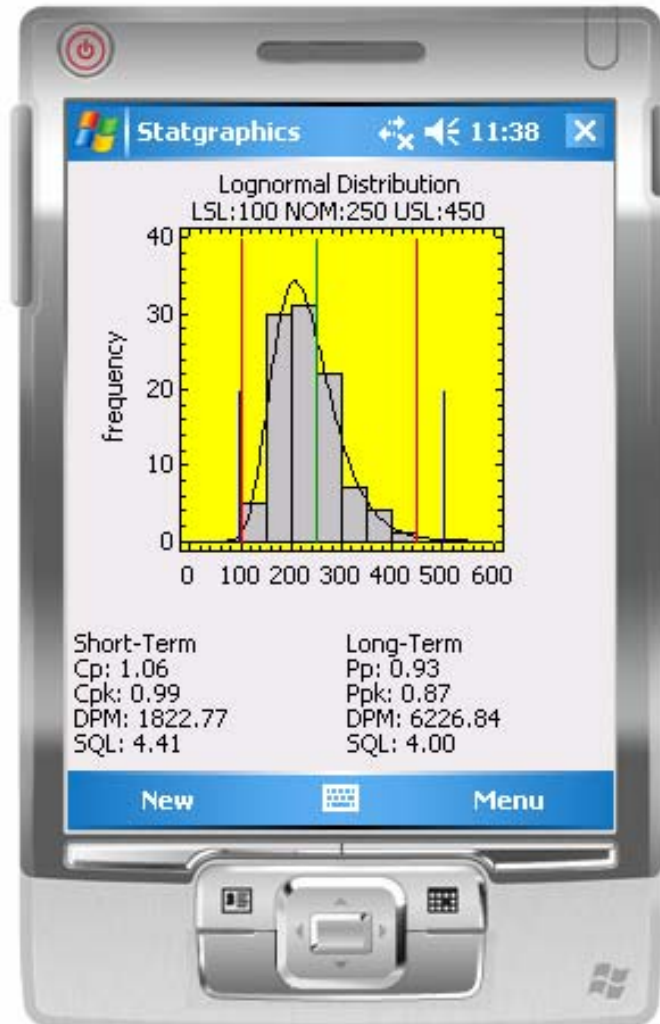
- May shift axes and zoom in on selected regions using special navigation buttons

Control Charts



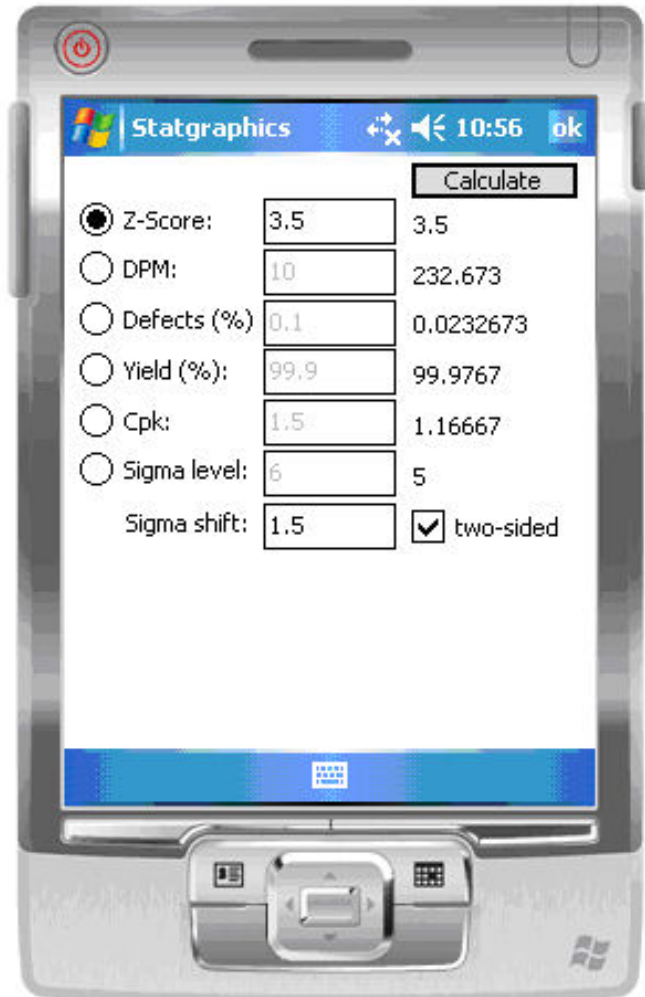
- ❑ Plots charts for variables and attributes
- ❑ Control limits may come from data (Phase 1) or from user input (Phase 2)
- ❑ Standard runs rules may be applied

Capability Analysis



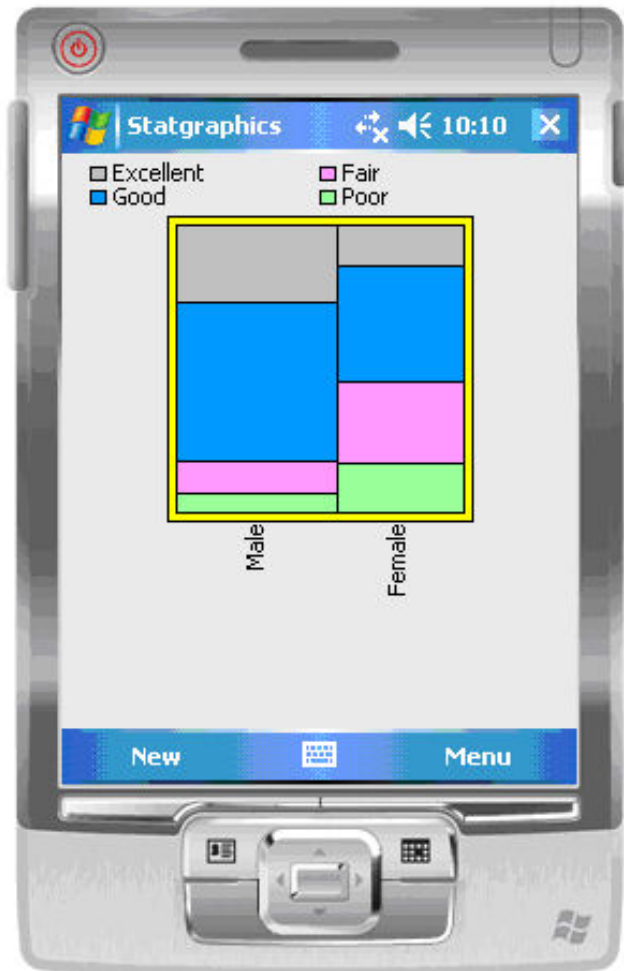
- Estimates both long-term and short-term capability
- Based on normal, lognormal, or power normal distribution

Tools: Six Sigma Calculator



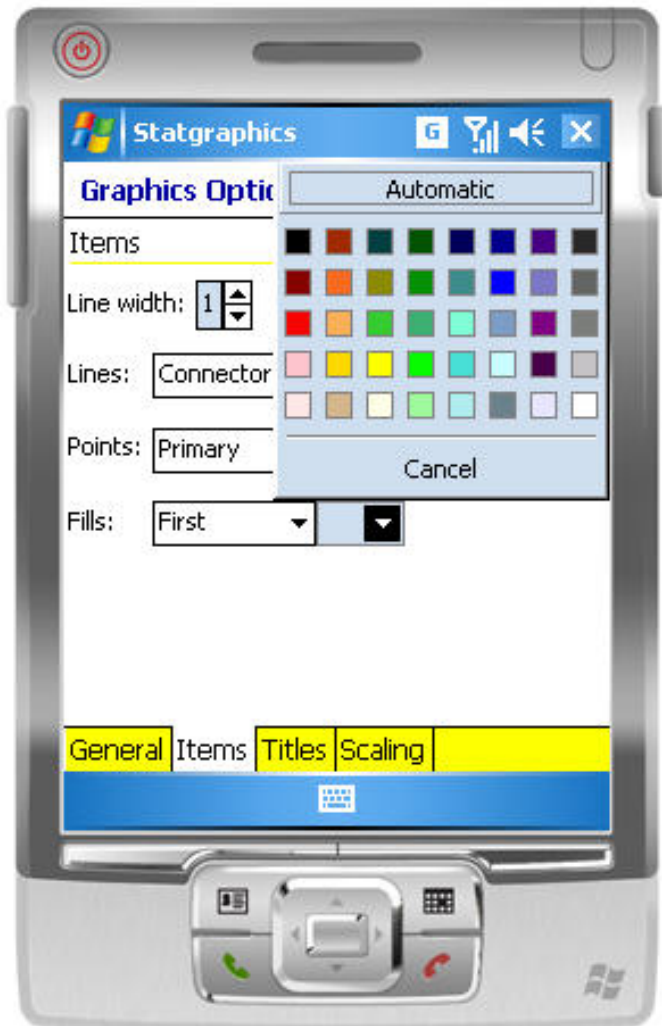
- ❑ Converts between different quality metrics

Attribute Data



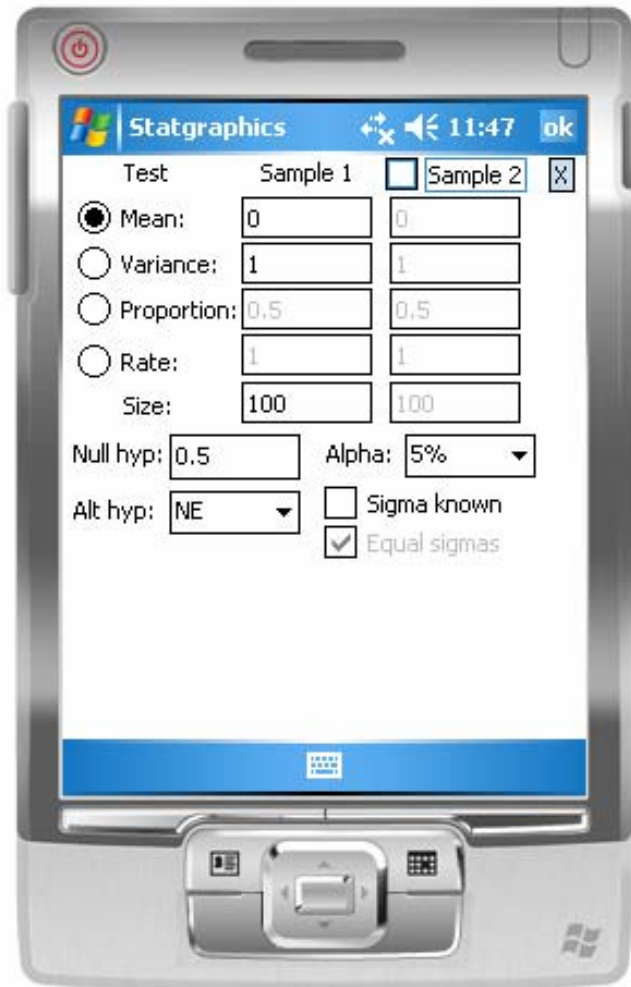
- Performs tabulations and crosstabulations
- Includes tests and measures of dependence between rows and columns in a twoway table

Graphics Options



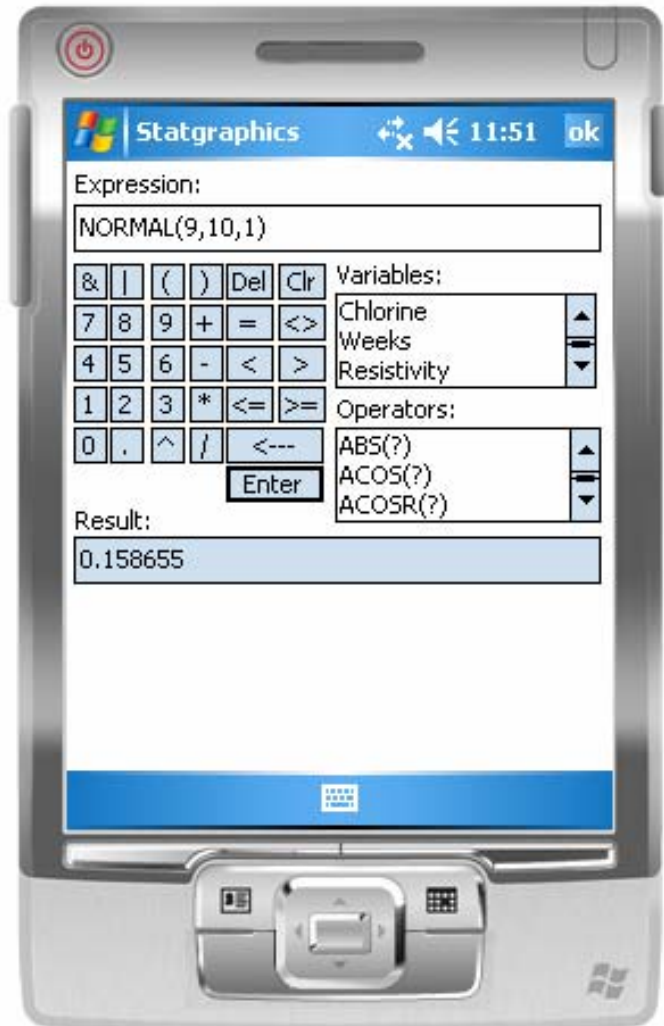
- May change titles, scaling, and other features of any graph
- May also drag text to reposition it

Tools: Hypothesis Tests



- One and two sample tests from summary statistics
- Normal, Poisson and binomial problems

Tools: Expression Evaluator



- May be used to evaluate algebraic expressions
- Also calculates probabilities and critical values