VaRio

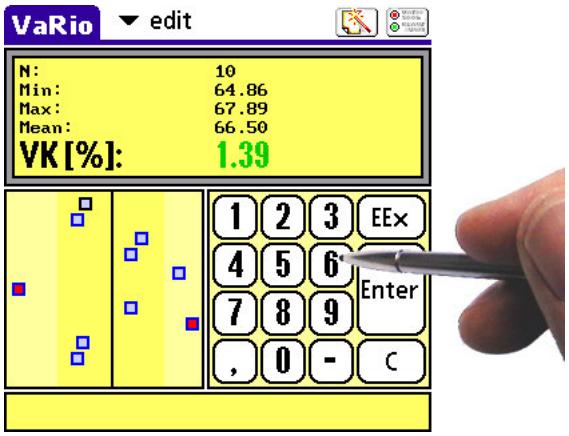
1. Purpose

The purpose of VaRio is to calculate the coefficient of varation out of a number of measurement values. Emphasis is layed on quick and easy input of new values, the immediate calculation of statistical information and simple input correction capabilities.

2. Requirements

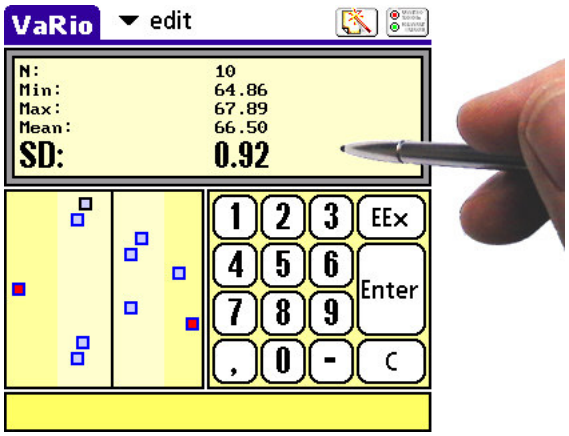
The current program version requires a PDA with PalmOS version 3 and a high resolution colour display (320 x 320 pixels). Grayscale displays are little contrasty but usable.

3. Input



The keyboard keeps being present. The key „C" deletes the last digit, „Enter" completes the input. Right after the takeover of the second value the statistical data will be determined. "EEx" changes to scientific input mode. The first grafical button in the menu line rejects all calculations that have been done and initiates a new data set. The second is reserved for presets.

4. Display

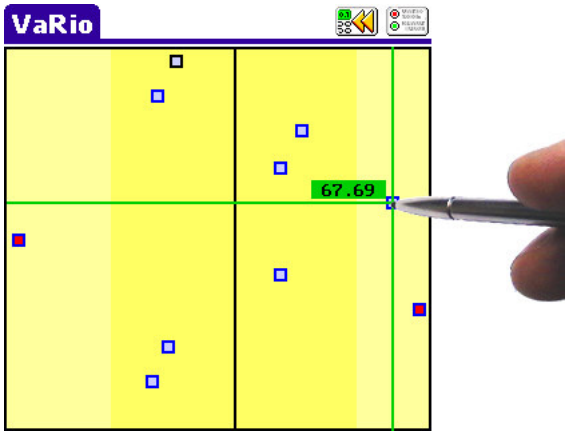


The standard display shows the number of fed values „N", the minimal und maximum value „Min" and „Max", the „Mean" as well as the coefficient of variation „VK" in percent. VK shows up in red or green depending on the given threshold of 5%. New data will continuously refresh the readout.
A tap on the display area changes to the standard deviation screen. Another tap in this area restores the VK screen.

Below the keyboard resides the status bar.

5. Diagram

The left half is occupied by a graph showing the allocation of all values. Single data are recognizable by a blue square. The recent entry has a black border and is located on the top. The calculated data for minimum and maximum are coloured in red. The graph is automatically scaled.
The background depicts the standard deviation in a different colour. The mean is represented by the vertical black line.



A high amount of values would make the diagram appear to be crowded. For this reason VaRio offers a zoom mode that can be accessed by a simple tap on the graph.
In zoom mode a reticule will be drawn wherever the pen touches the screen. Its colour changes when it matches a square representing a measurement value. The measurement value itself is shown as highlighted number beside the reticule.

The button in the upper right corner showing arrows leads to the input screen.

6. Edit Mode

There are two options to correct invalid data.

1. As soon as the second value is entered a selection field called „edit" is shown in the headline. A tap on it opens a list containing all entries. When selected the value to be corrected will be inserted into the display and is ready to be changed. „Enter" overwrites the old value with the new one.

2. In zoom mode a single point can be marked by the green reticule. After pressing the arrow button to return to the input screen its value will be automatically inserted into the display and is ready to be changed. If no value is marked in zoom mode no changes will be made in the input screen.

7. Remarks

Input is limited to 8 digits. The exponent may vary in a range of ±30. The maximum number of values is 100.
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