

# RedCrab the Calculator – update History

## Version 4.13

12.04.2012

### New features:

- Access to single cells in multidimensional fields.
- Dim(x) returns the number of dimensions of data fields.
- Cols(x) returns the number of columns of data fields.
- Rows(x) returns the number of rows of data fields.
- Input of binary- and octal numbers.
- Output of binary- and octal numbers in result boxes.

### Bug-fixes:

- Runtime error by invalid input of:  $x=x[1..4]$  fixed.
- Flickering of function panel (right) by pressing of **Ctrl** + **Enter** fixed.
- Runtime error by invalid option in result boxes fixed.

## Version 4.12

19.03.2012

### New features

By chart boxes, the option X/Y position allows the free definition of *X* and *Y* coordinates.

### Bug-fixes:

Run time error fixed in display module: problem happened when displayed single-column field or more chart boxes.

Use of constant "e" results in a wrong error message.

## Version 4.11

05.03.2012

### New features

- The decimal key below the numeric keypad (point / comma) produces a decimal point always, regardless of the country setting.
- For the function "SUM ()" you can use alternate the Greek letter "Σ".

### Bug-fixes

CPU freezes when subscript symbols were behind a number.

Corrected error message when field definition is wrong  $[1..(a*b)]$ .

## Version 4.10

04.02.2012

### New features for field and financial calculation

*AddIn, AddTo, AddOn, MulIn, MulTo, MulAd, Patt*

### Bug-fix:

When inserting columns, problems occurred when result was behind a formula.

Mouse pointer showed wrong symbol when leaving text box.

Runtime error under Linux OS / Wine fixed.

## Version 4.0

18.12.2011

Difference to 4.0 beta, improvements in details, particularly in display of chart boxes and tables.

## Version 4.0.beta News in Version 4.0:

05.12.2011

Calculation with multidimensional data fields.

Chart boxes to display results graphically.

Variable overload

Standard Functions:

**Round** rounded to the nearest whole number.

**Int** returns the integer part of a value.

**Frac** returns the fractional part of an argument.

**Rnd** returns a random integer number.

**Abs** returns the absolute value of numbers and fields.

Functions / operators of dynamic data fields:

**Join** connects one or two-dimensional fields with each other.

**Fill** fills all elements of a field with a specified value.

**Mulx** operator for multiplication of matrices.

**Trans** producing the transpose of a matrix .

**Min** return the minimum value of fields.

**Max** return the maximum value of fields.

**Count** returns the number of elements of fields.

**Aver** returns the mean values of successive elements of fields.

**URnd** fills a field with a series of unique random numbers.

Statistic functions

**Sum** returns the sum of the elements in fields.

**Prod** returns the product of all elements of fields.

**Cusum** returns cumulative sum.

**Sort** sorts field elements from low to high values.

**DSort** sorts field elements from high to low values .

**Median** returns the median value of fields .

**Mean** returns the mean value of field.

**Vari** returns the variance of data fields .

**SVar i** returns the variance of an example.

**StDev** returns the standard deviation of data fields.

**SStDev** returns the standard deviation of examples.

**Diff** returns the difference values of successive elements of fields.

**LQuart** returns the value of the first quartile.

**UQuart** returns the value of the third quartile.

**QRan** returns the area from the 1<sup>st</sup> to 3<sup>rd</sup> quartiles.

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