Advanced Calculator Roadmap

# For 2015 🡪 2016

# August 2016: Bluetooth Programming

1. Create Bluetooth calculator with all features + copy of icons

## Bluetooth Programming

LET N = Bluetooth.Devices.Dotti.Count  
dotti = Bluetooth.Devices.Dotti.Get(1) // 1-based array  
color = Colors.Red  
dotti.SetDot (1, 1, color);

# Basic language feature improvements

* Bluetooth programming!
* Graphics!
* Sound (e.g., Midi!)
* Dialog
* DateTime objects
* Allow for Class objects
* Automatic system test
* Automatic code backup/restore/diff (part of programming in the very small)
* 2d tables (including editors, display, save/restore, statistics on data)
* Escape quotes inside of strings
* Pasting into editor sets the font size and color (but should not)
* Meta data for programs and packages should include links (e.g., for Wikipedia)
* REPL loop for interactive BASIC input
* Add a Math.Range (min, max, value) to truncate a value
* Set the screen size
* Allow for HEX colors
* QR Codes for programs!

# General Feature Needs

|  |  |  |
| --- | --- | --- |
| **Item** | **Status** | **Notes** |
| Manual test update | P1 | Every release, make better! (prog?) |

# Technical Additions

|  |  |  |
| --- | --- | --- |
| **Item** | **Status** | **Notes** |
| More Keys, P3 | P3 | 300 % 14 🡪 42 300 %T 14 🡪 4.6% Prime factors, GCD,  x exchange y  IsRandom  DMS🡪DD  X\*\*(1/y) for e.q. fourth roots |
| Display grad/turn | P3 | 360 degrees=1 turn=400 grad/'gon' |
| Talk back to users | P3 | Would be awesome to have a way to "chat" back with users |
| "Two line" display | P3 | 2nd line shows expression |

# New Solvers

|  |  |  |
| --- | --- | --- |
| **Item** | **Status** | **Notes** |
| Angle/Triangle | P3 | The right triangle calculator doesn't calculate when given areas or angles. The text originally talked about 'the angle solver', but that solver needs to be written. |
| Volume solvers | P3 | Cylinder, box, cone… |
| Combinations/Permutation | P3 |  |
| Battery solver | P3 | Joules/wats/amps… |
| List functions for mean/mode | Done! P3 |  |
| List functions make box plot | Done! P4 |  |
| List functions compare | Done! P4 |  |
| Degrees/radians/grad solver | P3 | Includes parts-of-PI |
| Potential energy | P3 | E=egh (kgram/g/meters)->Joules |
| Kinetic energy | P3 | E=1/2mv\*\*2 |
| Kb/mb/gb bytes/bits | P2 | e.g., 1.2k + .6G=… |
| Obsolete units | P4 |  |
| Nautical units | P3 |  |
| Cost solver | P2 | COST=1550; Markup=20%; Sell@=1875 |
| CAGR | Done! P2 | Compound Annual Growth Rate |
| MTBF solver | Done! P3 | Look at sticky note… |
| BMI calc | P3 | Keep track of values? |
| Runtime typesetting values: | P3 | Inch, px (96 per inch) pt (72 per inch) cm |
| Dictionary | P4 | Don't know why I didn't think of it before -- but of course a nice dictionary is always welcome.  CANCELED: this is far more work than expected  REINSTATED: start a calculator help file for the keys! |

# Bugs

|  |  |  |
| --- | --- | --- |
| **Title** | **Status** | **Notes** |
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|  |  |  |
|  |  |  |

# Release notes

**Version 11: July 2016**

Keep that feedback rolling in; the latest version of Best Calculator includes features specifically asked for.

* Percent key (takes over the old P5 key)
* Simple statistics + linear regression
* Easy equation entry and sigma functions
* Complete manual for the entire calculator
  + And all buttons have alt-text
* Finance includes WACC (Weighted cost of capital)
* Unicode 9.0 (pre-release) + updated to show the latest Microsoft characters
* Advanced searches in Unicode
* Works on Phone
* BC BASIC improvements
  + More Math functions (Sqrt and more)
  + Has line-continuation
  + Name your keys

Version 10: 2016 – with BASIC

**Version 9: September 2014**

Did you know that Unicode includes a thumbs-up sign? To find it, select "Conversions and Tables", and in that list, pick "Unicode Data". Then type "thumb" into the on-screen search box. You can also list all of the Unicode character in the same set. Thumb, for example, is in Miscellaneous Symbols and Pictographs. Just enter that (or jut Pictographs!) into the search box.

I've gotten feedback that the decimal point is somehow not working. To help fix this I've updated the programmer's calculator and the number conversion function; this should fix the problem. If it doesn't, I've also updated the feedback to give me a little more information about the state of calculator when you report issues.

Lastly, the programmer's calculator "XOR" (^) button didn't work correctly; it's been fixed.

**Version 8: 2014**

A very quick release to support the MSAD (spelling) project. This lets educational institutions take a bundled snapshot of apps and auto-install them on a bunch of people's machines

Version 7:

Thanks to some sharp designers at the Microsoft //Build/ conference, the newest version of the calculator has been spruced up! The buttons are less obtrusive now, and the menu opens up all on the left hand side -- no more double-layer menus. And along the way, I've updated how it remembers your last state, fixed a weird double-calculation issue so that the keyboard control is more reliable, and updated the Unicode characters to version 6.3. And Unicode now knows about the special Microsoft addition in the Segoe Symbol font! Lastly, there's a new CAGR (Compound Annual Growth Rate) solver in the Financial section.

Version 6:

Keep that feedback coming! New in this release: Unicode characters to complement the ASCII table. Type in a word ("MOON") and see all of the Unicode characters with MOON in the description. And now you can copy to the clipboard.

And, thanks to widespread feedback, you can now personalize the calculator. You can pick a plain or colorful button scheme, you can set symbols to show in the background, and you can set the background and symbol colors. By default, some common formulas are displayed as the background.

Version 5:

Thanks to your feedback, three exciting new features: BMI for Kids, Indian weights, and the resistor color code. The BMI for kids looks like the regular BMI solver, but with an addition: after you calculate a BMI value, enter in an age (in months) and gender. BMI for Kids then shows how the BMI compares to other kids. This is based on the charts and data from the American CDC (Centers for Disease Control). The Indian weights calculates weights based on the Indian system of Tolä, Sèr, and Maund. Lastly, the electrical engineering solvers now include a resistor color code chart.

Also based on feedback: it used to be that if you hadn't ever set your display format, and you switched from programmer mode back to the regular or advanced calculator, the calculator would stay in decimal mode. Thanks to feedback, this has been found and fixed.

Version 4:

Keep the feedback coming! All of these changes are based on your comments. New in this version are ASCII table (look in Conversions and Data), plus the memory registers can now be named and easily incremented. This is handy when you need to tabulate a set of items -- e.g., to count up your "red" versus "green" items. The E key was renamed to be EE to match more common calculators (some also call this the EXP key). Lastly, if you have a wide screen, advanced mode will include both the advanced functions and the regular keypad -- that way you don't have to move between them.

See a bug? Report it in the feedback!

Version 3:

1. Righties rejoice! Calculators can be right, center, or left aligned via the app bar
2. Dice includes a full set of 6-side dice
3. Nicer feedback dialog

# Fun Additions

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| --- | --- | --- |
| **Item** | **Status** | **Notes** |
| Slide Rule | P4 | Linear and circular |
| IBM tab machine capacity | P4 |  |
| Measure is correct size | P3 | e.g., can use the "ruler" in measure as a ruler |
| English coins | P3 | Sovereigns! farthings! |

# Sidekick additions

|  |  |  |
| --- | --- | --- |
| **Item** | **Status** | **Notes** |
| Clock | P3 |  |
| Pom clock | P3 |  |
| Notepad | P3 | One that does unicode + math would be great |

# Sidekick Work (notepad)

|  |  |  |
| --- | --- | --- |
| **Item** | **Status** | **Notes** |
| Type values into existing note |  | Notes areRTF |
| Save to My Documents |  | Save/restore buttons |
| Create note |  |  |
| Edit titles for notes, stacks, groups |  |  |
| Move notes up and down in stack; stack in group; group in all |  |  |
| Create stack |  |  |
| Create group |  |  |
| Save to appdata, no my doc |  | My docs is protected ☹ |
| Autosave on changes |  | Pause (10 seconds?) before saving to group together |
| Autorestore on start |  |  |
| Save single note to alternate RTF file |  |  |
| Share contract |  |  |
| Search contract |  |  |
| Save to SkyDrive |  |  |
| Update looks |  |  |
| Move stack between groups  Move note between stacks |  |  |
| Mark note |  | Start/end data, status |
| Roll up status |  |  |
| Stack with to-do items |  |  |