

Towards a Cross-Platform Version of G7

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Motivation

- Need to keep G7 alive with latest tools on Windows, Linux and Mac.
- Our experience on Linux includes Kylix, GNU console mode, and Qt (Doug Meade).
- An interesting and useful alternative is wxWidgets, using the CodeBlocks IDE.

What is wxWidgets?

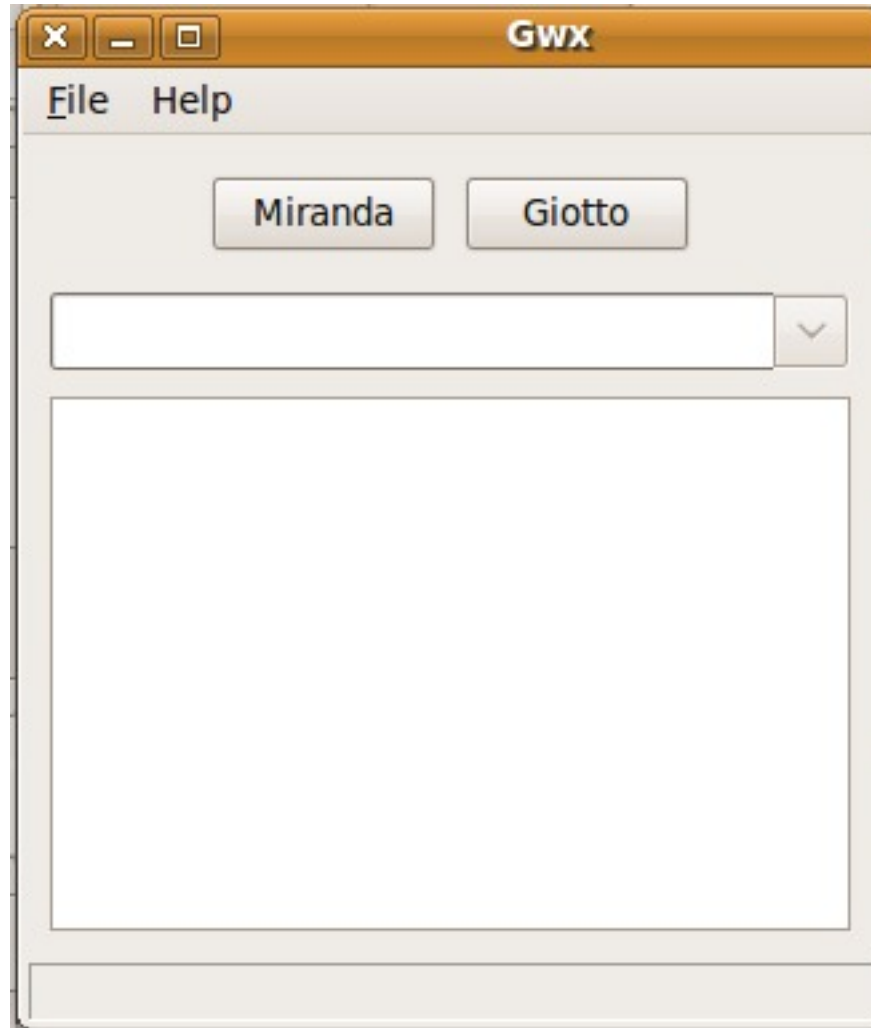
✦ A collection of visual objects:

- ✦ Frames
- ✦ Dialogs
- ✦ Buttons
- ✦ Labels
- ✦ Check boxes
- ✦ Radio buttons
- ✦ Text boxes
- ✦ Drop-down boxes
- ✦ Also: combo boxes, grids, multi-line editors – together with sizers, a string class and routines for drawing and saving graphs.

Plan of Attack

- ✦ G7 in wxWidgets = “Gwx”. Several levels of work to complete:
 1. Make Gwx assign a data bank, type to the screen the values of a variable, create new variables in the workspace bank with the “f” command, run a regression and show the results on the screen.
 2. Introduce data into the workspace and to draw and save graphs.
 3. Add commands with arguments.

Basic Gwx Form



Gwx: A Series of Tutorials

1. Basic Framework:

- a. Setting up C++ and CodeBlocks under Ubuntu Linux.
- b. Setting up main Gwx window with form designer.
- c. Restoring printf() in the GUI environment (much of the G7 code uses this function to print to the screen.)
- d. Setting up the event table.
- e. Getting input from the user in the command box.

2. Command Processing:

1. Select-Chop interaction.
2. Expand command line arguments (%1, %2, etc.)

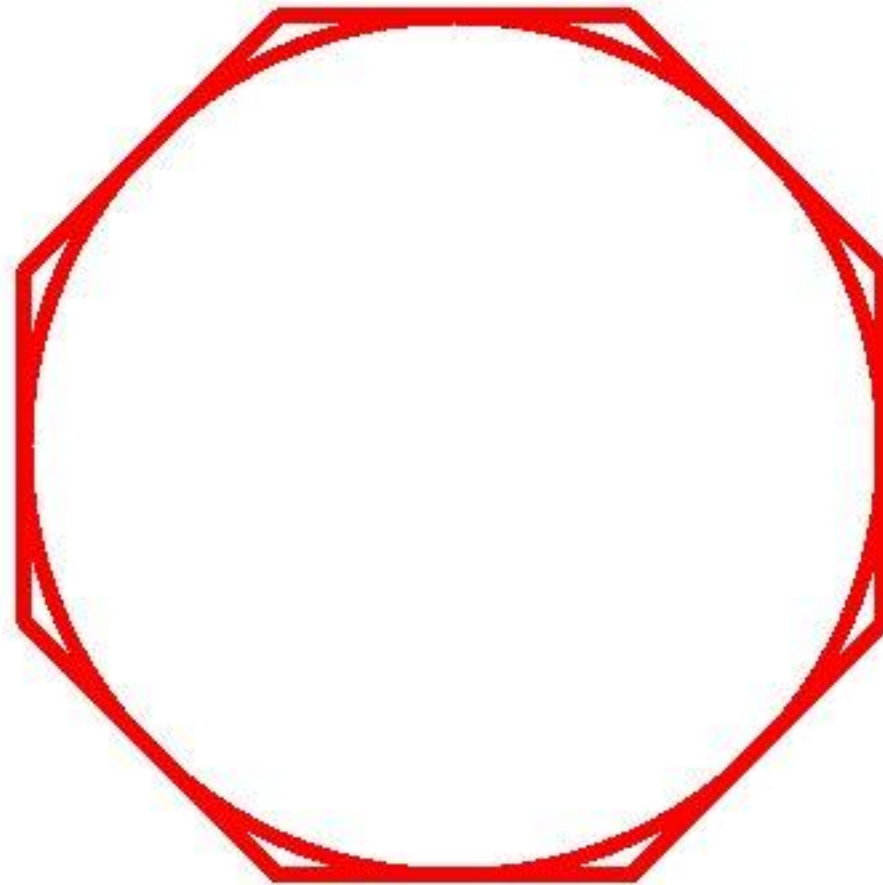
3. Drawing and Saving Graphs

1. Basic drawing
2. Stretchable canvas
3. Drawing straight lines, octagon, text, circle
4. Saving graphs as .jpg and .png files

Giotto

Clopper: “I was in Florence when I started G7, and happened to remember the story that Pope Boniface VIII sent a messenger to Giotto to ask for a sample of his work. Giotto simply took a brush, dipped it in red paint, and drew a freehand circle and gave it to the messenger. The messenger was not happy with so meager an example; but when it was clear that he could get no more, he took it back to the Pope. Fortunately, the Pope understood draftsmanship better than did the messenger, and gave Giotto the commission at once. So our first graph will be created by the Giotto button which just draws a circle.”

Give Boniface This!



Gwx: A Series of Tutorials

4. Where we are now

- a. Using wxWidgets in CodeBlocks with the GNU debugger.
- b. Refining chop().
- c. Improving text substitutions.

For more information, see the document [G7LinuxA4.pdf](#).
Contact Clopper Almon for more information on the code.