Application to plot real time data readings

Application name:
Live Data Plotter

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Introduction

When it comes to electronic devices which plot readings with utmost accuracy we usually find no GUI or application to perform operations on it.

So here's a python based application that reads the data from such devices our main aim is to read data from an oscilloscope and display it to user remotely or then and there.

User may also perform some basic arithmetic operation on the data he recorded data and use it as per his needs.

Problem Statement

While monitoring an experiment if any person doesn't know how to use an oscilloscope (a device to display the experiment's outcome) a huge misunderstanding could be created.

There were no open-source live data plotting softwares found.

We can also use the proposed application to remotely monitor an ongoing experiment by using LAN network which is also a very secured line.

Proposed Solution

We come up with an Python based application that would solve the above stated problems.

Our proposed application reads data from all devices connected to it and starts plotting them in different tabs which would be totally chosen by user.

All the readings received would be considered as parameters and user would be able to choose which parameter is to be plotted in which tab.

Also as an extension he may keep computer in the experiment room and then host it on a private network to view it remotely from his workplace.

This application is very user friendly so that any user will be able to use this app with couple hours of exploring and familiarizing themselves with the app's user interface and features.

Problems faced

Earlier we were uncertain on what features should this application give to the user.

We found a similar application that worked with existing data "Glue-wiz" and we thought to replicate this open-source app for live data.

Later we cut-short it to only having the necessary features since live-data manipulation is not really needed most of the times and it was time consuming as well.

We made 3 different GUI's only to realize what exactly was needed and which one would be most user friendly to operate. This took around two months.