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| Squidstat GUI  Programmers guide |
| 2017 |

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# Introduction

This document contains a whole description of the SquidStat GUI software.

Developers can use this guide to extend the software functionallity.

# General description of the structure

Top-level description, UML diagram (maybe couple), description of the main modules.

3 h

# Serial communicator

Logic of the Serial Communicator module.

0.5 h

# Instrument operator

Logic of the Instrument Operator module.

0.5 h

# Instrument enumerator

Description of the Instrument Enumerator module logic.

0.5 h

# What is an experiment

0.5 h

# Workflow of a regular experiment

Description of the whole call-chain between "Start Experiment" button pressing and data plotting.

1.5 h

# What is a custom experiment

0.5 h

# Workflow of a custom experiment

0.5 h

# What is a manual experiment

0.5 h

# Workflow of a manual experiment

0.5 h

# Experiment plugin creation

Updating existing document.

0.5 h

# Builder element plugin creation

Describing the process of the builder element plugin creation.

1.5 h

# How does the "Run an Experiment" tab work – [optional]

Widget structure, widget interaction logic.

1.5 h

# How does the "Build an Experiment" tab work – [optional]

Widget structure, widget interaction logic.

1.5 h

# How does the "Manual Control" tab work – [optional]

Widget structure, widget interaction logic.

1 h

# How does the "View Data" tab work – [optional]

Widget structure, widget interaction logic.

2 h

# How does the "Channel Status" tab work – [optional]

Widget structure, widget interaction logic.

0.5 h

# How does the notification area work – [optional]

Widget structure, widget interaction logic.

0.5 h

# How does the firmware updater work – [optional]

Widget structure, widget interaction logic, protocol description.

1 h

# How to extend the firmware updater – [optional]

For example, what to do to add teensy utility.

0.5 h

# QSS tips and hints – [optional]

Some undocumented and unobvious tricks for Qt Style Sheets.

0.5 h

# Estimation summary:

Minimum estimation – 10.5 hours.

Optional paragraphs – 9 hours.

Total (minimum + optional) – 19.5 hours.