ATExplorer 1.0 - User Manual

Smith Lab, Allen Institute for Brain Science

October 2018

Copyright © 2016-2019 Allen Institute for Brain Science

Preface

ATExplorer integrates a number of software components that are useful in the context of *Array Tomography (AT).*

.. AT intro here..

The following software components are the main building blocks that ATExplorer is built in top of:

- RENDER PYTHON by F Collman et al. RenderPython is a thin Python wrapper for *Render*.
- RENDER by ??? et.al
- FIJI by et. al....
- DOCKER et. al.

In addition to the above, semi specialized software packages, a number of open source, C++, libraries are employed by the ATExplorer application:

- VTK by
- POCO by ??? et.al
- LIBCURL by et. al....
- TINYXML2 et. al.
- DUNE SCIENTIFIC LIBRARY (DSL) et. al.

The ATExplorer application was designed and implemented in the lab. of Stephen J Smith and

Forrest Collman, at the Allen Institute of Brain Science by Totte Karlsson.

The following people has been contributing to the effort; .....

Part One

1. Overview of the ATExplorer UI

1.1 Introduction

This chapter gives an overview of the software that is named *ATExplorer*.

The following section discusses the application in greater detail.

1.2 The ATExplorer UI

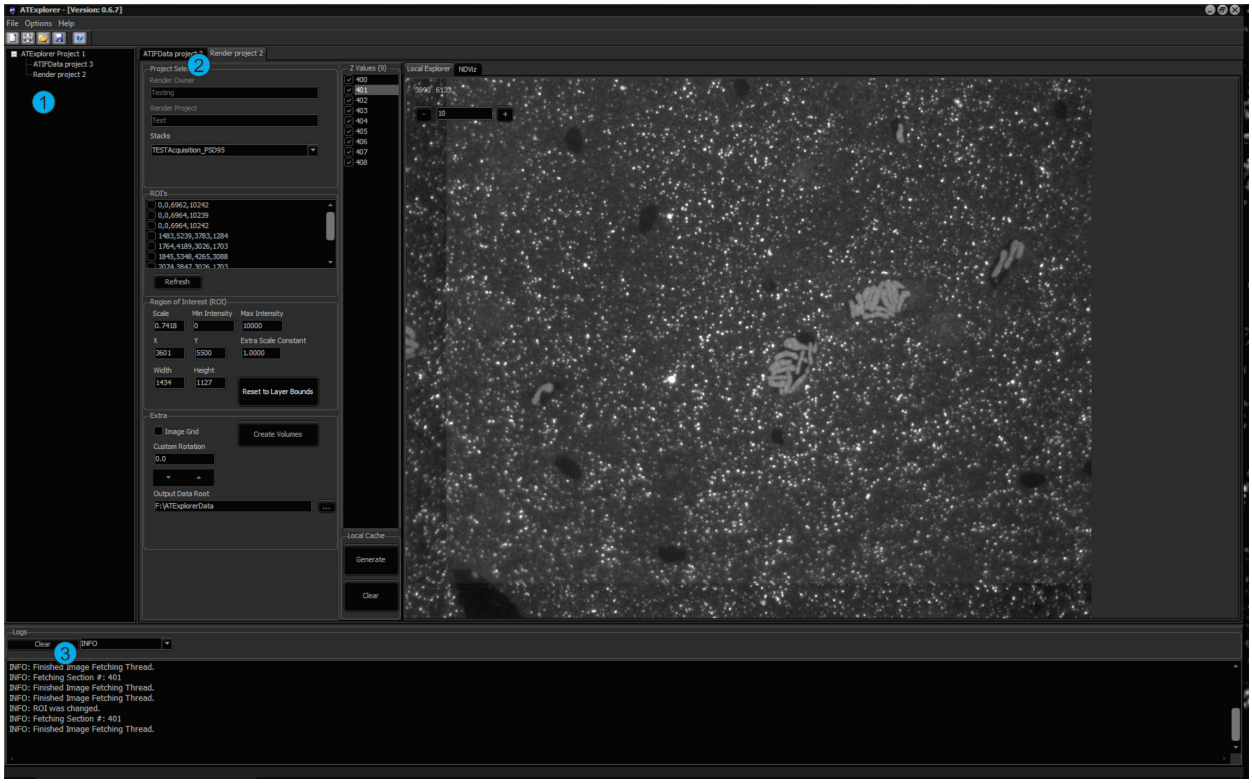


Figure 1.1: ATExplorer UI. The circled numbers in the figure indicate relevant elements of the UI; ① Project(s) TreeView. ② Tabbed Project Item View. ③ Information and Application Log Messages.

1.2.1 Importing Data

- IMPORTING PROCESS Give an overview on what happens when data is being imported to ATExplorer .
- DATA FORMATS Mention the Allen Institute format, and Kristinas format.

1.2.2 Processing Data

- FLATFIELD CORRECTION
- ROUGH ALIGNING
- FINE ALIGNING
- OTHER

1.2.3 Connecting to a a Remote (or local) RenderHost

1.2.4 Managing Stacks in Render

1.2.5 Exploring Data

Appendices

A. Software Design and Software Components

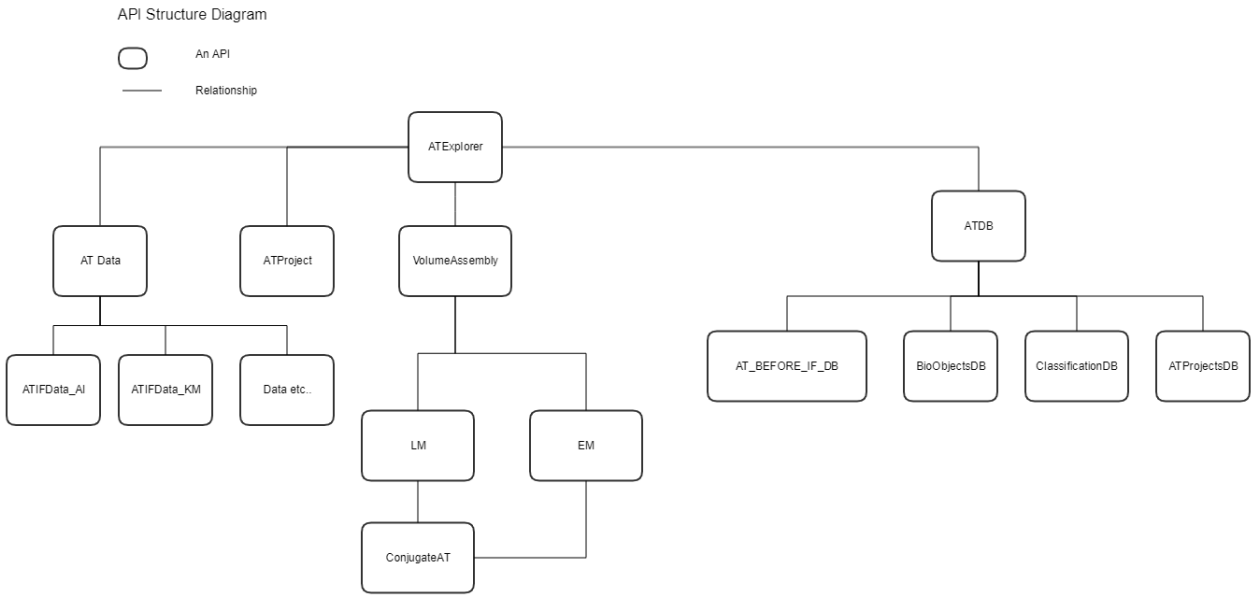


Figure A.1: An overview of some of ATExplorer API's

A.1 ATExplorer Software API's

A.1.1 atCore

A.1.2 atData

A.1.3 atVCLCore

A.2 ThirdParty libraries

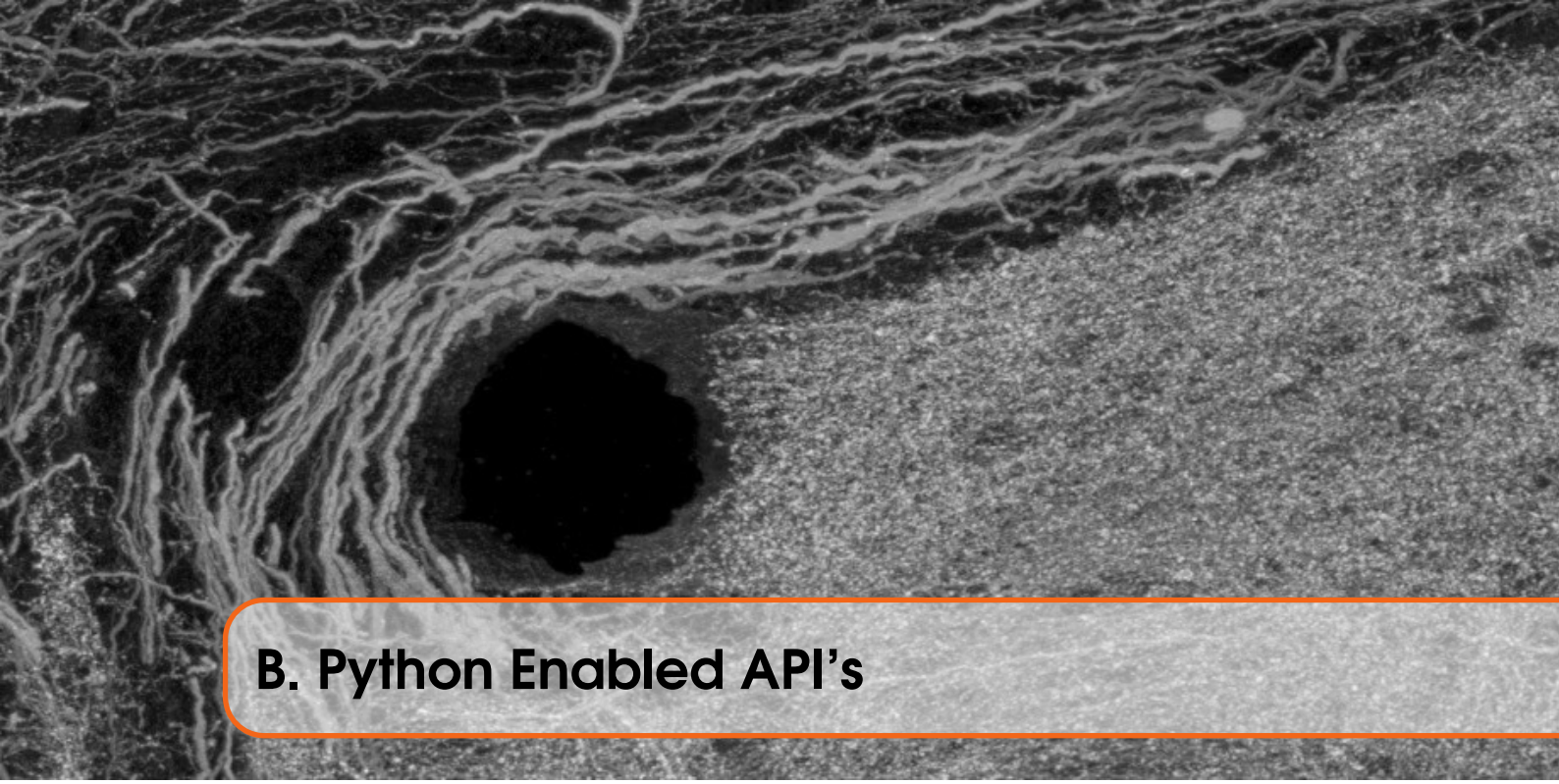
A.2.1 Poco

A.2.2 libCurl

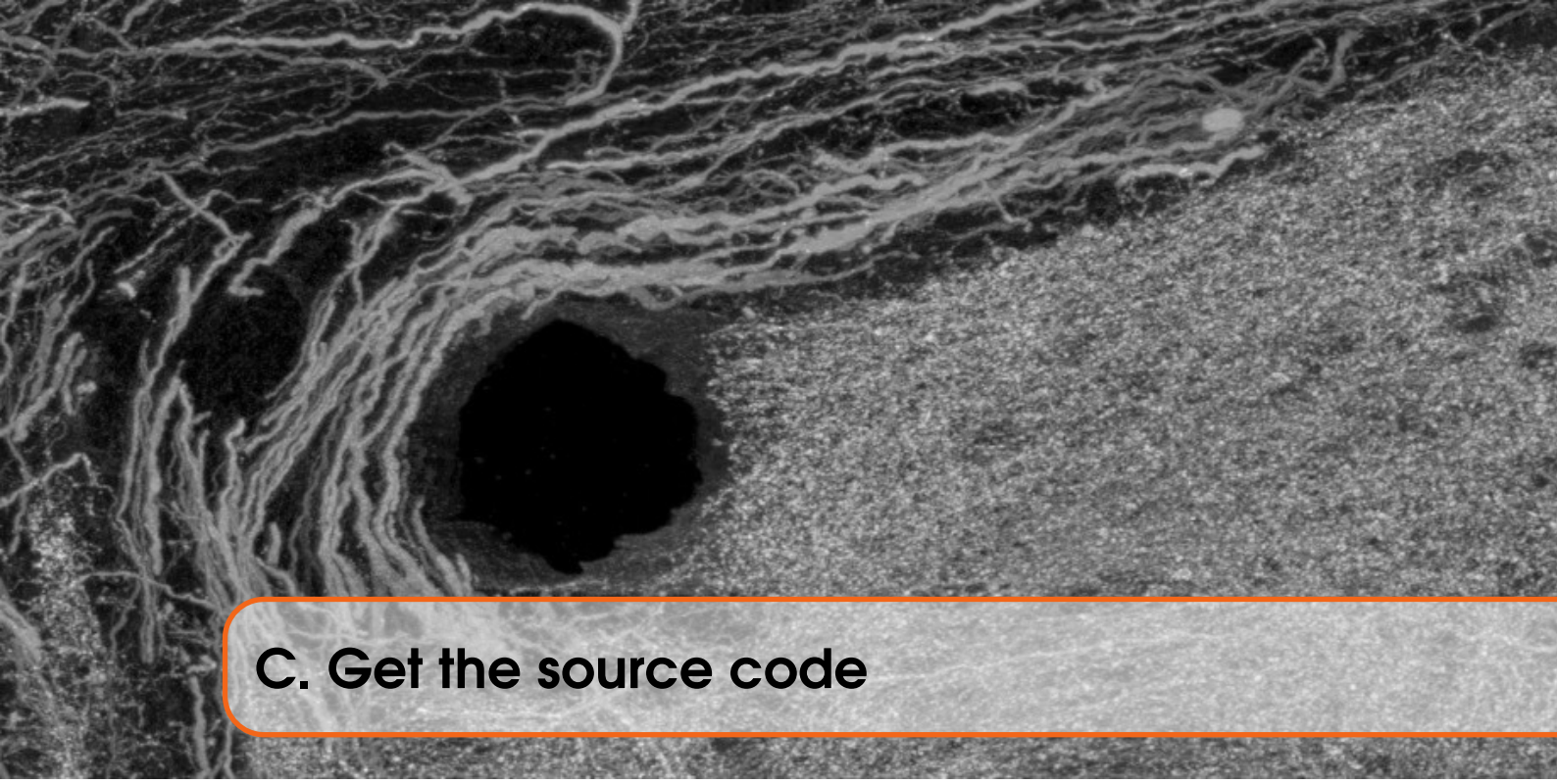
A.2.3 SQLite 3

A.2.4 TinyXML2

A.2.5 Dune Scientific libraries: dslFoundation



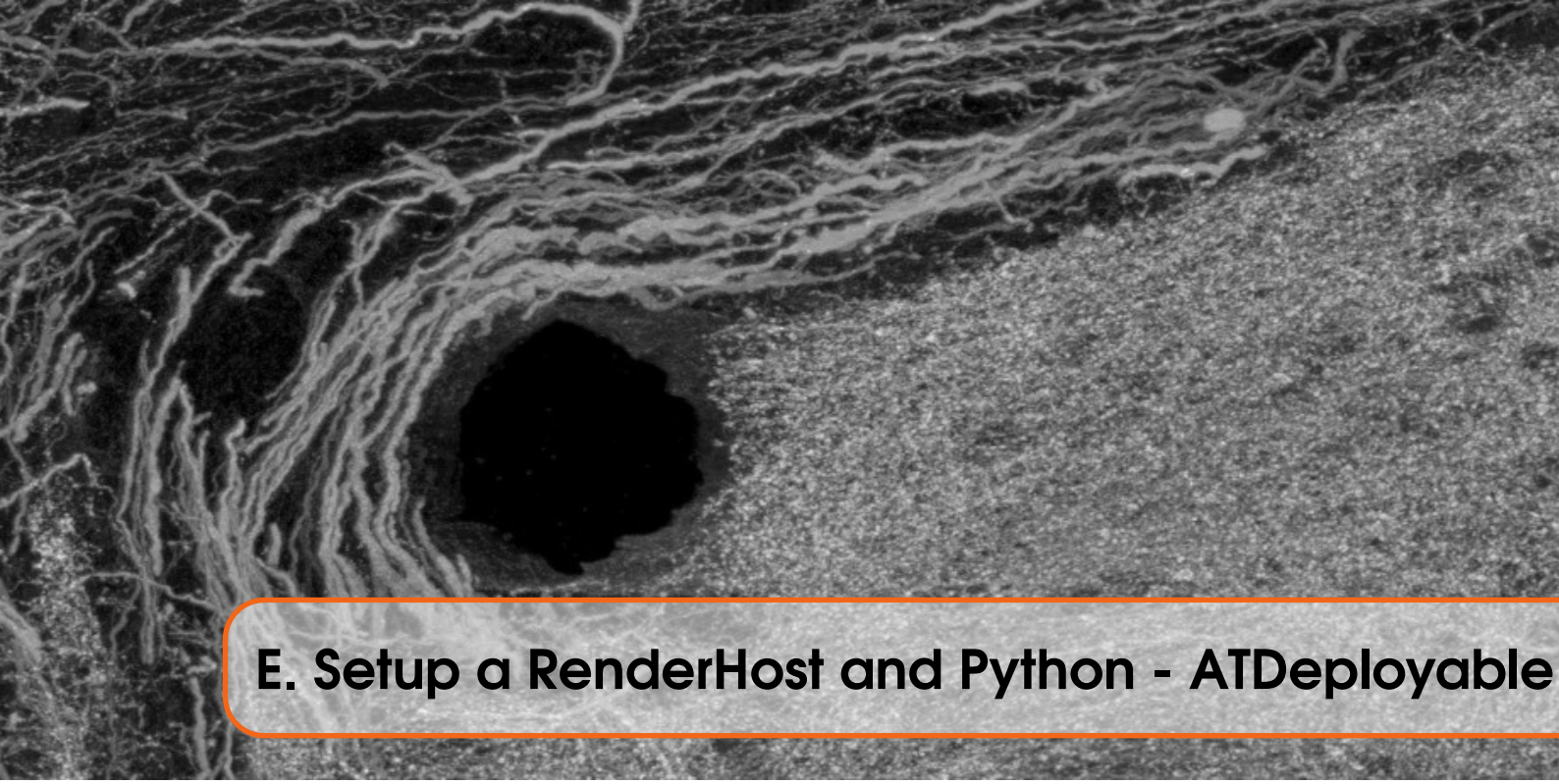
B. Python Enabled API's



C. Get the source code

Public Software Repository: **git@github.com** : **TotteKarlsson/ATExplorer.git**

D. How to Build ATExplorer and its API's



E. Setup a RenderHost and Python - ATDeployable

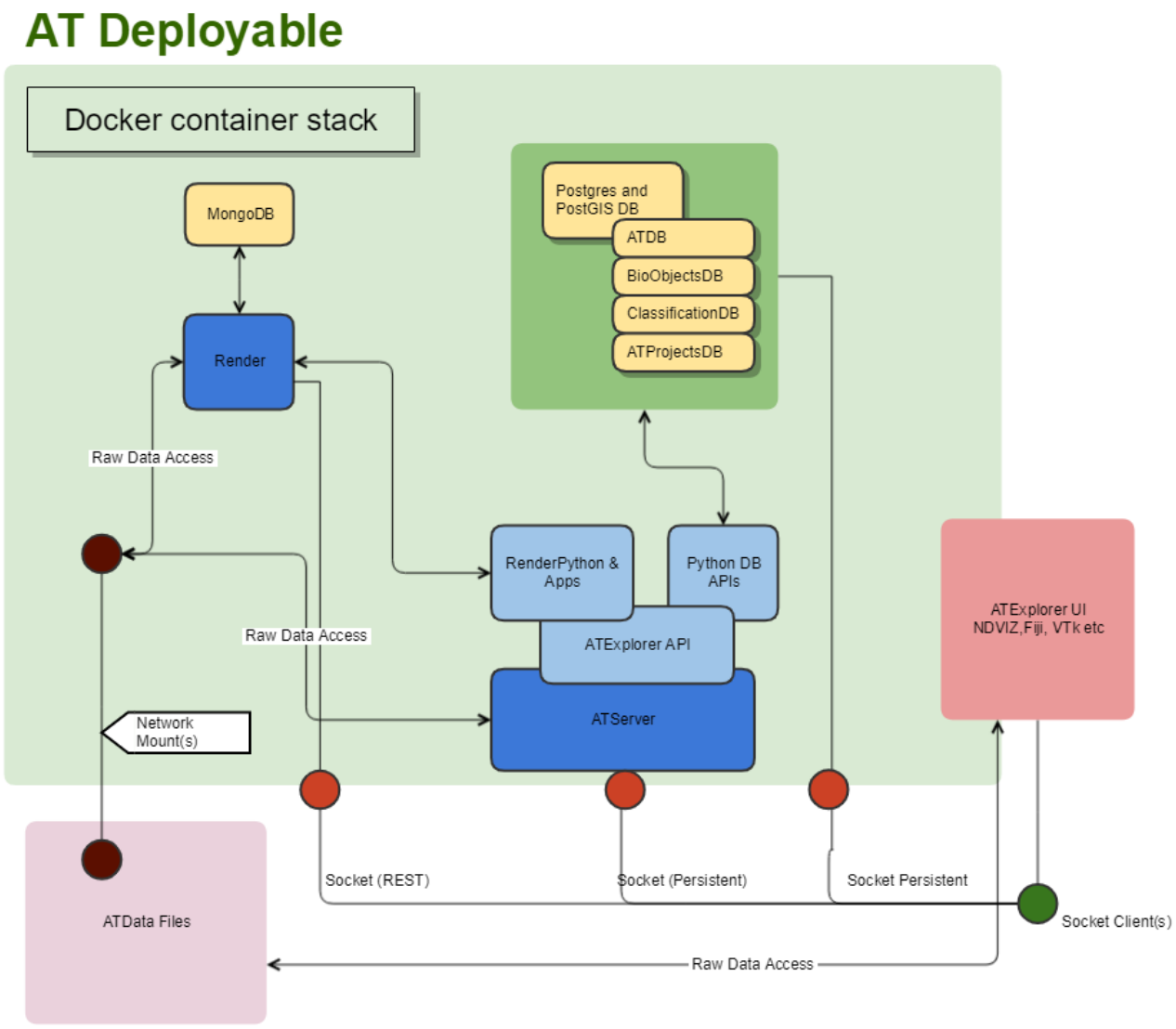


Figure E.1: A deployed system