



東南大學  
SOUTHEAST UNIVERSITY

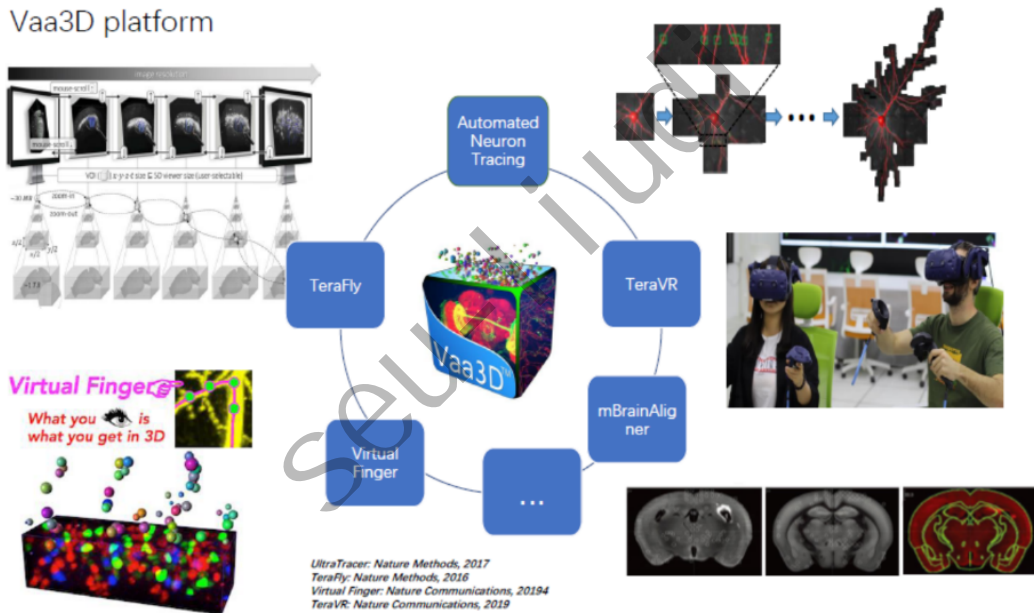
# Vaa3d and SmartScope2

Di Liu

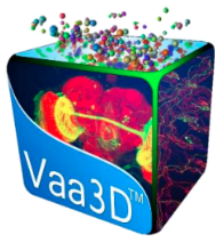
2021.10.13

# Overview

## Vaa3D platform

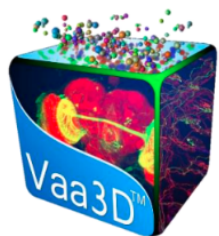


# Vaa3D solves 2 problems

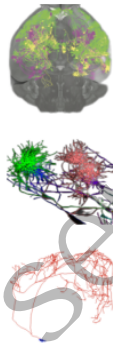


- visualization of multi-dimensional data and super-large images(TB,tera-byte)
- 3D interaction issues, including how to easily view large images, how to quickly and easily label neurons

# Is there any necessary relationship between Vaa3D and S2?



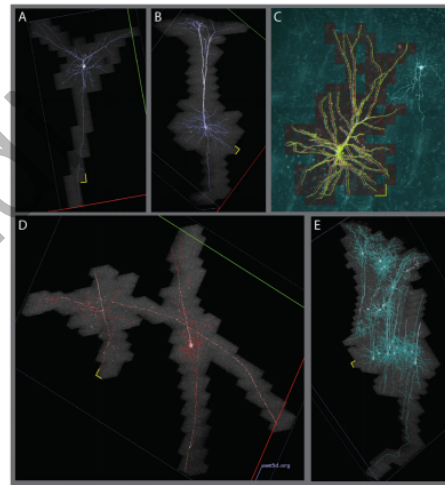
image



- Real-time remote control for image acquisition
- Optimize the microscope acquisition strategy, improve the imaging speed
- Simultaneous Imaging and Reconstruction of Neuronal Morphology,  $1+1>2$

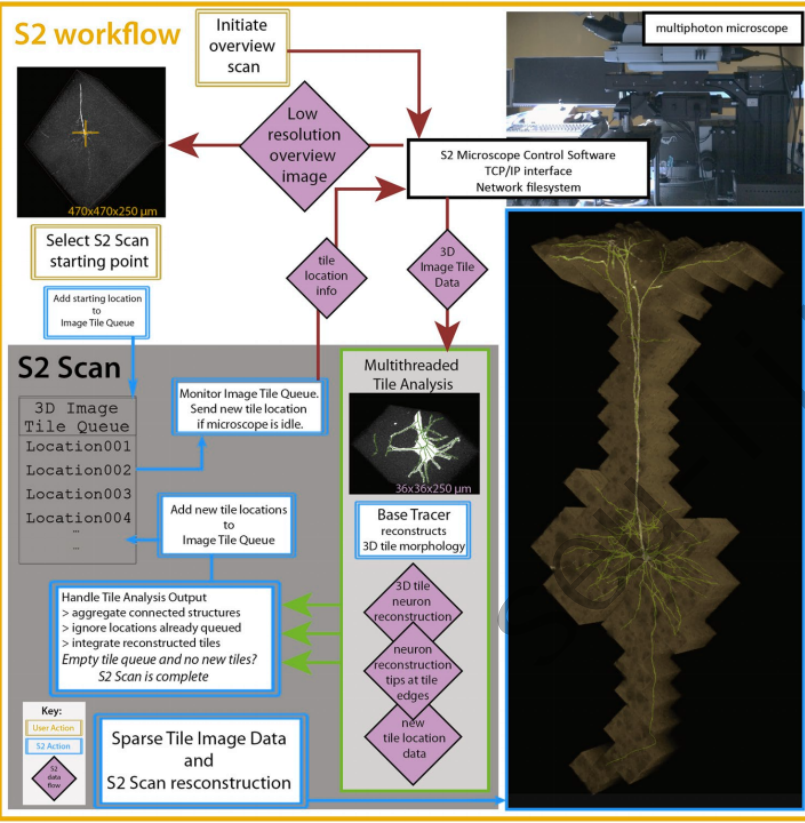


# SmartScope2



The first open source, automated neuron reconstruction machine integrating online image analysis with automated multiphoton imaging.

Long, Zhou, Peng, *Sci Reports*, 2017





# Hi 5 = Mobile 'Vaa3D'

# Hi 5

## Old features:

### Annotation

*Draw curve, Pinpoint  
Zoom in/out, Set Color*

### Neuron Reconstruction

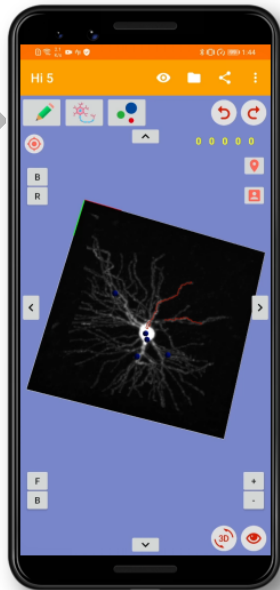
*APP2, GD, Save SWC*

## New features:

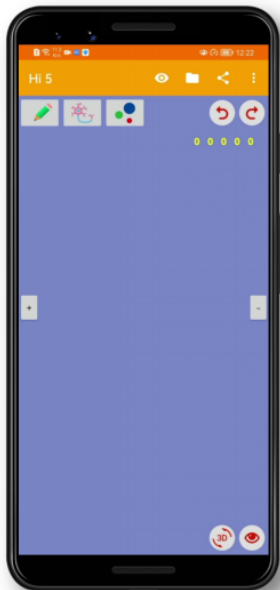
*Real-time Collaborations*

*Instant Messaging*

*Game Design*



# SI Pro = Mobile 'S2'

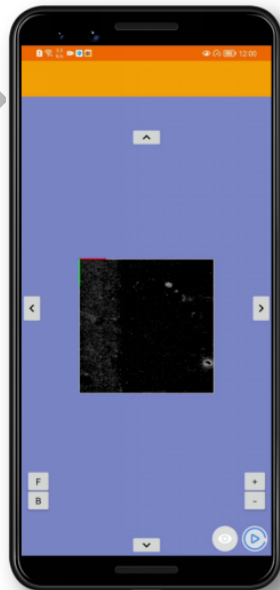


## Features:

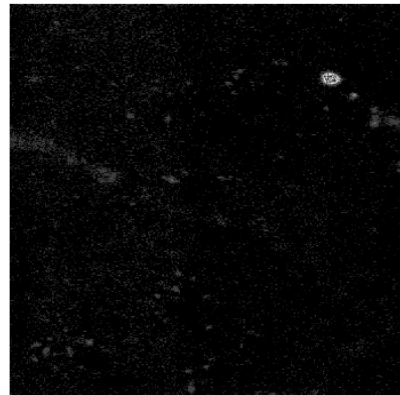
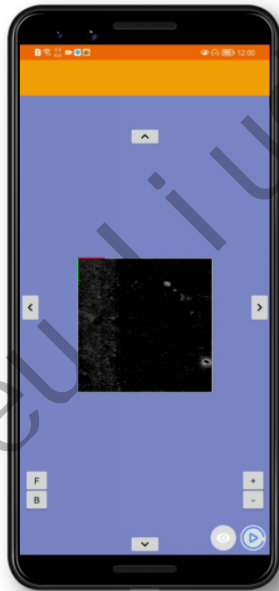
*Real-time Control*

*Instant Imaging*

*Image Stack acquisition*



# SI Pro = Mobile 'S2'



*Original acquired image  
in real time*