Overview

- Brain functions emerge from the coordinated activity of billions of neurons connected in specific ways to form highly dense neural circuits.
- Understanding human brain function and how neurological and psychiatric diseases affect the brain are just a few fields that would immensely benefit from primate brain maps.
- Obtaining primate brain maps using viral-vector mediated high-resolution fluorescent labeling results in several terabytes of raw image data.
- A scalable cyber infrastructure that converts the data into visualization format during acquisition for real-time exploration and analysis is the key to accelerate progress towards generating mesoscopic scale connectomes.

The ViSUS Visualization Framework

1. Data Source
2. Preliminary Interactive Analytics
3. Asynchronous Parallel Processing
4. Interactive, Exploratory Assessment and Feedback

Clearing the Brain: CLARITY

Remote Monitoring of Data Quality During Acquisition