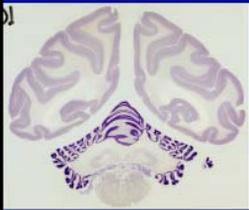
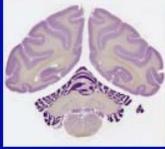


Large Scale Data Visualization

Re-Sizing



Contact information:

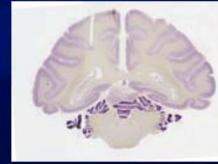
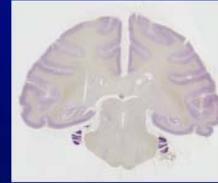
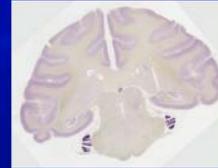
James Talmich

Electrical Engineering
University of California, Irvine

jtalmich@uci.edu

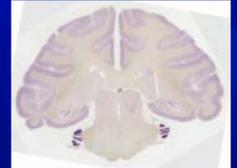
- Human Brain Project
 - NIMH
 - Began in 1993
 - Over 100 Research Groups
- UC Davis
 - Rhesus Macaque Monkey Brain
 - Microtome
 - Nearly 1400 slides 50 microns thick resulting in about 76 GB of information
- My Project
 - Alignment of Histological Sections of a Rhesus Macaque Monkey Brain
 - Repair of Damaged Slides
 - Techniques Used: Transparency, Alignment, Re-Sizing
 - Special Cases: Missing, Damaged, Flipped Slides
- Importance
 - Unable to Store Information in Main Memory
 - Accurate 3-D Model of the Brain
- Future Research
 - 3-D Brain Atlas
 - Further Study of Neurological Disorders

Before

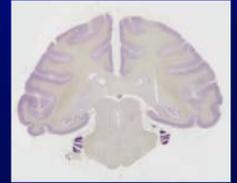


After

Rotation



Flipping



Damage Repair



James Talmich, Christina Wong, Joerg Meyer
University of California, Irvine · Electrical Engineering and Computer Science Department

