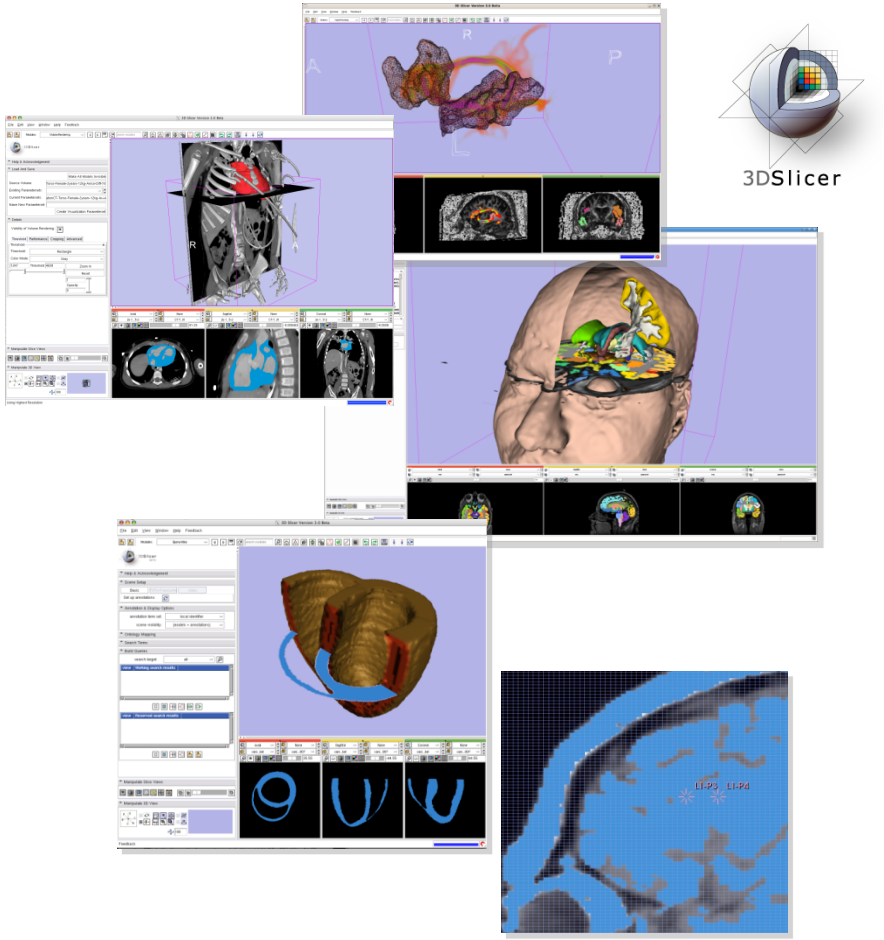
NA-MIC
National Alliance for Medical Image Computing
http://na-mic.org

NA-MIC



Motivations and
Ongoing Development

Overall Goals

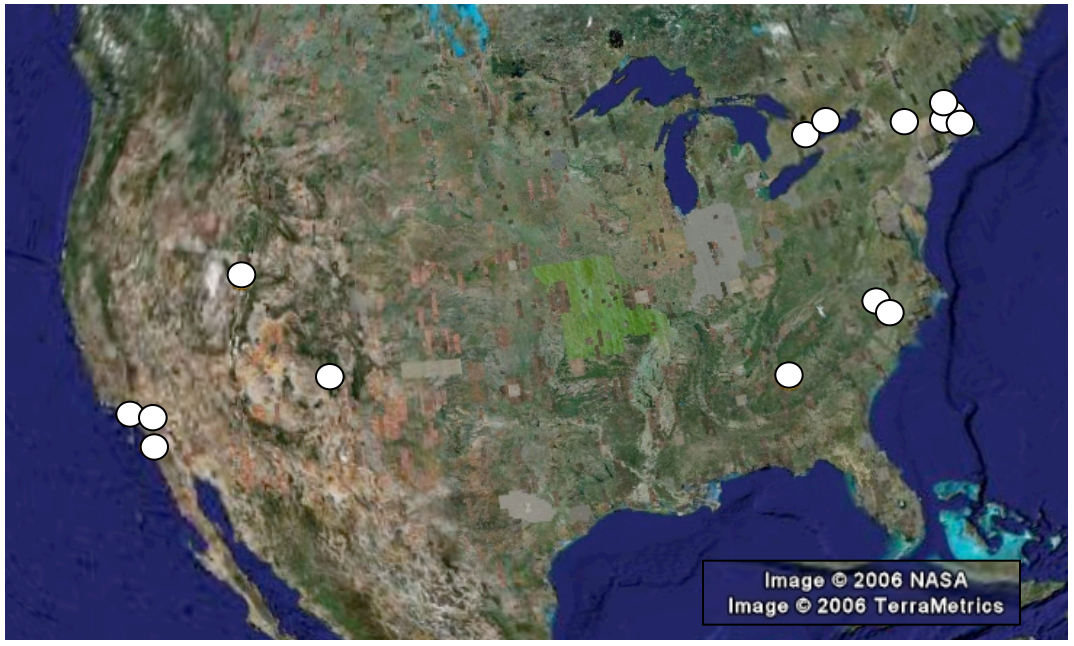
- Why Medical Research?
  - To Help Patients!

NA-MIC Approach

- Belief in Computation to Improve Clinical Effectiveness
- Community of Like-Minded Researchers
  - Algorithm Developers
  - Systems Engineers
  - Computational/Biological Scientists
- Dedicated to Openness and Reproducible Science
  - Open Source Software
  - Open Data
  - Open Development Processes
- Activities Aim to Create Coordinated Community

NA-MIC: A Network of Peers

- Leadership:
  - BWH: Ron Kikinis, (Overall PI)
- Core 1 Algorithms
  - Utah: Ross Whitaker (Core 1 PI), Guido Gerig
  - MIT: Polina Golland
  - UNC: Martin Styner
  - MGH: Bruce Fischl, Dave Kennedy
  - GaTech: Allen Tannenbaum
- Core 2 Engineering
  - Kitware: Will Schroeder (Core 2 PI)
  - GE: Jim Miller
  - Isomics: Steve Pieper
  - UCSD: Mark Ellisman
  - UCLA: Art Toga
  - WashU: Dan Marcus
- Core 3 DBP 2004-2007
  - BWH: Martha Shenton
  - Dartmouth: Andy Saykin
  - UCI: Steve Potkin
  - UofT: Jim Kennedy
- DBP 2007
  - UNC: H. Cody
  - BWH: M. Kubicki
  - Mind Institute: J. Bockolt
  - Queens University: G. Fichtinger
- Core 4 Service
  - Kitware: Will Schroeder
- Core 5 Training
  - MGH: Randy Gollub
- Core 6 Dissemination
  - Isomics: Steve Pieper, Tina Kapur
- Core 7 Management
  - BWH: S. Manandhar



Provided by Pieper, Kikinis

Community Involvement

- Daily – e-mail, dashboards, wikis
- Weekly – telephone conferences
- Periodic – architecture reviews, workshops
- Semi-annual– Programmer/Project Weeks
- Yearly – All Hands Meeting

NA-MIC Project Weeks

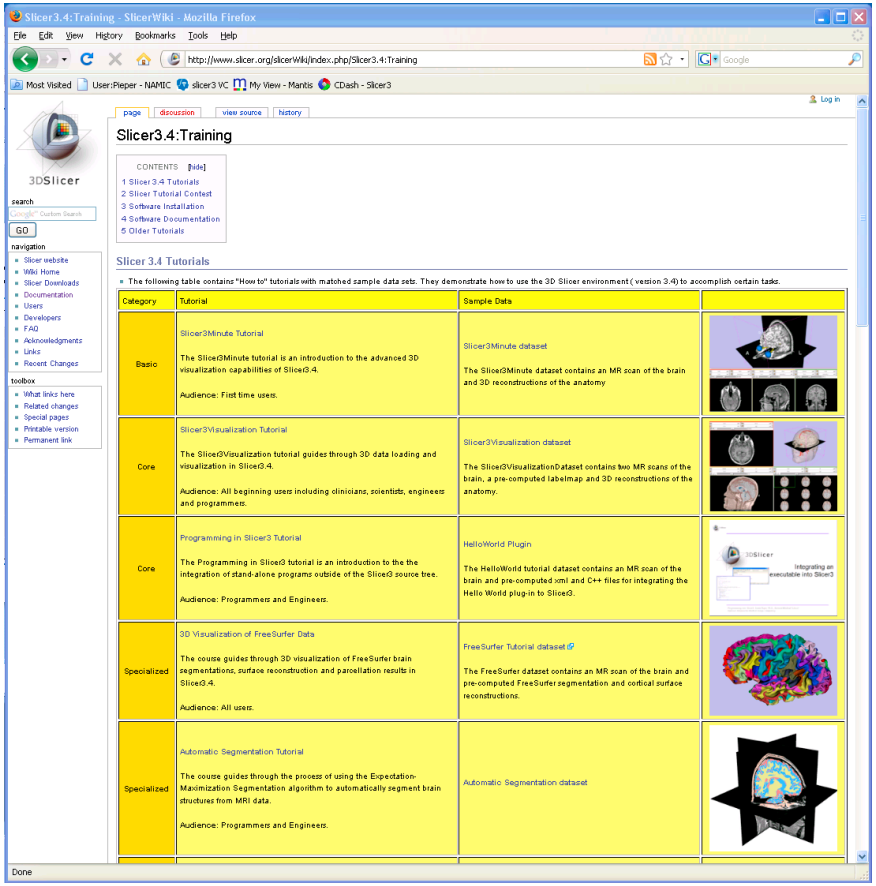
- Twice Yearly Since June 2005
- June 22-26, 2009
  - 125 Participants
  - 71 Projects
  - Hands On Software Development
  - GE, Siemens, INRIA, Kitware, Harvard, MIT, UNC, UCLA, NCI…
- Upcoming: January 4-8, 2010
  - Salt Lake City, Utah
  - Open Attendance

Dissemination and Training

- National and International Events
  - MIT, MGH, UNC, EPFL, NIH, UNM, UCSD…
- All Materials on Wiki
- Project Weeks
  - Full Week Each Summer
  - ½ Week at Winter AHM
- Workshops
  - MICCAI 2005, 2006, 2007, 2008..
  - OHBM, RSNA, Munich, NCI…

NAMIC Training Portfolio

- http://slicer.org



Active Development

- Insight Software (ITK)
  - Hundreds of Fundamental Imaging Algorithms
  - Rapidly Expanding, Careful Quality Control
- Visualization Toolkit (VTK)
  - Hardware Accelerated Graphics, Interaction Widgets
- XNAT
  - Image Database & Archive for Research
  - Becoming Widely Deployed, Integrated with Slicer
- 3D Slicer
  - New User Interface in Development
  - Additional fMRI Tools Through Interoperability with Neuroimaging Python (NIPY) Effort
  - Many New Application-Specific Modules Becoming Available

Getting Involved

- Winter Project Week 2010
  - January 4-8, Salt Lake City, UT
- Summer Project Week 2010
  - June at MIT Stata Center, Cambridge MA

- Collaborations PAR-05-063
  - 8 Active R01/R21 Collaborations with NA-MIC on topics including Neuroscience, Orthopedics, Image Guided Therapy..
  - http://www.na-mic.org/Wiki/index.php/Collaborator:Resources

More Information

- NA-MIC wiki:

  http://wiki.na-mic.org
- 3D Slicer

  http://www.slicer.org