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

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
  – 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..
More Information

• NA-MIC wiki:
  http://wiki.na-mic.org

• 3D Slicer
  http://www.slicer.org