



WHAT STARTS HERE CHANGES THE WORLD

THE UNIVERSITY OF TEXAS AT AUSTIN

DDDAS Project Update

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Outline

- **Data Transfer**
- **Calibration**
- **Registration**



Data Transfer

- Houston to Austin

- ▷ *34 anatomical images 131072 bytes each*
- ▷ *121*5 temp images 65535 bytes each*
- ▷ *avg bandwidth was .2MB/s and the file size of one time instance is .32MB*

- Lonestar to Maverick

- ▷ *120 files sets use for vis of MRTI w/ fem.*
- ▷ *5.5 MB FEM Mesh 2.6 MB MRTI Vis*
- ▷ *avg bandwidth: 1.7MB/s (WORK FILE system)*
- ▷ *avg bandwidth: 3.4MB/s (/tmp on the comp node)*



Calibration

$$Q(u(\beta)) = \frac{1}{2} \int_0^T \int_{\Omega} (u(\mathbf{x}, t) - u_{exp}(\mathbf{x}, t))^2 dx dt$$

Noise in MRTI data has tremendous effect on optimizer



Registration

- Using ITK for Registration.

▷ *ITK provides software framework to try 3D FFT methods*

- www.itk.org

