



## Social event and demonstration of image-guided surgical toolkit (IGSTK) open source software toolkit

Sunday February 17, 2008

**When :** 8:00 pm to 10:00 pm

**Where:** Towne/Esquire rooms (behind the main pool area and the gazebo)

**Who:** Kevin Cleary, ISIS Center, Georgetown University, Washington, DC, USA  
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Patrick Cheng, ISIS Center, Georgetown University  
Frank Lindseth and Ole Vegard, SINTEF Health Research and the National Center for 3D Ultrasound in Surgery, Trondheim, Norway

### Description:

The Image-Guided Surgery Toolkit (IGSTK) is an open source software toolkit, which provides the basic software components needed to develop image-guided surgery applications. The focus is on robustness using a state machine architecture. This project is a collaboration between Georgetown University, Kitware Inc., Arizona State University, and SINTEF from Norway. To date, the components have been implemented and an example application is available. All of the software is freely available for download by anyone. In this new release we have refactored the View and Tracker classes and added a VideoGrabber component (paper 6919-36, Thursday 2:40pm) and a Surgical Coordinate system. This project is currently funded by NIBIB/NIH grant R01 EB007195

The demonstration will show the software in an example image-guided system incorporating both an NDI Vicra and Claron Micron tracker and a dummy torso. There will also be an informal social gathering with limited food (come early) and a cash bar. Basic information related to IGSTK can be found at the website [www.igstk.org](http://www.igstk.org) and the Wiki pages <http://public.kitware.com/IGSTKWIKI>.

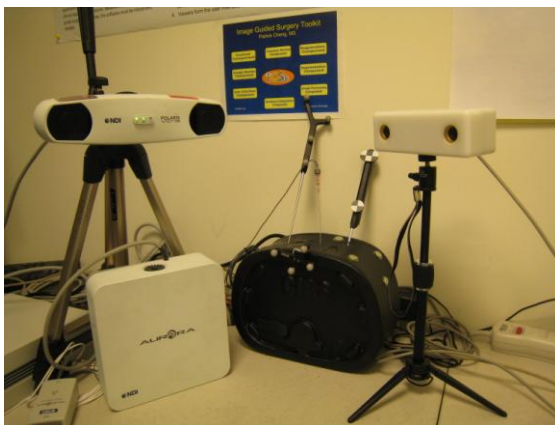


Figure 1: Demo setup

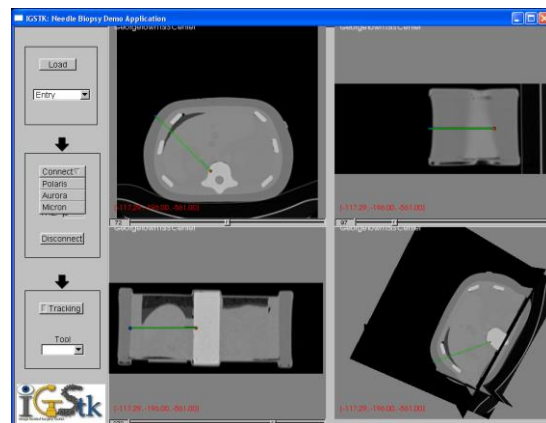


Figure 2: Screen shot



Figure 3: Animal study using IGSTK and Aurora EM tracker (Northern Digital Inc.)

## Coordinate Systems

View showing the scene from the point of view of the MRI coordinate system. Tracker using reference tool.

