DARPA Urban Challenge 2007 Report
CJ Chung 12-5-07

Brief Project History
- July, 2006: Dr. Chung was contacted by Cybernet Co. in Ann Arbor (http://www.cybernet.com/urbanchallenge)
- August, 2006: Dr. Chung gave a presentation on IGVC experience at Cybernet
- September, 2006: Dr. attended the first team meeting
- Fall 2006: Dr. Chung and 4 LTU students attended meetings to discuss work division and software design
- Jan. 2007: Cybernet team co-leader Steve Rowe visited Lawrence Tech for a workshop to Dr. Chung's class
- April 2007: LTU graduate student Marcus Randolph delivered data acquisition software module for SICK laser scanner
- April 28, 2007: Team leader Dr. Chuck Jacobus presented the car to World Robofest participants
- June 2007: Team Cybernet passed qualifying test and chosen as a team of 36 semi-finalists.
- July 2007: LTU graduate student Brace Stout delivered RNDF editor software module

Semi-final Competition Results
We passed on B&C areas, but had a sensor hit at the end of the B area and on our third try on the A area (with moving traffic) the car only saw traffic within 3 car lengths and that was too short a time for it to not make some merging errors (even though logic for this was bug free).

We were the last Type B team eliminated from the final event. We were probably one or two trials behind the 11 finalists. On a cost per autonomous mile driven we think we were the first -- Our car did several 10 km runs through vehicle and other obstacles flawlessly, faster than any of the other competitors.

Software modules LTU provided were working perfectly. Especially, RNDF editor must be one of the best tools in the competition.

Simple Lessons learned
- SICK laser scanner needed a shade to prevent from a direct sunlight.
- It is obvious that we need to use 3D laser scanner product such as Velodyne (www.velodyne.com) for competitions like DARPA.