

Assignment for Student One-Pager “The Future of the Automobile”

Topic: Advantages / Challenges of Electronics and Mechanics in the Car

Due Date: January 18, 2010 / 10am

Description: Today there are as many as 70 controllers in an automobile and such systems like engine control, safety systems, or navigation aids would not be possible without computers running them. However, mechanics still play an important role in powertrain, chassis, and structure of a vehicle so that the question remains if this evolution will continue or might level out. The different aspects of electronics and mechanics in the automobile should be thought about. For example, think about the following:

- What are specific benefits / risks of electronics and mechanics in a car?
- What are benefits of “by-wire” throttle, steering, brakes (no mech. links)?
- What will always be a stronghold of mechanics?
- Are “smart systems” safer than “solid structures”?
- What else do you think of when it comes to electronics vs. mechanics?

Format: The papers serve as a preparation for the seminar discussions to capture students’ thoughts, expectations, and concerns regarding the selected topic. While the papers should reflect the students’ own understanding of the matter, references that were used should be listed (e.g research, statistics, news...). All students draft their paper individually; it is not a group work.

The papers are due at the date and time stated above to allow for review and to include them into the preparation for the seminar discussions. Students should indicate on their paper if they do not authorize the use of their paper in class, further research, or discussion with industry partners.

Credit: Students earn one point per paper towards the required three points for successful completion of the course CS532 / ME302. The papers need to be sent to beiker@stanford.edu by the due date.

Instructors: Prof. C. Gerdes (ME), Prof. S. Thrun (CS), Prof. C. Nass (COMM)
Sven Beiker, Terman 548, beiker@stanford.edu, 736-1504
Office hours: Mon, 2-4PM, Terman 548

Website: <http://me302.stanford.edu>