CENG 491 PROPOSAL REPORT

ANKA YAZILIM

Project Topic: EDU3D

Project Title: 3D Traffic Education (3Direksiyon)

Company

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Project Definition

Our aim is to create a three dimensional realistic traffic environment which will be used for driving education.

Project Scope

In our country, driving education is not sufficient. Driving schools mostly do not give enough practical education for candidates. They only focus on license examinations which evaluate driver knowledge insufficiently. If you want further practical knowledge you have to pay more for private lessons. Moreover, for working people and students, it is hard to find suitable driving hours for those schools. So most of the driver candidates or new licensed drivers will need an environment to improve their driving skills without damaging their cars or hurting anybody.

Advantages of such an environment will be:

- gaining self confidence
- improving physical coordination
- learning and applying traffic rules
- gaining driving habits

Research

Deciding on this title, we have come accrossed a few applications on the Internet:

- Trafikent (http://www.trafikent.com)

It is a driving simulator designed by Meteksan. This product consists of both hardware and software. Actually, it is the first driving simulator of Turkey.

- 3D Driving School (http://www.3d-driving.com)

It is a software designed for PCs and sold over Internet. It includes many different language options and real cities as driving environment. Also it is adopted for different traffic rules of different countries.

- The National Advanced Driving Simulator (NADS) (http://www.nads-sc.uiowa.edu)

It is a university project as a part of an academic study for preventing accidents. It includes both hardware and software. This project is the most advanced project of our research.

- Driving Test Success (http://www.focusmm.co.uk/store/drivingtestsite/drivinginfo/dtsess428.html)

It is another software designed for PCs. Its main purpose is to make people pass the driving tests of UK. It also includes lessons for written examination.

Features

After first research, we have decided on the following features:
- 3D graphics and sounds for realistic driving sense.
- Pedestrians and other vehicles.
- Sensor for traffic violations which will be used for evaulation and guiding.
- Audible driver guide for warnings and directives.
- Evaluation system for self testing.
- Realistic in-car controls (gears, signals, mirrors, etc).
- Custom driving assistance for different levels of driving.
- Support for peripherals like joysticks and wheels.