[First Draft Design Doc](http://ptg-iqp.blogspot.com/2009/09/first-draft-design-doc.html)

Design Doc

**Goal:**

“Traffic Game” is an experiment in the effectiveness of games as a persuasive media. The experiment will compare the reactions of a sample group after playing the game with their reactions to raw data, a news article, and a video. The reactions of the subjects will be gauged by a simple survey taken after playing/reading/watching.

**High Concept**

“Traffic Game” is an interactive overhead traffic simulator. The player’s goal is to manipulate traffic regulations and markers to optimize traffic flow.

**Game World**

- Fixed Grid

- Comprised of roads/intersections

- Overhead view

- Multiple levels with varied road patterns

- Scalable viewing plane (zoom)

- Scenes range from urban to rural

- AI cars populate the world

**Game Objects**

- AI Cars

o Form (type of car)

 Car (sedan)

 Van

 Sports car

 Pickup truck

 Semi Truck

 Bus

 Police Cruiser

o Personality attributes(% chance)

 Average Joe (Obeys Signs/Maintains Speed Limits – little bit over/Yields ROW/follows road markings)

 Stressed Steve (Obeys Signs/Speeds/Goes first at intersection/doesn’t always follow road markings)

 Defensive Dan (Obeys Signs/travels under speed limit/always yields/always follows road markings)

 Grandma Mildred (Sometimes Ignores Signs/ Travels Under limit/sometimes yields/sometimes ignores road markings)

 Inebriated Irene (Sometimes Ignores Signs/Travels Over Speed Limit/rarely yields/rarely follows road markings/swerves)

 Policeman Pete (Obeys all traffic/causes other vehicles in proximity to turn average joe)

- Traffic Markings

o Signs/Lights

 Traffic Light

 Stop

 Yield

 Speed Limit

 No Turn/One Way

o Road Markings

 Divider/passing lines

 Crosswalks

 Turning/suicide lanes

- Roads

o Highway (multi-lane, overpass, off/on ramp)

o Standard (single-double lane)

o One way street (single lane single side)

- Intersections

o Four way (light, 2 or 4 ways stop sign)

o T Junction (light or stop sign)

o Merge (yield signs)

- Aesthetic Environment

o Sidewalk

o Trees

o Buildings

**Gameplay**

- Initial Game World

o Each scenario is preconfigured with a non-optimal traffic configuration, that will cause

o Every pre-set traffic item can be removed, by player.

o The map has pre-determined location for every item, and blank locations are marked with a “ghosted” outline for the marking to be placed.

o The world will start paused, and can be paused and unpaused at any time.

o The world will have no cars to start, and the will populate the map as they are generated at the roads which boarder the map.

- During Gameplay

o Cars will be randomly generated at start nodes, and try to travel to randomly determined exit node.

o If an accident occurs, all cars involved will be destroyed.

o Player Interactions

 Player can place any traffic sign/light by clicking on their respective object or location.

 When player clicks or traffic sign/light or empty traffic slot, a context menu or potential items will be presented to the player to choose from.

 Player can also, modify/remove street lines in the same manner

 Player can change the games speed (pause, 1x, 2x, 4x)

 Player can zoom in/out of map.

- Win Condition

o Points accumulate as cars successfully leave the game space. Cars that crash will be destroyed, so no point can be awarded.

o Each scenario is time based, and the player needs to exceed the set goal to complete each level.

o Each scenario also has a predetermined crash limit which will prevent the player from achieving the win condition.

o Meta Game: Players score will be compared to leaderboard at the end of each scenario. High enough scores will be post on the board.

o Meta Game: Possible achievements for small accomplishments or successes. Examples:

 Complete level “X”

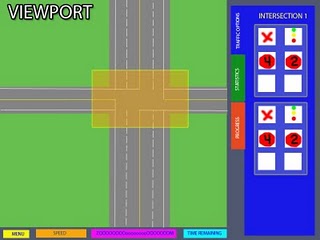
 Complete all levels

 Complete level only using “X” tool

 Save the Granny!: Grandma Mildred type never gets in an accident.

o Not achieving the win condition, requires player to replay level, or chose another.

**UI**

[](http://3.bp.blogspot.com/_YywkYeDVTDI/SsQUvEqsGEI/AAAAAAAAAAU/bLc_qAbY0j8/s1600-h/traffic_game_mockup.jpg)

- Menu (Pop-up menu, pauses game)

o Graphic Quality

o Exit Scenario

o Resume

- Speed

o Pause, 1x, 2x, 4x

- Zoom

o Ranges from whole map to single intersection

o 1x, 2x, 3x, 4x…

- Timer

o Time remaining in scenario

- Traffic Options

o Displays option for selected Road or Intersection

o Only Displays relative options

- Statistic

o Overall gameplay statistics

 Accidents

 Cars unharmed

 Efficiency rating

o Selected Item Statistics

 Car Personality

 Road History and type

- Progress

o Stop Light, starting at yellow. Yellow is neutral, green indicates successful stats, red indicates failure.

o Lists object and current score.

- Viewport

o Gameworld is displayed.

o Interactions with world

 Modifiable objects are roads and intersections

 Cars can also be selected, but only for view statistics.