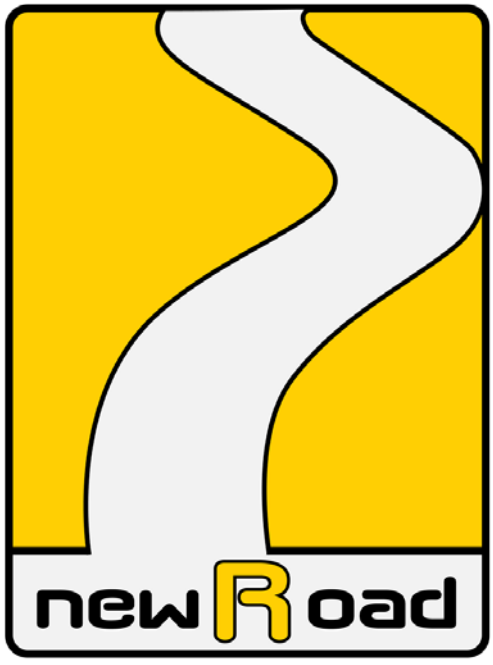
Formal Game Proposal

Game Programming Lab 2010



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1 Game Description

1.1 The Historical Background

Since in this year's Game Programming Lab course the given theme of all games will be „**Historical places and events**", we had to come up with a game idea based on this theme.

We choose the time of the **American Prohibition** as our historical background.


EXTRA Daily Globe EXTRA

PROHIBITION RETURNS!

This Time, There's Something To Celebrate

1.2 Basic Game Idea

Based on the chosen historical background, our game will be a car-chasing game where the main goal of the player is to make money by smuggling alcohol.

Different marked spots on the map along the streets are pickup-places like breweries for beer or whiskey. The player has to pick up the alcohol here and deliver it (as fast as possible) to one of several pubs and nightclubs which are also placed on the map. A guidance system (like an arrow next to the vehicle or a similar sign on the edge of the screen) will point in the direction of the delivery place. The player is rewarded for the delivery in form of a payout and a time bonus.

The player drives a rack body truck. The alcohol barrels are placed on the cargo are of the truck and covered by an awning. On collisions the position of the awning will change and the barrels can be seen more clearly. This leads to more attention from the cops.

Since the government don't like the smuggling activities of the player, the police will be after him. The police cars are controlled by the CPU and cruise also on the map. The more the barrels are exposed – due to the previously mentioned movement of the awning - the higher

will be the attention level of the police cars on him. Once spotted, the police will chase the player.

When chased by the police, the player still will be able to deliver. The cop cars that are engaged on the player will try to ram him which makes the task of delivery more difficult. Upon delivery, the police cars will disengage and the attention is reset to zero.

Collisions (mainly with the police cars but also with other “stuff”) will make you lose your cargo bit by bit – what consequently results in lesser money on delivery. When the whole contraband is lost, the police will also lose the interest on the player’s vehicle and the attention is reset to zero.

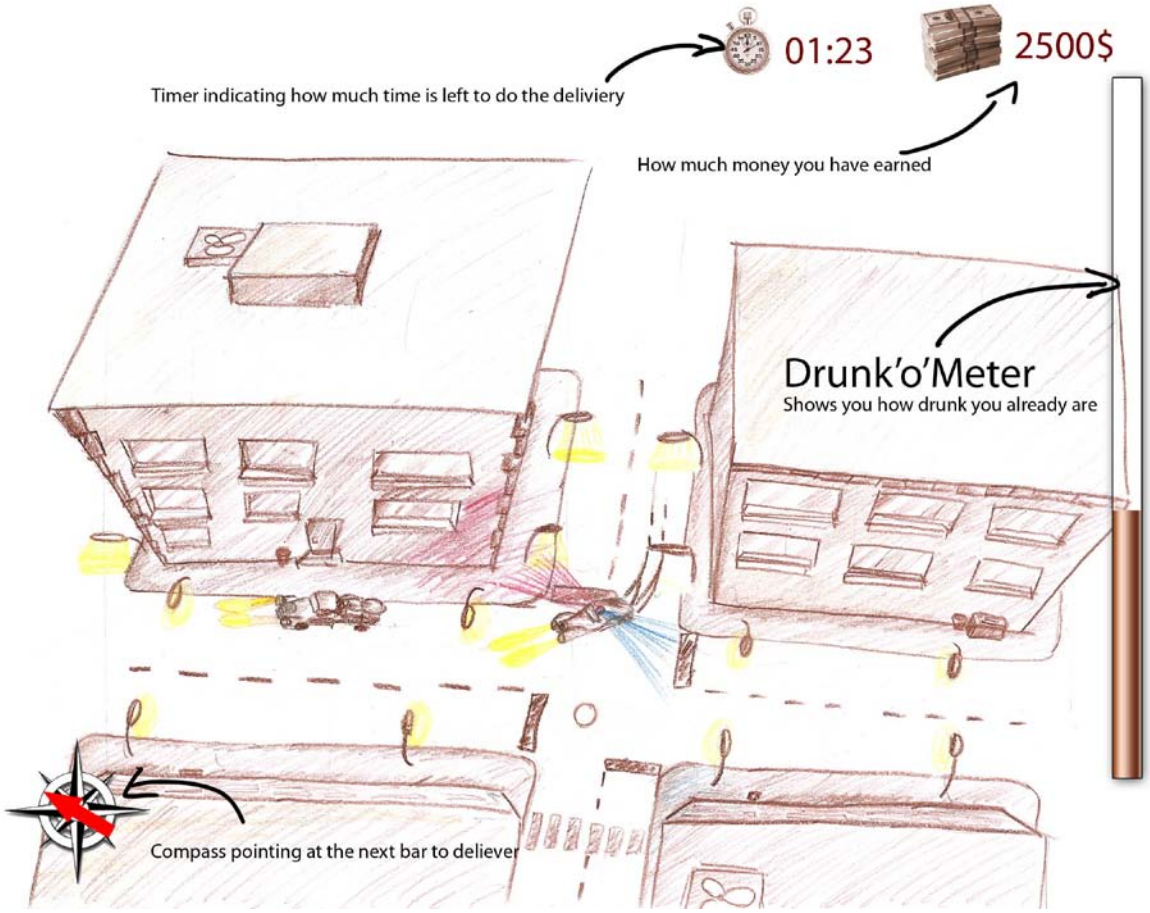
The game starts with a given amount of time on a countdown clock. The delivery acts like a checkpoint where the player is rewarded with a time bonus. The amount of bonus time depends on the distance between the pickup and delivery spot and decreases slowly the longer a game is running.

The game ends when the countdown clock reaches zero. The performance of the player is measured on the total amount of money he gathered.

Another option which we would like to include is called the “drunk’O’meter”. Whenever the player delivers the cargo, he hast to take a drink with his business partner. The further into the game, the more drunk he gets, the more difficult it will become to steer the car and this finally leads to more attention from the cops.

Since we are not sure if this element will be as much fun as it sounds at first sight and how good it can be included next to the other (more crucial) game elements, we plan to test it thoroughly. The influence on the car control has to be very well balanced in order to not annoy the player.
Because of this, we filed the “drunk-O-meter” in the development targets under extras.

1.3 Game Mockup



2 Development Schedule

2.1 Development Targets

Functional minimum (A)

- Basic driving physics of player vehicle
- A basic test map
- Box-based 2D or 3D graphics with simple topdown view
- Basic collision detection
- Basic implementation of game logic (pickup and delivery)
- Some pickup and delivery points on the map
- In short: Something to test / present the most crucial core gameplay

Low target (B)

- A functional guidance system
- Player car model
- Two building models
- Basic 3D graphics with a rudimentary working chasing-camera
- A game map (streets and buildings around it)
- Some basic graphic effects
- Some menu screens (main, pause, scoring)

Desirable target (C)

- Fine tuned driving physics
- Some reasonable physics on collision
- One or more cop-cars with a basic AI
- A basic attention implementation for the cop-cars
- Cop car model
- Enhanced 3D graphics
- Special delivery and pickup buildings
- A fully working camera system with no major drawbacks
- Some sound effects are included
- A well working game physics
- The game logic is fully implemented (pickup, delivery, countdown, bonustime)

High target (D)

- Good AI for cop-cars
- A fully functional attention system for cop-cars
- Some advanced graphic effects
- Most events have a sound effect associated to it
- Game logic is completely fine tuned
- The graphic should reflect the style of the 30’s

- Some suitable background music

Extras (E)

- More stylized rendering
- Highscore Board
- Multiplayer (Split Screen) with the possibility to interact with the competitor's car
- Multiplayer LAN Game
- Multiple difficult levels
- Randomly generated maps
- Civilian (NPC) traffic
- "drunk-O-meter"
- Radio System for background music (GTA Style)

2.2 Tasks

Task	Description	Time	Assignee
Low Target			
	Brainstorming for game idea	...	all
	Redefine game logic	...	Jh
	Define basic game structure (classes, threads, etc.)	2	All
	Implement basic game structure and technical setup to built on	3	dg / jh
	Testing of 3rd party physic framework (Farseer)	2	dg
	Basic driving physic prototype	3	dg
	Control mechanism for Xbox 360 pads	2	jh
	Implementation of a rudimentary collision detection	2	dg
	Basic implementation of game logic	3	jh
	Simple 2D graphic output (UI)	2	pk
	Create prototype game map with pickup / delivery points / map-loading	5	all
	Implementation of basic 3D map (model, textures, programming)	6	ts / pk
	Implementation of basic 3D cars (model, textures, programming)	6	ts / pk
	Implementation of basic 3D effects	4	ts / pk
	Implementation of a guiding system	2	jh
	Implementation of a basic chase-camera system	2	ts
	Creation of basic menu screens	2	pk
	Debugging, playtesting and tweaking	3	all
Desirable Target			
	Well working game physics	2	dg
	Creation of a full game map	2	pk
	Creation of HUD	5	pk
	Fine tune driving physics	3	dg
	Implementation of advanced 3D map (model, textures, programming)	4	ts
	Implementation of advanced 3D cars (model, textures, programming)	4	ts

	Full implementation of game logic	3	jh
	Implementation of the basic AI for cop cars	10	all
	Creation of a 3D model for cop cars	2	ts
	Adding police logic to game logic	5	jh
	Fine tune camera system	2	ts
	Adding some sound effects	3	pk
	Debugging, playtesting and tweaking	3	all
High Target			
	Better cop AI	10	all
	Fully functional attention system for cops	4	jh
	Implementation of advanced 3D effects	5	ts
	More sound effects	2	pk
	Background music	2	pk
	Implementation of the “Drunk’O’Meter” and its effects on the car control for testing and to decide if it will add some value to the gameplay	3	all
	Debugging, playtesting and tweaking	3	all

3 Assessment

The logic behind the game is quite simple and can be explained within a short amount of time:

- Pickup and deliver alcohol
- Basically omit to much trouble with the police
- The faster you deliver, the more cash you get
- The riskier your drive, the more contraband you will risk to loose on collisions
- The more you deliver, the more cash you get
- The game is over when time runs out
- The performance of the player is measured by the amount of money he gathered

The other important gameplay characteristics are:

- The game should be a typical “pickup and play” experience like in most arcade games.
- The driving should be handy and easy to learn. There will be some physical realism (acceleration, cornering behaviour, etc.) to it, but it will be far away from a driving simulation.
- The gameplay will be basically in a flat 2D-Space like the older GTA Games.
- The graphics will be in 3D.
- The player will control the car from an isometric perspective with a chasing camera. The view will be nearly topdown (approximately 15-20degrees angle).