



Game design document for the game Grad  
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# GAME OVERVIEW

# 1 KEY FEATURES

- Take control over vehicles spanning from light motorcycles and quads to heavy Humvees and trucks in vehicular combat
- Upgrade your vehicles and mount different weapons on them to be able to take on enemy vehicles and structures
- Utilize enemy weaknesses and the environment to get an upper hand in battles
- Discover, extract, refine and use resources and manage their logistics
- Buy and restore buildings that extract and refines raw materials into valuable resources
- Unravel and take part in a story through intriguing missions
- Explore a vast landscape and the different cities in it

# 2 GENRE

The game is a combination between vehicular combat and resource management in a real time three-dimensional world.

# 3 SETTING

The game takes place in the future, in a vast and barren landscape consisting of several islands.

# 4 BACKGROUND STORY

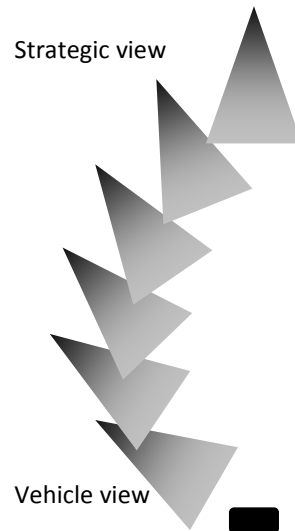
In the early times of civilization, humankind was divided into sovereign city-states  
Conflicts between them raged  
Civilizations divided and merged through battles and alliances, forming countries  
Conflicts between them raged  
Countries were dissolved and humankind was once again divided into city-states  
Conflicts continue



# GAMEPLAY

## 5 POINT OF VIEW

The player's vision is fixed to a camera situated behind the vehicle. The player is able to increase and decrease the altitude of the camera, hence change between different types of views in a seamless motion. When zooming in and out, the HUD will change as well as what the player is in control of.



### 5.1 VEHICLE VIEW

- Third person/chase camera
- Vehicle HUD
- Vehicle control

### 5.2 STRATEGIC VIEW

- Distant top down view
- Strategic HUD
- Menu control

### 5.3 BUILDING VIEW

- 60 degree perspective
- Building HUD
- Menu control



## 6 NAVIGATION

The player is able to drive a variety of land vehicles, each with different driving characteristics and abilities.

### 6.1 BASIC DRIVING

The player is able to steer any mounted vehicle while in the vehicle view (third person/chase camera). If the player is driving when going from vehicle view to strategic view, the vehicle will brake and come to a stop. He is able to drive forward, steer right and left, brake and drive backwards.

#### GEAR SHIFTING

Gear shifting is done automatically.

#### ACCELERATE

When the player presses the control for forward or reverse, the vehicle accelerates before reaching its top speed.

#### DECELERATE

When the player let go of the control for forward or reverse, the vehicle decelerates until coming to a full stop.

#### BRAKE

When the player presses the braking control, the vehicle decelerates fast without locking the wheels of the vehicle.

#### HARD BRAKE

When the player presses the hard braking control, the vehicle decelerates fast by locking the wheels or tracks. If the player turns at the same time as using the hard brake, the vehicle will start to drift.

#### STEER

When the player presses the right or left steer control the vehicle steers in that direction until the control is released. If the right or left steer control is tapped, the vehicle makes a minor steering adjustment. When the player stops steering, the vehicle will line up and continue in a straight line. If turning too hard at high speeds or on ground with bad grip the vehicle loses its grip and spins.

### 6.2 AUTOMATED NAVIGATION

The player is able to get to a destination automatically by setting one or more navigation points, using the strategic HUD. When traveling with automated navigation the player will only be able to see the world through the strategic view. The automated navigation is deactivated if the player enters the vehicle view, is intercepted by enemy vehicles or the navigation path is blocked somehow.

## TIME ACCELERATION

The player can accelerate time when using automated navigation. As default, time acceleration is set to two times the normal speed when automated navigation is activated and can be increased to five or ten times normal speed.

## 6.3 VEHICLE CHARACTERISTICS

Different types of vehicles have different driving characteristics regarding acceleration, top speed, maneuverability and such. Besides the type of vehicle, the weight of it affects its characteristics. Different vehicles are more or less suitable for different tasks and missions.

## 6.4 FUEL AMOUNT AND CONSUMPTION

The player needs to be aware of the amount of fuel left in the vehicle. The fuel consumption of a vehicle is determined by the type of vehicle and the weight of it. Fuel can be gotten at refineries, owned by the player or other citizens in cities. If the fuel tank gets empty, the player will not be able to drive anywhere but will have to request towing.

## 6.5 REQUEST TOWING

The player can request towing over the radio at any time. When the player requests to be towed, he is able to choose to which city to be transported. When being towed, time will speed up to ten times the normal speed. Towing costs money that is taken from the player when the vehicle is dropped off at its destination. When the vehicle is dropped off in the city and the player is in control over it again, it will have been filled with fuel that lasts for only a short distance. Therefore, the player has to drive to a refinery to get more fuel.

## 6.6 CRASHING

The vehicle will be damaged if the player crashes into any obstacle. The amount of damage will depend on the speed the vehicle is moving at, its armor and the type of obstacle it hits. If crashing with an already heavily damaged vehicle it can explode.

## 6.7 ROLLING OVER

The vehicle cannot be stuck lying on its roof. If the vehicle at some point rolls over on the roof it will automatically continue to roll until it is over on its proper side.

## 6.8 USING NITROUS OXIDE

The player can use nitrous oxide, which boosts the vehicle for a limited amount of time, increasing its top speed.

## 6.9 FLYING

If driving over a jump on the ground the vehicle can become airborne. The length that the vehicle flies depends on the speed at which the jump was hit, the angle of the jump and the type and weight of the vehicle. This ability can be used to gain access to places that are hard to get to, or taking shortcuts to save time.

## 6.10 PARTS DAMAGE AFFECT

If a vehicle's parts are damaged the characteristics of the vehicle is affected. The vehicle will never be completely unmovable though, so that the player can get to places to repair it or to fill fuel.

### ENGINE DAMAGE AFFECT

The more damaged an engine gets the worse the vehicle's top speed and acceleration becomes. If the engine is severely damaged, the vehicle is only able to move very slowly.

### SUSPENSION DAMAGE AFFECT

The more damaged the suspension gets the worse the vehicle's top speed, acceleration, braking functionalities, grip and stability becomes. With damaged suspension, the vehicle's chassis takes more damage when driving on rough ground or landing after being airborne.

### BRAKES DAMAGE AFFECT

The more damaged the brakes gets the worse the vehicle's braking functionalities becomes.

### WHEELS DAMAGE AFFECT

The more damaged the wheels gets the worse the vehicle's top speed, acceleration, braking functionalities, grip and stability becomes. If the wheels are severely damaged, the vehicle is able to move but with worse functionalities. With damaged wheels, the vehicle's chassis takes more damage when driving on rough ground or landing after being airborne.

## 6.11 RAIN AFFECT DURING DRIVING

The grip of the vehicle becomes worse when it is raining. The amount of grip lost is determined by the amount of rain falling.

## 6.12 GROUND AFFECT DURING DRIVING

Vehicles driving behavior vary depending on the surface.

### ROADS AND HIGHWAYS (ASPHALT)

Asphalt provides the best grip for vehicles.

### DESERT (SAND AND ROCKS)

The sand and rocks in deserts provides worse grip than asphalt.

### GROUND ANGLE

Vehicles behave differently depending on the angle of the ground. If starting uphill the acceleration is slower than if starting on flat ground or downhill, which will have the opposite effect. When rolling downhill, vehicles do not come to a full stop until the player uses the brakes or the ground flattens.

## 6.13 NIGHT AFFECT

The player is able to see very far by day but by night, his vision range is significantly decreased. To be able to see further, the player can add more light to his vehicle or use flares.

## 6.14 BOUNDARIES AND OBSTACLES

### WATER

The player will not be able to drive in water deeper than approximately one meter. There is an invisible wall stopping the player if he tries to enter deeper waters than that.

### STEEP CLIFFS OR MOUNTAIN WALLS

The player will not be able to drive upwards walls steeper than approximately 45 degrees. The different types of vehicles can climb walls of different angles.

### CONSTRUCTIONS

Any city wall, building or other bigger construction stops any vehicle.

### NATURE OBSTACLES

The player's vehicle is stopped by any tree or boulder.

## 7 COMBAT

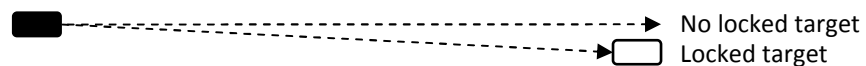
### 7.1 LOCKING AN ENEMY TARGET

The player is able to get a lock on any vehicle or building. When locking on an enemy target the one closest to the player is selected. If the player presses the control for locking again, the second closest enemy is selected and so on.

### 7.2 USING DIFFERENT WEAPONS

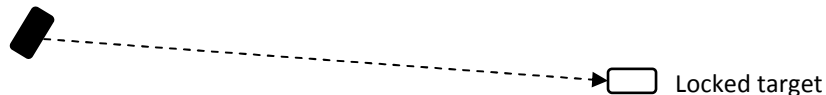
#### STATIC WEAPONS

The player needs to aim the vehicle in the direction he wants to shoot when using static weapons. The player needs to keep the enemy target in front of him when firing to be able to hit it. The static weapons are not totally fixed but adjust themselves a few degrees to any target the player has locked on, making it easier to hit them. If the player has not locked on a target, the static weapons will fire straight ahead.



#### TURRET WEAPONS

When using turret weapons the player can lock on a target and the turret will automatically aim at it until another target is selected, it gets out of radar range or it is destroyed. The player can then face any direction and the turret will still aim at the target locked on. If the player has not locked on any target, turret weapons will fire straight forward.



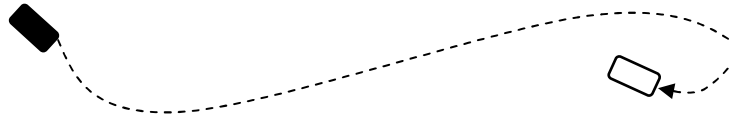
#### ARTILLERY WEAPONS

To be able to use artillery weapons the player has to lock at a target to let the weapon adjust itself into the proper angle. If the player has not locked on a target or a locked target is out of the weapon's range the artillery weapon will not fire. When the player has locked on a target, any artillery weapon will automatically adjust the vertical angle continuously if either the player or target moves. Artillery weapons also make a minor horizontal adjustment to locked targets but the player has to keep his vehicle aimed towards the target to be able to hit it. Artillery weapons are shot to a high altitude and do therefore have a longer time span between being fired to impact than most other weapons. Artillery weapons do have a greater firing range than most other weapons.

#### USING WIRE GUIDED WEAPONS

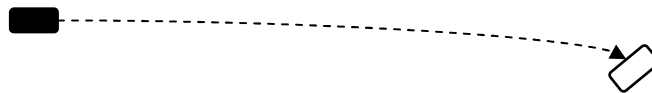
Wire guided weapons can be manually steered by the player after being fired. As soon as a wire guided weapon is fired the player's control transfers from the vehicle to the weapon. When a wire guided weapon is fired it has to be destroyed before the player gets control

over the vehicle again. Wire guided weapons explode on impact or when the player chooses to detonate it. The length of the wire varies for different weapons. When a wire guided weapon is fired the camera will stay at the same place but focus on the projectile and aim towards it until it is destroyed.



## HEAT SEEKING WEAPONS

Heat seeking weapons cannot be locked at a target but navigate itself towards any heat source in its path. The player has to be within a certain angle with a target when firing heat seeking weapons for the weapon to guide itself towards it. Heat seeking weapons ability to distinguish heat emission of vehicles or buildings against the surroundings will not work on very hot days.



## RADAR GUIDED WEAPONS

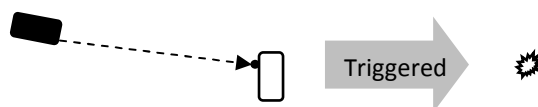
If the player locks on a target, radar guided weapons will automatically guide themselves to it when fired. The player can face any direction when shooting the weapon and it will still hit the target. When a radar guided weapon is fired on a locked target it will guide itself to it even if the player locks onto another target, while it is in the air, or the target gets out of radar range. Radar guided weapons will evade any object in their path by going over them. Radar guided weapons will go straightforward if the player has not locked on any target.

## DROP WEAPONS

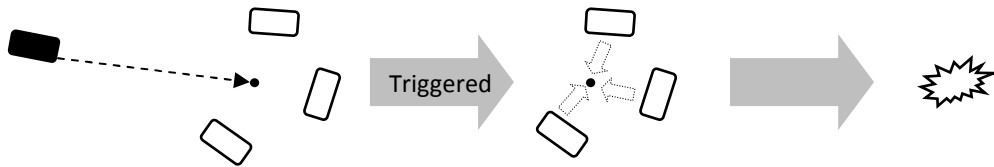
Drop weapons are dropped on the ground and dangerous until triggered. There are two types of drop weapons, namely pressure triggered and proximity triggered. Pressure triggered drop weapons will damage any vehicle that travels on them while proximity triggered drop weapons are triggered if a vehicle comes within a certain range.

## MAGNETIC IMPLOSION CHARGE WEAPON

The magnetic implosion charge is using a high-powered magnetic charge that attracts metal objects in its surrounding. The player uses it by firing the charge either at a vehicle or on the ground. After being fired, the charge can be triggered by the player. By doing so, it will either crush the vehicle it is stuck on or attract the vehicles surrounding it when it is lying on the ground, making them crush into each other. The player's vehicle will not be affected by the magnetic force from a weapon fired by himself.

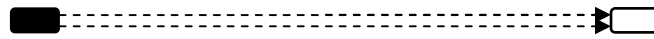






### 7.3 LINKING WEAPONS

If the player has multiple weapons of the same type, like two static machine guns for example, he can link them to make them shoot at the same time using the control for firing.



### 7.4 USING EQUIPMENT AND SYSTEMS

Most of the equipment and systems are driven by an internal battery that is depleted when used. The batteries reload whenever the player's vehicle is moving. Equipments and systems that are not driven by batteries have a limited amount of uses until they are depleted and have to be reloaded or replaced with new ones.

#### FLARES

Flares are used to lighten the environment. When firing a flare it will be shot straight up and slowly descend while burning.

#### SMOKE SCREEN

Smoke screens can be used to confuse enemies. If the player activates a smoke screen and stays in it, the enemy will have more difficulty hitting him with weapons. Heat seeking and radar guided weapons will not be affected by smoke screens though.

#### MINE DETECTOR

The mine detector will detect mines within its effective range and show them on the radar.

#### MINE DESTROYER

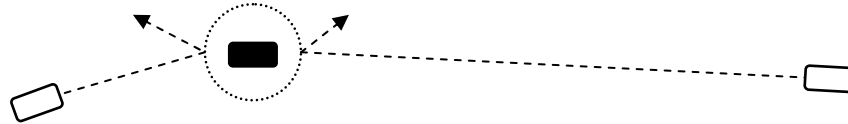
The mine destroyer will detect and trigger all mines within its effective range.

#### RADAR JAMMER

The radar jammer jams enemy radars, making it impossible for enemies to get a lock on the player. Radar guided weapon's homing ability is disabled when using radar jammers. It also makes it possible for the player to avoid detection from enemy vehicles.

#### MAGNETIC SHIELD

The magnetic shield deflects small and medium sized metal projectiles shot at the player. Larger metal projectiles will be able to penetrate the shield. It can be activated and deactivated whenever the player wants to.



## ELECTROMAGNETIC PULSE

The electromagnetic pulse paralyzes all vehicles and city weapon defenses within its effective range for a limited amount of time. The player is not affected by his own electromagnetic pulse but any friendly vehicles or city weapon defenses will be paralyzed as well.

## 7.5 UTILIZE ENEMY ARMOR WEAKNESSES

The player can use weaknesses in the armor of enemy vehicles in his favor. By hitting vehicles in areas where their armor is weaker more damage is inflicted than if hitting areas with strong armor. Like any vehicle, the player's has weak areas as well and the player has to watch out for enemy fire on those weak areas.

## 7.6 AMMUNITION AMOUNT

The player needs to be aware of the amount of ammunition stored for the different weapons mounted on the vehicle. Ammunition can be gotten at city arsenals as well as player munitions stores in cities. If the ammunition is used up, the player needs to get to a city arsenal or a self-owned munitions store to buy or load the weapons with more ammunition.

## 7.7 GETTING ATTACKED

### IN MISSIONS

During most missions, there are enemy vehicles or buildings trying to stop the player from completing it.

### RANDOM ATTACKERS

During the game, the player can be attacked by enemies at any time, except when in a friendly city. The level of difficulty of the random attacks is determined by the player's current vehicle and the location.

## 7.8 LIBERATING ENEMY CITIES

To liberate a city, all defending vehicles and weapon defenses must be eliminated. The amount of defending vehicles and weapon defenses are determined by the size of the city.

### CITY DEFENDING VEHICLES

Every city has a number of defending vehicles fighting for it.

### CITY WEAPON DEFENSES

Enemy cities' weapon defenses fires at the player when in range.

## 7.9 ASSAULTING ENEMY OIL PUMPS AND QUARRIES

The player can destroy any oil pump or quarry.

## 7.10 NEUTRALIZING DANGEROUS TERRITORIES

### NEUTRALIZING ENEMY CITY TERRITORY

To neutralize a territory of an enemy city the player has to liberate the city. By liberating it, the city's alignment towards the player will become neutral.

### NEUTRALIZING OUTLAW TERRITORY

To neutralize an outlaw territory the player has to eliminate all outlaws of higher ranks of the faction in control over the area.

## 7.11 ARMOR AND WEAPONS DAMAGE AFFECT

### ARMOR DAMAGE AFFECT

The more damaged an armor gets the worse its protective abilities become. If an armor of some sort is severely damaged, it offers near to no protection.

### WEAPONS DAMAGE AFFECT

Weapons are not affected by damage until severely damaged. When a weapon is severely damaged, it cannot be used.

## 7.12 WEATHER AFFECT DURING COMBAT

The weather affects weapons in different ways. The weather can be utilized against enemies as well.

## 7.13 GROUND AFFECT DURING COMBAT

The more uneven the ground is the more unstable the player's vehicle becomes. Consequently, shooting gets harder with an unstable vehicle. The better suspension and wheels the player has the more stable the car becomes and more accurate at shooting.

### ROADS AND HIGHWAYS (ASPHALT)

Asphalt provides a very smooth surface hence making aiming and shooting more accurate than any other surface.

### DESERT (SAND AND ROCKS)

The desert's sandy and rocky surface makes vehicles unstable, hence making shooting less accurate.

### ELEVATION

The higher up the player is the further he can shoot.

## 7.14 PLAYER VEHICLE AND WEAPONS STATUS

The player is able to see the status of all components of his vehicle on the vehicle HUD.

## **7.15 ENEMY VEHICLE AND BUILDINGS STATUS**

When damaging enemy vehicles or buildings they will change visually. First, they are deformed and get holes and cuts when hit by weapon fire or colliding with objects. After that, they begin to smoke. The smoke gets heavier the more damaged they get and eventually they will catch on fire and finally explode.

## **7.16 IMPORTANT ALLIES OR BUILDINGS KILLED OR DESTROYED**

There are missions in which important allies or buildings must survive or remain intact for it to be a success. If the ally is killed or the building is destroyed, the mission fails.

## **7.17 FRIENDLY FIRE**

The player can damage and kill any friendly vehicles and buildings.

## **7.18 USING CITY ARTILLERY BOMBARDMENT**

The player is able to request artillery bombardments from some cities. The requirements are that the city has an artillery battery (5<sup>th</sup> sector) and the player needs to have a 5<sup>th</sup> grade citizenship in it. Requesting artillery bombardments are extremely expensive. The player uses the radio to request an artillery bombardment. After requesting an artillery bombardment, the player selects a position to bomb. City artilleries are very powerful and take out most vehicles and buildings within the strike area.

## **7.19 RETREATING**

The player can retreat from any situation at any time. If retreating, any enemy vehicles currently fighting with the player will either follow him or let him go, depending on their alignment towards the player and level of difficulty. The player can retreat to a friendly city but the city gate will not open if there are enemies too close to it. If the player reaches a friendly city with pillboxes or missile turrets, they will shoot at any enemy vehicle following him.

## **7.20 IF KILLED**

If the player is killed, the game will automatically load the last saved game.

## 8 BUYING, SELLING, TRADING AND REPAIRING

The player cannot buy a part, armor, weapon, equipment or system if the weight limit of the vehicle will be exceeded by adding it. When buying armor, weapons, equipment and systems, they are fitted to the vehicle currently driven by the player. When buying a type of armor, weapon, equipment or system that is already mounted on the vehicle, the one already mounted on the vehicle will be replaced with the new one.

### 8.1 VEHICLES

Vehicles can be bought, sold and repaired in city depots. To be able to buy a vehicle the player need to have a garage with at least one free parking spot. When buying a vehicle it is placed on a free parking spot in the garage closest to the city depot it is bought in. To repair a vehicle, the player needs to enter a city depot.

### 8.2 PARTS

Parts can be traded and repaired in city depots. When trading parts, they are fitted to the vehicle currently driven by the player. When trading a part, the one already mounted in the vehicle will be replaced with the new one. If the player trades a part that is worth less than the one already installed in the vehicle he will get the difference in value in money. To repair a part, the player needs to enter a city depot.

### 8.3 ARMOR

Armor can be bought, sold and repaired in city depots. If the player buys an armor that is worth less than the one already mounted on the vehicle, he will get the difference in value in money. To repair armor, the player needs to enter a city depot.

### 8.4 WEAPONS

Weapons can be bought, sold and repaired in city arsenals. If the player buys a weapon that is worth less than the one already mounted on the vehicle, he will get the difference in value in money. To repair a weapon, the player needs to enter a city arsenal.

### 8.5 EQUIPMENT AND SYSTEMS

Equipment and systems can be bought and sold in city arsenals. If the player buys an equipment or system that is worth less than the one already installed in the vehicle he will get the difference in value in money.

### 8.6 FUEL

#### CITY REFINERY

The player can buy fuel in or sell fuel to city arsenals. To buy fuel in a city refinery the player needs to enter the building. When buying fuel it is filled into the vehicle currently driven by the player. Fuel cannot be bought if the fuel tank is full. The player pays money for fuel in city arsenals.

## REFINERY

The player can fill fuel in refineries owned by him. To fill fuel in a refinery he needs to enter the building. When filling fuel it is filled into the vehicle currently driven by the player. Fuel cannot be filled if the fuel tank is full. The player does not pay for the fuel filled from refineries he owns.

## 8.7 AMMUNITION

Different types of ammunition costs different amount of money to buy in city arsenals as well as different amount of ammunition when loading from munitions stores. The bigger and more powerful the type of ammunition is the more money or ammunition the player has to spend on it.

### CITY ARSENAL

The player can buy ammunition in or sell ammunition to city arsenals. To buy ammunition in a city arsenal the player needs to enter the building. When buying ammunition it is loaded onto the vehicle currently driven by the player. Ammunition cannot be bought if all weapons are fully loaded. The player pays money for ammunition in city arsenals.

### MUNITIONS STORE

The player can load ammunition in munitions stores owned by him. To load ammunition in a munitions store he needs to enter the building. When loading ammunition it is loaded onto the vehicle currently driven by the player. Ammunition cannot be loaded if all weapons are fully loaded. The player pays no money for the ammunition loaded from munitions stores. When loading ammunition from ammunitions store the amount of ammunition stored in it determines how much ammunition the player can load.

## 9 INTERACTING WITH BUILDINGS

There are certain buildings that allow player interaction.

### ENTERING BUILDINGS

To interact with a building the player needs to enter it. To enter a building the player drives his vehicle up on the painted concrete block in front of the gate of the building and sound the horn of the vehicle. By doing so the gate will open and the player can drive into the building. If there are enemies nearby a building, its gate will not open until the enemies are eliminated or gone.



## 10 RESTORING, BUYING, SELLING AND REPAIRING BUILDINGS

### 10.1 BUILDINGS AT OIL FIELDS AND MINES

#### RESTORING UNOCCUPIED OIL PUMPS AND QUARRIES

The player can restore unoccupied oil pumps and quarries at oil fields and mines. To do so the player need to enter the unoccupied building. The player can then restore the building through the building HUD. The cost of the restoration depends on the distance to the nearest city.

#### BUYING OCCUPIED OIL PUMPS AND QUARRIES

The player can buy occupied oil pumps or quarries from anyone but enemies at oil fields and mines. To do so the player need to enter the building. The player can then buy the building through the building HUD. It is more expensive to buy an already occupied oil pump or quarry than an unoccupied building. The cost depends on the distance to the nearest city.

#### SELLING OIL PUMPS AND QUARRIES

The player can sell self-owned oil pumps and quarries. The player can do so by either enter the building and use the building HUD or use the strategic HUD. The cost differs depending on the distance to the nearest city.

#### RESTORING WEAPON DEFENSE SYSTEMS AT OIL PUMPS AND QUARRIES

The player can restore pillboxes and missile turrets at oil pumps and quarries. The player can do so by entering the building and restore the weapon defense systems through the building HUD. They will defend the building by shooting at any hostile vehicles close to the building. By having weapon defense systems at oil pumps and quarries they are safe from minor attacks, which would be devastating if there were no defenses at all.

### 10.2 BUILDINGS IN A CITY

To be able to buy buildings within a city the player need to be a citizen of city. The player is only able to buy buildings in sectors, to which he has clearance.

#### BUYING UNOCCUPIED CITY BUILDINGS

The player can buy unoccupied garages, munitions stores and refineries. The player can do so by entering the building and buy it through the building HUD. The player can only have one garage, one munitions store and one refinery in each city at the same time. The player can buy a new unoccupied building in another city sector at any time. When doing so he will pay for or receive the difference in value between the bought and sold building. Garages are available for purchase in all sectors of a city. Munitions stores and refineries are available for purchase in city sectors 3, 4 and 5. The cost increases the further in towards the center of a city it is.



### **SELLING BUILDINGS IN A CITY**

The player can sell self-owned buildings within a city. The player can do so by either enter the building and use the building HUD or use the strategic HUD. The cost increases the further in towards the center of a city it is.

### **CITY WEAPON DEFENSES**

The player can donate money to a city for the construction of city weapon defenses. He can choose to donate to the construction of pillboxes or missile turrets. The player has to enter the capitol of a city to be able to make donations for city weapon defenses.

## **10.3 REPAIRING BUILDINGS**

The player can repair any building of his own. To do so he needs to enter the building. The player can then repair the building through the building HUD. The cost of the repair depends on the damage of the building.

## II EXTRACTING RAW MATERIALS

The player can extract crude oil and iron ore. These raw materials are extracted at oil fields and mines. The extracted raw materials are stored at the building where they are extracted. Oil pumps and quarries have a limited storage capacity. If the storage capacity is reached, the extraction is stopped. The extraction will continue when raw materials are taken from the storage.

### EXTRACTING CRUDE OIL

To be able to extract crude oil the player need to restore an unoccupied, or buy an occupied oil pump at an oil field.

### EXTRACTING IRON ORE

To be able to extract iron ore the player need to restore an unoccupied, or buy an occupied quarry at a mine.

## 12 DISTRIBUTING RAW MATERIALS

### 12.1 HIRE TEAMSTERS

The player has to hire teamsters to transport raw materials by truck. There can only be one teamster at a time working at each oil pump or quarry.

#### TEAMSTER GRADE

There are five grades of teamsters available in the five different city sectors. The teamsters' grade increases the further in towards the centre of a city they are hired.

#### TRUCK CAPACITY

The load capacity of the trucks increases with the grade of the teamsters. Truck capacity is measured in liters, for crude oil, or kilos, for iron ore.

#### TEAMSTER PAYMENT

The teamsters' payment increases with their grade. The payment is measured in money per day.

Teamster grade	Truck capacity	Teamster payment
1	1000	500
2	2000	1000
3	3000	1500
4	4000	2000
5	5000	2500

### 12.2 TEAMSTERS NAVIGATION PATH

The player chooses the buildings at which the teamster picks up and drops of raw materials. He can adjust the path that teamsters take by setting additional navigation points for them to follow. If not setting any additional navigation points, teamsters will take the shortest way between the two buildings.

### 12.3 TRUCK STATE

There are four different states that trucks can have.

#### OPERATIONAL

Operational status means that there are no problems.

#### INACTIVE

Inactive status means that the truck has come to a halt by any of the following reasons.

- Destroyed oil pump or quarry
- Empty oil pump or quarry

- Destroyed city refinery, refinery, city arsenal or munitions store
- Full refinery or munitions store

## **BLOCKED**

Blocked status means that the truck is being blocked by enemies or outlaws.

## **ATTACKED**

Attacked status means that the truck is under attack by enemies or outlaws.

## **12.4 PROTECTING AND FREEING TRUCKS**

Trucks that are traveling through dangerous territory run a risk of being attacked or blocked. The risk is eliminated by either rerouting the trucks around the dangerous territory or neutralizing the territory. The player can also protect trucks by escorting them and fight off any attackers.

## **12.5 DISTRIBUTING CRUDE OIL**

### **DISTRIBUTING TO CITY REFINERY**

The player can distribute crude oil to any friendly or neutral city refinery.

### **DISTRIBUTING TO REFINERY**

The player can distribute crude oil to any self-owned refinery.

## **12.6 DISTRIBUTING IRON ORE**

### **DISTRIBUTING TO CITY ARSENAL**

The player can distribute iron ore to any friendly or neutral city arsenal.

### **DISTRIBUTING TO MUNITIONS STORE**

The player can distribute iron ore to any self-owned munitions store.

## 13 REFINING RAW MATERIALS

The player can refine raw materials in refineries and munitions stores. The refined products are worth more than the raw materials from which they are produced. By refining raw materials, the player can produce his own fuel and ammunition, which will decrease the amount of fuel, and ammunition the player has to buy in city refineries and arsenals. Refineries and munitions store have a limited storage capacity. If the storage capacity is reached the refining is stopped, and will not continue until the building is not full no more.

### REFINING CRUDE OIL INTO FUEL

To be able to refine crude oil into fuel the player need to own a refinery.

### REFINING IRON ORE INTO AMMUNITION

To be able to refine iron ore into ammunition the player need to own a munitions store.

## 14 SELLING RAW MATERIALS

The player can sell any extracted crude oil or iron ore. The player can do so by either enter the building where it is stored and use the building HUD or use the strategic HUD.

### SELLING CRUDE OIL FOR MONEY

The player can sell crude oil at city refineries in exchange for money.

### SELLING IRON ORE FOR MONEY

The player can sell iron ore at city arsenals in exchange for money.

## 15 SELLING REFINED MATERIALS

The player can sell any refined materials stored at a refinery or munitions store. The player can do so by either enter the building where it is stored and use the building HUD or use the strategic HUD.

### SELLING FUEL FOR MONEY

The player can sell fuel in exchange for money.

### SELLING AMMUNITION FOR MONEY

The player can sell ammunition in exchange for money.

## 16 RESEARCHING

The player can research within four different areas. Researching is done through the strategic HUD and costs money.

### RESEARCH LEVEL

Each area of research has ten levels. The cost of research increases with each level.

### RESOURCE EXTRACTION SPEED

The player can upgrade the speed at which resources are extracted at oil pumps and quarries. The resource extraction speed is measured in liters per second for crude oil and kilos per second for iron ore.

### REFINING EFFICIENCY

The player can upgrade the refining efficiency of refineries and munitions stores. The refining efficiency determines the amount of fuel that is made out of crude oil and ammunition that is made out of iron ore. The efficiency is measured in percentage.

### REFINING SPEED

The player can upgrade the speed at which resources are refined at refineries and munitions stores. The refining speed is measured in liters per second for crude oil and kilos per second for iron ore.

### LOGISTICS SPEED

The player can upgrade the speed at which teamsters load and unload resources at oil pumps, quarries, refineries and munitions stores. The logistics speed is measured in liters per second for crude oil and kilos per second for iron ore.

Research level	Resource extraction speed	Refining efficiency	Refining speed	Logistics speed	Cost
1	10	5	10	10	10000
2	20	10	20	20	20000
3	30	15	30	30	30000
4	40	20	40	40	40000
5	50	25	50	50	50000
6	60	30	60	60	60000
7	70	35	70	70	70000
8	80	40	80	80	80000
9	90	45	90	90	90000
10	100	50	100	100	100000



## 17 COMPETING IN RACES

### JOINING RACES

The player can compete in races by entering a city forum. The type of vehicles of the competitors will be the same as the player is currently driving when joining a race.

### DIVISIONS

The player can compete in five divisions. The difficulty level increases the higher the division is.

### PRIZE

The prize is in money and the sum will depend on what place the player finishes at and the division. As soon as the race is over, the prize sum will be given to the player automatically.

### FEE

There is a fee for joining a race. The fee is different for each division.

### CITY RACES

City races take place on the asphalt roads inside a city.

### OFF ROAD RACES

Off road races take place on rough ground outside a city.

### TRACK MARKINGS

Both city and off road racetracks are marked with a continuous painted line to show the outline off the track and where to drive.

### CHECKPOINTS

Throughout the race tracks there are checkpoints that have to be passed through in the right order to complete the race.

Division	1 <sup>st</sup> prize	2 <sup>nd</sup> prize	3 <sup>rd</sup> prize	Fee	Laps
1	1000000	500000	250000	250000	13
2	800000	400000	200000	200000	10
3	600000	300000	150000	150000	7
4	400000	200000	100000	100000	5
5	200000	100000	50000	50000	3

## 18 CITIZENSHIP

The player can obtain citizenship in the cities.

### CITIZENSHIP GRADE

There are five grades of citizenship. The grade of citizenship affects what abilities and possibilities the player has in cities. City sectors that are accessible for the player are determined by his citizenship in the city.

### OBTAIN AND INCREASE THE CITIZENSHIP

To obtain and increase the citizenship in a city the player can:

- Accomplishing missions in favor for a city
- Make donations to a city to build weapon defenses
- Sell raw materials and refined materials to a city
- Buy buildings and things in a city

### REDUCE AND LOSE THE CITIZENSHIP

The citizenship in a city is reduced and eventually lost by:

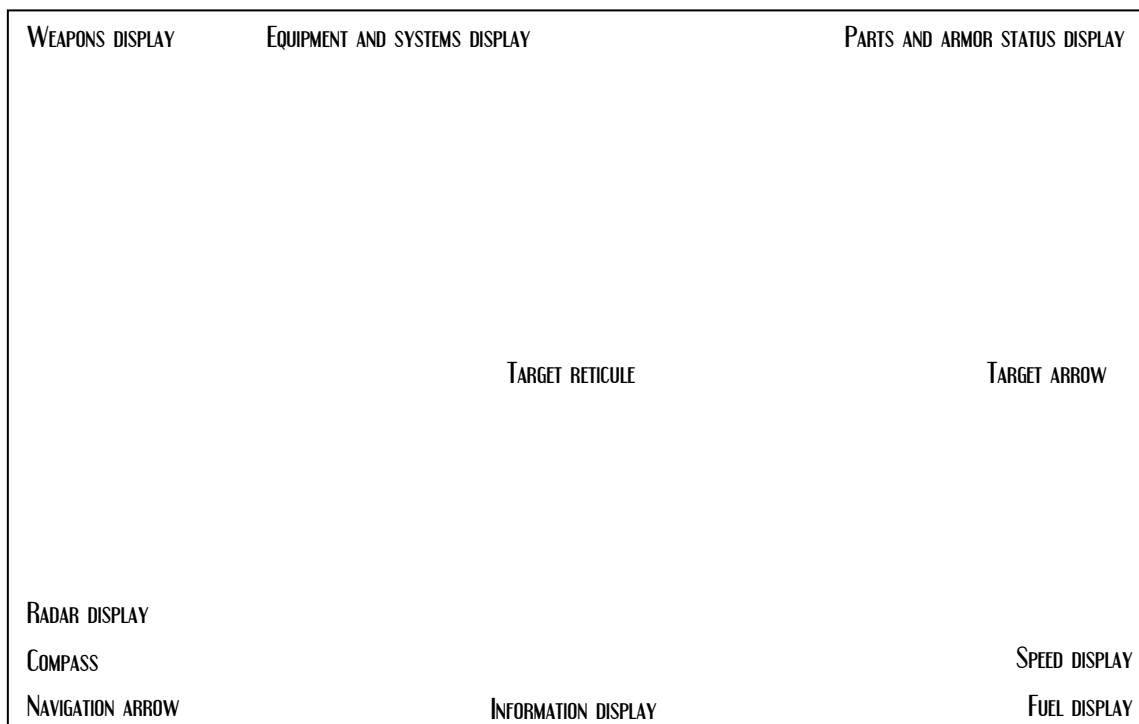
- Killing citizens of the city
- Destroying buildings owned by citizens of the city
- Not paying taxes

## 19 HEAD UP DISPLAYS

Text, numbers and other graphics are displayed directly on the in game screen. There are darkened and transparent areas behind text, numbers and other graphics that are displayed on the screen to make it more distinguishable. The player changes between the vehicle HUD and strategic HUD by zooming in and out. To access the building HUD the player needs to enter a building.

### 19.1 VEHICLE HUD

The vehicle HUD is displayed when the player is in the vehicle view.



#### WEAPONS DISPLAY

The weapons display shows the current weapons mounted on the vehicle as well as the current ammunition in each. If weapons are damaged the weapons display will indicate the damage with a red bar that increases the more damaged a weapon gets.

#### EQUIPMENT AND SYSTEMS DISPLAY

The equipment and systems display shows the equipments and systems the vehicle has. It also shows the current battery status or uses left for the different equipments and systems.

#### PARTS AND ARMOR STATUS DISPLAY

The parts and armor status display shows the status of the vehicle's engine, suspension, brakes, wheels and different armor. The parts and armors are displayed as a blueprint. If parts or armors are damaged the parts status display will indicate the damage by lighten the part or armor with yellow, orange and red color.

## **TARGET RETICULE**

The vehicle HUD shows a circle around the current target the player has locked on when it is within the player's field of view.

## **TARGET ARROW**

A target arrow is displayed in the edge of the screen if a target that the player has locked on is outside the player's field of view of. The target arrow points in the direction the player has to steer to see the target.

## **RADAR DISPLAY**

The radar display shows every vehicle and building within the radar's range in the form of bright dots. When a vehicle or building is locked on, it appears as a brighter dot on the radar. The radar also displays city walls and other major man made constructions.

## **COMPASS DISPLAY**

The compass display indicates the direction in which the vehicle is facing.

## **NAVIGATION ARROW**

If the player sets a navigation point, an arrow will point in the direction of the navigation point.

## **SPEED DISPLAY**

The speed display shows the current speed of the vehicle.

## **FUEL DISPLAY**

The fuel display shows the current amount of fuel left in the fuel tank of the vehicle.

## **INFORMATION DISPLAY**

The information display works as a bulletin board and shows the current mission. It also shows the total amount of stocked fuel and ammunition as well as the total amount of money the player has. The information display will also warn the player about attacks or blockades on hired teamsters or attacks on buildings and such.

## 19.2 STRATEGIC HUD

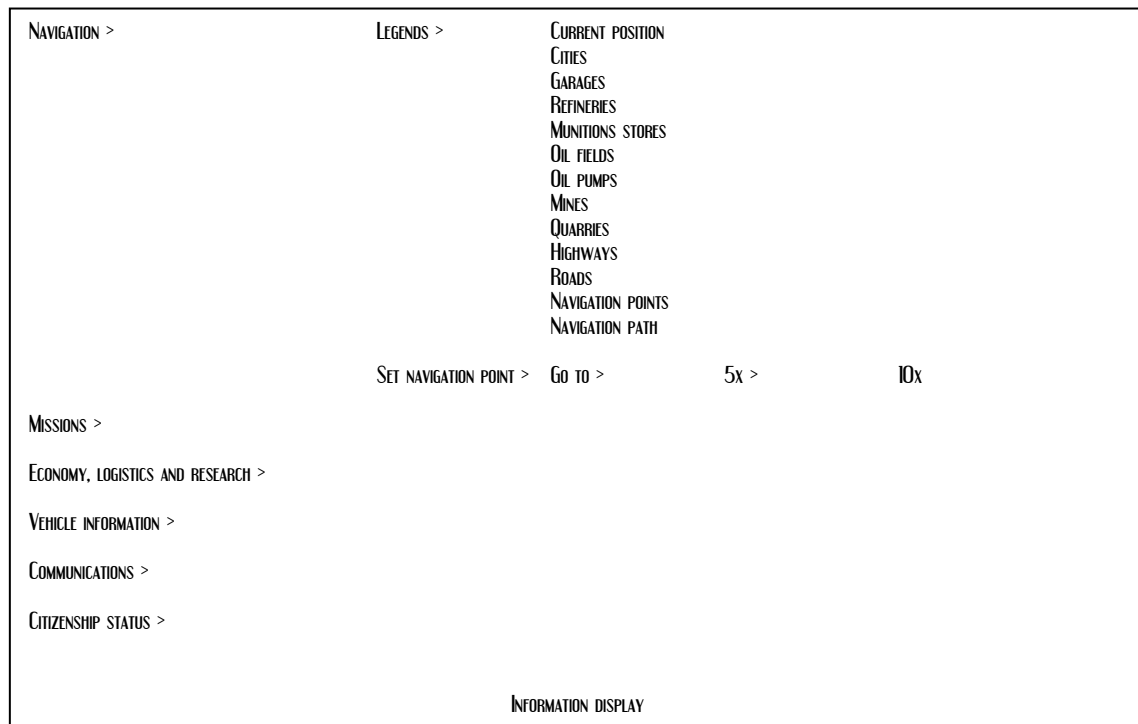
The player access the strategic HUD by zooming out with the camera. The strategic HUD is used by the player for several tasks. It is divided into menus dealing with various areas.



### INFORMATION DISPLAY

The information display works as a tooltips bar in the strategic HUD, describing what the different menus and buttons are used for.

## NAVIGATION



### NAVIGATION > LEGENDS

Legends can be activated and deactivated from showing on the strategic HUD. The following legends can be shown when in the strategic view.

- Current position – an icon of the vehicle currently driven by the player
- Cities – icons of every known city with the cities name
- Garages – icons of the player's garages in the cities
- Refineries – icons of the player's refineries
- Munitions stores – icons of the player's munitions stores
- Oil fields – icons of every known oil field
- Oil pumps – icons of the player's oil pumps
- Mines – icons of every known mine
- Quarries – icons of the player's quarries
- Highways – lines showing all known highways
- Roads – lines showing all known roads
- Navigation points – icons showing where the vehicle is heading
- Navigation path – a line showing the path that the vehicle will follow
- Point of safe return – a circle around the vehicle that indicates the point to which the player can drive and have enough fuel to get back to the current position

### NAVIGATION > SET NAVIGATION POINT

The player can set navigation points anywhere on land. The vehicle will automatically navigate to the navigation point when the *go to* function is used. The closest way possible to the navigation point is taken by the vehicle. The player is able to set several navigation points that the vehicle will travel to in the order they were set. Any navigation point can be deleted by the player.

## NAVIGATION > GO TO

The *go to* function can be used after setting one or more navigation points. Time will accelerate to two times normal speed when the *go to* function is used.

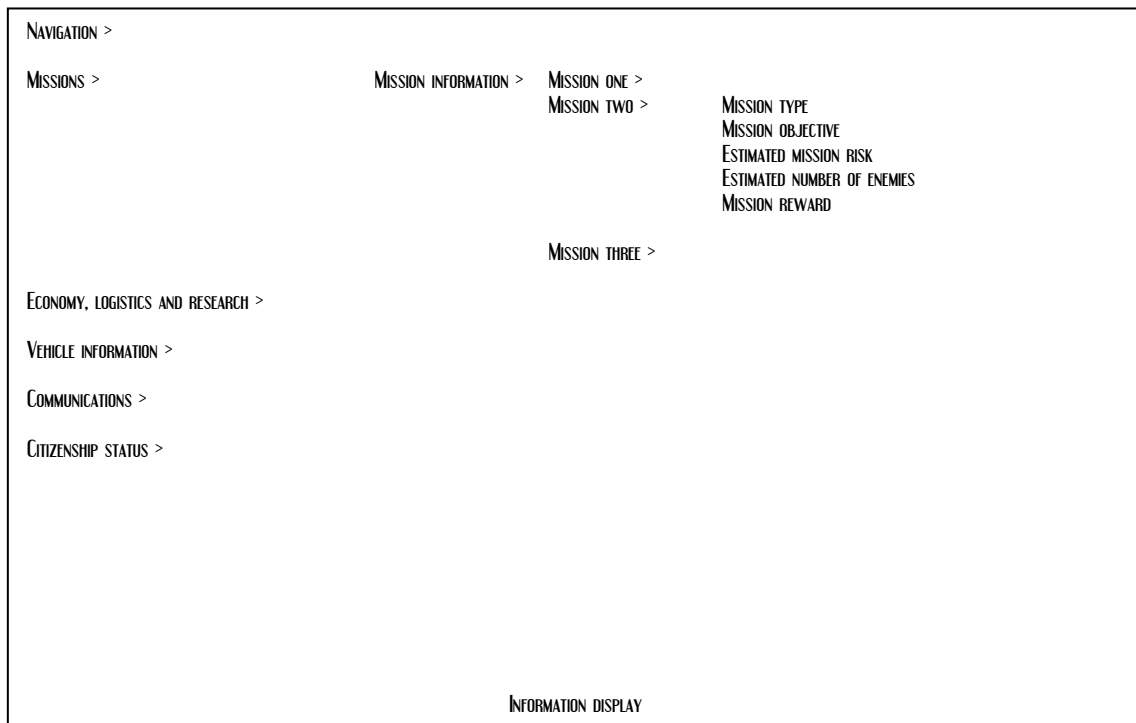
## NAVIGATION > GO TO > 5X

The *5x* function can be used after the *go to* function has been used. It accelerates time to five times normal speed.

## NAVIGATION > GO TO > 5X > 10X

The *10x* function can be used after the *5x* function has been used. It accelerates time to 10 times normal speed.

## MISSIONS



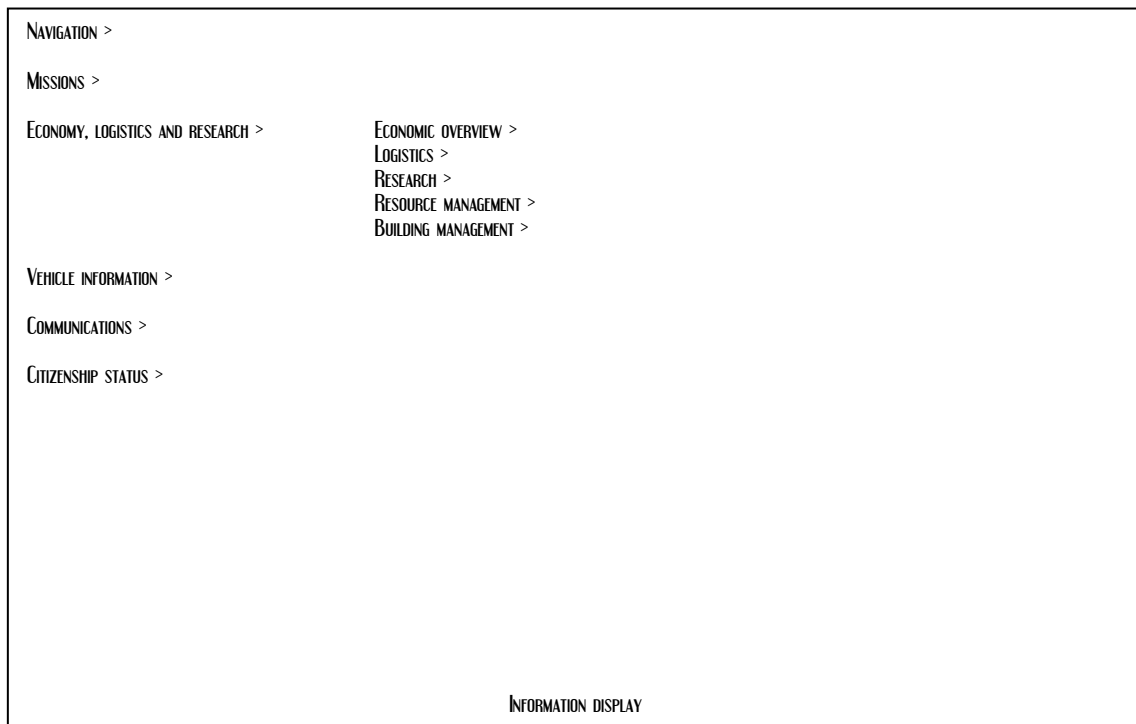
## MISSIONS > MISSION INFORMATION

The mission information shows all the missions currently available. The selected is the one that will be displayed in the information display when in the vehicle view. The mission information menu shows information about the selected mission.

- Mission type
- Mission objective
- Estimated mission risk
- Estimated number of enemies
- Mission reward

## ECONOMY, LOGISTICS AND RESEARCH

The economy, logistics and research menu is where the player gets information about and manages his economics, logistics and researches.



### **ECONOMY, LOGISTICS AND RESEARCH > ECONOMIC OVERVIEW**

The economic overview menu displays the following.

- Profits
- Expenses
- Total profit or expense per day
- Total money
- Total capital

### **ECONOMY, LOGISTICS AND RESEARCH > LOGISTICS**

The logistics menu contains information about hired teamsters. In this menu, the player can manage or stop the logistics of different teamsters. The status of every truck is shown in the logistics menu.

### **ECONOMY, LOGISTICS AND RESEARCH > RESEARCH**

The research menu displays the current research status. In this menu, the player can pay for new researches.

### **ECONOMY, LOGISTICS AND RESEARCH > RESOURCE MANAGEMENT**

The resource management menu displays all resources the player has in stock in extraction and refinery buildings. The player can sell resources in the resource management menu.

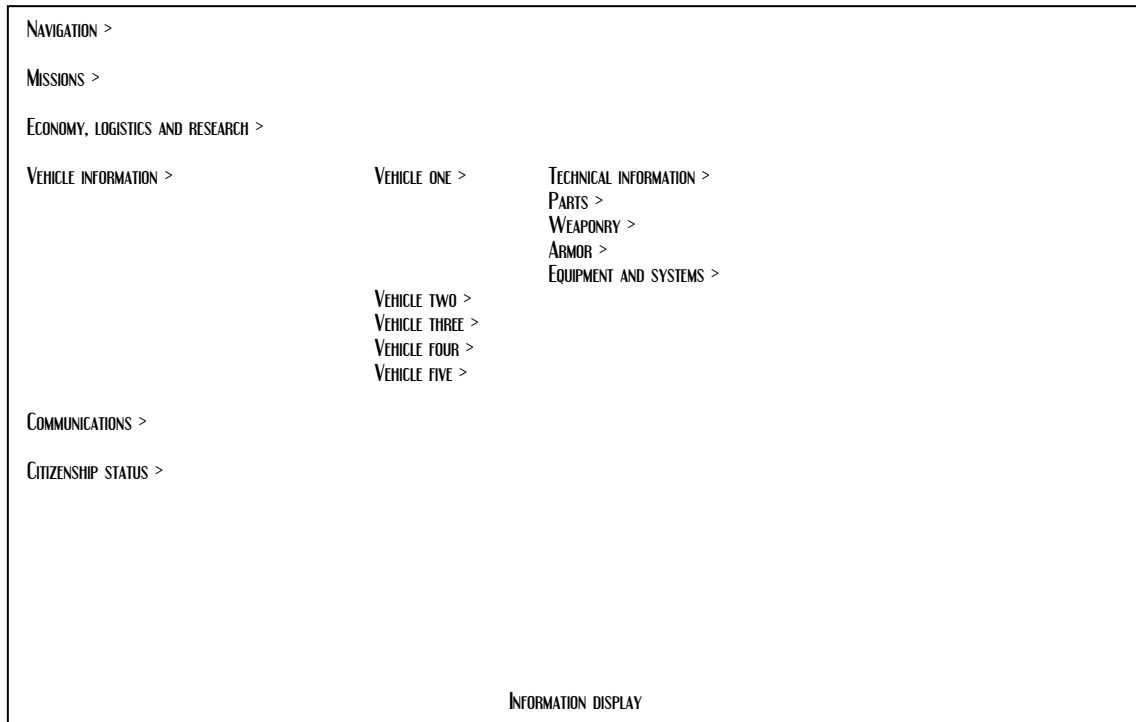
### **ECONOMY, LOGISTICS AND RESEARCH > BUILDING MANAGEMENT**

The building management menu displays all buildings owned by the player as well as information about them. The player can sell buildings in the building management menu.



## VEHICLE INFORMATION

The vehicle information menu displays all vehicles that the player owns.



### VEHICLE INFORMATION > TECHNICAL INFORMATION

The technical information menu displays the following information about the selected vehicle.

- Top speed
- Fuel capacity
- Fuel consumption
- Weight
- Weight limit

### VEHICLE INFORMATION > PARTS

The parts menu displays the parts mounted on the selected vehicle as well as information about them. It also shows the status of the parts.

### VEHICLE INFORMATION > WEAPONRY

The weaponry menu displays the weapons mounted on the selected vehicle as well as information about them. It also shows the status of the weapons.

### VEHICLE INFORMATION > ARMOR

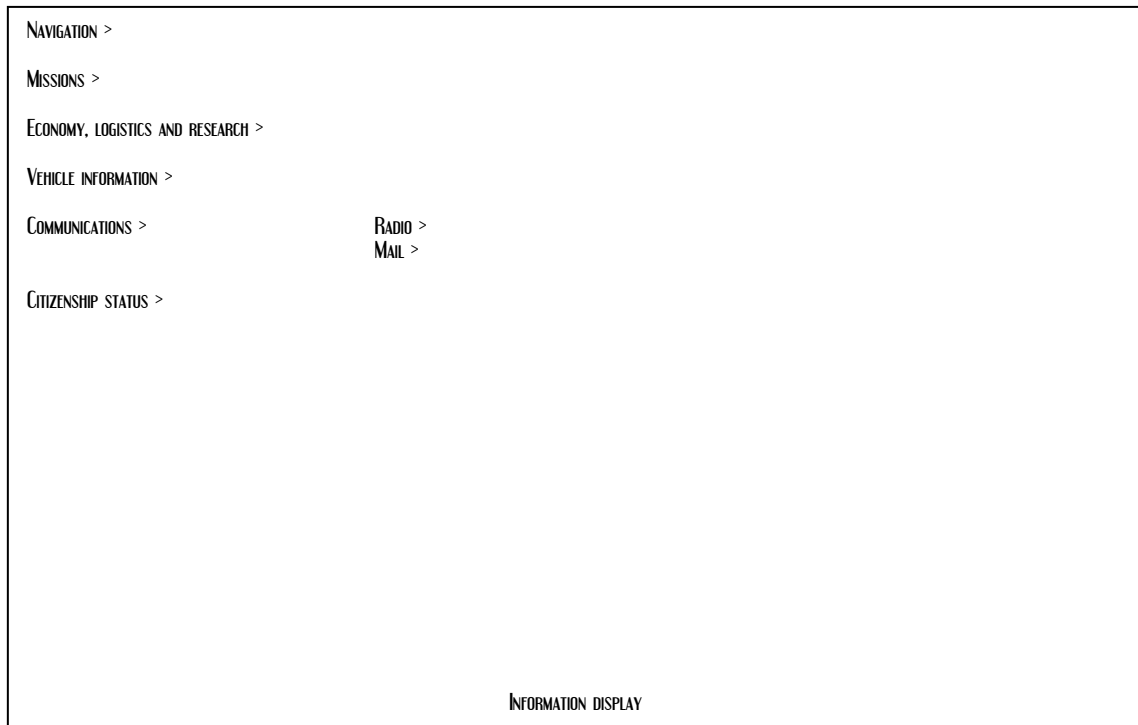
The armor menu displays the armors fitted on the selected vehicle as well as information about them. It also shows the status of the different armors.

### VEHICLE INFORMATION > EQUIPMENT AND SYSTEMS

The equipment and systems menu displays the equipment and systems on the selected vehicle as well as information about them.

## COMMUNICATIONS

The player is able to communicate with other characters through the strategic HUD.



### COMMUNICATIONS > RADIO

The player is contacted by other characters over the radio through which the player gets information. He can contact allies and commissioners as well, using the radio. Each character has an individual frequency. The player can do the following with the radio.

- Acquire mission information
- Request towing
- Request city artillery bombardment

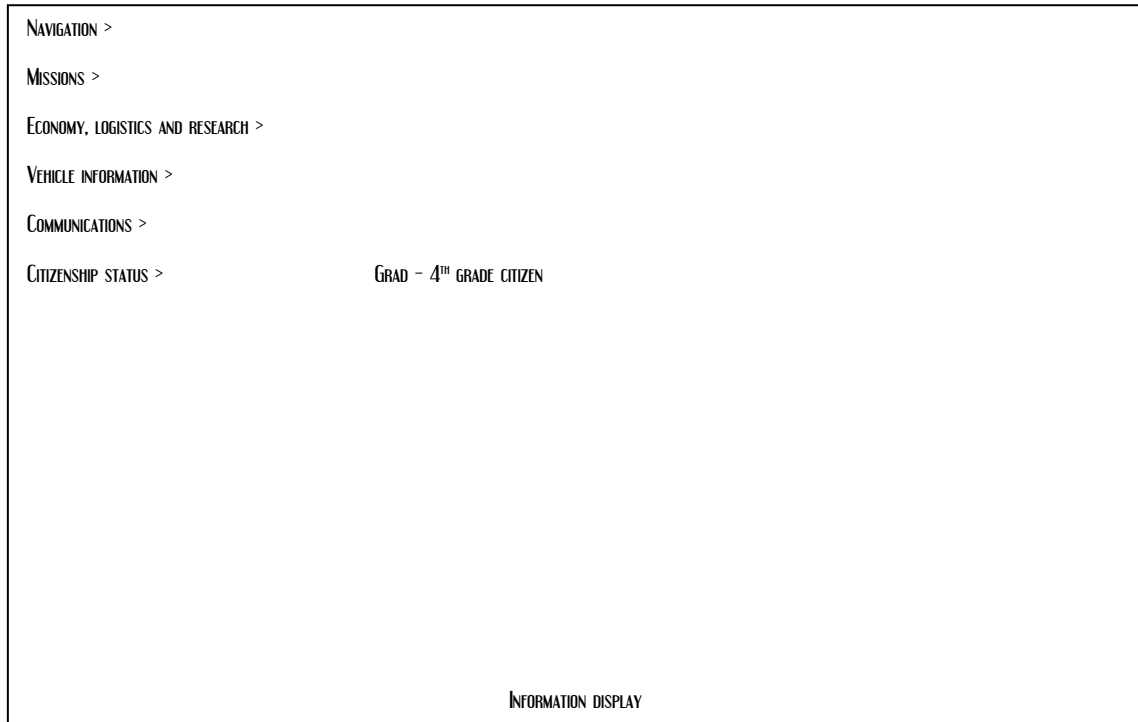
### COMMUNICATIONS > MAIL

The player gets information through mail. The information can be regarding missions, the location of mines, oil fields or outlaws among others. Mails can be attached with photos and maps. The player can only receive mails, not send. The player can do the following with obtained mails.

- Confirm mission (if the mail is about a mission)
- Delete mail

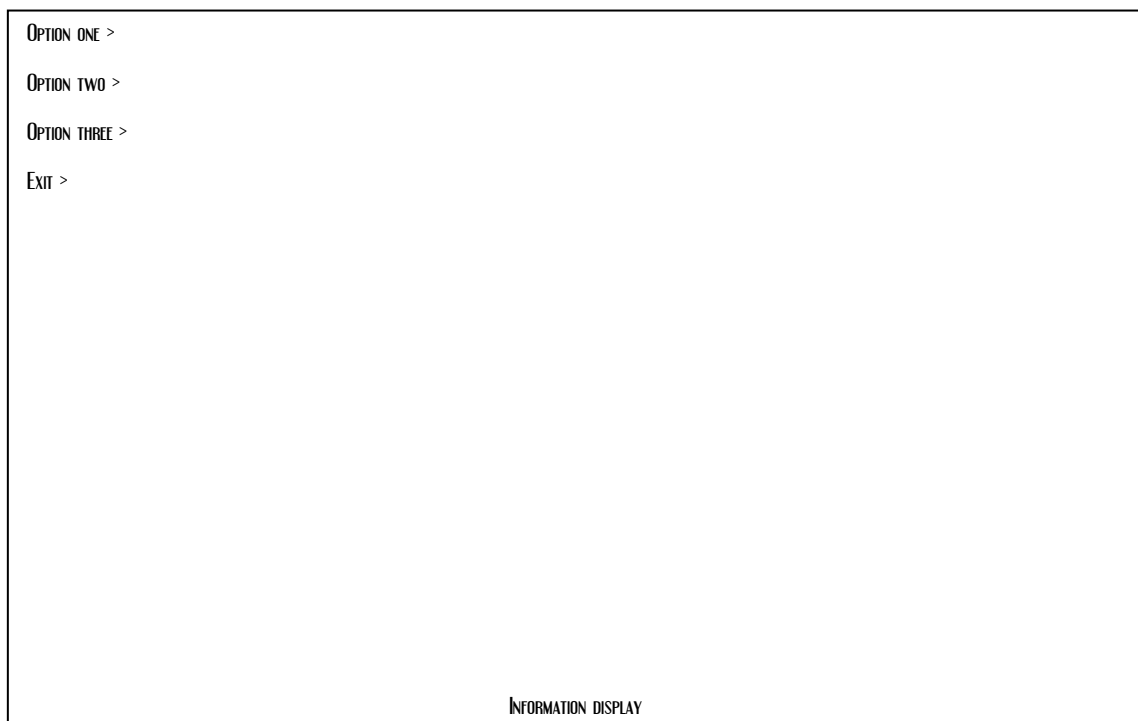
### CITIZENSHIP STATUS

The citizenship status menu lists the cities of which the player is a citizen and the status of the citizenships.



### 19.3 BUILDING HUD

When the player has entered a building, the HUD for that building is automatically shown. The building HUD displays what the player can do in or with the building.



## 20 MISSIONS

The player can obtain missions by entering a city forum or city capitol. He can also get mission offers over the radio or by mail from other characters. The player has to perform primary missions to complete the game but can choose to accept or decline any secondary mission offers.

### 20.1 MISSION CATEGORY

#### PRIMARY MISSIONS

Primary missions advance the story. When the player has completed all primary missions, the game is cleared.

#### SECONDARY MISSIONS

Secondary missions are done to earn money or neutralize an area from enemies for example and do not affect the story.

### 20.2 MISSION TYPE

#### TRAINING

Training missions involve the basics of navigation and combat and does not involve any danger.

#### ASSAULT

Assault missions involve one or more vehicles or buildings that are to be eliminated.

#### LIBERATE

Liberation missions involve one or more oil pumps, quarries, cities or territories that are to be freed from the forces in control.

#### DEFEND

Defend missions involve one or more static vehicles or buildings that are to be protected from one or more assaults.

#### ESCORT

Escort missions involve one or more moving vehicles that are to be protected from one or more assaults.

#### RECONNAISSANCE

Reconnaissance missions involve a location that is to be scouted.

### 20.3 MISSION GRADE

There are five mission grades available in the different city sectors. The differences between missions with different grades are the number of opposing enemy vehicles, their level of difficulty and the size of the reward.

## **20.4 ESTIMATED MISSION RISK**

The estimated risk of a mission is calculated from the current vehicle the player is using and the number and level of difficulty of the enemies. There are three different grades of mission risks, namely low, medium and high.

## **20.5 ESTIMATED NUMBER OF ENEMIES**

Most missions have an estimation of the number of enemies the player has to fight. The estimated number of enemies is accurate most of the time but may occasionally show a wrong estimation regarding the number of enemies.

## **20.6 MISSION REWARD**

The mission reward is the amount of money the player gets when a mission is completed. To obtain the reward the player need to get to the city and building in which the mission was acquired after the mission is finished. The size of the reward is determined by the estimated mission risk and number of enemies eliminated.

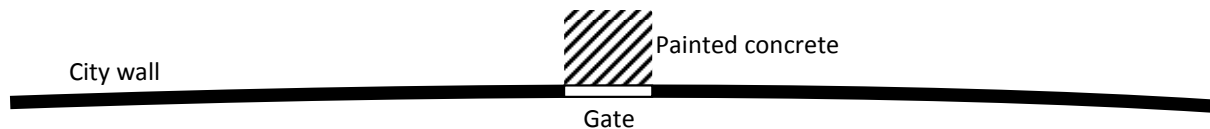
# GAME ELEMENTS

## 21 CITIES

Most people have gathered in cities in search for protection from the harsh and barren landscape of the islands.

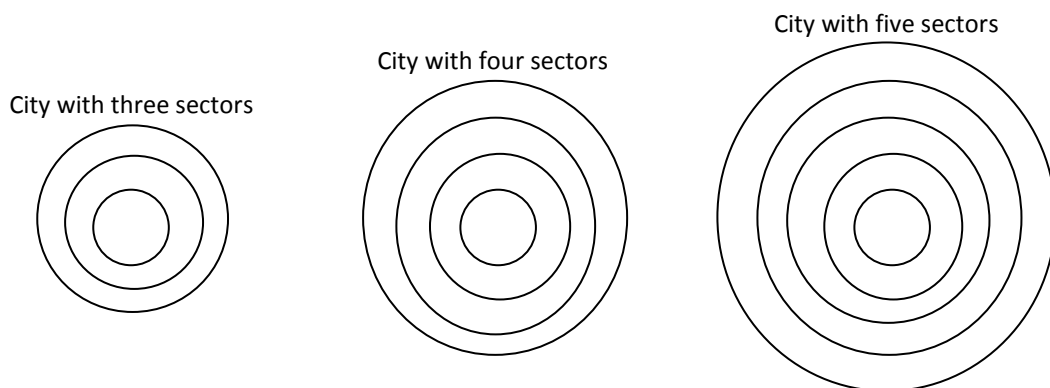
### 21.1 ENTER AND EXIT CITIES

To enter or exit a city the player has to place the vehicle on the painted concrete block in front of a gate and sound the horn of the vehicle. The gate will not open if there are enemies within a certain range of it.



### 21.2 CITY SECTORS

Each city is divided into sectors divided by circular walls. There are three different sizes of cities with either three, four or five sectors. The further in towards the city centre the player's buildings are the better results and abilities they provide. The further in towards the centre of a city, the better weapons and vehicles are available for purchase in city buildings.



City sector	Building cost	Selling price	Building maintenance cost	Garage parking spots
1	100%	100%	100%	1
2	200%	200%	200%	2
3	300%	300%	300%	3
4	400%	400%	400%	4
5	500%	500%	500%	5

City sector	Refining efficiency	Taxation	City depot vehicles	City depot parts
1	N/A	100%	1 <sup>st</sup> grade	1 <sup>st</sup> grade

2	N/A	200%	2 <sup>nd</sup> grade	2 <sup>nd</sup> grade
3	100%	300%	3 <sup>rd</sup> grade	3 <sup>rd</sup> grade
4	200%	400%	4 <sup>th</sup> grade	4 <sup>th</sup> grade
5	300%	500%	5 <sup>th</sup> grade	5 <sup>th</sup> grade

City sector	City depot armors	City forum missions	City forum races	City arsenal weapons
1	1 <sup>st</sup> grade	1 <sup>st</sup> grade	1 <sup>st</sup> grade	1 <sup>st</sup> grade
2	2 <sup>nd</sup> grade	2 <sup>nd</sup> grade	2 <sup>nd</sup> grade	2 <sup>nd</sup> grade
3	3 <sup>rd</sup> grade	3 <sup>rd</sup> grade	3 <sup>rd</sup> grade	3 <sup>rd</sup> grade
4	4 <sup>th</sup> grade	4 <sup>th</sup> grade	4 <sup>th</sup> grade	4 <sup>th</sup> grade
5	5 <sup>th</sup> grade	5 <sup>th</sup> grade	5 <sup>th</sup> grade	5 <sup>th</sup> grade

City sector	City arsenal equipment and systems	City capitol missions	Defending vehicles
1	1 <sup>st</sup> grade	1 <sup>st</sup> grade	3
2	2 <sup>nd</sup> grade	2 <sup>nd</sup> grade	5
3	3 <sup>rd</sup> grade	3 <sup>rd</sup> grade	7
4	4 <sup>th</sup> grade	4 <sup>th</sup> grade	10
5	5 <sup>th</sup> grade	5 <sup>th</sup> grade	13

## 21.3 CITY SECTOR GATES

There is one gate in every wall of a city. The number of open or closed gates in a city depends on the current citizenship the player has in the city. All gates of the sectors that are available for the player are open when he is in the city. All gates of the sectors that are not available for the player are closed.

## 21.4 CITY TAXATIONS

The player pays tax to every city in which he is a citizen. The taxation increases with the grade of citizenship. Taxes are paid automatically.

## 21.5 CITY DEFENSES

### DEFENDING VEHICLES

Every city has a number of defending vehicles fighting for it.

### WEAPON DEFENSES

Cities can have weapon defenses in the form of pillboxes and missile turrets.



## 21.6 CITY ALIGNMENT

There are three alignments that cities can have towards the player and other cities.

### ALLIED CITIES

Allied cities offer access for the player and the ability to obtain highest citizenship in them.

### NEUTRAL CITIES

Neutral cities offer access for the player and the ability to obtain a lower citizenship, which gives the player access to the outer sectors. The player can get a citizenship of the 1<sup>st</sup> grade in cities with three sectors, 2<sup>nd</sup> grade in cities with four sectors and 3<sup>rd</sup> grade in cities with five sectors.

### ENEMY CITIES

Enemy cities do not offer access for the player. If the player comes to close, the cities' defending vehicles and weapon defenses will attack him.

## 22 TERRITORIES

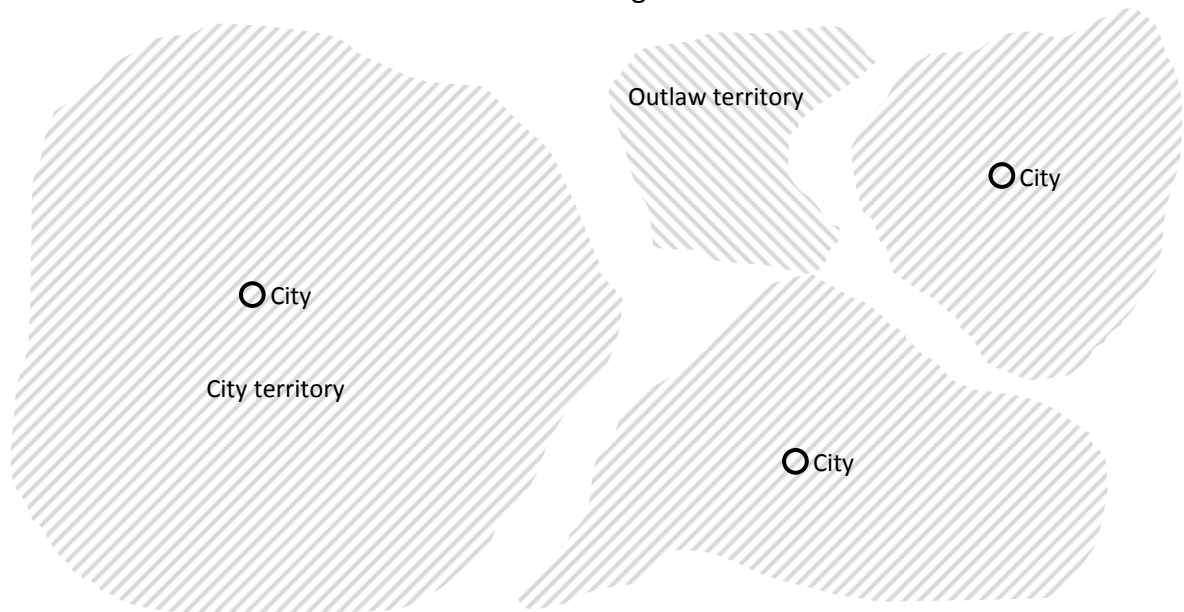
Most of the world is divided into territories controlled by the different cities and outlaw factions.

### CITY TERRITORIES

Each city is in control over an area of the game world.

### OUTLAW TERRITORIES

Some areas are under control by outlaw factions. If passing through a territory controlled by an outlaw faction there is a high risk of being attacked. There is also a high risk of trucks that are hired, by the player, of being attacked or blocked if traveling through outlaw faction controlled territory. By eliminating all outlaw faction members of higher rank in a territory the area becomes neutral and safe to move through.



### TERRITORY RISK

Depending on in which territory the player is or teamsters hired by him, the risk of being attacked by other citizens or outlaws vary.

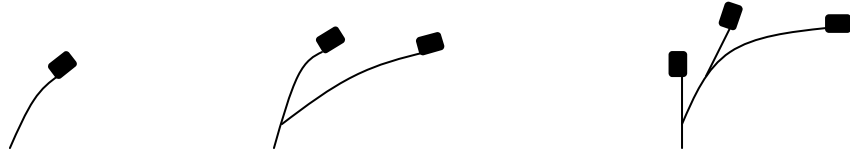
<b>Territory controllers</b>	<b>Risk of attack</b>
Allied city	Low
Neutral city	Medium
Enemy city	High
Outlaw faction	High

## 23 OIL FIELDS

Oil fields are the only source for crude oil.

### OIL PUMPS

There can be one, two or three oil pumps at an oilfield. They can be either occupied or unoccupied. All roads leading from oil pumps at an oil field are linked into one single road that is used by teamsters that are hired by the player.

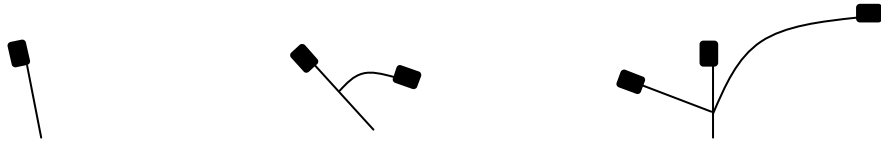


## 24MINES

Mines are the only sources for iron ore.

### QUARRIES

There can be one, two or three quarries at an oilfield. They can be either occupied or unoccupied. All roads leading from quarries at a mine are linked into one single road that is used by teamsters that is hired by the player.



## 25 CITY BUILDINGS

City buildings are not owned by the player but by the city itself or by other citizens of it.

<b>Building</b>	<b>Provides and enables</b>	<b>Quantity per city</b>	<b>City sector location</b>
City capitol	Missions/rewards City donations (city weapon defenses)	1	3, 4 or 5 (always the inner most)
City forum	Missions/rewards Teamsters (hire) Races	3-5	1-5
City depot	Vehicles (buy/sell/repair) Parts (buy/sell/repair) Armor (buy/sell/repair)	3-5	1-5
City arsenal	Weapons (buy/sell/repair) Ammunition (buy/sell) Equipment and systems(buy/sell)	3-5	1-5
City refinery	Fuel (buy/sell)	3-5	1-5
City pillbox	City weapon defense	0-12/15/18	1-5 + outside city
City missile turret	City weapon defense	0-12/15/18	1-5 + outside city
City artillery battery	City artillery bombardment	0/1	5

## 26 PLAYER BUILDINGS

### 26.1 PLAYER BUILDINGS IN CITIES

<b>Building</b>	<b>Provides and enables</b>	<b>Quantity per city</b>	<b>City sector location</b>
Garage	Store vehicles (1-5) Paint vehicles	1	1-5
Refinery	Fuel (refine/fill/sell)	1/2/3	1-5
Munitions store	Ammunition (refine/load/sell)	1/2/3	1-5

### 26.2 PLAYER BUILDINGS ON OIL FIELDS AND MINES

<b>Building</b>	<b>Provides and enables</b>	<b>Quantity per oil field or mine</b>
Oil pump	Crude oil (extract/sell)	1/2/3
Quarry	Iron ore (extract/sell)	1/2/3
Pillbox	Oil pump/quarry weapon defense	1/2/3
Missile turret	Oil pump/quarry weapon defense	1/2/3

### 26.3 BUILDING MAINTENANCE

Every building that the player owns has maintenance cost. Maintenance for buildings inside a city increases the further towards the centre of the city they are.

### 26.4 IF DESTROYED

If a building owned by the player is destroyed the resources currently stored in it are destroyed as well.

## 27 VEHICLES

### 27.1 VEHICLE CLASSES

There are six classes of vehicles.

- Motorcycles
- All Terrain Vehicles “Quad”
- Desert Patrol Vehicles “Buggy”
- Supercars
- High Mobility Multipurpose Wheeled Vehicles “Humvee”
- Trucks

### VEHICLE SUBCLASSES

Every vehicle class has a number of subclasses with different characteristics.

- Light
- Medium
- Heavy

### 27.2 VEHICLE CHARACTERISTICS AND FEATURES

#### TOP SPEED

The top speed of a vehicle is the fastest speed possible to reach on flat and horizontal ground without the use of any nitrous oxide.

#### ACCELERATION

The acceleration of a vehicle determines how fast a vehicle accelerates.

#### BRAKING

Braking determines the efficiency of the brakes of a vehicle.

#### WEAPON SLOTS

Every vehicle has a certain number of slots that can be fitted with weapons.

#### ARMOR SLOTS

Every vehicle has a certain number of slots that can be fitted with different types of armor.

#### EQUIPMENT AND SYSTEM SLOTS

Every vehicle has a certain number of slots that can be fitted with equipment or systems.

#### MANEUVERABILITY

The maneuverability determines the turning speed and characteristics of the vehicle.

#### CLIMBING CAPABILITY

The climbing capability of a vehicle determines the ground angle that it can drive upward.

## **RANGE**

The range of a vehicle determines how far it can drive before needing to be refueled.

## **DURABILITY**

The durability determines the basic toughness of a vehicle with no additional armor included.

## **STABILITY**

The stability of a vehicle determines its dampening effect towards rough ground.

## **WEIGHT LIMIT**

The weight limit determines the amount of things that can be mounted on the vehicle.



## 28PARTS

Depending on the vehicle currently used by the player, different parts are available for purchase. The different parts are the following.

- Engine
- Wheels
- Brakes
- Suspension
- Fuel tank

### PARTS CONDITION

The condition of the parts affects their functionality.

<b>Parts condition</b>	<b>Functionality</b>
Good	100%
Lightly damage	80%
Medium damage	50%
Heavily damage	20%
Severely damage	5%

## 29 ARMOR

Depending on the vehicle currently used by the player, different armors are available for purchase. The different types of armor are the following.

- Body
- Chassis
- Roll cage
- Plating
- Glass

### ARMORS CONDITION

The condition of armors affects their functionality.

<b>Armors condition</b>	<b>Functionality</b>
Good	100%
Lightly damage	80%
Medium damage	50%
Heavily damage	20%
Severely damage	5%

## 30 WEAPONS

Depending on the vehicle currently used by the player, different weapons are available for purchase.

### WEAPONS CONDITION

The condition of weapons affects their functionality.

Weapons condition	Functionality
Good	100%
Lightly damage	100%
Medium damage	100%
Heavily damage	100%
Severely damage	0%

### 30.1 WEAPONS CHARACTERISTICS AND FEATURES

#### GRADE

There are five grades of weapons. The different grades of weapons are available in the different city sectors.

#### PRICE

The price is what the player needs to pay for a weapon in a city arsenal.

#### EFFECTIVE RANGE

The effective range is the range at which a weapon inflicts damage. If firing against a target beyond a weapons effective range, the target will not be harmed.

#### POWER

The power of a weapon is the damage, which it inflicts per round.

#### AMMUNITION TYPE

Various ammunition types are used by different weapons. The different ammunition types are better or worse against different types of targets.

- Kinetic projectiles (solid body)
- Explosive projectiles (solid body with explosive charge)
- Rocket propelled kinetic projectiles (solid body with propulsion system)
- Rocket propelled explosive projectiles (explosive charge with propulsion system)
- Electrical charge

#### AMMUNITION

Ammunitions are varying in length and width. The dimensions of ammunition are measured in millimeters.

### **AMMUNITION PRICE**

The ammunition price is what the player needs to pay for a single round of ammunition.

### **RATE OF FIRE**

The rate of fire is measured in rounds fired per minute.

### **WEIGHT**

A mounted weapon's weight adds to the vehicle's total weight.

### **MAGAZINE CAPACITY**

The magazine capacity determines how many rounds a weapon can contain in each magazine clip.

### **RELOAD SPEED**

The reload speed determines how long time it takes a weapon to reload a round or magazine.

### **ACCURACY**

The accuracy determines the precision of a weapon. The better the accuracy of a weapon, the less the rounds spread over distance.

### **BLAST AREA**

The blast area determines the area, in which a round of a weapon is inflicting damage.

### **VEHICLE DEMAND**

Some weapons can only be mounted on certain vehicles.

### **EQUIPMENT OR SYSTEMS DEMAND**

Different weapons demand certain equipment or systems to be installed in the vehicle.

### **WEATHER AFFECTS**

Some weapons are affected by different types of weather conditions.

## **30.2 STATIC WEAPONS**

- Machine guns
- Vulcan cannons
- Cannons
- Coil gun
- Magnetic implosion charge
- Tesla coil

## **30.3 TURRET WEAPONS**

- Machine gun turrets
- Vulcan cannon turrets
- Cannon turrets

### **30.4 DROP WEAPONS**

- Spike mats
- Anti vehicle mines

### **30.5 ROCKETS AND MISSILES**

- Anti armor rockets
- Heat seeking missiles
- Radar guided missiles
- Wire guided missiles

### **30.6 ARTILLERY WEAPONS**

- Artillery cannons
- Katjusha rockets

## 31 EQUIPMENT AND SYSTEMS

Equipments and systems cannot be damaged.

### EXTRA LIGHTS

Extra lights enhance the player's field of vision when it is dark. Depending on the vehicle, the player can add lights on different spots on it and with different strengths.

### FLARES

Flares enhance the player's field of vision when it is dark. Flares are bought in packs of different sizes.

### EXTRA FUEL TANK

Extra fuel tanks enhance the vehicle's total fuel capacity. There are different sizes of extra fuel tanks that can be mounted on different vehicles.

### RADAR ENHANCER

Radar enhancers expand the range of the vehicles radar. There are different radar enhancers with different ranges.

### NITROUS OXIDE

Nitrous oxide allows the player to boost the speed of the vehicle for a limited time. Nitrous oxide can be bought in tubes in different sizes.

### RADAR JAMMER

Radar jammers prevent enemies to see the player on their radars. There are different radar jammers with different ranges.

### MINE DETECTOR

Mine detectors allow the player to see mines, which are shown on the radar display. Different mine detectors have different ranges.

### MINE DESTROYER

Mine destroyers detonate any mine within its effective range. There are different mine destroyers with different ranges.

### SMOKE SCREEN

Smoke screens emit a thick screen of smoke surrounding the vehicle. Different smoke screens vary in the time that the smoke remains.

### MAGNETIC SHIELD

A magnetic shield produces a protective sphere around the vehicle that reflects metal projectiles.

## **ELECTROMAGNETIC PULSE**

Electromagnetic pulses disable all vehicles and buildings within its effective range for a limited time. There are different electromagnetic pulses with different ranges.

## **GLIDER WINGS**

Glider wings can be attached to lighter vehicles. They allow the vehicle to glide and hence fly further.

## 32 CHARACTERS

All except outlaw characters are citizens of one or more cities.

### 32.1 CHARACTERS ALIGNMENT TOWARDS PLAYER

Characters will have the same alignment towards the player as the city, in which they are a citizen, has. There are three alignments that characters can have towards the player and other characters.

#### ALLIED CHARACTERS

Allies will help the player if he is attacked by a vehicle that is an enemy to both the player and the allied character.

#### NEUTRAL CHARACTERS

Neutrals help the player in a battle if the character fighting the player is an enemy to them. If the character fighting the player is an allied with them though, they will attack the player.

#### ENEMY CHARACTERS

Enemies attack the player when getting a chance.

## 32.2 CHARACTER ROLES

#### COMMISSIONER

Commissioners offer missions to the player.

#### PARTNER

Partners help the player in some missions.

#### VIP

VIPs are characters that have a crucial part in a mission.

#### ASSASSIN

Assassins are enemy characters that are hunting the player with the goal to kill him.

## 32.3 OUTLAW CHARACTER RANKS

#### DIFFICULTY

The higher rank an outlaw has the more difficult the person is in one on one combat.

#### GUARDS

The higher rank an outlaw has the more guards are hired for protection. Guards are always traveling with the person they are protecting and will fight until death to protect that person.



## REWARD

The higher the rank of the outlaw that the player eliminates the higher the reward is.

<b>Rank</b>	<b>Difficulty</b>	<b>Guards</b>	<b>Reward</b>
Commander	10	7	100000
General	7	5	75000
Major	5	3	50000
Captain	3	0	10000
Private	1	0	0

## 33 RESOURCES

### MONEY

Money is used by the player when buying, selling, trading and repairing.

### CRUDE OIL

Crude oil can be sold or refined by the player.

### FUEL

Fuel can be bought, sold or used by the player.

### IRON ORE

Iron ore can be sold or refined by the player.

### AMMUNITION

Ammunition can be bought, sold or used by the player.

Resource	Source	Relative value
Fuel	City refinery/Refinery	5
Ammunition	City arsenal/Munitions store	5
Crude oil	Oil pump	3
Iron ore	Quarry	3
Money	Mission rewards Selling/trading Race prizes Eliminating outlaws	1

# GAME WORLD

## 34 WORLD PHYSICS

### TIME

The game is played in real time. Time will continuously go forward at all times when in the game world. The player has however the ability to speed up time with the use of time acceleration. Time will only pause when activating the pause menu.

### DAY CYCLE

The game cycles between day and night, as the sun and moon travels across the sky.

### GRAVITATION

The gravitation of the game world is similar to that of the real world.

### SCALE

The game world stretches over an area of approximately 900 square kilometers.

### WEATHER

The weather changes throughout the game. The weather affects the player and some of his weapons, equipment and systems in different ways. The weather is determined out of the combination of the three factors clouds, rain and wind.

- Clouds – determines the amount of clouds in the sky. It differs from clear sky with no clouds to a completely filled sky that blocks the light of the sun or moon almost completely.
- Rain – determines the amount of rain falling. It differs from no rainfall to very heavy rainfall.
- Wind – determines the speed of the wind. It differs from calm to storm force wind.

## 35 WORLD ENVIRONMENT

### DESERTS

The major part of the game world is made out of deserts. The deserts mostly consist of sand with scattered rocks of different sizes. The deserts' topography is quite flat and peaks at a couple of meters with dunes.

### WOODLANDS AND TREES

There are a few woodlands in the world as well as some scattered trees in the deserts.

### BOULDERS

There are several larger boulders scattered throughout the world.

### MOUNTAINS

Some mountains are accessible for the player to drive up on while some are not. Some mountains make up extensive mountain ranges.

### CHASMS

All chasms have at least one way in and out of them. Some chasms have crossings over them.

### ROCK PILLARS

There are several rock pillars throughout the world.

### MESAS AND PLATEAUS

Some mesas and plateaus are accessible for the player to get up on while some are not.

### LAKES

There are a few water filled lakes throughout the world.

### OCEAN

The islands are surrounded by the ocean.

### ROADS

The roads are made out of asphalt and are two lanes wide.

### HIGHWAYS

The highways are made out of asphalt and are four lanes wide. Highways are lit up at night by streetlights.

### SIGNS

There are several kinds of signs along the roads and highways.

- Name signs (roads, cities, bridges and tunnels)
- Speed limit

- Distance signs (to cities, oil fields, mines, bridges, tunnels and so on)

## **BRIDGES**

There are a few bridges between some islands and over some greater chasms. It has two or four lanes depending on the type of road that connects to the bridge.

## **TUNNELS**

There are a few tunnels running through some mountains. It has two or four lanes depending on the type of road that connects to the tunnel.

## **WALLS**

There are a few man made walls throughout the world with different lengths.



# Reflexiv rapport av examensarbete för spelkonceptet "Grad"

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2007-06-11

Reflexiv rapport av examensarbete i medier: datorspelsutveckling, 20p C-nivå  
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## Abstract

Rapporten är en reflexiv text som behandlar det verk som skapats och arbete som utförts under examensarbetet i medier, våren 2007 på Högskolan i Skövde. Verket utgörs av ett designdokument som behandlar spelkonceptet "Grad" som framarbetats under examensarbetet. Inledningsvis tas i texten upp de inspirationskällor och idéer som ligger till grund för arbetet. Vidare definieras den problemställning samt de mål som funnits under arbetet. Dessutom tas för arbetet viktiga begrepp upp och definieras. Därefter följer ett kapitel som tar upp de problem som behandlats under arbetet. Följande kapitel tar upp designdokument för spel och definierar dess egenskaper. Vidare tas den arbetsmetod som använts under arbetet upp. Slutligen sammanfattas slutsatsen av arbetet i ett kapitel om resultat och diskussion.

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# 1 Inledning

Denna rapport är en reflexiv text som behandlar det spelkoncept jag arbetat med under examensarbetet. Jag har under en tid funderat runt en spelidé och tog tillfället i akt att arbeta på konceptet för det i samband med examensarbete. Spelkonceptet är ett spel som innefattar tydliga egenskaper från två olika genrer. Genom arbetet försöker jag att kombinera dessa olika egenskaper på ett bra sätt. Det slutliga verket som examensarbetet kommer att mynna ut i är ett designdokument i vilket jag sammanställer informationen gällande spelkonceptet.

Till att börja med tar jag i denna rapport upp målet jag har med examensarbetet samt det problem jag försöker lösa med hjälp av det. Vidare tar jag upp och definierar de olika termer jag använder mig av i arbetet och beskriver dem utifrån mina egna erfarenheter samt utifrån böcker författade av erkända speldesigners. De eventuella problem jag arbetat med under arbetet tas sedan upp, vilket följs av den arbetsmetod jag använt för att lösa dem. Slutligen redovisas det som arbetet lett fram till i delen om resultat och diskussion.

## 1.1 Bakgrund

Det spel som inspirerat mig mest till min spelidé är *Interstate '76* (Activision, 1998). I spelet tar man kontroll över fordon bestyckade med vapen och annan utrustning av olika slag. Spelet är baserat på en linjär kedja av uppdrag och för varje uppdrag man slutför kan man uppgradera sitt fordon med nya delar och vapen samt reparera det. Strategispelet *Company of Heroes* (THQ, 2006) är ytterligare en inspirationskälla jag haft, och då huvudsakligen det system med olika strategiska punkter spelet använder sig av. Genom att i spelet kontrollera dessa punkter får man tillgång till resurser av olika slag och behöver skydda dessa punkter mot fientliga attacker.

Då mitt spelkoncept innebär en kombination av två mycket olika genrer så har jag även granskat exempel av spel som kombinerar genrer och som jag anser är mindre lyckade för att se vad som bör undvikas eller kan förbättras. I tredjepersons actionspelet *Resident Evil 4* (Capcom, 2005) kräver spelet spelaren till att lösa ett antal pussel för att ta sig vidare. Då de ofta är mycket enkla och ibland kan bestå av enbart två element som skall sammanfogas

tycker jag att man som spelare inte får ut något av de spelmomenten utan blir endast frustrerad över att behöva utföra dem. Enligt min mening hade det varit en förbättring att antingen automatiserat dessa simpla pusselement eller gjort dem mer utmanande för spelaren att utföra. Ytterligare exempel på mindre lyckade sammanslagningar av genrer tycker jag är förstapersonsskjutarens spel (first person shooter) som inkluderar någon form av fordonssimulator utan att ge spelaren kontroll över fordonets navigering. Istället åker fordonet utefter en förutbestämd bana som spelaren inte kan påverka på något sätt vilket man enligt min mening ofta skulle vilja. Dock finns det en mängd spel som löst det genom att just ge spelaren möjligheten att styra fordonet direkt eller skifta plats i det så man kan placera sig i förarsätet och kontrollera det.

Det finns även en mängd spel som lyckats bra med kombinationer av olika genrer. Exempel på detta är spelet *Ghost Recon (2001, Ubisoft)* som kombinerar förstapersonsskjutarens spel (first person shooter) med mer strategiska element som härstammar i strategispel. I spelet har man tillgång till en strategisk karta som man kan använda sig av för att ge kommandon till andra soldater och på så sätt få mer inflytande i spelvärlden. Detta tycker jag är ett mycket bra exempel på att det går att kombinera faktorer från vitt skilda genrer i ett och samma spel och få dem att samverka på ett mycket bra sätt.

## 2 Problemställning och mål

Den problemställning jag haft under examensarbete är: Hur kan man kombinera de två genrerna "fordonsstrid" och "resurshantering", så att deras olika element samverkar på ett sömlöst sätt och spelaren upplever samtliga element som meningsfulla?

De båda genrerna som innefattar mycket skilda element och egenskaper definieras senare i texten med hjälp av olika källor och mina egna erfarenheter.

Det första målet jag har med detta examensarbete är att kombinera de två genrerna "fordonsstrid" samt "resurshantering" på ett bra sätt genom att arbeta fram ett spelkoncept. Genom att identifiera några av de olika genrernas typiska element och kombinera dem på ett sätt som passa för båda spelstilar hoppas jag kunna skapa ett intressant spelkoncept som innehåller tydliga influenser från båda genrerna.

Andrew Rollings och Ernest Adams tar i boken *Andrew Rollings and Ernest Adams on Game Design (2003)* upp ett antal olika genrer och definierar vanligt förekommande mönster av utmaningar hos dem. De menar att "Although it can add flavor and interest to a game, crossing genres is a risky move. Rather than appealing to two groups, you might end up appealing to neither." (Rollings & Adams, 2003, s. 43) Alltså behöver man få alla utmaningar som ingår i kombinationen att samverka på ett bra sätt så att samtliga är tilltalande för spelaren att spela. Enligt min mening finns det ett antal exempel på spel med misslyckade genrekombinationer. I dem har det varit nödvändigt med kompromisser av exempelvis kontroll, kamerahantering, tydligt interface med mera för att man skulle kunna kombinera olika typer av utmaningar i ett och samma spel. I de flesta fall är uppdelningen mellan genrerna mycket ojämn då det finns en dominant huvudgenre som spelets design fokuserats på medan den eller de andra endast har en liten del i spelets hela upplevelse. Detta tror jag kan vara orsaken till att de inte fungerar helt problemfritt tillsammans då man haft fokus på, och till största del arbetat med den större genrens egenskaper medan designarbetet varit mycket mindre med den eller de mindre genrerna. Man ser även ibland olika typer av minispel i spel som är av en annan typ av genre än spelets huvudsakliga. Då dessa minispel

inte har någon essentiell påverkan på det huvudsakliga spelet så kan man ibland märka att de inte arbetats igenom i lika hög grad som huvudgenren. Jag tror att man kan få en betydligt bättre kombination om man redan från början inriktar sig på att spelet skall innehålla fler genrer än en och att de får betydande delar i spelet samt att de påverkar varandra i hög grad. I fallet med mitt koncept är de båda ingående genrerna mycket viktiga och helt nödvändiga för spelet i helhet eftersom man som spelare inte klarar av det utan att behärska båda delar. En stor del av målet är att samtliga delar i spelet skall vara meningsfulla för spelaren att utföra. Spelaren skall tycka att det han eller hon gör har betydelse för hur det går i spelet samt se resultat av sina handlingar.

Mitt andra mål är att sammanställa ett designdokument som väl beskriver det spelkoncept jag arbetar fram under kursen. Målsättningen med designdokumentet är att det skall vara lättnavigerat, lättläst, lättförståeligt samt behandla de viktigaste delar som ett designdokument bör innehålla. Jag strävar efter ett slutresultat i form av ett spelkoncept med hög kvalitet som skulle kunna intressera eventuella förläggare och/eller finansiärer.

## 3 Begreppsdefinitioner

I detta kapitel tar jag upp och definierar begreppen genre, genren fordonsstrid samt genren resurshantering. Jag utgår ifrån ett antal olika källor samt mina egna erfarenheter och synpunkter då jag definierar innebörden av begreppen jag använder mig av under arbetet.

### 3.1 Genre

Genre definieras enligt den elektroniska upplagan av *Nationalencyklopedin* (2007-04-25) som en "... typ av konstnärlig framställning med vissa gemensamma stildrag eller innehållsliga faktorer."

Med genre menas i denna reflexiva rapport de stildrag och faktorer som ett dator- eller tv-spel består av. Dessa stildrag och faktorer innefattar allt från gameplayelement, så som kontroll och tempo, till grafiska element, så som perspektiv och interface. Spel inom samma genre kan dock variera mycket på flera punkter men innefattar alltid ett antal för genren grundläggande faktorer. Benämningarna på samma typ av genre kan också skilja lite från olika källor men oftast är namnen bra beskrivande av vilken typ av spel det handlar om.

### 3.2 Genren fordonsstrid

Andrew Rollings och Ernest Adams (2003) identifierar de två genrerna "Action games" samt "Vehicle simulation". De definierar actionspel som en genre vars nyckelutmaningar är "... reaction time and hand-eye coordination under pressure." (Rollings & Adams, 2003, s. 289) Ytterligare tar de upp ett flertal element som de menar många spel tillhörande actiongenren innehar. Exempel på dessa element är liv, noggrann styrning, timing och skjutning med mera.

Ytterligare identifierar Rollings och Adams fordonssimulator som en genre. De menar även att markanden för fordonssimulatorer är indelad mellan purister och vardagliga spelare. Medan purister kräver extremt verklighetstroga och detaljerade simulatorer har detaljerna inte lika stor betydelse för de vardagliga spelarna, utan de spelar endast för att kunna flyga eller köra fordonet och eventuellt skjuta saker om det ingår i spelet. Rollings och Adams tar också upp olika perspektiv som är vanligt förekommande i fordonssimulatorer.

Förarperspektiv (Drivers view) är ett av dem och innebär att man som spelare ser vad föraren skulle ha sett från förarsätet. I denna vy ser man instrumenten på den nedre halvan av skärmen medan den övre delen representeras av vindrutan. Ytterligare en vy de tar upp är tredjepersonsperspektiv (Chase view) som innebär att man som spelare får se det fordon man styr bakifrån. I simulatorer för markfordon är ofta kameran, vid användningen av tredjepersonsperspektiv, även upphöjd över fordonet för att spelaren skall få en bättre uppfattning om hur marken ser ut framför fordonet.

I boken *Handbook of Computer Game Studies (2005)* tar Mark J. P. Wolf upp kategoriseringen av spel genom olika genrer. Han tar upp genren "Combat" som han menar "... involve two or more players, or one player and a computer-controlled player, shooting some form of projectiles at each other, and in which all players are provided with similar means for a fairly balanced fight. These games usually emphasize maneuverability and sometimes the outwitting of the opponent." (Wolf, 2005, s. 197-198) Han sammanfattar genrens grundelement som "... shoot the opponent while avoiding getting shot..."

Wolf definierar även genren "Driving" som han menar är "... based primarily on driving skills such as steering, maneuverability, speed control, and fuel conservation." (Wolf, 2005, s. 198)

På internetencyklopedin *Wikipedia (2007-02-11)* kan man läsa om genren "Vehicular combat", där den beskrivs som "... games where the primary focus of play concerns automobiles or other motor vehicles, normally armed with guns or other weaponry, attempting to destroy vehicles controlled by the CPU or by opposing players. The genre normally features a variety of different vehicles available for play, each with its own strengths, weaknesses, and special attack abilities. ... Traditionally, vehicular combat games focus on fast-paced action inside the vehicle, rarely, if ever, concerning themselves with role-playing or other elements. Games may include racing themes, but they are generally secondary to the action."

Jag har i denna del tagit upp de olika definitionerna actionspel (action games), fordonssimulator (vehicle simulation), strid (combat), körning (driving) samt fordonsstrid



(vehicular combat). Jag anser att man i stort sett kan applicera samtliga av dessa benämningar på mitt spelkoncept. Dock anser jag att benämningen simulator inte är rätt ord för spelet eftersom en simulator ofta strävar efter extrem realism då målet är att simulera verklighetens motsvarighet i digital form. Detta är inte faller för mitt spel, och då fokus ligger mer på strid så väljer jag att använda definitionen strid (combat). Och då det handlar om strid med hjälp av fordon har jag valt att använda benämningen fordonsstrid (vehicular combat) i mitt arbete vilken jag anser är den som passar bäst som beskrivning av spelet.

### **3.3 Genren resurshantering**

"Construction and management simulations" tas upp som en genre av Andrew Rollings och Ernest Adams (2003). De skriver att "Most CMSs give the player the chance to build and manage some entity... using two general sets of tools: one for building and one for managing. Building is easy, but managing is tricky..." (Rollings & Adams, 2003, s. 418) Ekonomin i ett spel är ett system av olika resurser som produceras, konsumeras samt växlas. Denna typ av genre innehåller ett antal element som styr hur den inre ekonomin fungerar i spelet. Exempel på element som Rollings och Adams tar upp är resurs, källa, förbrukning och konvertering. Det är med hjälp av dessa element bland andra som spelaren får sköta sin ekonomi i spelet.

Mark J. P. Wolf (2005) skriver om "Management simulation", där han menar att "... players must balance the use of limited resources to build or expand some kind of community, institution, or empire..." (Wolf, 2005, s. 199) Han skriver dessutom att man som spelare samtidigt ställs inför olika inre samt yttre hot i form av kriminalitet eller naturkatastrofer.

Internetencyklopedin *Wikipedia* (2007-02-11) beskriver genren "Economic simulation games" och menar att denna genre principiellt alltid är strategi spel och aldrig krigs spel. Vidare skrivs att "In economic simulator games, players seldom interact with units (like subjects, individuals or vehicles) in the game, but rather lay or determine the foundations for their situation. Thus, all effects on the populace will be indirect, similar to god games."

Då samtliga av de ovan nämnda genrerna konstruktion och förvaltningssimulator (construction and management simulation), förvaltningssimulator (management simulation)

samt ekonomisimulator (economic simulation) innehåller benämningen simulator har jag valt att inte använda mig av någon av dem för mitt spelkoncept. Detta på grund utav att spelet inte handlar om en simulation i dess rätta bemärkelse eftersom man i en simulator ofta är strikt styrd av verkligheten i strävan efter realsim. Realsim är som jag nämnt tidigare ingen bra beskrivning av spelet. Därför har jag valt att i arbetet använda mig av definitionen resurshantering (resource management) då det just handlar om att hantera olika sorters resurser på ett inte nödvändigt helt realistiskt sätt.

## 4 Eventuella problem vid en kombination av genrer

Som nämnts tidigare i texten tar man en risk när man kombinerar olika genrer. I värsta fall kan man genom att göra så avskräcka vissa grupper av spelare då man inkluderar utmaningar som dessa inte vill bli konfronterade med. Detta stämmer enligt min mening mycket väl och för att lyckas med en kombination, som är långt ifrån omöjlig, så tror jag att man måste få de båda genrerna att i hög grad samverka i det slutliga spelet. Om spelaren känner att samtliga av spelets element är meningsfulla och påverkar spelet som helhet tror jag att en kombination fungerar bättre än exempelvis vid en förening där en andra genre bara lagts till eller två genrer inte påverkar varandra inom ett spel. Rollings och Adams (2003) skriver att "... don't mix up genres purely for its own sake. A game should cross genres only if it genuinely needs to as part of the gameplay." (Rollings & Adams, 2003, s. 44)

En av de primära uppgifter jag har med detta arbete är alltså att designa spelet på ett sådant sätt att man undanröjer situationer i spelet som spelaren uppfattar som meningslösa eller som en allt för konstig kombination av uppgifter.

### 4.1 Betydelsefulla skillnader mellan de två genrerna

Antalet skillnader mellan ett par så vitt skilda genrer som fordonsstrid och resurshantering är många. Jag kommer i denna del ta upp ett antal skillnader som jag anser är betydelsefulla och de jag kommer att ta störst hänsyn till under mitt arbete.

#### 4.1.1 Avatar eller omnipotens

Vid fordonsspel och actionspel har man alltid kontroll över en avatar som presenterar spelaren och dennes handlingar i spelvärlden. Men vid resurshanteringsspel har vanligtvis inte spelaren kontroll över någon avatar utan är då så kallad omnipotent och styr över stora delar av spelvärlden i stället för att vara bunden till en avatar i form av en karaktär eller enhet av något slag.

#### 4.1.2 Liv

Med liv menas här en typ av resurs som spelaren har tillgång till och som minskar på något sätt om något negativt händer med spelaren. Spelarens hälsa och liv mäts på olika sätt i olika genrer. Liv kan i spel vara allt ifrån fysiskt, gestaltat genom en avatars status, eller

ekonomiskt, i form av pengar eller liknande, till tid som spelaren har till förfogande att utföra en uppgift. När det gäller actionspel över lag är oftast hälsan fysiskt bunden till en avatar som presenterar spelaren i spelvärlden. Om avataren dör betyder det att spelaren inte får fortsätta utan måste starta om eller ladda tidigare sparat spel. Vid resurshantering å andra sidan är spelarens liv mätt genom den rådande finansiella situationen. I detta fall kan spelaren inte fortsätta om han eller hon inte sköter sin ekonomi på ett bra sätt. Spelarens liv kan alltså mätas antingen fysiskt eller ekonomiskt beroende på genre.

#### **4.1.3 Handling och konsekvens**

Med handling och konsekvens menas här sambandet mellan spelarens handlingar och konsekvenserna som blir till följd av dem i spelet. Alltså avses själva resultatet av handlingen och inte handlingen i sig. Sambandet mellan dem skiljer sig mycket åt mellan fordonsstrid och resurshantering. Då det gäller actionspel så har spelaren generellt direkt kontroll över sin avatar och ser också direkt konsekvenser av sitt handlande i spelet. Detta på grund utav att actionspel fokuserar på reflexmässiga och snabba handlingar. Det spelaren gör får alltså direkta konsekvenser i spelet. Vid resurshanteringsspel är dock konsekvenserna för vissa av handlingarna indirekta i den mening att de inte blir synliga förrän efter en viss tid. Alltså är konsekvenserna direkta respektive indirekt för de två genrerna.

#### **4.1.4 Tempo**

Som nämnts tidigare är reaktionstid och koordination mellan hand och öga under press en viktig faktor i actionspel. Det gäller att snabbt kunna ta rätt beslut och utföra dem snabbast möjligast för att få bra resultat. Till skillnad från actionspel behöver man i resurshanteringsspel oftast som spelare inte stressa med några beslut eller känna sig under större press utan spelaren uppmuntras istället att ta tid på sig och överväga eventuella handlingar för att få ekonomin att fungera så bra som möjligt. Alltså skiljer sig det genomgående spelartempot för fordonsstrid respektive resurshantering.

#### **4.1.5 Perspektiv**

Gällande perspektivet som spelaren uppfattar spelvärlden genom så är det vid fordonsspel mycket vanligt med antingen en första persons vy inifrån fordonets cockpit eller en vy från en kamera som befinner sig en bit bakom och ovanför fordonet; ett så kallat tredjepersons perspektiv. Genom användandet av dessa perspektiv så leds spelaren lättare in i spelet och

ökar där igenom inlevelsen. Resurshanteringspel har dock inte samma strävan efter inlevelse utan strävar efter större översikt och kontroll över spelets olika system. Då översikten är en mycket viktig faktor i denna typ av spel så har det isometriska eller top-down perspektivet blivit en logisk följd. Genom dessa perspektiv får man en bättre överblick över spelvärlden. Alltså skiljer sig de båda genrerna genom att använda sig av perspektiv som är mycket nära spelarens avatar och dess påverkningar i spelet respektive ett utzoomat perspektiv som ger spelaren mer information om spelets omgivningar.

#### **4.1.6 Grafiska gränssnittet**

"Because CMSs aren't trying to create an illusion of reality in the way that first-person shooters or flight simulators are, their user interfaces can be more 'computerlike,' using pull-down menus and rows of buttons along the edges of the screen. In a CMS, the emphasis is more on convenience than verisimilitude." (Rollings & Adams, 2003, s. 432) Kravet på verklighetstrogenhet är alltså inte lika viktigt i denna typ av genre i jämförelse med andra då man strävar efter tydlighet och lättfattlighet i första hand. Rollings och Adams skriver ytterligare att "... user interface design for action games is extremely straightforward... The user interface should be as minimalist as possible. In order for the player to be able to effectively play the game, he needs to [be] able to accurately and quickly assess the play environment." (Rollings & Adams, 2003, s.315) Här strävar man efter ett så sparsamt grafiskt gränssnitt som möjligt. Alltså är designen på det grafiska gränssnittet olika i action och konstruktion och verksamhetsgenrerna då det strävar efter att vara omfattande och detaljerat respektive rakt på sak, verklighetstroget och minimalistiskt.

## 5 Designdokumentet

I detta kapitel redogör jag för designdokumentet för dator- eller tv-spel genom att ta upp vad det är till för samt vad som bör ingå i det. Förutom egna slutsatser har jag tagit del av andra källor som är menade att fungera som förslag eller mallar vid skapandet av ett designdokument.

### 5.1 Vad är designdokumentet till för

Ett designdokument har två huvudsakliga syften. Dessa är att kommunicera designen på spelet till en utvecklingsgrupp samt att sälja idén och spelet till en förläggare som bekostar utvecklingen av spelet. Designdokumentet fungerar också som dokumentation för skaparen av spelkonceptet.

### 5.2 Vad bör ingå i ett designdokument

Det finns ett antal olika typer av designdokument med olika benämningar. Beroende på typen så varierar även vad som normalt ingår i dokumentet. Men om man, som är fallet under mitt examensarbete, skall skapa ett designdokument som huvudsakligen är till för att förmedla en spelidé eller koncept till en eventuell utvecklingsgrupp så finns det ett antal vanligt förekommande rubriker och punkter som tas med. Rubrikerna jag tar upp är inte universella i den mening att de används i samma form i alla designdokument, men det huvudsakliga innehållet som de har är vanligt förekommande men kan vara strukturerat på annat vis.

Ett designdokument bör ha en balans mellan detaljrikedom och helhet. Det bör beskriva spelidén på ett sådant sätt att man som läsare av det förstår hur det fungerar och vad som ingår. Man skall inte ta med allt för många och små detaljer då detta försvårar läsandet av dokumentet. Då man skriver ett första designdokument kan man inte heller veta exakt hur samtliga detaljer fungerar när de slås samman i ett och samma spel.

#### 5.2.1 Game overview

Denna del av ett designdokument tar upp spelet som helhet och dess egenskaper ur ett större perspektiv. I denna del kan man finna information gällande genre, nyckelegenskaper (unique selling points), var och när spelet äger rum och bakgrundshistoria med mera. Denna

del är till för att snabbt förmedla spelidén så att man som läsare får en uppfattning om själva kärnan i spelet.

### **5.2.2 Gameplay eller game mechanics**

Benämningen på denna del varierar mellan gameplay och game mechanics men brukar oftast innebära samma sak, nämligen vad spelaren kan göra i spelet. Richard Rouse skriver i boken *Game design: theory & practice (2005)* att "The Game Mechanics section is the most important part of your document. [...] it describes what players are allowed to do in the game and how the game is played. By describing what sort of actions players can perform, the Game Mechanics section defines the game itself." (Rouse, 2005, s. 361) Här tar man alltså upp och beskriver all interaktion som spelaren kan utföra. De underrubriker som tas med i denna del är till stor del styrda av vilken typ av genre designdokumentet behandlar. Genom att läsa detta skall man ha en klar bild av allt som spelet erbjuder i form av interaktion.

### **5.2.3 Game elements**

Medan delen om gameplay eller game mechanics tar upp hur man som spelare kan interagera i spelet så tar denna del upp vilka saker man kan interagera med. Här tas alla element som har en påverkan på spelet med. Richard Rouse menar att "If you think of the level designers on your team as painters, then the game elements are the colors they have on their palette." (Rouse, 2005, s. 369) Återigen är genren för spelet mycket styrande för hur denna del av designdokumentet struktureras och vad den innehåller.

### **5.2.4 Game world**

Delen game world beskriver den värld i vilken spelaren spelar spelet och alla element finns med i. Här beskrivs allt ifrån hur fysiken i världen fungerar och tiden förflyter till hur miljön omkring spelaren ser ut och låter.

## 6 Arbetsmetod

I detta kapitel tar jag upp den arbetsmetod jag använt mig av och hur den varit under arbetets gång.

### 6.1 Koncept- och designarbete

Under det tidiga konceptarbetet arbetade jag primärt med att lösa de eventuella problem som sammanfogningen av de två genrerna kunde innebära. Målet är att spelet skall vara så enhetligt som möjligt och inte kännas som två sammansatta spel, utan som en helhet med sömlöst interagerade element från de olika genrerna.

Jag tog i delen om betydelsefulla skillnader upp de sex delarna avatar eller omnipotens, liv, handling och konsekvens, tempo, perspektiv samt det grafiska gränssnittet. Vad gäller spelarens kontrollverktyg i form av en avatar eller omnipotens innefattar spelet en kombination av de två. Detta då man i första hand påverkar sin omgivning med hjälp av en avatar i form av sitt fordon men man även har en viss övergripande kontroll. Den övergripande kontrollen består i att man kan sköta ekonomiska och logistiska uppgifter genom det grafiska gränssnittet utan att behöva vara på den plats uppgifterna äger rum. Jag tror att användningen av båda typer av kontrollverktyg är ett måste vid denna typ av genrekombination då man som spelare helt enkelt inte skulle klara av vissa delar av spelet utan tillgång till dem.

Gällande liv kan spelaren sägas ha två stycken, i form av ett fysiskt och ett ekonomiskt. Det fysiska representeras i form av det fordon som för tillfället handskas av spelaren medan det ekonomiska representeras av de resurser och pengar han eller hon har tillgång till. Ett krav på spelet är att dess beståndsdelar skall uppfattas som meningsfulla för spelaren och det gäller i hög grad denna del. Spelaren måste sköta sin finansiella situation för att ha råd att kunna försvara sig, klara uppdrag och expandera sitt inflytande i världen. Och genom att förbättra sin fysiska ställning i världen kan han eller hon utöka och försvara sina ekonomiska intressen. Genom att man som spelare är tvungen att behärska både den fysiska och ekonomiska delen för att överleva tror jag att man just upplever de olika delarna som meningsfulla att utföra.



I spelet ställs krav på att man sköter såväl den actionorienterade som den strategiska och ekonomiska delen för att få framgångar. Genom det tror jag att man som spelare uppfattar spelet och dess olika beståndsdelar som mer enhetligt. Detta då man uppfattar samtliga element som meningsfulla. Uppdragen kommer även de att fungera på ett sammanfogande sätt mellan de två genrerna då de består av såväl rena fordonsstridsuppdrag som resurshanteringsuppdrag och ekonomiska uppdrag. Exempel på uppdrag kunna vara att eliminera en fiende, förstöra eller köpa en viss byggnad eller sälja en viss mängd resurser till en stad.

Sambandet mellan handling och konsekvens samt ett spels tempo skiljer sig åt mellan de olika genrerna. Detta ser jag dock inte som något problem då man i spelet alltid har övergripande kontroll över sina resursrelaterade uppgifter genom det grafiska gränssnittet medan man i tredjepersonsperspektivet sköter stridsdelarna. Jag tror istället att det kan vara positivt med variationen i dessa faktorer. Detta då man som spelare behöver göra snabba och reflexiva beslut likväl som mer långsiktiga och planerade.

En av de tydligaste skillnaderna mellan de två genrerna är deras olika typer av grafiska gränssnitt. På grund av detta ansåg jag det vara viktigt att finna en lösning som passar för de båda spelstilarna och som inte känns för detaljerad eller tvärtom för simpel. För att få ett bra grafiskt gränssnitt mellan de olika genrerna använder jag mig av ett som jag försökt hämta inspiration till, från båda genrerna. Jag har valt att i spelet använda en rörlig kamera som spelaren har vertikal kontroll över. Genom att man i spelet har kontroll över kameran och med den kan zooma in och ut från sitt fordon kommer man att kunna skifta mellan tredjepersonskamera och "top-down" kamera på ett sömlöst sätt. Följaktligen kan spelaren med lätthet få både en nära vy över fordonet och överblicksbild över hela spelvärlden. När man gör dessa in och utzoomningar anpassas spelets HUD (Head-Up Display) automatiskt för olika ändamål. Jag tror att man genom att göra så får en bättre kombination mellan de olika typerna av grafiska gränssnitt. Detta då man på ett sömlöst sätt kan skifta mellan perspektiv samt grafiska gränssnitt genom att helt enkelt zooma till läget som passar bäst för situationen utan att behöva skifta mellan olika skärmar. Resultatet tror jag kan vara mycket

positivt för hur spelaren upplever spelet som en helhet istället för två olika delar som slagits samman.

### **6.1.1 Avsaknad av prototyper och testning**

Något jag saknade under arbetet med spelkonceptet var prototyper och testning av olika delar i spelet. Prototyper är mycket givande under utvecklingsfasen och jag skulle gärna haft med prototyper. Men eftersom jag saknar den grafiska och programmeringsmässiga kompetens som krävs för att framställa givande prototyper och att jag arbetade ensam så skapades inga. Då inga prototyper skapades blev följaktligen ingen testning utförd. Detta kan självklart medföra problem då inga spelelement är testade för att se hur de fungerar var för sig eller tillsammans. Dock är detta konceptarbete just vad namnet innebär; ett koncept, vilket är den första delen i utvecklingsfasen. Koncept är till för att användas för vidare utveckling. Och under denna utveckling kan den första tiden planeras för prototyputveckling och testning.

Ytterligare skulle jag även gärna haft med konceptgrafik och "mockups" på olika delar i spelet då det kan förmedla idéerna för spelet på ett mycket effektivare sätt. Men återigen var jag begränsad av mina kunskaper inom grafiska applikationer.

## **6.2 Arbete på designdokumentet**

I det tidiga stadiet av designarbetet och sammanställningen av designdokumentet undersökte jag, från olika källor, vilka delar som tagits med i dokument som är menade som mallar eller förslag på designdokument. Jag valde att dela upp designdokumentet i fyra större delar som behandlar game overview, gameplay, game elements samt game world. Då designdokumentet blir relativt omfattande bestämde jag mig för att inte gå in på detaljer runt ljud, musik eller rent grafiska egenskaper. Jag valde även att inte specificera typen av konsol som spelet är till för och följaktligen inte heller typen av fysiskt gränssnitt. Orsaken till ordningen jag valde för de olika delarna var att jag tyckte det var en logisk följd att använda mig av. Detta då man i den inledande översiktsdelen får just en översikt om spelet i stort och kan få en uppfattning av spelets egenskaper. Gameplay tyckte jag passade bäst till att fortsätta designdokumentet med, då man i det får vetskap om allt man kan göra i spelet, vilket enligt min mening är det viktigaste i ett spel. Efter delen om gameplay tyckte jag att

delen om game elements passade väl in. Detta då man i delen om gameplay får kunskap om vad man kan göra, får man i delen om game elements vetskap om med vad man kan utföra dessa saker. Det innehåller alltså information om samtliga viktiga element man kan påverka eller bli påverkad av i spelet. Slutligen passar det enligt min mening mycket väl att ta delen om game world i slutet av designdokumentet då den beskriver världen i vilken de två tidigare delarna, gameplay samt game elements utspelas och äger rum.

På grund av de många kapitel och delkapitel jag tagit med i designdokumentet blir innehållsförteckningen mycket lång. För att göra det lättare att söka i innehållsförteckningen minskade jag antalet rubriker som tas med i den. Genom att göra detta minskades listan märkvärdt och den blev lättare att läsa.

Jag lade till enkla skisser till vissa delar i designdokumentet för att ytterligare förtydliga för läsaren. Jag implementerade även tabeller som ökar tydligheten där jag tyckte det behövdes.

## 7 Resultat och diskussion

Målet jag hade med arbetet var att sammanfoga två genrer och av dem skapa ett enhetligt spel vad beträffar dess beståndsdelar. Då jag, som nämnts tidigare, inte utvecklat någon form av prototyp och testat idéerna på andra personer kan frågan hur jag lyckats med projektet inte ges något definitivt svar här och nu av mig enbart. Ytterligare mål med arbetet var att sammanfoga det framarbetade spelkonceptet till ett väl beskrivande designdokument. Frågan huruvida jag lyckats med det är även den mycket svår att besvara. Den skall dessutom bedömas av någon som tar del av designdokumentet utan att vara bekant med spelkonceptet sedan tidigare för att man skall kunna få svar på frågan om hur väl den beskriver spelkonceptet. Dock känner jag mig nöjd med arbetet och min personliga bedömning är att jag lyckats bra med projektet och att det utvecklats som jag i början velat och planerat. Jag tycker även att jag har lyckats med min uppgift att finna lösningar på de problem jag funnit samt definierat. Problem som kan uppstå vid en kombination mellan två mycket skilda genrer.

Jag har under projektets gång studerat ett antal böcker och andra dokument som behandlar speldesign samt skapandet av designdokument. Genom det har jag tagit lärdom av vad man bör tänka på vid designarbetet och hur man kan dokumentera det på ett bra sätt.

Vad gäller min arbetsmetod så har den fungerat mycket väl. Jag har kunnat hålla mig till min initiala tidsmässiga och innehållsmässiga planering utan större ändringar. Även om jag i början av projektet trodde att jag skulle ha problem med tidsbrist känner jag nu i efterhand att jag haft en bra planering av arbetet och att det har varit passande för omfattningen på kursen.

Frågan huruvida jag lyckats med uppgiften att skapa ett intressant spel som lockar spelare intresserade av både fordonsstrid och resurshantering kan jag inte svara på utan en spelbar version. Men jag känner att spelkonceptet är så pass genomarbetat att jag vågar tro det.

## 8 Referenslista

### Spel

*Company of Heroes*

Utgivare: THQ

Utvecklare: Relic

Europeisk utgivning: 2006

Plattform: PC

*Ghost Recon*

Utgivare: Ubisoft

Utvecklare: Red Storm Entertainment

Europeisk utgivning: 2001

Plattform: PC, Xbox, Playstation 2, Gamecube, N-Gage

*Interstate '76*

Utgivare: Activision

Utvecklare: Activision

Europeisk utgivning: 1998

Plattform: PC

*Resident Evil 4*

Utgivare: Capcom

Utvecklare: Capcom Production Studio 4

Europeisk utgivning: 2005

Plattform: Gamecube, Playstation 2, PC

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