



FUTUREWAR Design Document

Rev 1.0

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Appendix A: Internet Team Management**Appendix B: Story**

DESIGN HISTORY

[insert Revision history here]

GAME OVERVIEW**1. Game Overview****1.1 Game Design Goals****Easy to learn but lots to discover.**

One of the main goal in making this mod has to be that this should be not only easy to *understand* for beginners, but also easy to *play*. Lets take two very good and very successful mods as examples:

Mods like Natural Selection have a steep learning curve and are hard to understand. Everyone who played NS knows that. Reading the manual first is a must. On the other hand, it's easy to *play*. Weapons hit roughly where the crosshair is, full auto fire doesnt make a difference to single shots and weapons dont have secondary fire modes, you build with E and your commander cares about the rest. As alien, you run towards your enemy biting. Easy. But its depth and strategies are really hard to understand. Therefor, NS has the „*noob*“ syndrome, many new players that think they know how to *play* but didn't realize they didn't understand the concepts of the mod, therefor getting yelled at by the frustrated comms.

Counterstrike on the other hand is easy to *understand*. Two teams, kill eachother till noone is left is a good way to win a game. The only more complex thing is that silly bomb, but you can pick that up relatively fast. But Counterstrike is hard to *play*. To be able to get a kill on a server with a decent amount of decent players, you really need to learn to fire single shots, you need to know where your weapons are spraying when you fire on full auto, you need to know the maps. And you can't catch up skill-wise so fast because you spend most of the time waiting for the next round.

CS has the „*newb*“ syndrome, with half of the team on publics always being new players that never get to kill someone and then leave frustrated. (btw. campers in corners letting the dead wait ages for respawn are neither „*newbs*“ nor „*noobs*“, they're „*lamers*“. Many people don't use these titles correctly...calling a newb noob isn't fair, and calling a lamer noob is a compliment!)

This mod has the goal to avoid both the newbie and the noob problems and create a game with both a very simple principle and a very easy control, very direct feedback on your actions but on the other hand lots of secrets on the maps and tactics to learn while playing.

What you see is what you get.

This references one of the negative points about Counterstrike and many other mods out there: Your weapons don't hit where your crosshair is. And even worse, your weapons don't fire tracer bullets like in reality so that you can see where your bullets are spraying!

A key goal of this design is to make the player know what their actions are doing. All weapons have a clearly visible effect that shows where they are firing. Also, random spraying outside the crosshair is forbidden. A weapon hits where the crosshair is pointing at. Instead of doing spray outside the crosshair, either the crosshair itself gives precise feedback on the recoil like in Operation Flashpoint, or the view gets moved similar to Day of Defeat. DoD is a good example as it gives very good feedback on what is happening when you fire a weapon: Your view gets nudged because of recoil, and a deployed MG has tracer bullets to visualize where your bullets are going. DoD is pretty hard due to the heavy damage all weapons do, but it was a far less frustrating experience than CS to me: If i miss my enemy, I know why. In CS, I can hold my crosshair on the enemy while kneeling and fire like crazy and don't even see any impacts anywhere on my screen, while someone from 50 meters away has the random number generator on his side and creates a headshot while running by and firing randomly.

GAME OVERVIEW**Teamplay rewards.**

To fulfill the easy to learn, hard to master philosophy, we need advanced techniques that do not make a vet player an uber-killer, but instead benefit the whole team and require teamwork to achieve so that a veteran player can teach new players and thereby gets an advantage for his team, for example by getting a cool vehicle from a secret place where multiple players are needed to get there.

Key for this mod should be win by teamwork, not win by special shooting skills or a loss because your team didn't read a 50-page manual.

Every player who first plays the game will just be able to do good for his team by rushing towards the enemy and shooting them. As flag capturing is a pretty common element of games today, it won't be very hard to realize that the flags should be capped somehow, and that's all this mod is about. But the flag is often located in open places without much cover, and covering fire is necessary to get there. The first reward of teamwork is better flag capping and so the team will win the game more likely.

On the other hand, your team might be unlucky fighting, so you need more firepower – maybe you can find a vehicle? A vet who just joined knows where a vehicle is, but you need four people to jump on a platform to provide enough weight to lift it out of a pit. So here, cooperation when solving a physics riddle gets rewarded by giving the team a vehicle that could turn the tide of a battle.

Teamwork should be rewarded in many ways by the mod, for example by giving a losing team an item that could turn the battle around.

1.2 Common Questions**What is the game?**

The Futurewar mod is a teamwork multiplayer mod set in a dark future. It brings two teams – red and blue – together to fight inside a destroyed city, on a mix of big, open battlefields and plazas and smaller transition locations. The teams have to capture flags at the big key locations in a sequence to win the game. The maps are big, but lead pretty linear to the next key location with a flag. To travel the distances faster, players can use the old subway system below the city to get to the frontline. The subway stations have to be capped too and add a second important strategic element besides the flags. Sometimes in Side-streets players may encounter a physics riddle that rewards their cooperation in solving it with a vehicle. There are only one or two vehicles on a map and they are always hidden. It is supposed to be easy to learn and action-rich.

Where does the game take place?

The game takes place – as the name indicates – in the future. As the story is completely interchangeable and not really relevant, I'll just have to point you to the Story appendix if you're interested in it. Here I'll describe a setting and a desired atmosphere with comparisons to movies and other games:

Imagine a modern city, similar in architecture to City 17, but devastated by a long-lasting war. It's night, and only the pale blue moonlight enlightens the scenery, and some floodlights on the ruins of buildings illuminate some of the streets, as the city lights don't work. A big plaza is scenery of a battle between two groups: one rebels, the other an invading force. The laser weapons illuminate the night with clearly contrasting streaks of blue and red lasers.

Imagine Terminator-movie style lighting & scenery. Imagine Star-Wars style blaster fire in a dark retro-city setting. Imagine Deus-Ex locations filled with soldiers and wild laserfire exchange.

GAME OVERVIEW**What do I control?**

You control a soldier of one of two teams, red and blue. You can choose one of five player classes starting with different armor, weapons and items. Maybe you even get to drive a vehicle.

What is the main focus?

The main focus is on creating a mod that can be played without reading a manual and also for a bit of action in a coffee break but still provides enough depth to be played longer and organized in clans, even though the focus is definately on public action with many players. The game should be as easy and action-rich to play as TFC and still be a long-lasting experience.

Teampay shall not be required to win a map but enhance gameplay experience and chances to win extremely, even if it's only the very basic teampay that can be achieved by new players on a public without headsets. ;-)

What is different from other mods?

A lot of references to other successful mods can be seen, but most other mods go for either a very deep and complicated gameplay, too realistic weapons that kill very fast and provide less chance of a fun firefight or they go for a very shallow deathmatch-style game.

Futurewar is supposed to be a mod that is very accessible and atmospheric at the same time.

The Half-Life 2 engine is able to provide a lot of new effects that enable us to use great special effects for weapons instead of an invisible bullets that only materialize as hole-in-a-wall. The team-colored laser weapons of Futurewar provide direct feedback not only about where you are shooting, but also where a firefight is happening, where your friends are and where your enemy is shooting from, making sitting-in-a-dark-corner only a good strategy as long as you don't shoot.

It also provides for a richer experience because you can see the laserfire fly past you while you run for a flag point.

Futurewar also provides rich environnement with physical interactivity where you can carry around barrels to create a barrier for cover or where you have to solve a physics riddle to get access to powerups. The big levels provide enough space for many players and intense battles while their linearity and the clear objectives don't have players get lost. The dark city setting provides a lot of possibilities to take cover and also a great color contrast when the lasers lighten the level.

Also, the subway concept to travel the big levels is (to my knowledge) absolutely unique.

I must also admit that Futurewar borrows many, many ideas from other mods that are already existing, but maybe all these great ideas combined together will make this mod a better experience than ever before. :-)

GAME OVERVIEW**1.3 Feature set**

- ✓ action-rich, easy combat
- ✓ easy to pick up flag-caturing gameplay
- ✓ large scale maps for large scale battles
- ✓ physics useable for gameplay
- ✓ 5 character classes
- ✓ effectful laser weapons
- ✓ many new interesting items & gadgets
- ✓ driveable vehicles
- ✓ subway system to shorten travel time
- ✓ teamplay gets rewarded

THE GAME WORLD**2. The Game World****2.1 Basic Concepts****Scale**

The game's main location is a big, battle-worn metropolis. Buildings and locations are sized realistically, the terrain you have to travel is very large. However, maps are almost strictly linear: You can't go off very far from the chain of objectives you have to capture. There are side-streets with powerups, there may be two routes to take to the next objective, but no real alternating objectives or even free roaming. However, the big size of the locations and plazas and the long ways to travel should give the player the feeling of a real metropolis and the linearity should be covered as good as possible.

Objectives

In the level, there are a number of flags. At the beginning of the game, all flags except those next to the starting positions of the teams are neutral. Flags can be captured by moving next to it and pressing the use button for five seconds. A bar shows your progress capping the location. While doing that, you cannot fire, so your team has to cover you or you just have to pray no one comes to shoot you. The first team to capture all flags on the map has won. A time limit can be set and the team that holds the most flags on expiration wins.

The levels are linear and you have to capture the flags in a row. You cannot sneak behind enemy lines to cap a flag there. You always have to capture the flag next to the ones already belonging to your team and push the enemy team back flag by flag.

(Also see Flag capture points at Chapter 2.2)

Secondary objective must be to secure the subway stations on the map to be able to get faster to the enemy and to defend your flags.

Respawning

Respawning happens at start locations of the two teams on opposite ends of the map.

(See spawn locations article in this document)

The spawning always happens there the whole game, spawn locations do NOT move forward dependant on territory captured. That means that players will have to travel to the frontline. The more flags they have capped, the longer it will take them to reinforce their team. There is a different means of travelling, primarily the subway system.

(See subway system article in this document)

Between death and respawning, there is only a very short delay. When a player dies, the screen fades to black, then the character respawns and screen fades back to reveal the new location and giving control over the fresh character to the player. This takes only about two seconds, one second fadeout, one second fade in.

There is no group-respawn delay or other restrictions, every player respawns right after his death, no matter how many other team members have (or haven't) died.

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***Nice to have:**

- Transitions with more interesting effects (think of g-man at HL2 start, maybe black/white filter and fade to white?
 - maybe print a random famous quote during death transition to make it more entertaining?
-

2.2 Key Locations

Spawn locations

Both teams spawn in a big spawn room that is below earth. It has stairs leading up to a well-defendable base and to the first flag location that is just outside that base. There are also stairs leading down to a subway station from where players can start travelling to map locations as soon as a connection has been established. The „bases“ of course aren't high-tech facilities but selfmade-camps in captured houses with some fences and barriers around. However, they provide good cover so that the last flag point can be taken under fire from there and that spawn camping is made hard.

***Nice to have:**

- It would be nice to have an officer in the spawn room sitting on a planning table, something like a commander (who is of course just an animated map object, not a player), who constantly yells something like „Gogogo what are you waiting for!“ or „Kick their asses back to where they come from, soldiers!“ or similar encouraging and funny sentences while people are spawning. Maybe even have other base personnel like a comm officer at a radio or various staff there to make the scenario more lifelike.
-

Flag capture points

Flag capture points are usually landmarks like fountains or sculptures, or even just burning tank, that are placed in open locations. They are marked by a big flag that is colored either white (neutral), red or blue (red or blue team controls it). The flags can be captured by moving close to it / the object they're located on and pressing use key for five seconds. A progress bar indicates your progress while changing the affiliation if the flag location. Flag capture points are critical objectives for winning a round.

Recharging stations

There are two types of recharging stations in the game. Remember those things in HL1&2 where you could restore your health and HEV suit energy? Yep, something like that. Just that one of them is for recharging health and health only, armor can't be repaired.

(See health & armor section in this document)

And the other one can recharge your weapons.

Subway stations

In close proximity to flag locations entrances to a subway station can be found. They most prominently have stairways leading down to the station itself, and there are clearly visible „subway“ or „underground“ signs that help finding the subway entrances fast. The station itself always has one platform and two tubes where trains are moving. The name of the subway station is also written on a wall inside the station, as there are the names of the next/previous stations written on the walls near the respective train tracks. In every

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subway station the player can find maps of the subway and of course the city they're fighting in. Also, inside every station there is a terminal that allow claiming the station for your team by using it for 5 seconds just as you would do with flag locations.
(Read more in the subway article (next))

2.3 Travel

The Subway

Below the city where the fighting is taking place, an old subway system exists. At every big flag location, there are one or two subway entrances with stairways leading below the earth. Each subway station has one platform and 2 tunnels with trains moving in both directions, one side to the next location, the other moving back.

It's a normal subway like every big city has, just that both teams are using it for fast transport. Of course, they don't want the other side to be able to use it, thats why subway stations can be claimed and blocked for the other side.

At every subway station there is a terminal where you can capture the subway station for your side. By doing that, the railways to other stations of your teams next to this one get opened and trains start moving. Trains do not move to neutral (unclaimed, abandoned) or enemy stations.

- Owning subway station is independant from owning flag locations.
- Subway stations do not have to be captured in a sequence.
- The subway station below a flag that changes affiliation goes neutral until someone claims it again.
- The subway station at the spawn locations of the teams can't be captured by the other team.

Trains move automatically in set intervals and very fast, three seconds from closing the doors and departing to the opening of the doors at arrival. A train only moves between one station and the next. If players want to travel two stations, the'll have to switch trains in between. There are plans of the system hanging in every subway station and arrows showing to what direction and what location the trains both sides of the platform are moving.

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(Technical note: Maybe not have the tunnels and trains go all the way but instead have the train accelerate into a dark tunnel and then quickly teleport it and all the players inside to a tunnel at the next station where it only decelerates? And if a player presses his luck and runs into a subway tunnel just have him overrun by a train before he can discover that the tunnels don't go all the way through the map ;-)

The subway system should be easy to understand by new player because it's appearance and signs are taken from real life and the plans in every station should help to explain that stations can be catured and that trains don't travel to stations not belonging to your team. Maybe even add „tunnel closed“ signs to the tunnels leading to hostile stations to make it even clearer that no train will arrive at that track.

THE GAME WORLD**Vehicles**

In Futurewar, Vehicles can be found. There are only very few vehicles, two or three, on the whole map, and they're always hidden and need to be „unlocked“ with teamwork. The vehicles can be unarmed trucks that help getting the team faster to flag points while providing cover and enabling the team to fire out with their weapons, or they can be armed vehicles suited for combat that can be a big advantage if used properly. Vehicles always need a driver.

The vehicles cannot be damaged themselves, but they can be flipped by explosives making them useless until someone turns them around again. Instead of killing the vehicle, the driver inside can be killed as all the damage the vehicle takes is taken from his health. However, inside a vehicle, his armor protection value is increased drastically.

(See *health & armor chapter*)

***Nice to have:**

- Multiple positions in a vehicle. In a two-seated car, have one driver and one soldier who can fire out with his weapon. Or one to drive, one to operate a mounted gun.

2.4 Objects & Physics

As the maps in Futurewar are supposed to be very big, the density of physics objects can't be very high due to their performance impact. Really, I like shooting the computers on `css_office` into pieces, but do all the objects have any real impact on gameplay itself? Not really. To use the amount of physics objects and performance we have wisely, we have to define rules for the usage of physics. Physics in Futurewar always have to serve a gameplay purpose - so no destroyable decorations. Instead, we enable the player to carry around objects to either construct barricades for cover or use various physics effects for riddles.

Physics for Barricades

Spread on the map (not nearly as much as explosive barrels in half-life), you can find heavy barrels filled with ashes/metal pieces or similar. They're the heaviest object a player can carry. They cannot be destroyed and provide protection against all laser-based weapons. (Laser weapons don't impact with kinetic energy but with heat, resulting in the barrel starting to glow, but not being pushed back)

Also, they pose a serious problem for vehicles. A wall of heavy barrels can force a Vehicle - for example trying to overrun the team taking cover behind them - to a sudden halt or at least a major slowdown. On the other hand, these barrels weight as much as a player character does and so one barrel can replace one player in a physics weight riddle, if not enough players are cooperating.

Also, there may be barricades for vehicles on the map. Like in HL2, your team might have to raise/lower a ramp to get your vehicles to the other side while blocking the other team from doing this with their own vehicle(s). Also, you might want to get a vehicle into safety to your side of the map to continue using it for defense purposes by stealing an enemy vehicle when possible and using the ramp the other way.

(This doesn't allow vehicles to roam the map freely because that could likely overpower them.)

Physics for Riddles

Simple physics objects can be used for riddles. For example, you could find a long wooden plank that you can carry to build a bridge to a nearby house where a med-charging station is hidden. These objects are also indestructible to make them reusable, but an enemy team might want to blow them off or carry them to another location to make the bonus location inaccessible for your team.

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Vehicles should be hard to get and require either a lot of time for a single player or lots of teamwork if you want them fast. Here, any kind of complex physics can be used as long as its useful for the riddle. For example, an expert might have to destroy a stone wall to create a hole big enough for a scout to send a drone through with that he can push a lever that unlocks the gate to the vehicle location. Or the weight of four players on a crane contruction is needed to lift a vehicle out of a pit so that a fifth can drive it to safety.

2.5 Lighting

Lighting is one of the -if not THE - most important aspects for creating a credible, intense atmosphere. This is done both by ambient lighting that mostly applies to the scenery and effects that are created by the game action itself. Especially for a sci-fi game the developers have to treat lighting with care and invest a lot of time into it.

Ambient lighting

The scenery of futurewar is a dark, devastated city. The scenery can be divided into different two types of areas:

Battlezones, where the environnement is only the stage for furious firefights and should be lit unspectacular to not conflict with the effects.

Key locations, that have to be lit to stand out from the rest of the environnement and become clearly identifiable landmarks.

The ambient lighting on battlezones should focus on showing the destroyed city in the pale blue moonlight. The moonlight should not be too dark, the scenery has to be clearly visible and there has to be a clear contrast between the open spaces and the dark shadowed buildings and interiors.

That was we get a uniform blueish background where the buildings stand out as dark silhouettes and shady structures and where effects like fire, explosions, vehicle and player spotlights and laserfire stand out very well.

Key locations are locations like the subway, that the players have to find and be able to navigate well. They should be lit by warm, bright artifical lights to become a counterpart of the outside world. The same applies to the team bases and spawn locations.

Also the flags should be lit - either by spotlights from nearby buildings or any other form of lighting. This also gets supported by dynamic light emitted from the flag.

Dynamic effect lighting

Dynamic light is primarily emitted by the flags in the color of the team that possesses the flag to make them clearly stand out. Also, signs in subways may emit the team color. Of course the laser weapons are team-colored too. If a player fires a weapon, his surrounding is lit by the color of the weapon he fires.

/*****

I unfortunately doubt that every flying laser projectile in a 32-player game can be supported by dynamic lighting, even if fire rates are slow and projectiles fly fast - however, a programmer should evaluate this nonetheless, I'd be more than nice-to-have. :)

*****/

PLAYER CHARACTER**3. Player character****3.1 Player controls & abilities****Movement & Interaction**

The player controls his character from a first-person perspective using the WSAD-keys. (or an own configuration set in the options) The character has the following movement modes: run, walk, stand, crouch, walk with a stoop, prone, crawl. by default, the character stands. Pressing a movement key makes the character run. By holding shift while moving, the character walks (moves slowly). by holding ctrl, the character crouches. Ctrl and movement means to walk with a stoop. by pressing Z (qwerty keyboard) once your character goes prone moving when prone is crawling. No character can use a weapon when crawling. pressing the prone key again makes the character get up. The character can also jump. (default space) Various weapons may affect movement. For example, with a zoomed sniper rifle you can only walk slowly. With a deployed cannon you can't move at all.

There is no "stamina" but a small delay until a character can jump again after a jump to prevent wild hopping. Characters don't slow down like in CS when hit by a weapon.

Your character can use objects by pressing use key (default E). With buttons, this results in pressing the button and triggering the action associated with it. Physics objects can be picked up and dropped with E. you can pick up a barrel using E, carry it to another place and press E again to drop it. E is also used to get flipped vehicles back on their wheels.

/*****

technical note: welders in NS - if multiple people weld, welding happens faster. Multiple people can work on the same item: In Futurewar, we could use a same progress bar when flipping a vehicle back on its wheels. IThe player has to press E until the progress bar is full, then the vehicle gets flipped. If multiple people help, the vehicle can be used again much faster!

*****/

"Use" is also used to capture flag points.

Your character can drop his weapons or items and pick up any items/weapons lying on the battlefield. In the weapon slots, only one weapon of a type can be carried. In the item slot, any number of items can be carried, but only one of a type. A soldier can pick up a scout rifle. A scout can pick up a heavy cannon. However, weapon characteristics change when a weapon is misused. (see weapon usage) Items can be used by any character class to the same effects. Items and weapons get picked up automatically when you walk over and a slot is free. You can drop weapons with the "drop" key to free up the slot they were using.

Health & Armor

Every player class has a health and an armor value. They describe the integrity of your health and your armor in percent. Every class starts with 100% health and 100% armor.

If damage is inflicted, the damage value inflicted is reduced or even completely negated by the armor integrity before being subtracted from your health. How much the armor integrity wears down depends on the armor class.

The different character classes wear different armor with different resistance to weapon fire. That means, if a soldier is hit by a weapon, his armor lasts longer and has a higher remaining integrity value than the vulnerable cloaking suit of an ops-class player.

This of course results that the soldier's armor blocks more damage during continued attacks and makes him

PLAYER CHARACTER

survive longer. But it also means that even if he is very low on health due to damage slowly pushing through his armor, his armor integrity is still much higher than that of an injured ops.

Armor cannot be repaired during combat, but health can be recharged with medpacks. The soldier will be able to recharge his health and still has a good amount of armor significantly reducing the damage he takes on his health, while the ops may recharge his health but is extremely vulnerable due to his worn-down armor.

The more this system is used, the less beneficial health restoration will become for a long-time survivor because his armor is wearing down more and more up to a point where any respawning class is stronger than him.

A squad may be able to hold a flag location for long by humping a health station, but with every wave of fresh attackers their armor gets worn down more and they take more damage until they are finally overrun if no reinforcements arrive.

Different types of damage may damage only health or only armor. Falling damage only hurts health. Some melee weapons also deal damage by a different formula.

Weapon usage

Weapons can be fired with the LMB (primary attack key). Many weapons also have a secondary attack (default RMB).

Different weapons may use different aiming systems that give the different weapons individual characteristics and support the class separation. If an assault laserrifle doesn't have aiming advantages when shooting series of fast shots in combat over a light laser rifle, people might only choose the scout class for the battles as they hit more. An assault weapon isn't worth its name if a sniper weapon is better in direct one-on-one encounters.

Factors that may affect weapon aiming/shooting:

Zoomed/unzoomed - if a weapon has a targeting optics, is it getting used or not?

Character Movement - is the character jumping/running/standing/crouching/prone while shooting?

Projectile speed - how fast do the "bullets" of the weapon move? How good can I hit moving enemies?

Stability (recoil) - how likely is the aim going to become instable / applies to circle-dot-crosshair

Different weapon behaviors require different feedback on how the weapon behaves, so we need different crosshair systems:

No crosshair - Melee weapons don't have a crosshair, as you should be close enough that aiming isn't necessary.

Standard crosshair - a crosshair at the center of the screen. Shots always hit where the crosshair pointed when the shot was fired disregarding any other factors.

Spray crosshair - used only by secondary weapons (all pistols), this crosshair is only a circle of various size at the center of the screen that signals that the weapon can't be aimed precisely but sprays over long distances. (Comparable to random spraying in HL and CS, just with less effect)

For pistols that are secondary weapons for short range combat, random spraying is okay with a crosshair that signals that the weapon doesn't aim effectively.

For primary weapons, the *Circle-dot-crosshair* is supposed to give a better feedback on weapon behavior, when a shot will miss, where it hits and why.

PLAYER CHARACTER

Circle-dot-crosshair - is the standard crosshair at the center of the screen, a circle around it and a clearly visible dot that can move freely on screen. If the moving dot is inside the circle, the shot hits perfectly where the crosshair was pointing when the shot was fired. If the dot is outside, the player sight gets moved (see Day of Defeat mod) into the direction of the dot by an amount dependant on the distance of the dot to the center and then the shot is fired.

The movement of the circle is affected by the movement-mode of the player, the rate of fire and the overall stability (could call it recoil if laser weapons had that) of the weapon. If a player is prone, not moving and didn't fire the weapon lately, the dot moves only very slightly in random circular patterns in a very short distance from the center crosshair and always inside the sure-shot circle.

If the player fires a shot, the dot gets pushed and moves faster and in a bigger area that may exceed the sure-shot circle. During a wait, may it be reload or waiting on purpose, the dot calms down slowly until it reaches its minimum "nervousness" or another shot is fired. If you fire sequences of shots after each other, the dot may not get to fully calm down during reload and get faster with every shot. Dependant on the stability of the weapon, this may happen faster or slower.

Dependant on the movement, the minimum movement of the dot is higher or lower - if you run, it's very nervous and most of the time out of the sure-shot circle. (dependant of the stability of the weapon) Only with good reactions you might catch it when its inside and have an aimed shot.

If a weapon is less stable, the dot movement will go outside the circle faster and travel further distances on screen (the area of movement of the dot become wider fast). That way, it is harder to fire aimed shots and also the weapon gets "pushed" around more => the player sight gets moved more.

/*****

There may be changes to this crosshair sight dependant on how confusing it will appear to the user, but the basic principle of a moving element that signalizes when a shot is aimed and when not and how stable the weapon reacts will always be the same.

*****/

Since characters can pick up weapons of other character classes, their lacking capability in using this weapon results in a less stable weapon behavior and thereby harder aiming. Only primary weapons are affected by this.

Item usage

Items are kept in slot 4. To use them, you have to select them and press primary attack (LMB). Secondary attack (RMB) throws the item. Like that, you can pass the item on to a teammate who might have better use for it (think medkits, ammo packs). Items behave differently when you use them. Some might recharge your player values, others might offer you a special sight or have other special abilities.

(read more about the item abilities in Chapter 4.4: Grenades & Gadgets)

When a player dies, he also drops all weapons & items currently in his possession. Other characters of any class can pick up items - as many as they want but only one of each type. Items are class-independent: There is no penalty of any sort when a character uses an item that doesn't belong to his class.

PLAYER CHARACTER**3.2 Character classes****Scout**

The Scout is a light infantryman useful for reconnaissance and surveillance of the battlefield as well as giving fire support from a distance. His main weapon is the light laserrifle with optical zoom-sight that fires extremely accurate over long distances. The Scout also uses a remote-controlled surveillance-drone that he can use to scout the enemy positions from safe distance. His motion-tracker provides him information about enemy movements nearby even through the thickest walls. Using his concussion-grenade, he can confuse incoming enemy groups while he retreats to a safe distance.

Armor integrity class: 4
Equipment:
Melee weapon (slot 1): Combat knife
Secondary weapon (slot 2): Laser pistol
Primary weapon (slot 3): Light Laser rifle with optical sight
Items (slot 4): surveillance drone, motion tracker, concussion grenade.

Soldier

The Soldier is tuned for frontline duty and direct confrontation on the battlefield. Using his truncheon for close combat, he can deal heavy damage in short time when storming the enemy trenches. The primary weapon of the soldier is his assault-laserrifle, a fast firing heavy duty rifle that can sustain long hefty firefights without losing much of its precision. He can use a fragmentation grenade to combat strong enemy troops from safe cover, while using his medkit to heal the wounds of the battle.

Armor integrity class: 16
Equipment:
Melee weapon (slot 1): Truncheon
Secondary weapon (slot 2): Laser pistol
Primary weapon (slot 3): Assault-laserrifle
Items (slot 4): Fragmentation grenade, medkit

Support

The Support character has to deploy his Heavy Lasercannon before he can fire with any accuracy, but if that is done, he is able to provide excellent firecover by simply unleashing a hailstorm of pure energy that will force his enemies to run for cover. To advance into territory covered by enemy crossfire he can use a shield generator that, thrown to the ground, emits a barrier of polarized gas particles that absorbs incoming energy for a short time, but lets persons pass through. He also has an battery that he can use to recharge his own weapons or pass on to support teammates that are out of energy.

Special disadvantage: The heavy laser cannon is indeed very heavy and reduces the speed the support class (or any other class that picks it up) can move at.

Armor integrity class: 8
Equipment:
Melee weapon (slot 1): Combat knife
Secondary weapon (slot 2): Laser pistol
Primary weapon (slot 3): Heavy Lasercannon
Items (slot 4): Bulletshield, Ammo pack (battery)

PLAYER CHARACTER**Expert**

The Expert is your man if you need something that explodes spectacularly. His antimatter-launcher with ballistic trajectory and great area of effect allows him to literally bombard enemy infantry or even vehicles from cover. Furthermore, he can place and use sophisticated detonation devices like Laser-tripmines and remote-detonated explosives. A pulse-pistol guarantees that he can deal out some damage in a close-range firefight and his stun gun both hurts and paralyzes enemies he can catch unaware.

Armor integrity class:	8
<u>Equipment:</u>	
Melee weapon (slot 1):	Stun gun
Secondary weapon (slot 2):	Pulse pistol
Primary weapon (slot 3):	Antimatter-launcher
Items (slot 4):	Remote-detonated explosives, Lasertripmine

Ops

The Ops character has to use stealth, wit and cunning to get his team advantages no other character could achieve. The Ops wears a cloaking suite that can make him one with his surroundings (think *Predator*) and by that sneak through the enemy lines to capture subway stations to cut off enemy reinforcements, or to kill an entrenched enemy support who is blocking the team's advance with crossfire. The cloaking suit provides almost no protection and, because of that, the Ops is very vulnerable. He can be spotted by distortions in the air if an enemy watches his surrounding very closely and a single hit with an energy weapon destabilizes the cloaking field. Also, his suit uses energy and the Ops has to decloak for a few seconds in set intervals to allow the suit to recharge.

The Ops has a unique weaponry and items to observe the battlefield to spot chances or to create distractions.

Special advantage:	Cloaking ability
Armor integrity class:	1
<u>Equipment:</u>	
Melee weapon (slot 1):	Neutron claw
Secondary weapon (slot 2):	Heavy pulse pistol
Primary weapon (slot 3):	tranquilizer-crossbow
Items (slot 4):	Binoculars, Hologenerator

WEAPONS & ITEMS**4.Weapons & Items****4.1 Melee (Slot 1)****Knife**

The Combat Knife is... well... a knife. Whatever you do with it - stab or slice - the person on the other end most likely gets hurt.

Truncheon

The truncheon of the soldier is made of steel and can be used from a higher range and faster than a knife -a and it really, really hurts getting hit with a steel truncheon. Don't try it at home.

Stun Gun

A Stun gun - useful to stun, less useful to kill. Only melee weapon with a secondary attack.

Primary attack: touch the enemy with the stun gun and emit a normal charge. It stuns the enemy for a few seconds and does only minimal damage.

Secondary attack: overloads the stun gun: when you successfully attack an enemy with this attack, he gets killed and pushed back by an enormous electrical discharge. After the attack, the stun gun explodes and therefor seriously injures its user and disappears from the inventory.

Neutron claw

If you get attacked by someone uncloaking right in front of you and get slashed by two large supersharp blades charged with photonic energy that burns your flesh and accelerated by a servomotoric glove, you wish you weren't born in this century. Really.

4.2 Secondary (Slot 2)**Laser pistol**

<i>Aiming method:</i>	<i>spray crosshair</i>
<i>Spray amount:</i>	<i>little</i>

The Laser pistol is the most common secondary weapon in Futurewar. It shoots fast laser blasts with good accuracy. It does only cause little damage tho.

WEAPONS & ITEMS**Pulse pistol**

Aiming method: *spray crosshair*
Spray amount: *medium*

The Pulse pistol shoots pulses of concentrated energy. They travel a bit slower than laser blasts and spray more, but also do more damage.

Heavy pulse pistol

Aiming method: *spray crosshair*
Spray amount: *medium*

The Heavy Pulse pistol is a modified Pulse pistol especially created for the Ops - it deals out much more damage per shot while only shooting a little bit slower.

4.3 Primary (Slot 3)**Light laser rifle with scout optics**

The light laser rifle is very accurate over long distances and its fast laser blasts hit the target almost instantly. Furthermore, it is enhanced with zoom optics. While it is hard to aim without using it, a calm sniper using the optics can hit every target with ease. Unfortunately, the light laser rifle does not very much damage per shot, as the weapon cannot emit very much energy at the same time to keep the laser beam focussed.

Zoomed mode:
Can be used while: *slowly walking/standing/crouching/prone*
Can't be used when: *running/jumping/crawling*
Aiming method: *standard crosshair*

While the weapon is zoomed, the player automatically only walks very slowly with the WSAD keys. He can go back to normal movement by exiting zoom mode regularly (secondary attack key). If he presses the jump key, the weapon goes out of zoom and the jump gets executed. (dodge-exit)

If the player goes crouch or prone, he can't move anymore to any direction, so: no crawling.

Crouching/prone doesn't make a difference regarding aim: no matter if the scout is walking, standing, crouching or prone, the projectile always hits precisely where the crosshair pointed when it was fired.

Unzoomed mode:
Can be used while: *any movement mode*
Can't be used when: *-*
Aiming method: *circle-dot-crosshair /stability=low*

The scout aiming is very unstable and it's practically impossible to get a good shot when running. It's better when prone or crouched and not moving, your first shot will always hit, but a direct follow up is hard as the weapon goes unstable fast and needs time to calm down.

WEAPONS & ITEMS**Assault laser rifle**

Aiming method: *circle-dot-crosshair /stability=high*

The assault laser rifle is designed to be able to fire long series of shots without losing focus. It is a main battle weapon, both accurate and dealing out a solid amount of damage.

The assault rifle aiming is very stable and you can fire short bursts of aimed shots even when running, and when the dot gets out of the circle, the spray caused by that is only very slight at start. When prone or crouched and not moving, you can fire pretty long sequences of perfectly aimed shots.

Primary attack: The assault rifle's normal attack mode - repeated laser bursts.

Secondary attack: The assault rifle overloads - it uses a high amount of energy to prepare for a concentrated energy blast. Also, the weapon becomes very unstable as it charges up. If you release the trigger, the charged energy gets fired in a stronger, faster shot. You don't only have to watch your energy while charging, also the instability makes aiming harder and harder the longer you overload your weapon.

Heavy Laser Cannon

The Heavy Laser Cannon is a stationary defensive weapon that has to be deployed to be useable for any effect. The Heavy Laser Cannon fires very fast and does extremely heavy damage, with a laser blast so condensed that a kinetic component is added on impact damage. The player can deploy the heavy laser cannon with a separate key anywhere on even ground.

Deployed mode:

Can be used while: *standing*

Can't be used when: *anything except standing (the stand of the cannon can't be used while prone!)*

While using a deployed laser cannon, the player cannot move and is restricted in his aiming direction. (similar to a deployed machine gun in Day of Defeat)

Primary attack mode 1:

Aiming method: *standard crosshair*

The cannon fires repeated bursts of aimed shots.

Primary attack mode 2:

Aiming method: *spray crosshair*

The cannon overloads its shots and fires much faster, but also sprays its shots randomly. (Area suppression fire)

Primary attack mode 3:

Aiming method: *standard crosshair*

The cannon supercharges its shots and fires globes of energy that explode with extreme force, but travel very slowly (compare: Proton Torpedo launcher in Elite Force). It needs lots of energy per shot.

Secondary attack:

Pressing secondary attack on the laser cannon switches the attack mode.

Undeployed mode:

Can be used while: *any movement mode except prone*

Can't be used when: *prone*

Aiming method: *circle-dot crosshair | stability=extremely low*

Without being deployed, the cannon has only its standard fire mode, but with a circle-dot crosshair to reflect that the player carrying the cannon cannot control the recoil and weight of the cannon properly. The laser cannon is too big and heavy to be operated when prone.

WEAPONS & ITEMS**Antimatter-launcher**

You might want to call this grenade launcher... because it works almost exactly like one. ;-)

Aiming method: *ballistic crosshair*

The launcher is a weapon that fires with ballistic trajectory, and it's energy globes even bounce off walls and the floor. (Very similar to HL2 assault rifle secondary fire, just that the energy ball is slower and has a weight) It has a crosshair similar to aircraft HUDs: you get information at what angle you are currently looking. This helps shooting multiple projectiles at the same distance.

The sight of the player firing the launcher always gets "pushed" a little bit, the more charged, the more push (secondary fire).

Primary attack: The launcher fires a globe of energy at medium speed that bounces off materials a few times and then explodes.

Secondary attack: The launcher's safety switch gets disabled and you can control the launcher's strength personally: The longer the mouse button, the more energy will get allocated to launch the energy projectile. This gets displayed with a bar that has three levels: At level 1, the energy projectile gets launched at low speed and explodes soon so that you can hit close targets with it, but it's likely that you injure yourself. Level 2 is the same as primary fire. At level 3 the launcher uses twice the energy (and of course more time to charge) to shoot the globe twice as fast and thereby over longer distances.

Tranquilizer-crossbow

The tranquilizer is the only ranged weapon with conventional ammunition - your character cannot rearm it at an energy station or with an ammo pack! Therefore it comes with 3 magazines with 6 bolts each. The bolts stun the target for a few seconds but don't do noticeable damage. Also, it has a ballistic trajectory. (comparable to HL2, but the speed of the bolts is much faster) Its fire modes are similar to the scout rifle:

Zoomed mode:

Can be used while: *slowly walking/standing/crouching/prone/crawling*

Can't be used when: *running/jumping*

Aiming method: *ballistic crosshair*

While the weapon is zoomed, the player automatically only walks very slowly with the WSAD keys. He can go back to normal movement by exiting zoom mode regularly (secondary attack key). If he presses the jump key, the weapon goes out of zoom and the jump gets executed. (dodge-exit)

Crouching/prone doesn't make a difference regarding aim: no matter if the crossbow-operator is walking, standing, crouching or prone, the projectile always hits precisely where the crosshair pointed when it was fired. The crossbow only zooms a very little bit, comparable to the Assault rifles in CS.

Unzoomed mode:

Can be used while: *any movement mode*

Can't be used when: *-*

Aiming method: *standard crosshair with ballistic arrow*

In unzoomed mode, the crossbow still hits perfectly, you are missing the ballistic crosshair though and so the standard crosshair is only accurate on short distances. The lower end of the standard crosshair is extended by an arrow pointing downwards to signalize the weapon is ballistic. and that the crosshair isn't perfectly accurate.

WEAPONS & ITEMS**4.4 Grenades & Gadgets (Slot 4)**

As all items can be dropped with secondary attack button, all items only have a primary fire.

Concussion grenade

The concussion grenade stuns all players in the blast radius and pushes them away from the blast center. Stunned players can turn and move only very, very slow (inches) and cannot fire. When you use the conc grenade, your character disarms it, wait until you let go of the mouse button and then throws it. The item can only be used once and afterwards disappears from the inventory.

Fragmentation grenade

The fragmentation grenade seriously hurts all players in the blast radius. Also, a lot of dust and smoke gets pushed in the air causing additional visual distraction. When you use the conc grenade, your character disarms it, wait until you let go of the mouse button and then throws it. The item can only be used once and afterwards disappears from the inventory. Special: The frag grenade treats all characters as if their armor resistance value was 1! It does SERIOUS damage to any type of armor.

Medkit

As soon as a player uses his medkit, he gets full health instantly. The item can only be used once and afterwards disappears from the inventory.

Ammo pack

As soon as a player uses the ammo pack, all rechargeable weapons get full energy. The item can only be used once and afterwards disappears from the inventory.

Binoculars

If you use binoculars, you get a zoomed view of the battlefield. As long as you hold LMB, the binoculars keep zooming in until they reach a very high magnification. Pressing and holding primary attack again restarts the procedure. The item can be re-used.

Nice to have: An infrared vision mode of the battlefield, with characters being enhanced by red colors while environment is blue? That would also be nice for the scout rifle optics. Possible, dear coder?

Scout Drone

The scout drone is a small remote-controlled vehicle with a camera. As soon as it gets deployed, the player controls it with the WSAD key and sees the world from the perspective of the drone, while his character remains in the same position he was in when the drone was started. The item can only be used once and afterwards disappears from the inventory.

WEAPONS & ITEMS**Motion tracker**

The motion tracker is a small device that can be used to reveal enemy movement in close distance, even through walls. As soon as you hold this item in your hands (no activation needed), you get indicators when enemies move similar to NS (actually MT stolen from NS as item. Maybe we can find a more original way to do this later).

The item can be re-used.

Bulletshield

The bulletshield is a small device that can be thrown a few meters, then it emits a cloud of green, transparent particles (imagine Final Fantasy movie dropship scene) that absorbs any energy hitting it. Only matter can pass the cloud without problems, so characters, grenades or tranquilizer darts can still get through. If grenades explode inside the cloud, their explosion gets absorbed as well (and effectively they don't explode in the cloud, they just emit a little puff of smoke then disappear.).

The item can only be used once and afterwards disappears from the inventory.

Remote-detonated explosives

First press of LMB: bomb gets planted. The player then only holds a remote control in his hands. Another press of LMB detonates the planted explosive. Similar damage as a frag grenade.

Planted bombs disappear if the controlling player changes class or respawns.

The item can only be used once and afterwards disappears from the inventory.

Lasertripmine

The lasertripmine is an explosive device that gets triggered by interrupting a laser beam emitted by it. See HL1. Similar damage as a HE grenade.

Planted mines disappear if the controlling player changes class or respawns.

The item can only be used once and afterwards disappears from the inventory.

Holographic distraction generator

The holographic distraction generator (HDG) gets planted on the floor and, after a short delay, creates the typical sound and lighting of a firefight. This may get other players see who is fighting there and if a teammate needs reinforcements, and can thereby cause players to go to a location to investigate.

This can be useful to distract a pursuer or guards and generally buy a few seconds of time.

The item can only be used once and afterwards disappears from the inventory.

INTERFACE

5. Interface

5.1 Selection Menus

Team Selection

When you join a game or decide to change teams in game, the team selection shows up. On the left side there are two buttons with the team choices red or blue, on the right side a picture of a character of that team along with a description.

Class Selection

When you join a game or decide to change characters in game, the class selection shows up. On the left side there are buttons with the character classes, on the right side a picture of the character class of that team along with a description.

5.2 HUD

Health / Armor

The health of the player is shown in the lower left corner as number with a health icon (heart) besides it. Armor is also shown as bar with an armor sign (vest) besides it that has the armor strength inside as small number.

Ammo

Ammo is shown in the lower right corner together with ammo type(energy or darts) and magazines (if applicable)

Suit Energy

Suit energy for the cloaking suit of the spy is shown as bar above the ammo display on the mid-right of the screen.

Crosshairs

The crosshair changes dependant on the type of weapon or item you have activated.

Something like a "map" or a flag status display doesn't exist, this can be found at the bases or in any subway station!

VEHICLES**6. Vehicles****6.1 Combat vehicles****Mustang**

An old, half-demolished rusty 1969 Ford Mustang with a Lasercannon mounted on its Hood. Fast and furious, but it can only fire forward, the cannon cannot be turned. Low centre of gravity but it's a light vehicle that can be stopped with heavy barrels or explosives. It provides little cover to the driver

RCV - Riot Control Vehicle

The riot control vehicle is a heavily armored personell carrier with a laser cannon turret on its top. Once it had a watercannon, but the time of watercannons is over. Very slow, but with a strong engine and tracks, almost nothing can stop this behemoth from moving on and on and on. The RCV is very heavy, but it has a high centre of gravity and can be pushed over by shooting it from the side with high-impact weaponry like antimatter grenades. It's extremely difficult to get it driveable again then tho. It can only rotate on its tracks when standing still or moving slow. It's driver has a lot of protection

6.2 Transports**Truck**

An old, rusty truck. It has a large cargo area where Players can easily jump on and take a ride while still able to use their weapons. However, they're exposed to enemy fire.

Bus

The small bus provides better cover to the passengers who are able to fire out of the windows. It provides less cover for the driver...

END OF MAIN DESIGN DOCUMENT. MY BRAIN IS EMPTY. I NEED SLEEP AND A LIFE

APPENDIX A

Appendix A: Team Management & Coordination

(erased - only necessary for a big, less-experienced team. Hope that won't be necessary)

APPENDIX B

Appendix B: The Story

Story? Have you seen a story? Oh, it ran down the sidestreet over there? Thanks! *runs away*