Cyberpunk City

Presented by Rebellion Software Limited

Rebellion Software Limited,   Magdalen Centre,   Oxford Science Park,   Oxford OX4 4GA

Telephone: +44 (0)865 784555

Fax: +44 (0)865 784556

Cyber Punk City

Presented by Rebellion Software Limited

Warfare in the not too distant future...

A city is under attack from the enemy...

You are a private defence operative. Your task is to protect the centre of Cyber Punk City from destruction and defend the communication nodes from the robotic and pityless ground attack vehicles and flying drones.

The game is set in a sprawling city of the future. Years of unchecked pollution have created a heavy dark sky over the city. Your must fly between the city blocks in your highly specialised VTOL vehicle and attack the approaching enemy.

There are vast transport tunnels running under the ground. You must use these to navigate to critical areas of the war.

The city defence force is holding out in isolated blockhouses, you can refuel and rearm at these locations, but often they are in the thick of the fighting.

Your vehicle is highly manoeuverable and carries a formidable load of munitions - a forward firing mini gun, 36 minimissiles carries in side pods and an ability to be upgraded by the addition of plug in modules. These improve Electronic countermeasure abilities (ECM) and guidance around the city. It can fly vertically and backwards, as well as possessing rapid acceleration and heavy armour. It takes more than a few hits to knock you out of the sky.

The city is illuminated by the lights from the ever present neon, and the multitudes of office windows. Even during an attack the lights remain burning!

Cyber Punk City is a fast paced combat flight simulator set in a dark 'Bladerunner' type of city. It can be played on three levels. Level 1 is a fly and shoot game without any tactical requirements. Level 2 requires the flying of missions to specific areas of the map and to perform specific functions, eg destroy the road bridge at grid ref 37419. Level 3 is the full tactical game with mission choices and all out combat being up to the player.

Cyber Punk City

(c)1992 Chris Kingsley

Presented by Rebellion Software Limited

Introduction

Cyber Punk City is a fast-paced combat flight simulator set in a dystopian city in the not too distant future.

The player is a private defence contractor who is paid bounties for every enemy he shoots down.

With this bounty he can improve his vehicle's specification in terms of weaponry, engine capacity, armour, electronic counter measures (ECM) and computer systems.

Game set up and flow

The game begins with a fly past of a city scape, and a brief combat sequence. The following text then types over a slower flypast of the city.

2051 AD

Warfare in the not too distant future...

We are under siege...

Remote controlled attack vehicles have been sent into our city.

It is an act of unprovoked aggression. The city central command centre must be protected at all costs.

The City Council will pay a bounty for each aggressor terminated.

The game introduction will then loop back to the beginning unless a button is pressed.

If this happens the introduction screen fades to black, and a new screen appears. It looks like an old style CRT with previous ghost images burnt into its phosphor. The options appear as glowing green images on the dirty screen. The options are:

Start Game
Game Options

Start game will take the player to a view from the cockpit off the craft and a menu of choices. The highlighted option can be changed. The choices are:

Launch Craft
Long Range Scanner
Buy Systems
Fast Repair

Selection of any of the last two at this stage in the game or later if the player does not have any money will result in the following message:

You have no New Dolla

or

All systems fully functional

Later in the game these options will allow the player to update their ship's systems or to spend New Dolla on fast repair of the ship generally.

Selecting 'Launch Craft' will rocket the player's vehicle into the city's airspace at great speed. Once clear of the launch tube the player's craft will flash the message

You have control

on the HUD and the player will be able to select systems and generally control the craft.

Selecting the Long Range Scanner option will bring up a view of the city and the sectors under attack. If the player then selects a destination and locks that into the computer, on launch the player's vehicle will take control and hurtle the player at a great speed and break-neck turns through the air and into the underground tunnel system, to emerge and regain control in the selected sector.

Player's vehicle control systems

The player's ship is a vertical take off and landing vehicle (VTOL). It can hover stationary in the air, or fly at over 300 mph. It carries a heavy payload of munitions both internally and on external podules.

The player has full spherical freedom of motion and can hover in the air at all orientations.

The key controls below are configurable to a player's wishes in an Option Screen.

The default status is as below.

UP	Orient ship downwards
DOWN	Orient ship upwards
LEFT	Bank left - angle of bank increases as joypad held down
RIGHT	Bank right (as above)
A	Fire selected weapon system
B	Increase forward velocity
C	Decrease forward velocity

Weapons systems - Standard weapons are the forward-firing Mini-gun that uses tracer shells and carries 5000 rounds, 4 Firefly air-to-air missiles, two Groundhog air-to-surface missiles and 12 anti-missile flares.

Further weapons systems must be purchased from the armoured depots. ‾

12 flares	50 New Dolla
5000 Mini-gun rounds	250 New Dolla
1 Firefly air-to-air missile	150 New Dolla
1 Groundhog air-to-surface missile	200 New Dolla
5000 U-tipped Mini-Gun rounds	350 New Dolla
1 Firehawk air-to-air missile	300 New Dolla
1 Gundog air-to-surface missile	350 New Dolla
1 Sormeye air-to-air intelligent heavy missile	1000 New Dolla
1 Rebelfist area denial mine missile	500 New Dolla
1 Jellyfish aerial mine group	150 New Dolla

Increase in cost of a weapon system generally increases several of its statistics. U-tipped Mini-Gun rounds are twice as effective as the cheaper versions. Firehawk air-to-air missiles are smarter and less likely to be fooled by flares.

The Stormeye intelligent heavy missile is a top-of-the-range device used to take out the flying command-and-control centres of the enemy. It is difficult to fool with even the most sophisticated ECM devices.

The Rebelfist area denial missile scatters 50 bomblets once it is over a target area. These explode on contact with a metallic object or remain in place as mines until

ECM systems

These systems are automatic and protect the player's ship from homing missiles and other guided weapons systems. The ECM systems can automatically launch flares against homing missiles, and attempt to jam their lock-on systems. Better_systems have a greater chance of jamming a lock-on signal. Smarter weapons have a greater chance of penetrating an ECM system.

```
Big Brain systems
Mk 1 - Level 1 Jamming        20,000 New Dolla
Mk 2 - Level 2 Jamming        35.000 New Dolla

HAL Electronics
Level 3 Jamming               45.000 New Dolla

Rebellion Industries
Level 4 Jamming              120,000 New Dolla
```

Level 1 jamming has a 50% chance of breaking a lock-on signal of a level 1 missile system.

Level 2 has a 75% chance, level 3 a 100% chance.

Level 1 systems have a 25% chance of breaking the lock-on of a level 2 system etc.

If an ECM system cannot break the lock on signal it will send a warning to the pilot's HUD and launch a flare.

Engines and Energy systems

The engine of the player's craft is the most important on-board system. Its energy output is used to power all the other ship systems.

Each engine has a maximum energy output and this energy can be used for propulsion, weapons, repair systems and shields.

Energy can be shunted from one system to another in times of crisis. Normally there is a standard shunting of energy from the engine to each system. Hitting the energy shunt key brings up a screen with sliders. This allows the player to select one system and shunt more energy to it at the expense of all the other systems.

No system can be switched off totally.

The selected item is highlighted. Moving the joypad left or right decreases or increases the percentage of energy shunted to that system. Other systems loose or gain the remaining energy in proportion until they are at a minimum.

Standard set up is:

Propulsion	40%
Weapons	20%
Shields	20%
Auto repair	10%
E. C. M.	5%
Environment	5%

Improving the energy shunted to the weapons increases the power of the attack if using lasers. Missiles have their own stand alone energy systems and therefore do not benefit from increased energy.

The minimum level of energy for any system is 2%. Propulsion at 2% will only enable the ship to crawl along at a 20th of its normal speed.

Engines can be upgraded at armoured depots. The old engine is used to provide elements for the new one.

The alternative engines are:

Standard Engine	100 EU	supplied standard
Standard Plus	105 EU	5.000 New Dolla
Standard Gold	110 EU	10.000 New Dolla
Grupenbeck	125 EU	50.000 New Dolla
Morger	140 EU	70.000 New Dolla
Bell Whistle	150 EU	100.000 New Dolla
Toadteeth	200 EU	120.000 New Dolla
Wild Horses	235 EU	200.000 New Dolla

Auto-repair

These systems will automatically attempt to repair the player's ship.

The systems prioritise the on-board systems that are the most essential. These priorities can be changed. More energy can be shunted through the auto-repair systems to speed them up.

Increased efficiency systems can be purchased and installed.

The auto-repair systems themselves can be damaged or destroyed. If auto-repair is functioning, the HUD will display what aspect it is working on and how close to complete repair it is.

Selecting the auto-repair screen on the keypad brings up a screen with all the ship's systems shown as a series of bar charts.

A system that does not need repair will be shown as a filled green bar.

Systems damaged in combat will show shorter bars, in colours changing from green at 100 % efficiency to flashing red at 10% efficiency or below.

A system can be exchanged with another system in the auto-repair screen priority list by highlighting it and hitting the A button. The selected system will be moved to the top of the stack.

The auto-repair system has the following default priorities:

```
Environment
Shields
Auto repair
Propulsion
Weapons
E. C. M.
```

Remote eyes - Recon-Eyes

These remote devices can be purchased from the armoured depots and used as spies in the sky. They are launched like any other attack, but the view will be the view from the pod. It is possible to purchase pods with enhanced views in the infra red region or the Ultra Violet spectra. The Recon-eyes are one shot and have little combat value. Their role is strictly for reconnaissance. Sometimes primitive homing missiles will lock onto a Recon-eye rather than the player's ship.

Standard Recon-eye	100 New Dolla
Fast Recon-eye	125 New Dolla
Infra-Red Recon-eye	140 New Dolla
UV Recon-eye	140 New Dolla

Once a Recon-eye is launched a drop down window appears with the Recon-eye's view. The player's ship comes to a halt until the Recon-eye has run out of fuel and self destructed.

These devices can be controlled by the player's control pad. The Recon-eye will move left, right, up or down in response to the player's control pad. The B and C keys will speed up and slow down the Recon-eye.

The Recon-eye will be destroyed by collision with any object or any defence system.

Once it runs out of fuel, between fifteen and twenty seconds, it will plunge to the ground, detonate and the screen will be filled with static. The window will close up.

Player's ship

The player can see at all times several systems and brief descriptions of all the other systems in specific places in the cockpit interior.

The numeric keypad will be used to access the various sub-screens.

Visible on the cockpit at all times are:

Target Ident Panel
Bounty Value Indicator

Short Range Scanner
Computer Personality Screen
System Status Indicators

Selected Weapon System
Available Weapons Systems

Central Command Access Screen

Short Range Scanner

This appears at all times on the cockpit.

It shows all vehicles and a schematic of the building walls in the immediate area.

Enemy vehicles are shown as red dots. Brighter red means faster moving objects.

The buildings in the immediate area are shown as line drawn boxes in a variety of different blues and greens to add colour to the cockpit.

Target Ident Panel

Any mobile object that has been acquired by the lock-on systems of the player's ship will be identified on the cockpit Target Ident Panel, together with its level of bounty and danger rating.

The identity of the target will be in a small glowing green type face, as if written by an LED.

The colour of the bounty amount will be in a larger type-face. The colour used ranging from green for low numbers through a range for increasing bounty levels to red for the highest level of bounty.

Long Range Scanner

Selecting this with one of the number keys brings up a schematic of the whole city divided into blocks and zones of threat.

This appears on the large play screen and does not halt game play.

The zones not under attack are coloured in green, those under current threat are bright red, those already over-run are dull red.

Zones with enemy can be accessed by moving a blue highlight or transparent fill over the required zone and hitting the A button.

Information on this zone will then appear over the Long Range Scan which fades down in intensity. The blue transparent fill can be moved about by the joypad or deselected with another button press.

Computer Personality Screen

The player's ship is fitted with a computer personality.

This can be chosen by the player from two options (more options on the CD version).

The screen will be a series of digitised images of head and shoulder shots of real humans. The image animates and speaks to the player offering advice, or warnings about attackers or the ship's status.

The default personality is a young woman. The other personality is a completely mad man, with wild eyes and a tendency to shout and swear at the player:

Young woman's phrases:

```
Targets ahead
Ship sustaining damage
Ship critically damaged
Ammunition low
Good shooting
Warning Missiles approaching
Goodbye
```

Mad Man's phrases (same meaning as above):

```
Come to Papa, bad boys
Yeowww!
Oh no, new trousers time
We're low on fireworks, Daddy O
Right down their street
Incomming!
What a wild ride, catch ya on the
other side.
```

System Status Indicators

These are simple coloured lights and a symbolic representation of the system to which they refer. When the system is 100% intact the light is green, as it gets damaged, the light changes from green through to flashing red.

Any system that is flashing red will also trigger a warning message that is flashed up on the player's HUD for two seconds.

```
[System] Critical
```

Where [System] is the system that is in a heavily damaged condition.

Selected weapon system

This window on the cockpit shows a representation of the currently selected weapon system ie the one that will be launched by the player pressing the A button.

There will also be a HUD message showing the weapon type. Pressing the C button will change the selected weapon.

If there is only one weapon available, pressing the C button will have no effect.

If there are no weapons available, the HUD will say

```
No weapons available
```

- A particle system will be used for the explosions. Bits of destroyed target will bounce realistically off buildings and the ground, glowing sparks will fly off other vehicles when you shoot them.

- There will be full 360 degree roll and rotation without restriction.

- Realistic flight dynamics based upon the laws of physics will make the player's craft control realistically and add a level of simulation to the game.

- Sound effects will be linked to the movement of other vehicles and missiles. The doppler effect of change in tone of a sound as it passes will be simulated.

Optimisations

- Buildings will be located on a grid. Although there is a maximum size within the grid square the building itself can be of any shape and dimension within it.

- Large 3D building shapes do not require much memory space to describe. The world can be made very complex without using a vast amount of memory space.

- Hidden face removal is very simple, only one normal per building side is required. At least half a shape can be trivially rejected by the drawing algorithm.

- The screen can be drawn from front to back as buildings obscure each other in regular ways.

- Only a few points need to be rotated for each building. Windows and lights can be calculated by a simple method from this value.

- The object processor is used to rotate the screen, ie roll the aircraft. This saves one part of the rotation matrix, and introduces a super-optimisation for drawing polygons with the blitter.

Available weapon system

This is a series of boxes that represent all the weapons available at any time as symbols.

The selectable systems will rearrange themselves as the player selects a weapons system to use.

Central Command Access Screen

Central Command will on occasions send messages to the player about the threatened status of other sectors that the one he is currently in. The digitised image will offer the player a bounty to go to a threatened or particularly dangerous zone of the city.

```
This is Central.  We need you to go to
[zone number].  We're under very heavy
attack from [enemy type].  All bounties are
[doubled/tripled etc.] in this zone.
```

When the player has earned a big bounty the central controller will appear and send his congratulations.

```
You'll soon be able to retire.  Good
shooting hotshot!
```

Some areas of the city will be more heavily effected by the smog problems and will have very reduced visibility. To simulate this we will use the depth cueing and change its value gradually. This will enable us to simulate the effect of fog closing in slowly, or of darkness arriving or of suddenly descending gas clouds.

Particle System

The player's ship fires tracer shells from its Mini-gun.

These along with the anti-aircraft guns of the enemy glow like fireflies as they hammer through the air. This effect will be created with a particle system. The speed of a particle determining its length. We will also be able to see shells striking a target or bouncing off the heavily armoured sides of a shock tank.

Destroyed targets will smoke with glowing particles that rise up into the night and fade to blackness.

It will be possibel to fly through a cloud of dissipating debris from a recently vapourised enemy target. Particles will bounce off your front screen.

Explosions

Explosions will use a combination of non-rotating scaled bitmap explosion frames combined with fragments generated by the particle system.

Underground Tunnels

To enable the player's ship to travel around the city at great speed there is a network of rapid transport underground tunnels. Huge steel panels line the subterranean routes. Rust streaks line their sides.

Lights mark the intersection and vast numbered signs are painted on the walls showing the pilot which tunnel to take for which sector. The entry and exit points of the tunnel systems are protected by heavy armoured doors. These open and close automatically behind the player's ship. They are very vulnerable and are high on the enemy's list of targets. Automatic systems will close off a branch if the exit is destroyed by enemy action.

These tunnels are used by the player to access map zones quickly without having to fly through the city. In certain circumstances the player will be able to pop up behind enemy lines and cause devastation to their mobile unit factories and communications units.

Enemy types

Each enemy has a specific 3D shape associated with it as well as a specific set of texture mapped details and decals. Each has a specific strategy and target priority. Some of these strategies will be modified by the presence or absence of another type of enemy vehicle.

Each also has an armoured strength so that the player must learn which type of weapon system will be the most effective to use against which target.

Ground vehicles

Frontal Assault Armour

Blitz Tanks are heavily armoured and move slowly towards the main objective. Without a command and control centre in the same zone they will move in a straight line towards the objective, only going round an object after some seconds of deliberation. With a command and control centre they are capable of backtracking around blocked off streets.
Blitz tanks have very heavy frontal and top armour. Their major weakness is the rear armour and their stupidness without comand and control units present.
Ther have a coaxial mounted Mini-Gun as an anti aircraft weapon. Their limitation in is the traverse speed of the turret which cannot track a fast moving aerial target.
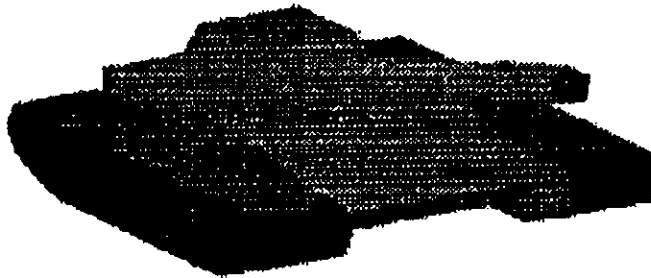
Fast Attack Ground Effect Vehicle

Skimmers are lightly armoured hovercraft. They are fast moving and smarter than the Blitz Tank. They each have a Mini-gun as Anti-Aircraft defence and suffer the same problems of slow traverse speed against a fast aerial attacker. Skimmers carry one anti-aircraft missile type 1. This will be fired at an air-based target once it has passed the Skimmer.
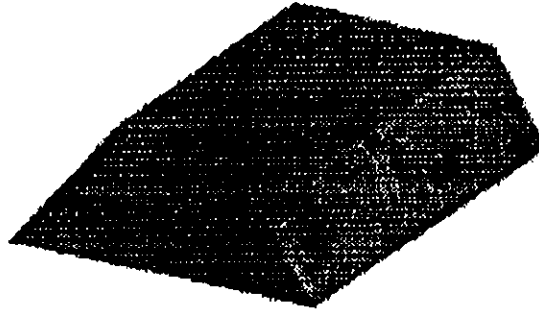
Missile Tanks

Missile Tanks carry racks of missiles to protect Blitz tanks from an airbourne threat. Missile Tanks are slower than Blitz Tanks and have no intelligence other than that supplied by the command and control centres.

Normally they will launch single missiles at each threat from their full complement of twelve. Each tank carries a single type 2 guided missile which it will reserve for persistant threats or attacks on the command and control unit.

If the command and control centre is destroyed, a missile tank has three options. 50% of the time it will simply shut down and wait for orders. 25% of the time it will launch all its missiles in unguided mode one after the other in close succession and then shut down. 25% of the time it will self destruct.
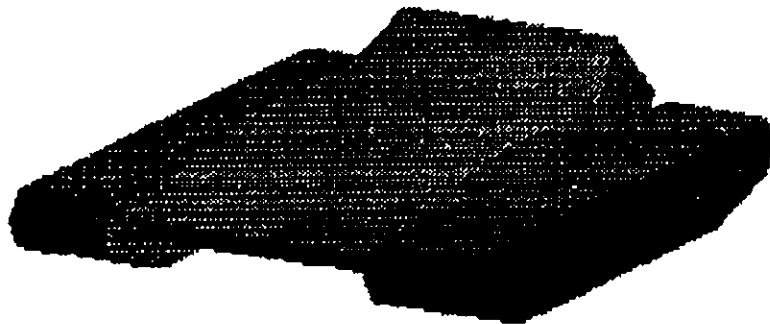
Anti-Aircraft tanks

Ack Tanks are support units for the command and control centres. Each C and C unit has at least one Ack Tank in close support. Fast traversing, these tanks have twin-mounted mini-guns which can track a target very quickly. Without the C and C unit they are very inaccurate. In its presence in the same zone their fire can be difficult to avoid and very dangerous.

Sometimes they are found in support of units of Blitz tanks.

Command and Control Centres

These are the brains and co-ordination units for any assault group. The command and control unit itself is heavily armoured and carries no weapons. It co-ordinates actions for the attack group and is almost always well protected at the rear of the attack group. Most attack groups loose their cohesion and efficiency without a command and control unit present. They are consequently the highest priority target for any attacker.
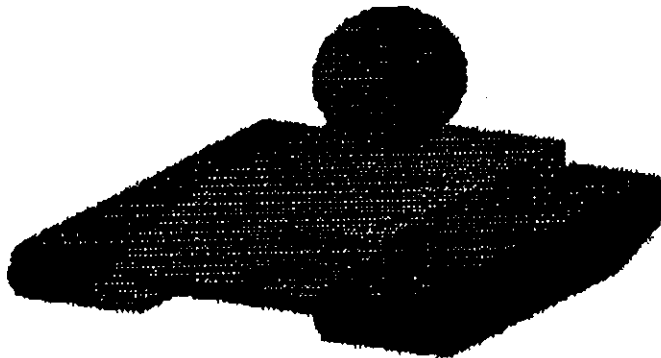
Supply Vehicles

These vehicles can be seen shuttling between attack groups and the supply centres behind the main attack. They bring fresh weapons and parts for the attacking units. Without resupply, an attack can grind to a halt. Weaponless attackers are an easy target. Supply vehicles are easily destroyed, and have no weapons. There are however lots of them.
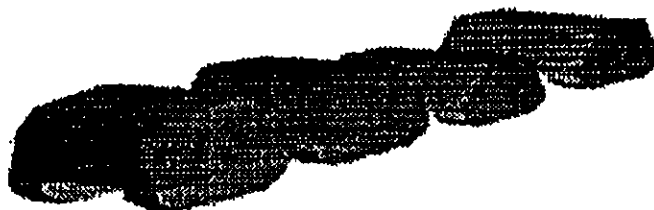
Fixed Communication Nodes

These fixed communication nodes are set up in a zone that is completely controlled by the attackers. They act as relays from the front line command and control centres to the overall strategic command centre.

Destroying these slows up the strategic decisions and the communication between the overall strategic command centre and the attack units. Without this link the attack groups cannot have their strategic targets updated and will go into a holding pattern about a successfully taken target and await further instructions.

Aircraft

Attack Drones

Drones are simple easily destroyed air attack craft. They are relatively smart and can initiate attacks and simple strategies without interaction from the command and control centre. They carry a forward firing mini-gun of low capacity and two unguided air-to-air missiles. Once they are out of weapons they will immediately turn around and head back to the refuelling point. At this stage of their strategy they are incapable of taking any avoiding action and are sitting targets.

There are often six or more attack drones with any major attack group. They are fast but not very agile.
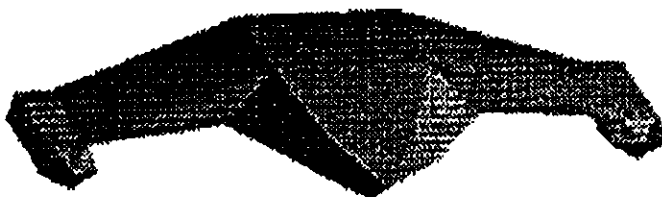
Advanced Attack Drones

Atax are smarter and more deadly versions of the drone craft above. They carry four missiles, two are homing, two are unguided. They usually attack in groups of two or three.
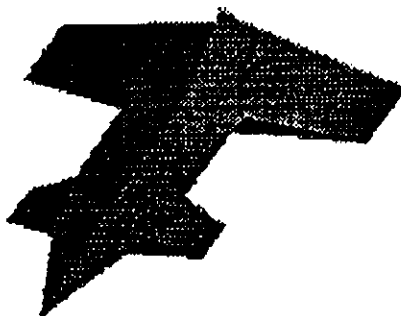
Mine layers

The large and bulbous craft scatter air-based mines in strings behind them. They have no offensive weaponry and their task is to make counter offenses more difficult. The mines they drop simply float in place until one of their long trigger arms is touched. They then explode sending shrapnell in all directions.

Recon Drones

Recon Drones are fast moving air-based scout units. They are the advance eyes and ears of the attack groups. They are very lightly armoured and have no offensive capability. They are independently intelligent and are capable of vectoring an attack group of Attack Drones or Advanced Attack Drones to the player's last position.
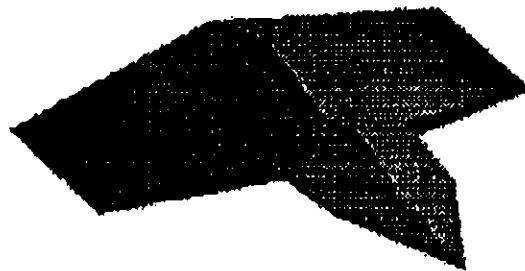
Command and Control Craft

These are the airborne-brains and coordination units for some assault groups. The command and control unit itself carries no weapons. It co-ordinates actions for the attack group and circles slowly at the rear of the attack group. Most attack_groups loose their cohesion and efficiency without a command and control unit present. They are consequently the highest priority target for any attacker.

They will be protected by an escort of Advanced Attack Drones and will retreat if placed under threat.
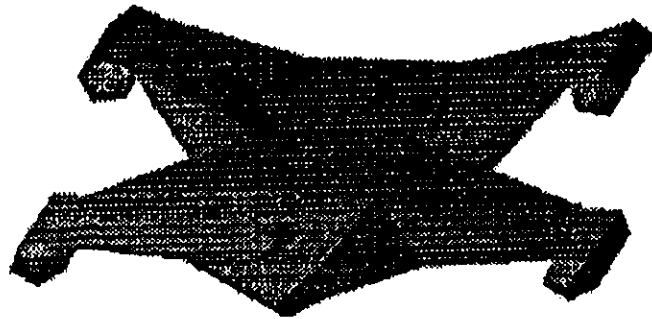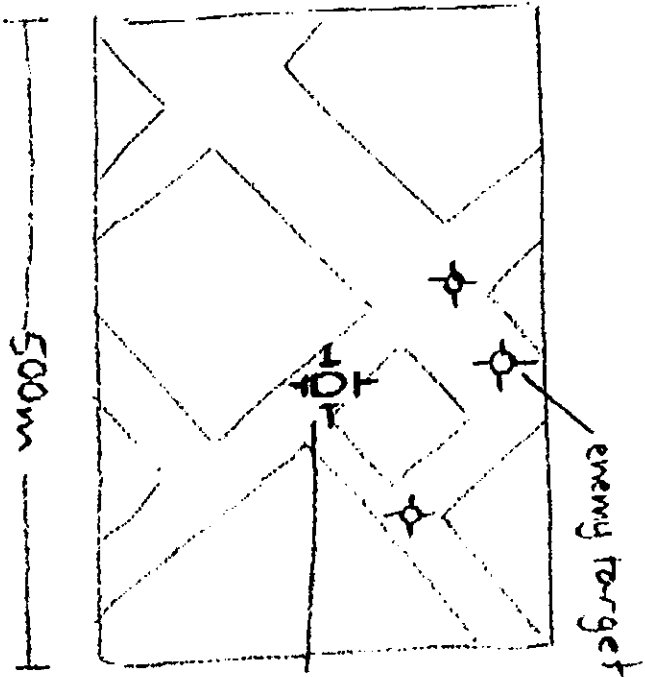
Aerial Supply Vehicles

These vehicles can be seen shuttling between attack groups and the supply centres behind the main attack. They bring fresh weapons and parts for the attacking units. Without resupply, an attack can grind to a halt. Weaponless attackers are an easy target. Supply vehicles are easily destroyed, and have no weapons. There are however lots of them.
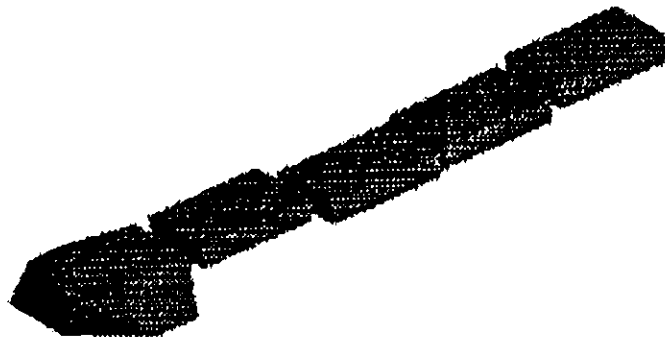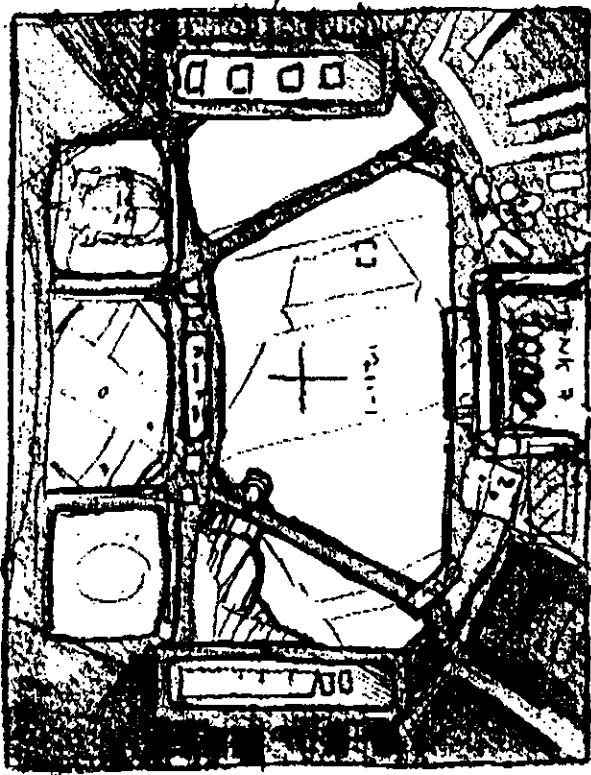
teddy bear
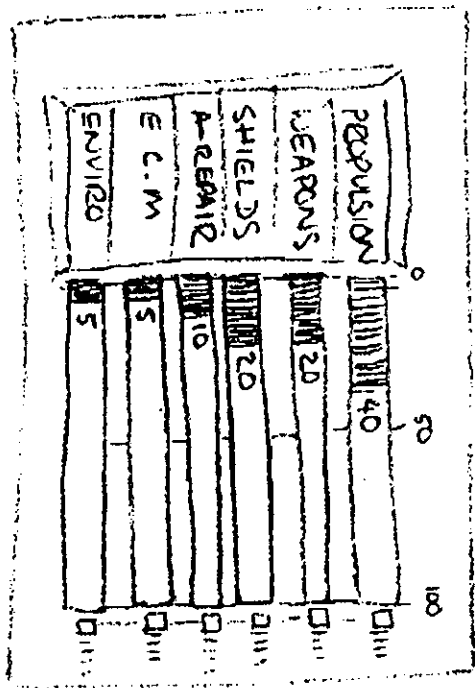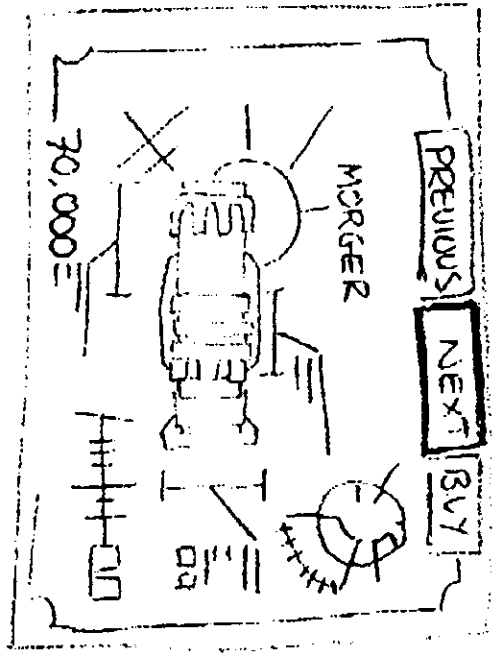bounty box
lucky
playing
cards

Short range scanner
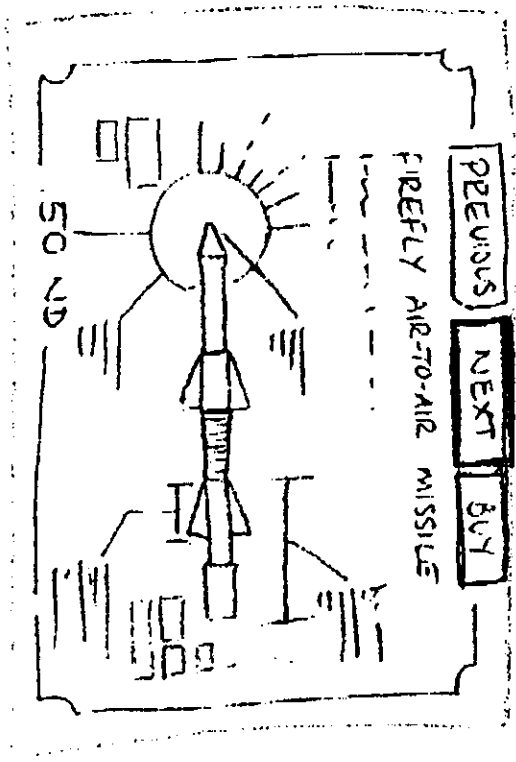
500m

enemy target

player's ship
remains central on
screen

Energy shunt screen

PROPULSION
WEAPONS
SHIELDS
A-REPAIR
E.C.M
ENVIRO

0   50   100

40
20
20
10
5
5

Engine purchase screen

70,000

MORGER

PREVIOUS NEXT BUY

Weapon purchase screen.

PREVIOUS NEXT BUY

FIREFLY AIR-TO-AIR MISSILE

50 VD

long range scanner

defence zone
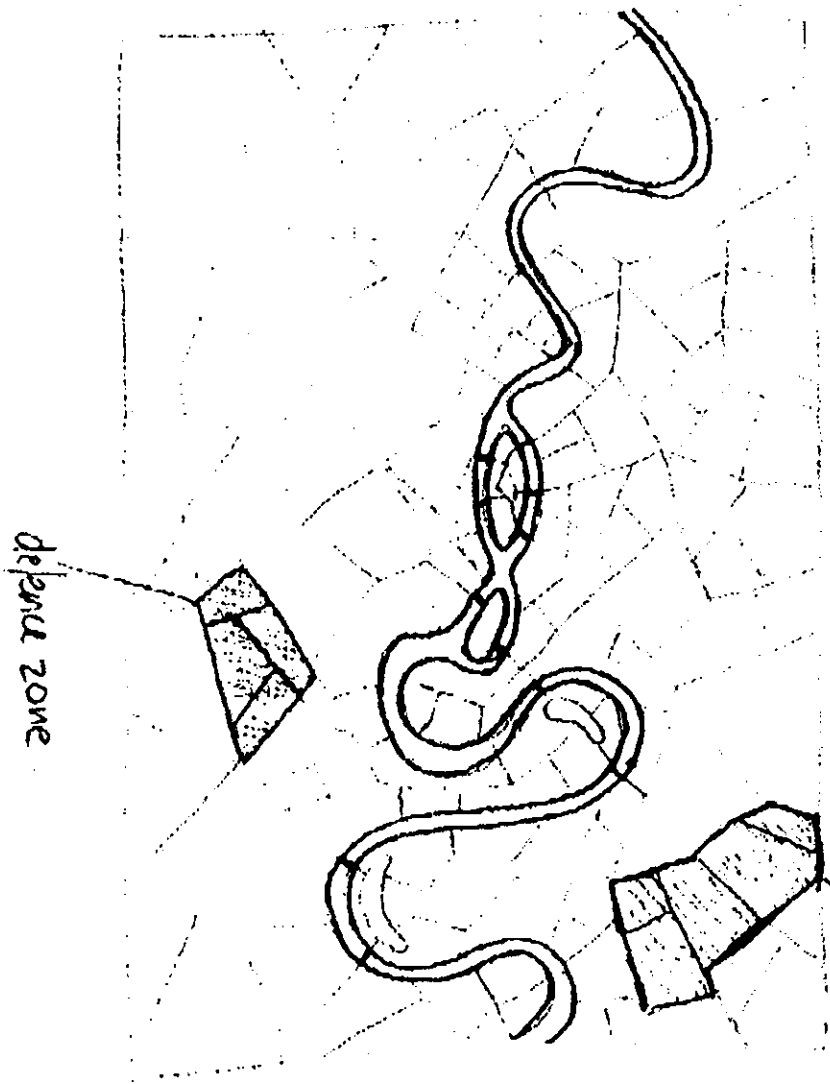
defence zone under attack

Game Environment

The game is set in one of three smog-bound cities of the future.

Vast skyscrapers rise up into the clouds. Navigation at this height is confused by satellite anti-tracking systems, making flight impossible.

Each building is lit by external lights and the light leaking from the office windows.

Many of the buildings have vast advertising hoardings on their sides. These will show a series of filmed and digitised advertisements for a variety of products and services.

Advert 1   Invest in more health insurance, you know it makes sense.

Advert 2   Our family car is the safest on the road.

Advert 3   The Sabretooth Tiger, Atari's 9th generation home computer system.

Advert 4   A Japanese girl eating something odd looking that isn't dead yet.

Advert 5   A girl in a bikini on a beach. Factor 1000 Radiation Block cream.

Advert 6   Come to the Arctic where the air is clean and fresh.

Advert 7   Join Rebellion Industries Off-world Pioneer Corp.

These will all be filmed and digitised with sound tracks. They will be playing in rotation on all the cities hoardings. They will be of an appropriate length for the storage space available on the cart or CD device.

The city blocks will be arranged on a loose grid pattern. This allows a number of optimisations in the display code and simuates the structure of the futuristic city.

Some of the blocks will be lower than the enshrouding smog. On these buildings it will be possible to land and shunt all energy to the auto repair systems for a well earned rest from combat.

Other buildings will be landing points to enter the hardened bunkers where more supplies can be purchased with bounty money. Entry to these bunkers is gained by flying up to the armoured doors and landing on the landing pad outside. Computer systems will check that you are friendly and the player's ship will automatically be pulled inside. The purchasing screens will replace the player's view of the world and once satisfied, the launch request can be given.

These hardened bunkers are obviously major targets for the attacking machines and though well-defended are often the focus of the enemy's attention.