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ART DIRECTION

The starting reference for all style decisions should initially be with the Carmageddon brand. We are creating a game based on a multi million dollar franchise and it is important that we are faithful to it and do not detract from the value that it has, and treat it with respect. Essentially we need to breakdown the core experience and make sure that holds true through the Art. This does not mean that we cannot push the art style in the form of unique visuals, effects, fun locations or environments, stylish cars with customization, but it does mean that we cannot create something that looks alien to the original game and start imposing our own take on the IP.

The second point of reference is game-play experience, which would include visual legibility, area navigation, set pieces, car customisation, story line and things like technical requirements as we will have to work within the technical restrictions of the engine, and the look needs to be sympathetic to what we are able to achieve. There is no point in trying to do environments with a 5 mile view distance if the engine can only handle one mile for example. I would like to drive these elements with the ‘Jackass’ and ‘Gonzo Broadcasting’ aesthetic.

The third point of reference for style decisions is the ‘scene’ itself and all its surrounding influences such as music and sounds. In many ways the music takes an equal seat to the art style to immerse the player and reinforce the Carmageddon experience. In detail, the ‘Obey’ style brand building from urban and grassroots level with a ‘pirate organisation’ underground feel. The CarmaTV logo would be subtly placed in the environments, possibly as a tag or graffiti.

So taking Carmageddon as the starting reference point, we need to determine the look, feel and mood of the game. Also, since we are using an overall thematic approach to the game, we need to separate the themes and deal with them individually. As with any piece of art, you need to decide on a palette of colours that work together that conveys the mood and feel that you are trying to portray. An intelligent use of colour in a limited palette approach, will reinforce the themes in the environment.

There are many theories behind colour harmony, and are generally described as an arrangement of colours that is pleasing to the eye. It is possible to create an inharmonious feeling to make the player uncomfortable. This can be used to good effect if we want to push the disturbing side of CarmaTV.

Some practical implementations of colour theory in the game: -

- The obvious use of colour palettes is to use them to help define the game themes.
- We use the palettes as a subliminal colour coding for the player so that if he moves into a predominantly red area he may know something is coming. (Triggered events, set pieces etc.)
- We could decide on a colour palette and style for the whole game accordingly, Metal Gear Solid is an excellent example of this; we could tint the game green and blue which seems to be fashionable at the moment, but would be difficult to carry across the different themes.
- Restricted colour palettes will be used to great effect in the “intense” out of car experience.

PALETTE

As earlier stated, it would be very difficult to apply the same colour palette to the locations within the different themes, so to start we need to define a palette for each of these. It would be too simplistic an approach to light the entire environment with a single colour wash, this would soon become very boring to the eye as there wouldn't be enough variation, and although it may look quite nice, it would not be appreciated much by our target audience.

So a good approach would be to light the scene in a naturalistic way, maybe slightly tinting the moon or sunlight, and then apply the defining palette colours with neon, billboards, street lights etc to add the definition and mood. As well as the glows on lights and neon signs we would also strategically use **fill lights** on the environment like down alley ways and in front of stores. It would be advisable to begin to nail down a set of palettes at this stage as we need to experiment with what works considering the existing themes, especially under different lighting conditions, and how subtle we need to be without the colour schemes becoming too simplistic.

CINEMATOGRAPHY

CAMERA WORK

To bring in the "Jackass" element, I propose that the camera work we use for playback and cut scenes should be in the style of a first person hand held camera, which means we will have to fake a subtle movement when the camera is looking at something. (Possibly with slightly washed out colours, scan-lines and a poor sound quality). This will also influence the kind of camera angles we use. If we take this further everything should be shot as if a person is there holding a camera and filming it or possibly having shots from placed webcams. Hopefully should also give it a grittier realistic feel. So that this doesn't start to look bland we can use more dynamic camera angles so that it isn't just from eye level all the time, angles that convey mood, power, speed and aggression, the obvious one being an upward angle giving the cars a sense of might.

Another device we would use is the helicopter shot, you see this quite often at sporting events and police chases, and is something that is used to give a wider angle shot of the action. Again this should have subtle movement in the camera with maybe some adjustments to the zoom length. (Quite tight, similar to the OJ Simpson/White Bronco chase) We may also be able to apply some post process filter such as film grain or interference. This would rely on much of the mesh being true mesh and may not be possible with the planned technology and engine specs.

CAR CAMERAS

Each car should have a camera rig setup in Maya, which will give a nice view of the car from various camera angles such as a rear view, a wheel shot, and side shot. The game can cut between these predefined camera angles, and the player should also be able to jump between these while playing the game. They should have varying fields of view.

OUT OF CAR CAMERA

Based on the initial design, this will be 3rd person gameplay in the style of GTAIII or similar. In order to get the intensity and fast paced feel, we will have to tweak the animations, HUD and palette. One other idea is that it should be in the form of a first person handy cam or helmet camera. It will help to intensify the 20-second experience and separate the gameplay from the core Carmageddon game. As a key feature of CarmageddonTV, this needs more discussion.

LIGHTING

As mentioned before the scene should be lit in a naturalistic way, but something that would look nice if we gave the impression that it had been softly overexposed while maintaining contrast. We would simulate this by using a bloom effect so that anything really bright has a subtle glow around it, so that for example a bright sky would start creeping into the silhouette of buildings. This would have to be used intelligently as everything would start to look washed out.

Fill lights -As mentioned earlier fill lights can be used to colour certain areas around the level, we can use them to help define the palette of the environment and help set the mood we want to convey. We can also use them to simulate

radiosity, so if there is a large blue neo advertising sign, then we would use a fill light below it to simulate the ground picking up the colour of the light.

Backlight – backlights are quite often used to separate characters from their backgrounds and help define the shape and form of them. This is something that we can use both in the front end to help to define the characters, but we can also use it to help define corners and things that the players needs to know the architectural structure of. So if an alley way is difficult to make out then we can start to backlight things so that their edges are defined to help distinguish their form.

Throw lights - we can simulate throw lights with projective textures. Light sources very rarely illuminate a scene in a completely even manner, there is usually a shape or pattern, a classic example is a torch light. With projective textures we can simulate what the film industry call ‘gobos’, so if we wanted light coming through the branches of trees and casting shadows underneath, we can do it by projecting textures. We can also simulate light coming through fences, window shutters, rotating fans etc.



ATMOSPHERICS

RAIN

Atmospherics are something that can really improve the mood of a game, rain in a game is nothing new, however it is a great vehicle for immersing the player into the game.

There would be raindrops appearing on the HUD and head lights would pick up rain and wisps of mist and steam as they moved around. The street lights and billboards would also show the rain drops falling. Cars would throw up a mist behind them as they ploughed through the water covered roads. We might also attempt this dynamically within the game by having the weather change as the level progresses.

FOG

Fog is an obvious thing that can be used to add atmospherics, but something I would like to use fog for is as a subtle depth cue, which will hopefully give the scenes depth. So the scene would never fog out to a solid colour, it is just used in a subtle way to make sure that objects a mile away do not have the same colour and luminance value as object right in front of you. This is something that a lot of games suffer from. The scenes really lack depth and look flat because the overall tonal value is the same even for things in the distance.

SMOKE AND FIRE

Smoke and fire as well as providing visual effects would also provide game play opportunities, for example if a car had crashed by the side of the road and caught fire, then the fire would be spreading a plume of smoke across the road so that you would have to drive through it, a leap of faith ‘Days of Thunder’ style.

Another set piece would be that the petrol from a car or an oil tanker had been leaking on to a section of the road and caught fire, this would be a visually cool obstacle to avoid, and if you did drive through it maybe it would affect the grip/handling of your car for a fixed period of time, and you could leave a trail of fire behind you 'Back to the future' style.

REFLECTIONS

Reflections were used extensively in Need for Speed Underground, and in my opinion were too over the top, what we should do is make it a lot more subtle, and just reflect the colour from the bright lights rather than an almost mirror reflection at a high intensity. This should at the same time provide a more believable visual experience but also make the level easier to read. It will be important that the surface detail of the road breaks up the colour reflection so that it is not a solid blob of colour, and again it needs to be done subtly.



WATER

Water is a major effect and comes to play in all of our levels. Especially in the Golf course and Theme Park areas which take place on the seaside. As we are pushing for more realism across the game, I believe that the water effect should be as real as possible. Rather than animating textures, we will have fully reactive water. It will react to the cars going through and collide with objects. It could also affect gameplay by altering handling and be used as an obstacle to level progression.



DAMAGE

This is a major part of the Carmageddon experience and carries an equal weighting to the mowing down of pedestrians aspect. Depending on the final G.D.O. we plan on using both morph targets and separating mesh to push the core gameplay past current generation games. Stuntman shows a great example of this.



CARS

Probably the most essential thing to get right with the cars is the in-game shaders that we use, the way the cars are lit so that they do not lose their form and get washed out and the way they react and handle after being smashed around the environment. They need to match the proposed idea of taking current concept cars from today and moving 20 years into the future. Also we need to take into account that those vehicles are now production cars that have then been modified as mobile killing machines. The vehicles also need to match the environment lighting and react to it as they drive through. This will involve light-mapping the environment which will be picked up by the car as well. They have to be realistically modeled and the modifications have to make them look mean, powerful and very dangerous. They will also carry a gloss map to make them shiny.

The player cars have to look 'mean'; they should be treated like leading characters because that is what essentially they are. If the cars do not look good and deadly in game then we will have failed at the first hurdle.

CUSTOMISATION AND DECALS

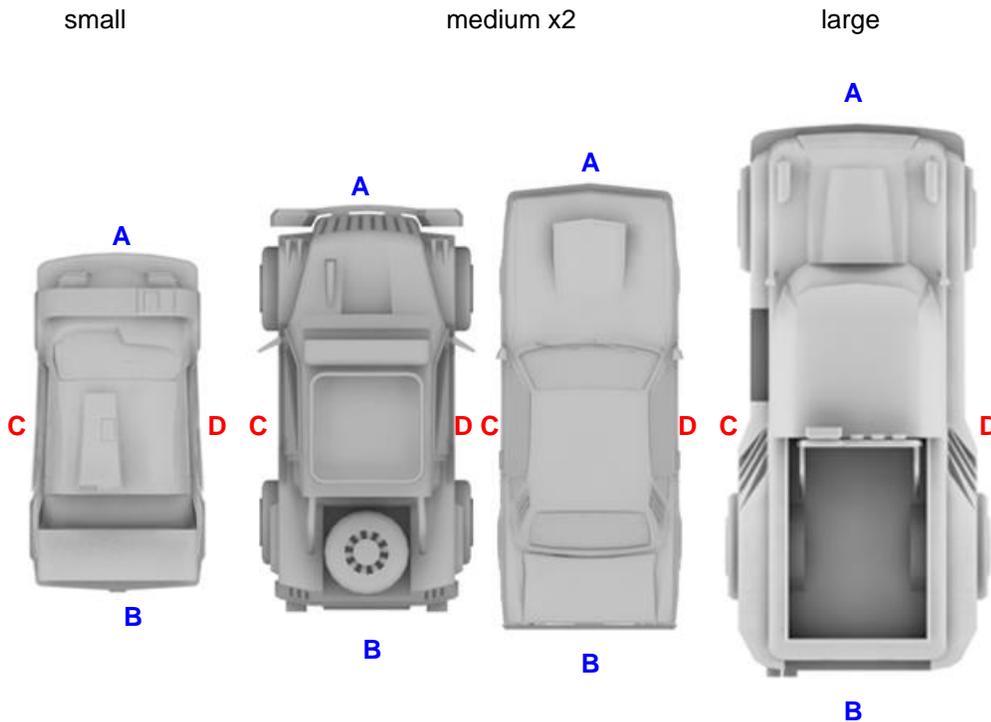
There is a cross over here with graphic design, and the 2 areas will have to work closely together to get the best possible results. The paint jobs and decals is where we can give the players a chance to start owning their vehicles and buying more into the experience. Adding also to the fact that we let them choose weapons that reflect the way that they play through the level. Customising your car with armour or weaponry will change the vehicle into your own personal killing machine. The ability to attach weapons/armour onto the front, side or rear of the car will give you the extra edge you may need. This will also affect the shape and overall aesthetic from the rear perspective.

Customisation will essentially have three main areas; Styling (which will include colour, decals and wheels), weapons and armour. As there are certain constraints with the game design (anim, and handling...), some of the customisation will be limited to texture changes only. These include wheels and side armour. The wheels have the potential for a size change however we are limited by what the vehicle mesh will accommodate so that no clipping occurs. We are examining an option to have armour appear on the wheels as well. However this has a ramification to both the look and handling of the car.

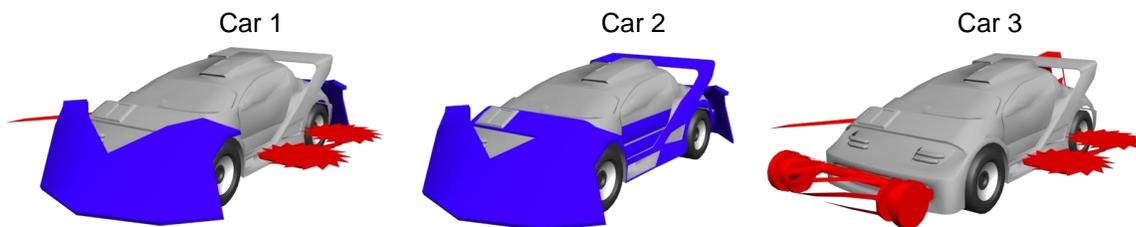


There are four locators (hard points) on each car that will define where the weapons and armour will be placed. They are the front and back (A:B) and the sides (C:D). At each point the player can place **either** a weapon **or** a type of armour at each point. Also, all weapons will be designed for **either** the sides **or** the front/back. For example the small car could have a front weapon on **A**, armour on **B** and **D** and a side weapon on **C**. It is also possible to have the same weapon front and back and different weapons side to side.

All weapons and armour will be the same across the “class” (small, medium, large). The part will change slightly (both visually and in its game effect) as it gets placed across the classes. So a “flipper” weapon will be smaller, lighter and do less damage on the “small” class. That same weapon will be larger, heavier and do more damage on the “large” class.

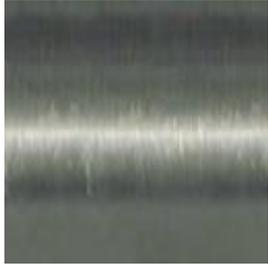


The Art Direction has all the cars being built essentially with a “blank canvass”. When adding weapons, armour, colour, wheels and decals, the cars themselves will have a huge variety. In the examples below Car 1 has armour on **A** and **B**, a buzz saw on **C** and a Scythe on **D**. Car 2 has armour on all four slots and Car 3 has different weapons in all four slots.





Armour will have three upgrades basic, intermediate and advanced.....this will be represented graphically as textures... they will also have performance issues... see below.

	Basic	Intermediate	Advanced
Material	Cast Iron 	High Tensile Steel 	Titanium 
Weight	Very heavy	Medium weight	Very light
Offence	Average	Good	Very Good
Defence	Good	Average	Very Good

PRE-BAKING LIGHTING

To help define the form of the cars, each car as a first pass should have a global illumination style lighting burnt into its texture. To change the colour of this texture we will change the palette. The shadowing should be diffuse and subtle so that there are no sharp shadows, just something that will make the cars look more 3D and help to define the form, especially when environment maps are applied as this quite often flattens out any shape that is there.

GRAPHIC DESIGN

It will be worth experimenting with a couple of different styles for the front end to see what kind of mood and feel that it will give. Something that we should definitely avoid is the age old gaming cliché of having a beveled brushed metal effect font, that is so out of date I cannot believe people are still using it. So we want something that is edgy, conveys the gritty and underground feel that we are trying to convey, something that has attitude and is contemporary. We also have to take into account that there will be a lot of very cool things happening around you like bodies, cars and objects flying around as you drive through them. That means that the HUD will have to be as minimal as possible in order to let the player see as much as possible.

FRONT END

The first and foremost thing for the front end is that it is legible, and easy and intuitive to navigate. There is nothing worse than a front end that is confusing and is an effort to use. There needs to be a consistent graphic style for the fonts and menu systems, and there needs to be a consistent typographical layout so that people do not get confused whilst navigating.

The front end as well as serving as an interface to the game for loading saving and starting races, also has a component that can help us with giving a feel for the scene and the world that you are involved in, and a greater sense of immersion. This has to be handled carefully as the front end should not be a game in itself, and should not slow the player down if he or she wants to get back into the game quickly.

With this in mind there is a lot we can do with look and feel, the 3d scenes can be dark and gritty and really convey the illicit underground feel, we can use similar lighting methods as mentioned previously.

HUD

The primary thing for the HUD is not to clutter the screen with untidy and unnecessary information, the layout has to be optimal and the less on screen the better in my opinion. There also has to be a consistency with the rest of the graphic design, quite often the HUD's in games look to have been done as an after thought, or by a different designer and has little relevance to the front end or overall feel of the graphic design work.

CAR CUSTOMISATION AND DECALS

Although this is also part of the car section, the graphic elements that we use on the cars are as equally important. There needs to be more research into the tastes of people involved in the scene, what music they like etc, and the decals and paint jobs need to represent this so that there is a range of imagery to choose from.

GOALS AND OBJECTIVES

To summarise, these are the over all visual objectives for the game, broken into the major categories: -

SETTING

The United States, 20 years in the future.

STYLE

The style is realistic, gritty, tribal, underground, not post-apocalyptic; not sci-fi; not cartoony or comic book-y. There should be a fusion of current concept car thinking and classic Carmageddon style, never losing sight of the timescale being 20-25 years from now. The environments are relatively the same as today. Nothing is openly 'sci-fi styled', however there may be a few elements that reflect near future technology. We will use a complimentary palette that conveys mood to the player by limiting the colours. A sophisticated use of 'bloom' to simulate an over exposed feel and give things a soft edge atmospheric feel. We want to use intelligent lighting and colour to set mood but also to enable player to see the environment clearly. The HUD/OSD, in game presentation and Front End elements are all driven out of a 'Gonzo Broadcasting' aesthetic; not overly clean, with a lot of noise and emphasizing the handy-cam aspects.

CARS

Vehicles are evolved versions of current, actual vehicles (concept cars of today are now the production cars driven everyday). The cars were new ten years before the game begins giving them a used look. They also have been in the arenas before, so they may have some "patchy" bolted-on feel to the textures. The cars have to be solid looking and have a definition of form that a lot of games lack; they must look realistic and have a realistic look to the shaders. They must look powerful and mean and should be something people would aspire to owning. A diffuse lighting effect should be baked in offline to help define form. Decals and paint jobs should be graphic and bold and represent different tastes of people in the scene.

ENVIRONMENTS

The environments must be alive and in everyday use. Not derelict, slightly used possibly with a "trailer park" seediness on some levels to come back to the Jackass style. Realistic design stylized only for gameplay purposes. The corporate logos should reinforce the near-future, evolved design idea similar to the Robocop satirical style. The lighting should basically be realistic with slightly more contrast to bring out the geometry. Must have contrast and variety and provide a visual spectacle to play through. Must also convey the mood and feel of the themes in locations and texturing and provide a great game-play experience. Must have a harmonious unsaturated palette and any lights must be used in a context of what colours go well together. Environment lighting should be baked in offline with radiosity to create a more sophisticated lighting effect. Lighting must also be used subtly to aid in visual cues and environment legibility. Environmental effects (lightning, fog, rain, etc.) and animated sky boxes to bring environments more to life. We might also consider doing this dynamically through the progress of the level. (i.e. starts dry, rains and then leaves puddles.)

GRAPHIC DESIGN

We need to define a style that is both sympathetic to the scene and that will make the game stand out, no gaming stereo types such as beveled metallic fonts and rust, the look must be contemporary and stylish. Something that is edgy, and has the gritty/underground feel based on the 'Jackass/Gonzo Broadcasting' style.

CUSTOMISATION

Once final design is locked, I will flush out this area in full detail.



CHARACTERS

The peds are more realistically proportioned, as the new design shows. They should also act, move and dodge more realistically. (possible investigation of mo-cap option). They will break apart in many places to push the gore factor. We will Ragdoll all the pieces to give them more reality and visual impact.

FRONT END AND HUD

There will be 'Jackass/Gonzo Broadcasting' TV feel of front end. A possible handy-cam pixilation, and the not-quite-locked signal presentation to the cutscenes.