VFX

TUTORIAL

3D tracking & integration.

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› INTRODUCTION

This is the tutorial of creating two visual effects shots from scratch. It is very crucial to explore the background and reference materials of the effect that is aimed to be achieved and the context of the technique that is used in order to provide such visual experience to the audience. Those two shots are the part of the one minute visual effects assignment of making visual effects movie trailer for imaginative movie where the story and the concept of the film had been developed as well. The trailer is about the film which is quite established in its type of genre and storyline. As the examples of that could be films such as Grand Prix [John Frankenheimer, 1966], American Graffiti [George Lucas, 1973], Gone in 60 Seconds [H.B. Halicki, 1974], Tron [Steven Lisberger, 1982], Gone in 60 Seconds [Dominic Sena, 2000], 2 Fast 2 Furious [John Singleton, 2003], animated film Cars [John Lasseter, 2006], Speed Racer [Andy & Lana Wachowski, 2008], Fast and Furious [John Singleton, 2009] and Tron Legacy [Joseph Kosinski, 2010]. All those motion pictures are the representation of the language that the movie is spoken with in terms of context and elements of the genre.

In the context of this particular tutorial the theme and the storyline are not covered in full because this tutorial is aiming to describe the technical challenge of the visual effects artist to be able to produce two shots in the sequence of the trailer. However the contextual, historical and artistic language of the background that those two shots are delivering will be covered in the research section of this document.

Aside of this document there will be established and provided project files and video training tutorials that will help to reproduce the same effect by following a written step by step instructions in the body section of this documentation. Aspects and advices from the experience of this tutorial will be covered in detailed fashion in the body of this book as well. Things like locating markers in green screen facilities [GS], adjusting camera angles and settings, compromising camera distortion on the tracking stage, matching the geometry of the scene and other technical aspects will be covered in the particular sections of the production pipeline for two shots that are the media outcome of the tutorial. Basically this tutorial is focused on tracking and match-moving visual effects techniques however all other issues around the pre-production, production and postproduction stages are covered here as well.

At the end of this workbook you can find an analyzed and explored outcome that the process had provided in terms of both context and technical achievement for the entire production pipeline of the visual effects trailer.

project overview

Basically this tutorial is about creating two shots in the trailer using GS shooting material and incorporating the frame with computer generated [CG] elements. This technique is very popular but in the way that the computer generated images are placed into the live action film but in our case we placing the live action element into CG scene where the balance is 85% CG and 15 live action. This had been done in James Cameron's film Avatar [2009] which could be clearly seen on the image provided below.

There are two main stages of making the shot like this which are shooting the live action material and creation of the CG elements in a post-production stage of the pipeline but there is one piece in between which will make the shot successful and it is a test that you would do first before the final shooting and renderings will be produced. This is very important because passed the test you will evaluate the mistakes and other issues that should be faced as a challenge for visual effects artist. As well as any moving image production we will start from pre visualizing and planning the shot that we aim to produce, create a concept art of the image and decide a compositional solutions of the frame as well. Then the next stage of the production is to create a test compositing image with evaluation of mistakes and other characteristics of the shot. After the test is passed the actual shooting will be done and on this stage the aspects of working in GS facilities will be covered. As soon as the shooting is finished the process directly goes into post-production stage where the final image will be produced, rendered, composited and sounded with all underwater aspects of the processes.

setting up the project folder and soft/hardware overview

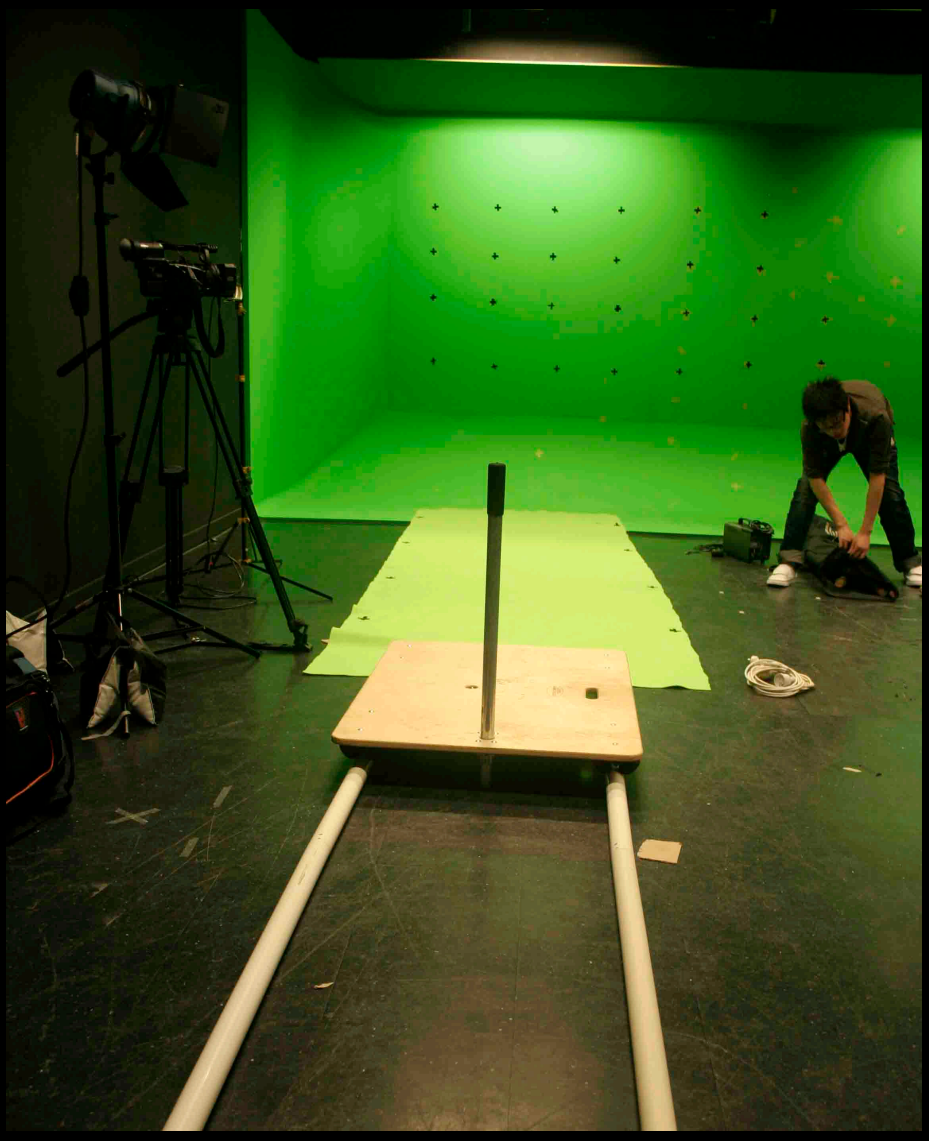
It is crucially important to keep the project in a very organized fashion in order to have a linear control of the stages that are covered and accomplished so far and ready to move to the next stage of the production. Here is the example of the project folder that had been established for achieving the outcome of this tutorial.

Some of the folders are optional for example Introduction, Research, Videos, Documentation which are more relevant to the tutorial content of the DVD, but an an empty set of folders could be found in the 01_Introduction folder of the DVD to be able to quickly and easily set up the project for the similar pipeline.

There are names of the software used in each of the stages of this pipeline which are Adobe Photoshop and After Effects, Autodesk Maya, Vicon Boujou, Final Cut Pro, Soundtrack Pro and Bodypaint. Other typically identical packages could be used for this pipeline as well. The whole process was made and recorded on MAC OS X platform.

The entire production process process had been done on two machines: Mac Book Pro [2.16 GHz Intel Core Duo, 2GB 667 MHz DDR2 SDRAM] and Mac Pro [4GB 667 MHz DDR2 SDRAM]. The next important piece of hardware is the camera Sony XDCAM EX3 [you can see the review of it on http://vimeo.com/882030].

You might also need a green screen set up. It might be any facility that provides that kind of service or you can built your own green screen set-up. It is called **chroma key paint** sometimes you can find it if sort of like "video paint" typed on http://www.google.co.nz/ For the Chroma keying processes particularly there are different colors of paint available such as blue paint, green paint which cold be as a paint for clothes as well. To establish a flat-based chroma studio it might probably required around 2-5 liters of video paint. It is also very useful to have sticky stripes with the colors of chromakeying surfaces. The light setup is very significant point of this particular set-up of the chroma key room. The green screen wall should be lighted separately from the object that moves in the scene.

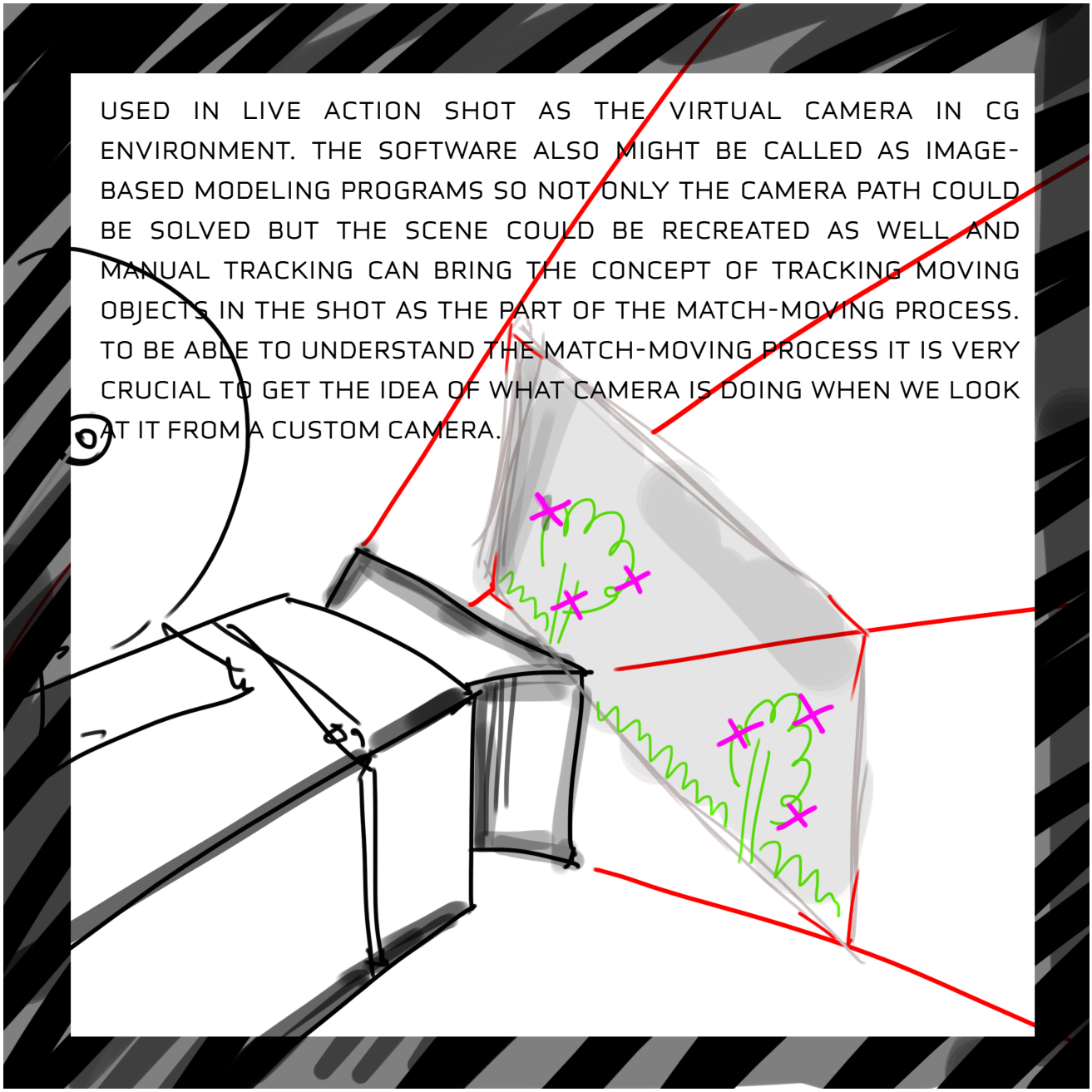


SETTING UP THE EQUIPMENT FOR THE SHOT, CAMERAS, LIGHT, DOLLY, GS WALL AND FLOOR.

› RESEARCH

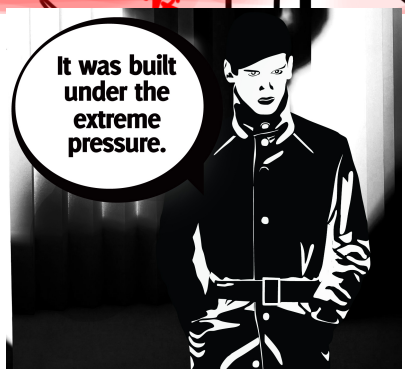
match-moving and integration

Camera tracking is the main responsibility of the match-moving processes. it is important to understand what is basically camera is doing in the shot based on the measuring information from 2d shot or moving image footage. using photogrammetry the environment could be recreated referencing points and visuals from the shot in order to be able to recreate the geometry of the static scene. the core of this technique is to match the placement of cg images into live action shots. In other words we matching the same motion of the camera that is being

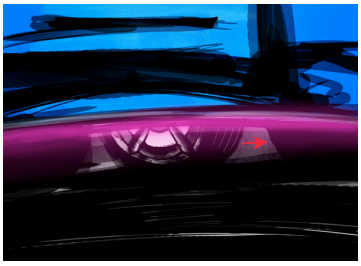


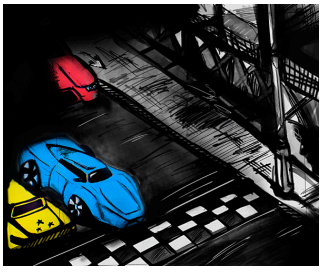

dolly
1
2
this car is not a vehicle...
3
4
its a weapon!
5
CUT!
its a masterpiece of engeneering!
6.
he walks
Car as a foreground
7
he walks off the frame
dolly move
8


This model is not a vehicle, this is the weapon.


It was built under the extreme pressure.


This is the masterpiece of engeneering.





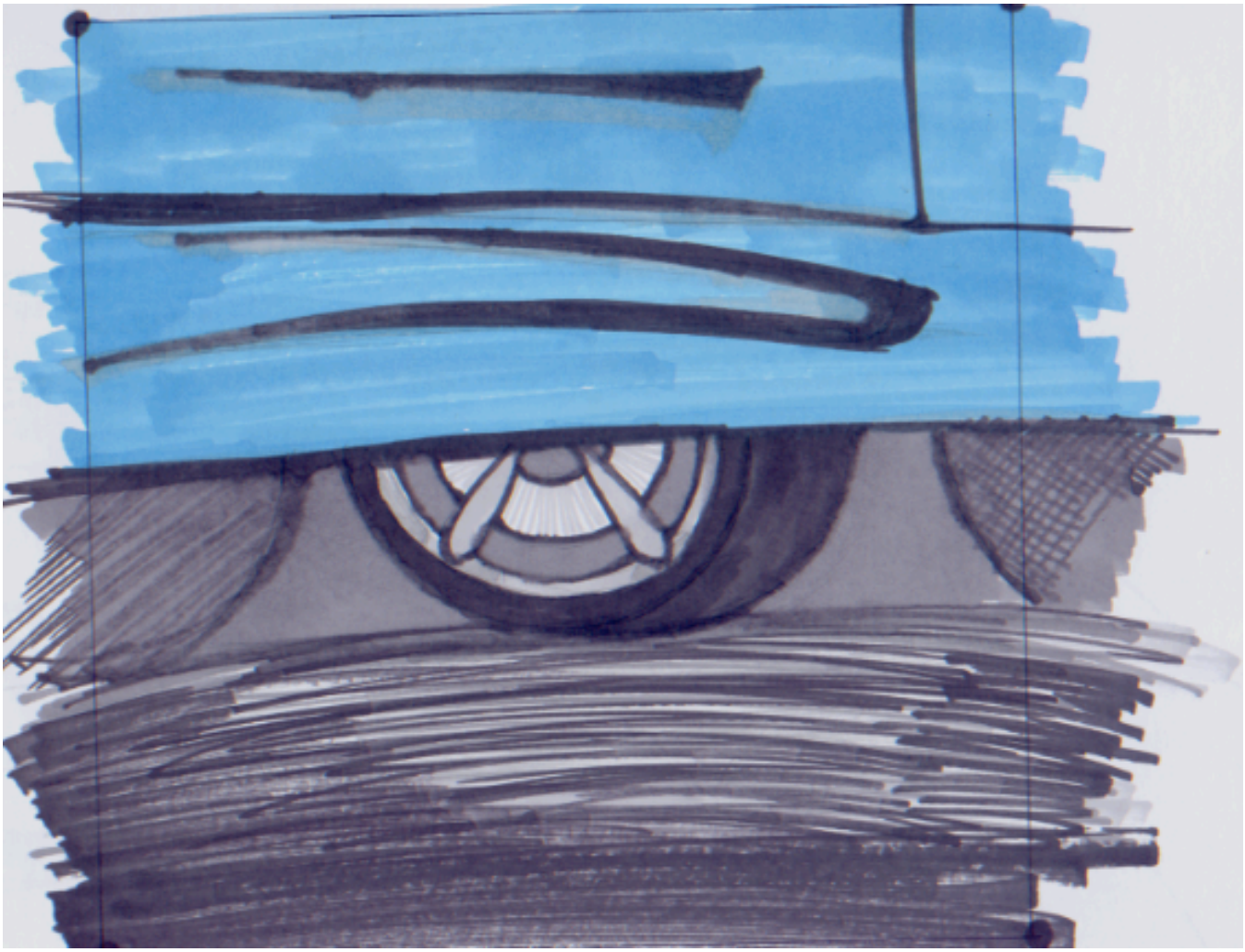
historical and contextual context of the effect

Historically the integration of the CGI elements to the shot could be found in Stevens Spielberg's Jurassic Park (1993) where the integration of the dinosaurs into the live action plates gave the audience an incredible experience. It was first time where the human perception was shuttered and broken into a series of broken pieces dealing with the fact of highly believable motion picture. CG characters were animated as if they moved in the real world. It is a very good point that it was a first time when we saw in the film media something that is never existed in our visual experience because dinosaurs are died many years ago. This might be very challengeable both in terms of perception and actual achievement of the shot. In our particular case we dealing with the shot that has 80 % Cg elements and 20 % live action. It is also important to understand what is camera doing during the shot and it is moves in the relationship to the static scene.

In terms of style and composition and overall mood of the shot it is quite important to note that a lot of the references has been taken from race movies, James Bond movies, Fashion advertisements, Automotive renderings and commercials, different types of media related to the actual production concept. Games are hugely influential on this particular work in terms of style and mood, and conceptional visual idea of delivering the experience. Need for Speed, Split Second, Grand Theft Auto, Grand Turismo, Colin McCray Rally and other games are related to the concept of the project.

Basic effect of the live action integration is aiming to interpret the idea that is the character can be presented in a more effective way. In this shot that this tutorial is designed for it is clearly identifiable that the car is might be another type of character, or the figure in the shot might be identified with the car. In the way the effects used in this shot using the match- moving pipeline in order to bring the message across the visual experience and let the audience the idea of the shot.

For many years the industry tried to extend sets of the actor's background and place the hero into a different environment. In this case the work of



seamlessly integrated CG element into the shot can save a lot of time and other resources to recreate any computer generated space that could be designed for the purpose of telling the story.

› PLANNING [PS]

storyboard

As it was mentioned before the outcome that is had to be produced is the movie trailer with the length of one minute. Aside from many different themes of the imaginative movie that the trailer is for this is very important to understand that the trailer of the film is what is actually sells the film and where the

audiences deciding to watch or not to watch the entire film. The trailer is always full of the effects that the film has and it shows them in the most attractive way possible. In the same way this particular project is not just about very rapid and very beautifully rendered car crashes scenes it is based on the story that has to be told in the trailer as well. Here the mission of the storyboard arises very clearly where all major beats of the story are going to be defined and the narrative pacing of the trailer delivered as well. Because the film is the emotional media the humanity should be handled on a very high level to be able to tell the story that the audience will be worthwhile to experience and spend time on it.

In terms of technical approach of the stage there used simple pencil and marker drawings on paper, scanned and stylized in Adobe Photoshop.

Particularly with the shot from this tutorial I wanted to introduce a special

type of character with the stereotype from James Bond movies and Batman as well. Sort of very confident and very powerful support of the main character who provides the main character with the special vehicle that will allow him to win his respect, his girlfriend and his car back that were dishonestly captured by the antagonist. In this way the storyboard was introducing this character with the dialogue that will incorporate the intent that his role is

required. Images below are showing the basic representation of the aimed shot and the settings of the shot. Basically there is not just an introduction of a new character in these shots, we get to know a new, hidden and powerful car.

The storyboard is a good planning tool not just to get the compositional solutions of the frame but also defining the style and look of the setting, character's expression and costumes as well. It wasn't completely necessary to do a storyboard in color and with all other details but it helps a lot later on when the whole piece come together.

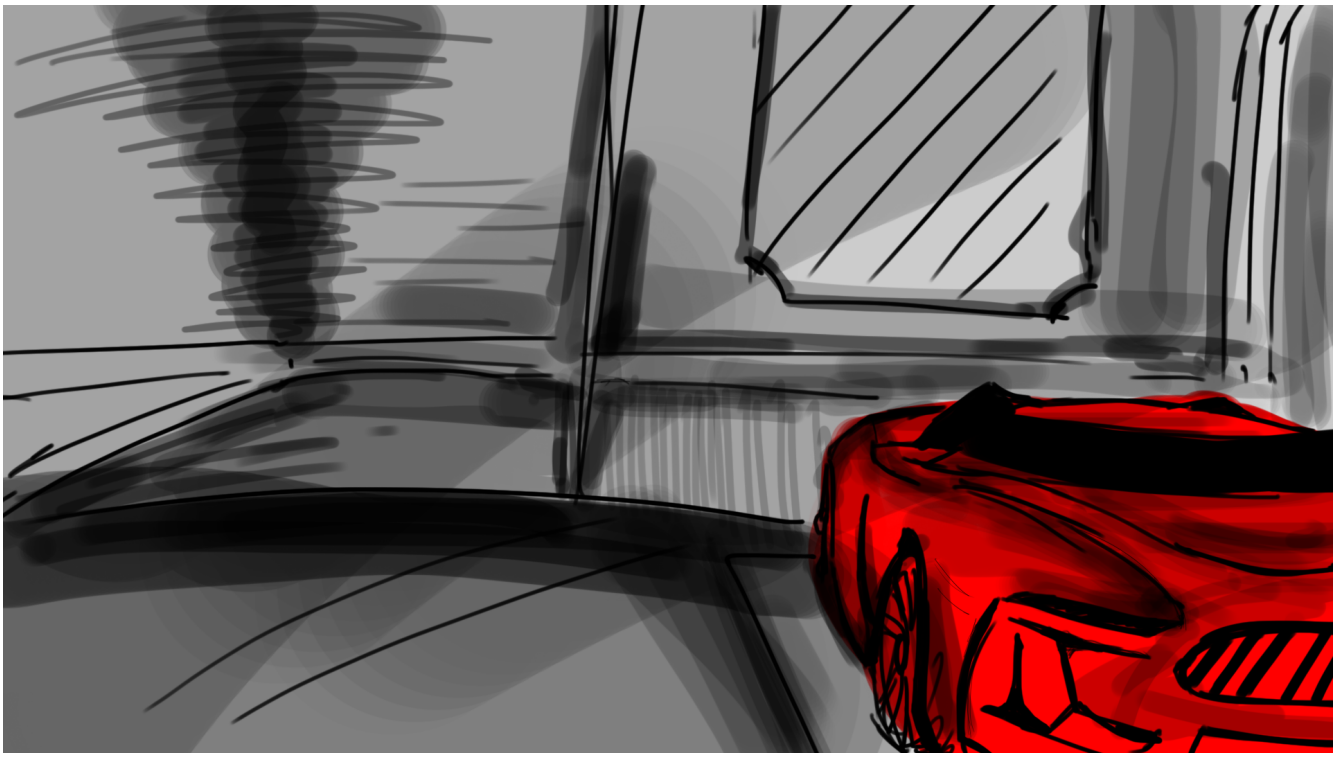
animatic

When the storyboard is created and planned out it is important to make a simple animated version of the storyboard to get the sense of the timing and spacing of the trailer. You can see the full version of the animatic on the DVD provided with this document and also on [http://vimeo.com/14002351]. When the storyboard was created there were evaluated that some shots are too long and the story is not in the limited one minute duration so there were removed some of the shots with the Mentor and left just two shots of this beat of the story. That was very important stage of the pre-production process because it gave the sense that the storyboard didn't tell the story that it should tell in the time that is limited with one minute, so many shots had to be prioritized and removed as if they are not relevant to the pace of the story and if they are not affecting the audience as much as they should. When the timing was established this is important to develop the final design and look of the shots that will be created by the end of this tutorial.

reference materials

As soon as the basic setup of the shots was established the next step is to create a concept art and general look of the shot that the audience will see for several seconds but their attraction will be captured by the very developed look of the shot. In this case there were examined some reference images in order to get the idea of the look of the environment and the design of the car that will be placed into it with the Mentor character. The shosen car for these two shots is the Citroen GT which is concept car that was introduced on Paris Motor Show in 2008 and there were just 6 cars built in the world. Very sophisticated and inspiring look of the car describes the narrative vocabulary in a very precise way. There was a video of the Cobra Car advertisement based as the reference of the environment of the shot and the idea that the car is coming from the floor door.

concept art & drawings



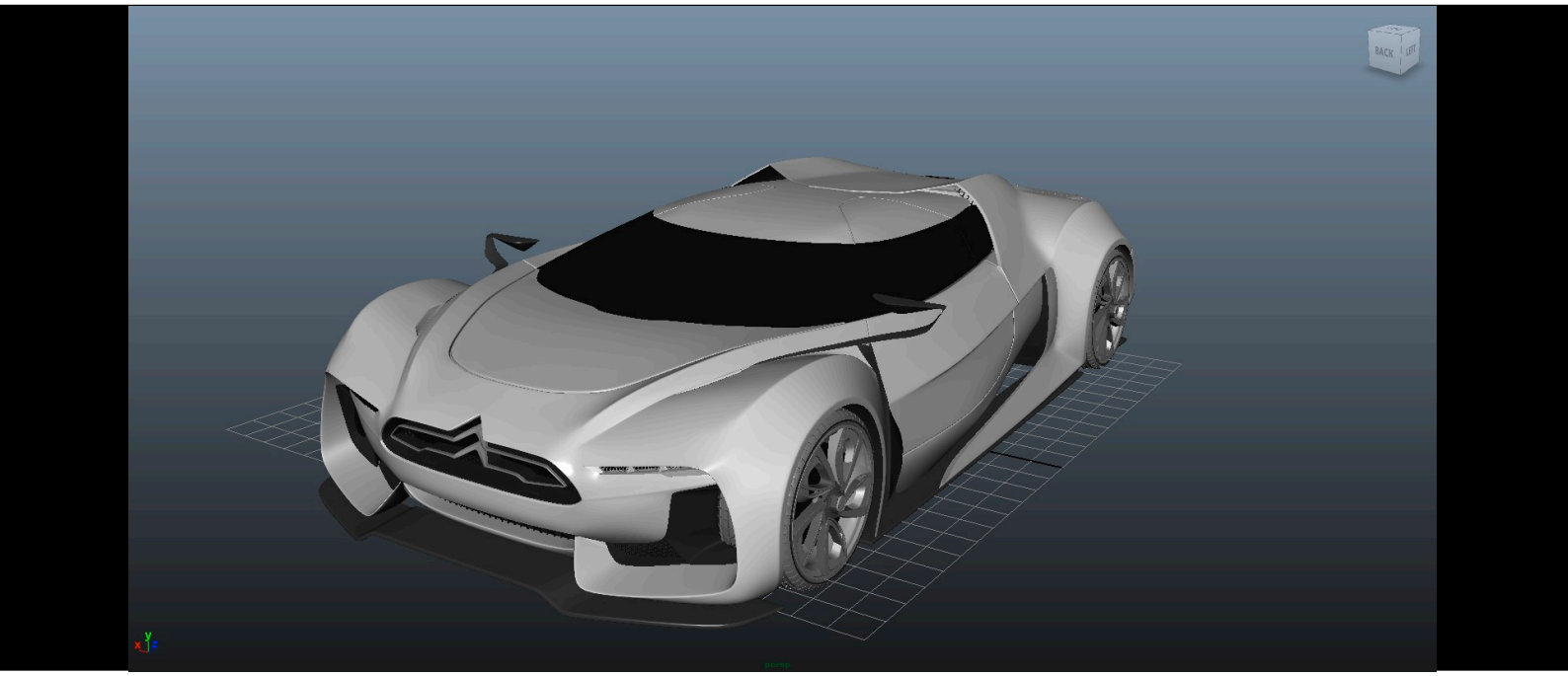
Before the actual production begins it is important to specify the final look of the moving image product. Concept stage might be very detailed but for this shot the entire look of the image is handled by mostly 3D visualization programs.

› MODELING [Maya]

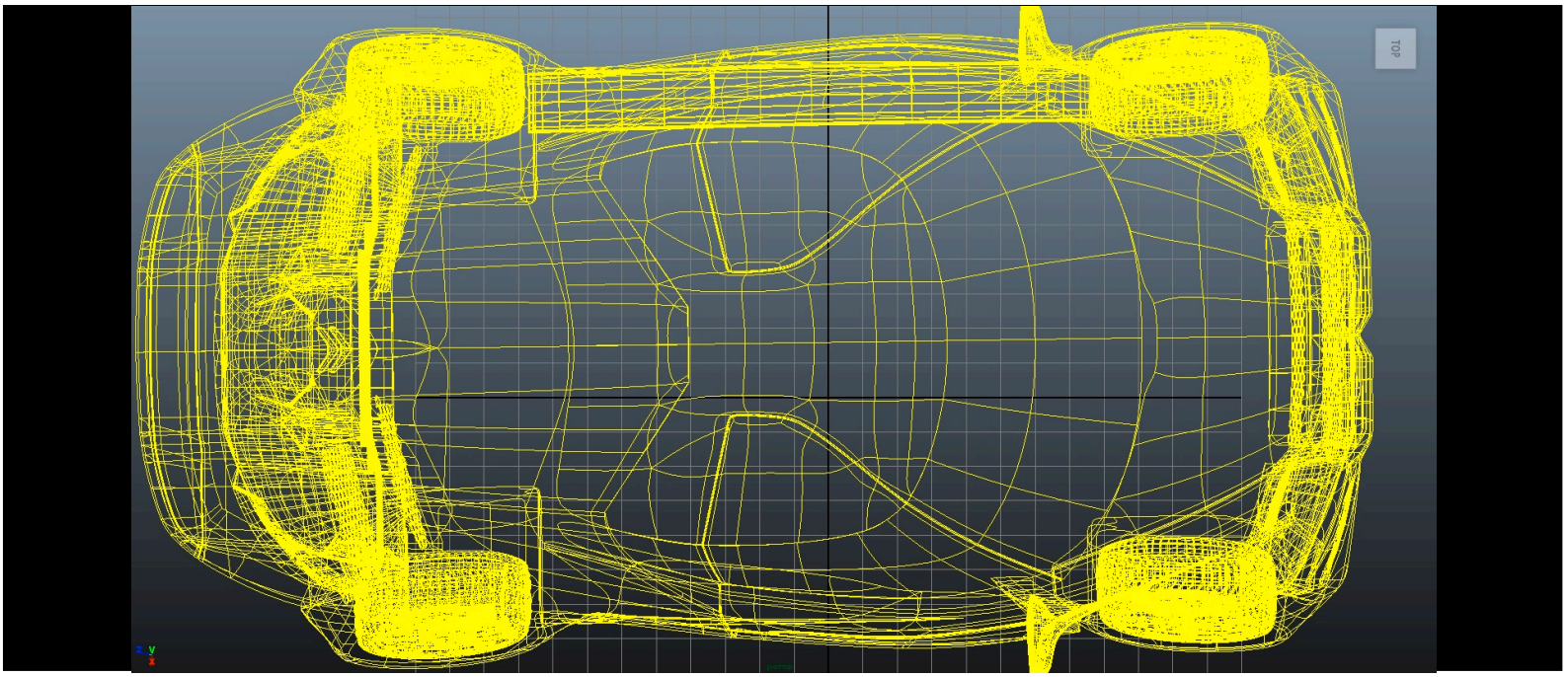
modeling the car

TO MODEL A CAR IN MAYA IT IS REQUIRED THAT YOU UNDERSTAND AND KNOW HOW TO MODEL SIMPLE OBJECTS AND DEPEND ON THE QUALITY THAT IS REQUIRED IT IS IMPORTANT TO KNOW ADVANCED MODELING SKILLS. JUST ALIGN FOUR IMAGE PLANES IN MAYA AND MAKE SURE THAT THEY ARE FIT WITHIN THE BOX SO ALL OF THE GEOMETRY WILL BE MATCHING PERFECTLY WHEN YOU START CONSTRUCTING YOUR SHAPE OF THE CARE. IT IS VERY IMPORTANT TO START WITH CURVE NETWORK SETUP WHEN YOU CAN GO TO /CREATE/CREATE CV CURVE IN MAYA AND START LINE BY LINE OUTLINE IN ALL 4 VIEWS - FRONT, SIDE, TOP AND REAR. IT IS IMPORTANT TO PAY ATTENTION OF WHY THE CURVE IS BASICALLY IN THE SPOT. IN THIS CASE YOU CAN CONSTRUCT A CURVE NETWORK THAT WILL VISUALLY TELL YOU HOW THE 3D OBJECT LOOK LIKE IN TERMS OF PROPORTION, FORMS, DETAILS AND DIRECTIONS OF THE SURFACES THAT HAS TO BE BUILT WITH "CREATE POLYGON TOOL". THE EXPERIENCE IS REQUIRED FOR BUILDING THE CAR IN 2-3-4 DAYS OF WORK IF THERE IS NO INTERIOR AND ENGINE MODELING INVOLVED. TWO WEEKS TOTAL MIGHT BE A VERY QUICK

EXAMPLE OF MODELING FULL ANATOMICALLY CORRECT CAR IN 3D ENVIRONMENT USING MAYA. IT IS IMPORTANT TO HAVE AS MUCH REFERENCE MATERIALS AS POSSIBLE OF THE PARTICULAR MODEL IS BEING DEVELOPED. AUTOMOTIVE RENDERINGS IN



THEMSELVES ARE THE GENRE OF 3D SOCIETY AND CG ARTISTRY. IN THE INDUSTRY WHERE THE MOVING IMAGE IS THE SUBJECT TO BE DELIVERED IN SEVERAL MOUTH THAT HAS A STORY, DIFFERENT CHARACTERS, DIFFERENT TYPES OF CHARACTERS AND

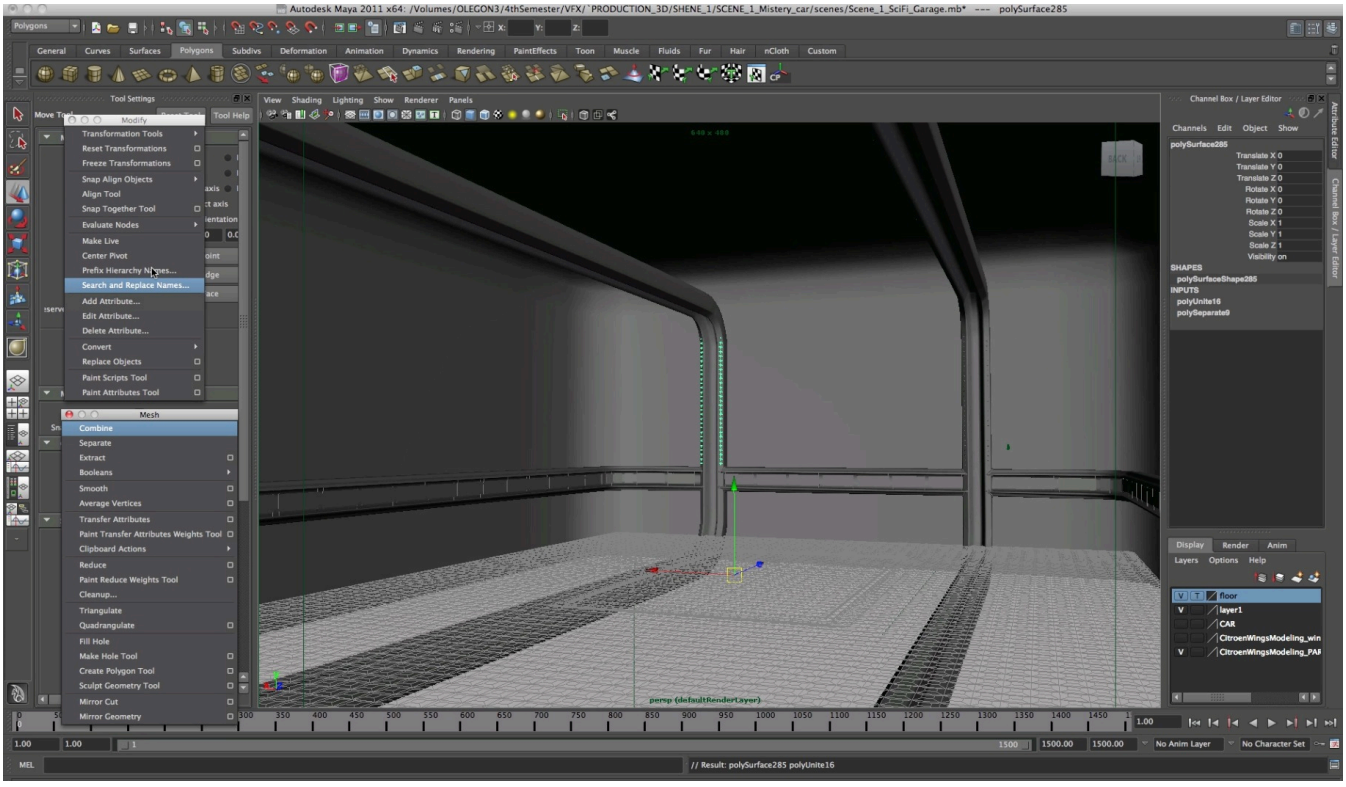


DIFFERENT CARS, IT MIGHT BE A SETUP OF MODELING DEPARTMENT PROFESSIONALS THAT CAN QUICKLY AND EFFICIENTLY MODEL SOPHISTICATED MODELS BASED ON

CONCEPT ART DEPARTMENT'S SKETCHES, DRAWINGS AND IMAGE PLANES. THE MORE DETAILED THE MODEL THE MORE SPECTACULAR IT MIGHT PRODUCE THE EXPERIENCE.

modeling the garage

THE GARAGE WAS MODELED IN ORDER TO GET CALM AND VERY SAFE ENVIRONMENT FOR THE CHARACTER. IN THE FILM SIN CITY (F.MILLER & R.RODRIGUEZ, 2005) ALL



OF THE ACTORS WERE FILMED IN GREEN SCREEN ROOM AND COMPOSITED WITH CGI FOR THE ENTIRE FEATURE FILM. IT IS HIGHLY IMPORTANT TO RECREATE A REALISTIC LOOKING ENVIRONMENT TO BE ABLE TO TELL A BELIEVABLE VISUAL STORY THAT THE AUDIENCE IDENTIFY CG ELEMENTS AS A NORMAL OBJECT IN THE WORLD.THIS IS THE BASE OF THE IMAGE, THIS IS THE STRUCTURE OF THE AMBIENT OCCLUSION RENDERS, THE MORE DETAILS YOU PUT IN TERMS OF ACTUAL BUILDING THE GEOMETRY, THE MORE INTERESTING THE VIEW THAT YOU CAN GET. IN THE BALANCE OF RENDERING TIME AND VIEWPORT PERFORMANCE FEEDBACK.

› FILMING [Green Screen]

green screen setup

THE MOST IMPORTANT RULE WORKING IN GREEN SCREEN IS TO SET UP THE LIGHTS THAT ARE SEPARATE CHROMA KEYING ELEMENTS FROM LIVE ACTION ELEMENTS. THIS WILL INCREASE THE KEYING PROCESS.

lighting setup

UNDERSTANDING OF THE BASIC THREE POINT LIGHT SET UP IS REQUIRED FOR MAKING THIS SHOT. THE CHARACTER SHOULD BE HALF CONTRASTED TO THE SCENE AND NOT ALL OF THE LIGHTING DETAILS ARE NEEDED FOR THE SHOT.

camera setup

CAMERA WORK IS HANDHELD AND OPERATOR STANDS ON THE DOLLY BEING PUSHED TOWARDS THE ACTOR. THE WORK OF THE OPERATOR IS TO KEEP IN THE SAME FRAME THE ACTOR AND IMAGINATIVE CAR ON THE RIGHT SIDE OF THE SHOT. THE CAR ITSELF IN TERMS OF CINEMATOGRAPHY ACTS IN THE SHOT AS WELL COMING FROM THE UNDERGROUND GARAGE SYSTEM. IT IS IMPORTANT TO UNDERSTAND THE CINEMATOGRAPHY WHEN THE CAMERA WORK IS THE ACTUAL SUBJECT TO BE EXAMINED.

IN GENERAL FILMING PROCESS IS THE PIPELINE THAT GOES IN A PARALLEL ACTION WITH DIGITAL PRODUCTION AND TO BE ABLE TO SUCCESSFULLY HANDLE THE PRODUCTION REQUIREMENTS IT IS SIGNIFICANT TO SAY THAT THERE ARE A LOT OF ORGANIZING SKILLS REQUIRED FOR THIS PARTICULAR JOB. ACTING AS A GENERALIST OF VISUAL EFFECTS FOR ANY FEATURE FILM THE TASK IS TO BE A PART OF THE FILM PRODUCTION ON EVERY STAGE STARTING FROM PRE PRODUCTION, TAKING A PART IN PRODUCTION AND POST PRODUCTION STAGES. IT IS IMPORTANT TO KNOW WHAT KIND OF TOOLS ARE REQUIRED FOR THE VFX ARTIST ON STAGE. STICKY STRIPES TO PLACE TRACKING MARKERS TO BE ABLE TO RECREATE THE ENTIRE OR THE PIECE OF THE GEOMETRY OF THE SCENE. THE LOOK OF THE MARKERS COULD BE DIFFERENT BUT THE CONTRASTED SHOULD BE VERY PRONOUNCED. THERE ARE MANY TRACKING MARKERS COLD BE FOUNDED ONLINE AS WELL. BEING ABLE TO WORK WITH LIGHTS, CAMERAS, TRIPODS, CRANES, PROJECTORS, NIGHT CLUB EQUIPMENT ON THE ACTUAL STAGE. IT IS ALSO VERY CRUCIAL TO MAKE A TEST OF THE SHOT BEFORE THE ACTUAL ACTOR IS ON STAGE TO BE PREPARED AND WORK ON CINEMATOGRAPHY DURING THE ACTUAL PRODUCTION.

› 3D TRACKING [Boujou]

3d tracking is the process of defining the solutions of geometry for the shot and solving the camera path

masking

masking is the process of rotoscoped shape around the moving object in the scene. from this point this document becomes absolutely project oriented and might be a bit too technical but with following the line of thought you can get the structured idea of the pipeline for this particular shot.open BOUJOU, and open your After Effects exported earlier an image sequence of the shot that is going to be tracked. Yes, we need to work with image sequence and you can find the files on the CD attached to this document. Then you need to chose a tool called Add Poly Masks in the Boujou menu and using a Wacom tablet it is a must to draw the contours of the moving object in the shot so we can track the scene only, which is called the static scene. everything that is moving in the shot should be rotoscoped before tracking process.

lens distortion

if your footage has a great mount of lens distortion you might fix it with Asses Lens Distortion dialogue in Boujou and assign Calibration lines to stabilize the geometrical shape of the shot.

tracking

to start tracking we have to make sure that the rotoscoped mask flows nicely around the moving object in the scene. the we click on Track Feature in Boujou to start tracking the scene. you will see red dot feedbacks around the space. what boujou is doing is it analyses the differentiation in positioning of the same point on the footage and link it to the move of the camera. so after the footage is tracked you can play around with different settings of Track Feature dialogue such as in advanced tab you can increase the sensitivity of your tracks, amount of tracks and the size of tracks. it is definitely recommended to use small tracks with highest level of sensitivity and use lots of tracks for that. it depend on the nature of the shot. after the tracks are placed onto live

action plate we have to solve the camera path to figure out what is the camera doing in relation to those points in space in the scene. So we press on the Solve Camera button in Boujou and depend on the version you click on smooth the camera path before you start camera solving process. it will take a while and depend on the resolution of your footage it will play it through on the possible RAM abilities. After you done with that you can press a 3D button and navigate in 3D space in Boujou to see the camera path and the scene that been created. Now there is another option of the following with the project and it is that you might get lost all logical control of what the Boujou is giving you. Try to track your footage with the different tracking options, such as density of trackers, sensitivity, size of them. For complex scenes like forest and other natural phenomena it might be a technique of the manual tracking applied.

exporting

now we ready to export our project into maya to be able te recreate a static scene for CGI placement. to do that simply go in Boujou to Export Camera Solve, it is on top in the menu in Boujou and select Maya 4+, type of file. Open this file in Maya and jump into perspective view and view that the Boujou brings into the scene. It should have a plane assigned to the camera so you can see the sequence playing and reference points in 3D from the side perspective view so you can recreate the geometry of the scene. then it is the matter of just importing different props into maya scene and start constructing your own set for that shot. for this particular rpoject you can find a Boujou file exported for Maya so you can start from this stage. Basically now it is the artistic way of establishing the shot in relation to CG / live action relationships.

› MATCH-MOVING [Maya]

match-moving process is based on constructing the geometry of the shot based on optical 3d tracking markers to integrate CG elements to the shot. the task is to match the optical placement of the moving image component such as live action and CG elements. Things to be aware of on the tracking process are lights, 2D and 3D differences, depth of the composition and such on. this process could be used as a image-based modeling software that allow to recreate the 3D objects from live action materials.

matching geometry of the scene

so thanks for boujou reference points we can recreate in maya all sorts of placements. this shot particularly is quite challenging in terms of the percentage of the CG placed to the shot which was at least 80% of the shot. so there were very important matchings of the floor and wall were taken into a count to be able to understand how the scene is constructed. the scale issue is very important because the main aim is to make a believable effect that the audiences perception will be shattered that it has a link to the uncanny feeling of everyday lives.

animation

the concept of the shot is the director's decision and it is entirely up to you what sort of content you might use in the scene but for this shot particularly there were the can and the underground gates animated as well. it is just to get the attention of the audience from the left side of the frame to the right one where the CG action is taken place. Animation of the CG elements is the traditional method of using CG elements placed into live action for shattering imagination of the audience. it is quite small and not exaggerated but it gives the sense of the weight of the car when it reaches the limit of automated gates.

lighting setup

the rule is to place the lights in your CG scene in Maya exactly in the same spot with the same intensity values as they were installed on the physical set while producing the shot. in this case the integrated and matched 3d geometry will fit the overall lighting conditions in the shot. you can give an extra atmosphere effects with using a glow slider of the surface shader material applied to the object as well. Particle effects could be added as well.

shadows and reflections

if the scene required to cast shadows of the placed CG elements it is important to put the plates that will cast shadows of the moving geometry in the shot. depend on the nature of the shot it is a different placement of reflective and casting shadows surfaces.

multi-pass rendering

multi-pass rendering is the basic workflow in any pipeline that involves 3d production. for this particular tutorial there is no information on that because due to the curvature of the learning process it wasn't enough experience to figure out this process for this project. the reason for that is not knowing the behavior of the compositing software nuke that is has to be adjusted in a sophisticated way that it can blend different render passes. Remember that we using Mental Ray rendering engine with MR materials so the set-up of the shading view should be a bit more involved. in terms of experimentation of the process of render passes it is to go to render layers and add the appropriate geometry to the layer and assign the presets like ambient occlusion, specular, zdepth and such on. it is basically the tutorial in itself. 3d artistry should be handled in a way that you can properly render images from maya with right light, materials, geometry set-up, modeling, shading, lighting, animation, test with play blasts in full HD resolution 1920x1080. The amount of frames should be exactly the same as your original footage and the frame rate should be identical as well.

› COMPOSITING [After FX, Nuke]

compositing

before this section of the pipeline begins check that you have : 1. original plate of the video with GS backgrounds for keying out. 2. rendered 3d sequence with placed CG elements to the shame shot. Their frames should be the same as well as frame rates. So inside Nuke you press R to bring the Read node and you mouse should be over the area where the nodes are. Then navigate to bring both your original footage and rendered CG from maya sequences. Bring the Primate node into a node editor in Nuke and pressing shit+apple and drag the area to key out. changing different modes of the node such as clean BG and FG pull out the good keying of the shot. it is important to work and check your keyign in the alpha channel by pressing A on the keyboard while on the view. It is recomended that you watch video files that come with this CD so you can get the idea of how to key out properly in Nuke environment. By watching the video you can mention that there were managed different typres of problems working with new software Nuke. Write node is quite tricky when you will need to export the file into an image sequence or a .mov file.

color correction, lighting

overall color and atmosphere of the shot is to be done in after effects and using the plugin called magic bullet looks to be able to color correct the shot. it is a sophisticated control of the color data in the shot and very useful tool for having presets that could be modified and adjusted to get the look that we aiming. In the video i don't use magic bullet because it is a product that is not available for everyone so on the video you can find another technique how to be able to control the color data of your shot in the way that it drives the narrative in terms of colorizing the mood of the shot. Nothing too complex or unusual components were used in After Effects, just several combinations of Levels, Curves, Hue, Saturation, Colorizing, Tint and blur. Working in different RGB channels to get the color corrected view of the shot in the proper way.

› SFX

in the video about the sound you see how the proper shot could be sounded with sound effects where there were final cut pro and soundtrack pro used to be able to match the soundtrack for the exported from After Effects composited shot. Adobe Sound booth could be used to extract .mp3 audio data from the original shot and by bringing the final shot into Soundtrack pro you can replace it with the original, add sound effects, increase, decrease the noise, make the voice louder and fade in and out as well. its pretty sophisticated piece of software that allow you to control the sound component of the media. You wouldn't be able to hear sounds in the video provided but you can get the idea how to put tracks and how to export your media.

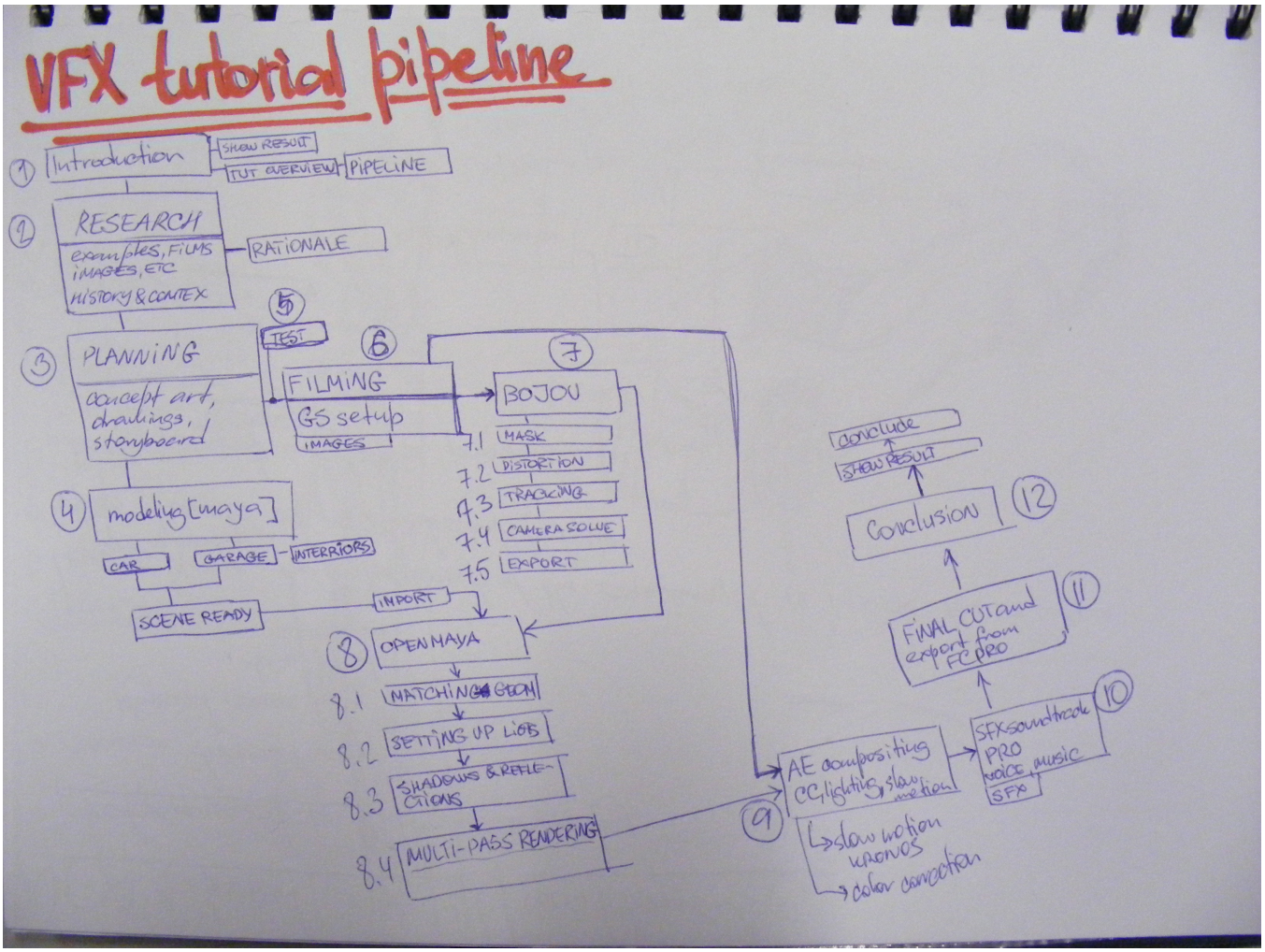
› FINAL CUT

finally when the soundtrack is produced it is the right time to open both the soundtrack and video file in final cut pro and drag both files into created project directory. Make sure that the audio file matching with video file by playing a test run. Usually Apple Pro res [LT] is working fine with .mov compressions where you can get the sounded version of your finished shot.

› RATIONALE

THIS TUTORIAL IS THE FOLLOWING DOCUMENT TO THE PROJECT FILES ON THE DVD THAT WILL HELP TO CREATE A FULLY FUNCTIONING LIVE ACTION CG INTEGRATED SHOT USING MATCH - MOVING PROCESS BASED ON 3D TRACKING AND CAMERA SOLVE TECHNOLOGIES. ART PART OF THE PROJECT REFLECTED IN THE COLOR CORRECTION SECTION OF THIS TUTORIAL.

IN TERMS OF STYLISTIC DECISIONS AND ESTHETICS OF THE SHOT THE VERY SOPHISTICATED GARAGE INTERIOR WAS CREATED TO PLACE THE FIGURE INTO LIVE ACTION PLATE MATCHING THE ENVIRONMENT AND LIGHT CONDITIONS AS WELL.



THE CAR PRESENTED IN THE SHOT AS A CHARACTER AND THE LIVE ACTION CHARACTER IS IDENTIFIABLE WITH THE CAR. TO THE NICELY ANIMATED ACTION OF THE CAR WITH SLIGHT MOVEMENT OF THE FRONT WHEEL AND LITTLE SUSPENSION BUMP THE ANIMATION PART OF THE PRODUCT DELIVERS AND ARTISTIC APPROACH TO BE ABLE TO ACCOMPLISH THE ATTRACTION MOMENT FOR THE AUDIENCE.

In general the shot basically constructed on the visual forms that place the audience into the room with the car coming from garage underground hydraulic systems. this is very impressive experience in terms of visual experience of the audience.

this effect is for the enhancement of the visual esthetics of the world that we are live in today. where and when the experience of any person on the street is limited with casual colors and where the media challenges that perception to be able to place the guest into a journey of virtual space. lighting and style of the interior was studied and referenced from image bank collected for this project as well. The texture on the wall and the material set up for mental ray in maya are in the cd with this book. you can see how to set up the bump maps and place the uv onto geometries, basically the entire production pipeline for making an effective CG live action shot. Pushing the project on the next level there were video files of the video references created for this tutorial as well.

› CONCLUSION

learning outcome from this process of documenting the tutorial and producing the actual media got the idea how much time it takes to actually produce the shot with both modeling or digital and filmmaking physical process, making the post production for the shot from scratch it is a bit of a challenge for the unexperienced user so make sure that is to be able to complete such tutorial you might require a professional training of some of software products but if you follow the artistic part of the workbook you can get the idea of what can be logically done using this filmmaking technology as a pipeline for some shots.

The second evaluation of the tutorial is the props making statement where the idea that the labour divided forces can be helpful as a providers of 3d geometry so the modeling process is completely handled by the modeling department. The animation and testing of the shot and in general 3D production is quite time consuming process and sometimes the compromises of the quality is the subject to deal with and the overall picture looks okay.

The fact that it is has to be a tutorial was so great because the project become more organized and directed with keeping notes and project files that it speed up the workflow of the digital production. The research around the subject area of using effects as a media to communicate with narrative instruments and provide and visual pleasure to the viewer who's perception captured by an amazing CG elements in the shot.

enjoy following the tutorial and using project files from the cd provided, watch the videos of actual production of the shot from start to finish to get the idea of the actual production.

› REFERENCE LIST

BAKER, S., AND MATTHEWS, I. 2004. Lucas-kanade 20 years on: A unifying framework. International Journal of Computer Vision 56, 3 (February), 221–255.

CHOUDHURY, B., SINGLA, D., AND CHANDRAN, S. 2008. Fast color-space decomposition based environment matting. In SI3D '08: Proceedings of the 2008 symposium on Interactive 3D graphics and games, ACM, New York, NY, USA, 1–1.

MIKIC , I., TRIVEDI, M., HUNTER, E., AND COSMAN, P. Human body model acquisition and tracking using voxel data. International Journal of Computer Vision. In Press.

The Lord of the Rings DVD, The Appendices, Part 2: From Vision to Reality.

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