

DIGIPEN INSTITUTE OF TECHNOLOGY
GRADUATE STUDIES PROGRAM
DEFENSE OF THESIS

THE UNDERSIGNED VERIFY THAT THE FINAL ORAL DEFENSE OF THE
MASTER OF FINE ARTS THESIS TITLED

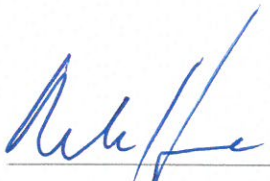
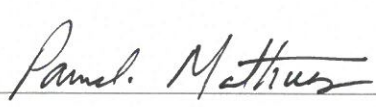
Art Direction, Character Modeling and Lighting:
Orientation Center for the Unseen

BY

Francisco Alexandro Guerrero


HAS BEEN SUCCESSFULLY COMPLETED ON July 30, 2015.
MAJOR FIELD OF STUDY: DIGITAL ARTS.

APPROVED:

 7/30/2015  7/30/15
Mark Henne date Pamela Mathues date

Thesis Advisor

Faculty Mentor

 7/30/2015
Peter Moehrle date

Faculty Mentor

DIGIPEN INSTITUTE OF TECHNOLOGY
GRADUATE STUDIES PROGRAM
THESIS APPROVAL

DATE: July 30, 2015

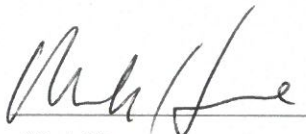
BASED ON THE CANDIDATE'S SUCCESSFUL ORAL DEFENSE, IT IS
RECOMMENDED THAT THE THESIS PREPARED BY

Francisco Alexandro Guerrero

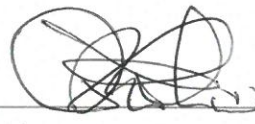
ENTITLED

Art Direction, Character Modeling and Lighting:
Orientation Center for the Unseen

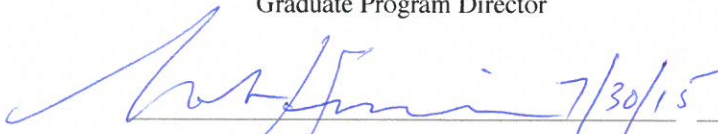
BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF FINE ARTS IN DIGITAL ARTS
AT DIGIPEN INSTITUTE OF TECHNOLOGY.


Mark Henne 7/30/2015
date

Graduate Program Director


Xin Li 8/27/2015
date

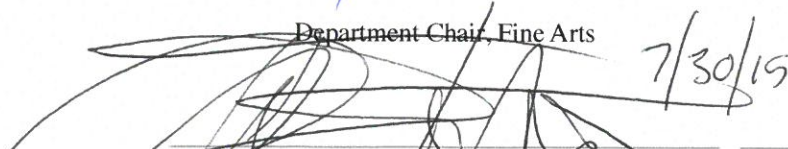
Dean of Faculty


Rob Kmiec 7/30/15
date


Department Chair, Fine Arts


Alain Schneuwly 8/25/2015
date

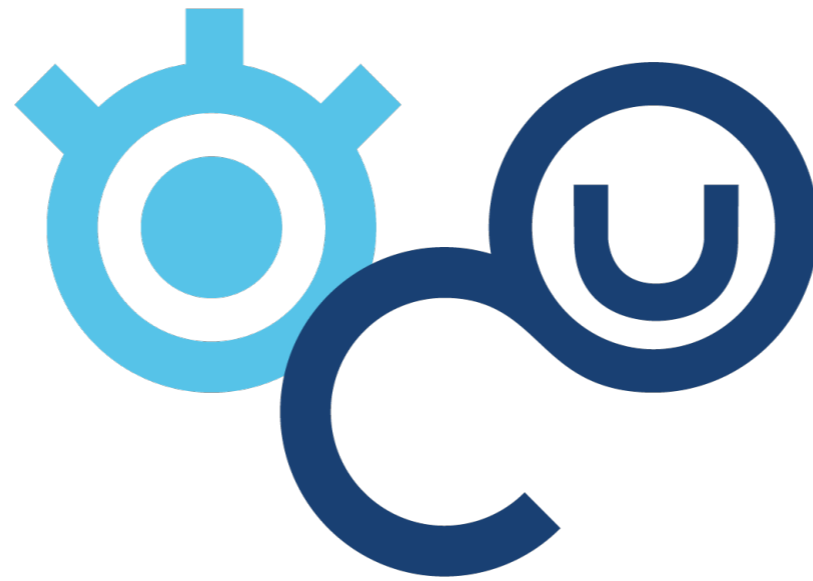
Department Chair, Digital Arts


Jazno Francoeur 7/30/15
date

Department Chair, Animation and Production


Claude Comaire 8/27/2015
date

President



ORIENTATION CENTER
FOR THE **UNSEEN**

MFA THESIS PROJECT • SHORT FILM

TEAM
MAGNUS
EFFECT

FRANCISCO GUERRERO
ZAHRA AMIRABADI
XIAORAN LI
TARA JAIYEOLA

TAI GORDON
AMANDA NEMIROFF
SCOTTLAND REED
ZACHARY MITCHELL
SPENCER MAURO



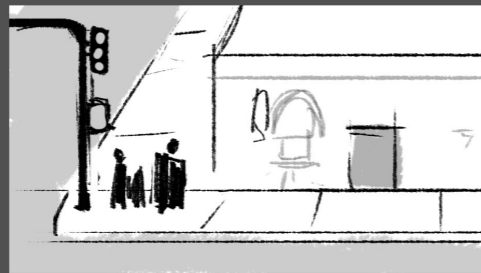
STORY

BEATBOARD

STORY EXPLORATION

(EARLY CONCEPT)

FRANCISCO GUERRERO



The group you see before you appear to be very different from one another. No matter their differences they all are approaching Ooberty,



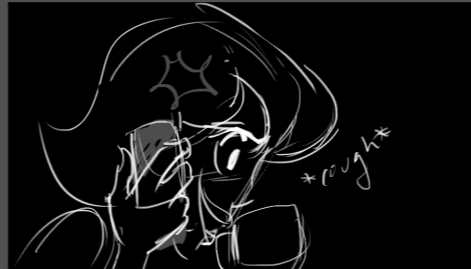
a process of mental and physical change. It can be a confusing time, so it is important to understand the three key triggers of Ooberty:



a process of mental and physical change. It can be a confusing time, so it is important to understand the three key triggers of Ooberty:



The initial change is a deepening of the voice.



(CHARACTER'S VOICE CHANGES)
The initial change is a deepening of the voice.



Changes in the skin also occur. The skin may become irritated, or change in color entirely. This is natural, and will resolve itself with time.



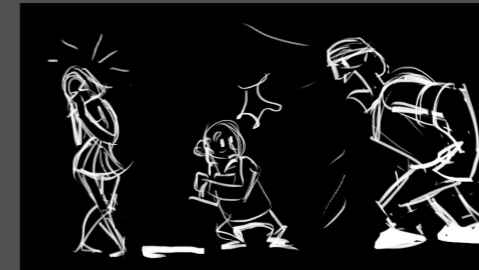
(TURNS GREEN AND TRANSPARENT)
Changes in the skin also occur. The skin may become irritated, or change in color entirely. This is natural, and will resolve itself with time.



Mood swings are also quite common and some say can be "scary" at times. With practice and time, they can be controlled and put towards productive activities.



Mood swings are also quite common and some say can be "scary" at times. With practice and time, they can be controlled and put towards productive activities.



(ENVIRONMENT CHANGES TO "GHOST MODE")
Mood swings are also quite common and some say can be "scary" at times. With practice and time, they can be controlled and put towards productive activities.



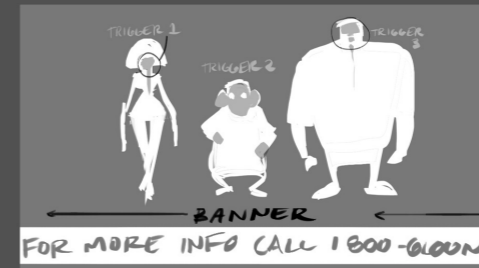
As we have seen, Ooberty influences our actions and interests, even our own appearance. Be patient and focus, it will lead you to many, many productive years as an active member of our society.



As we have seen, Ooberty influences our actions and interests, even our own appearance. Be patient and focus, it will lead you to many, many productive years as an active member of our society.



(CHARACTERS TRANSFORM INTO DIAGRAM)
Mood swings are also quite common and some say can be "scary" at times. With practice and time, they can be controlled and put towards productive activities.



(ENVIRONMENT CHANGES TO "GHOST MODE")
Mood swings are also quite common and some say can be "scary" at times. With practice and time, they can be controlled and put towards productive activities.



(FADE WHITE)
As we have seen, Ooberty influences our actions and interests, even our own appearance. Be patient and focus, it will lead you to many, many productive years as an active member of our society.



(FADE WHITE)
As we have seen, Ooberty influences our actions and interests, even our own appearance. Be patient and focus, it will lead you to many, many productive years as an active member of our society.



(FADE WHITE)
As we have seen, Ooberty influences our actions and interests, even our own appearance. Be patient and focus, it will lead you to many, many productive years as an active member of our society.



BEATBOARD

STORY EXPLORATION

(EARLY CONCEPT)

FRANCISCO GUERRERO



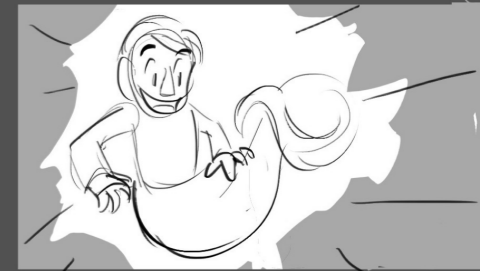
(PICTURES ARE IN TED'S OFFICE) Meet Ted. Ted is an ordinary person just like you. And just like you, Ted is going to die.



Upon death we all enter . It can be a confusing time, a process of physical change.



It can be a confusing time for most, so it is important to understand the changes ahead.



For most, the initial change is the proportions and shape of the body. You may feel stronger, faster, and overall feel lighter on your feet.



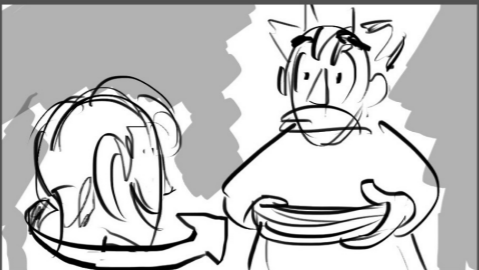
(TED FINDS THE ADVANTAGE OF FLYING AND GOES TO HIS OFFICE THROUGH THE WINDOW)



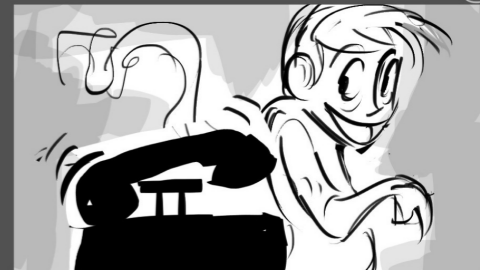
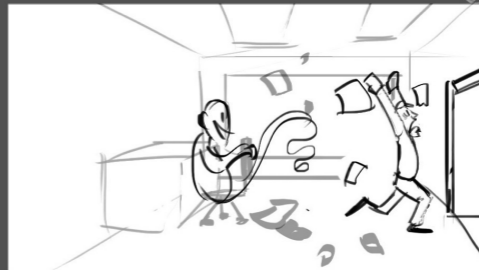
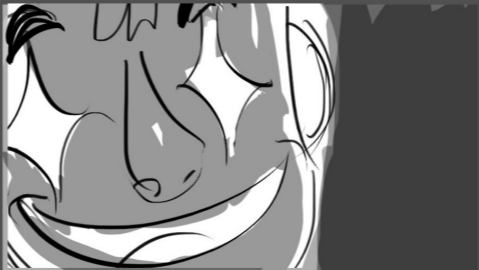
(TED STARTS WORKING AND TYPING RANDOM THINGS)



(TURNS GREEN AND TRANSPARENT) Changes in the skin also occur. The skin may become irritated, or change in color entirely. This is natural, and will resolve itself with time.



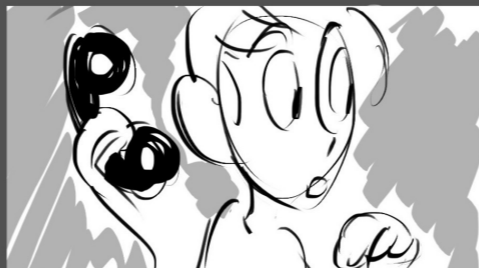
(TED TURNS WHITE) Changes in the skin also occur. This is natural, and will resolve itself with time.



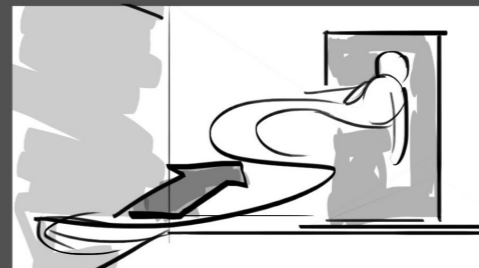
The cubicle phone rings. Ted grabs phone with tail.



Ted answers. Instead of a, "hello," a ghostly, "Booooo," comes out of Ted's mouth.



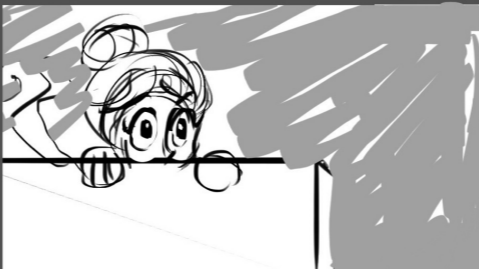
Ted puts down the phone, surprised by the sound that just came out of him.



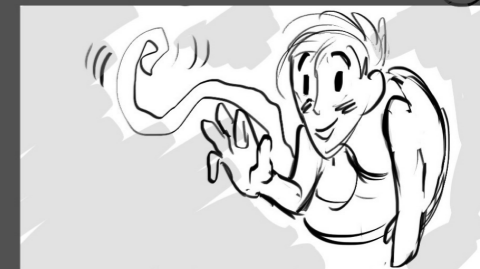
Ted hears another, "Booooo". This time it's not his own, in fact, it's scarier than his.



(ROOM IS UPSIDE-DOWN)



Out of another cubicle floats a female ghost. She waves Ted's ghost bashfully at Ted.



Ted waves back, happy to see another ghost. Ted's ghost "tail" springs up to show his "excitement."

Orientation Center for the Unseen / color thumbnail exploration



1



2



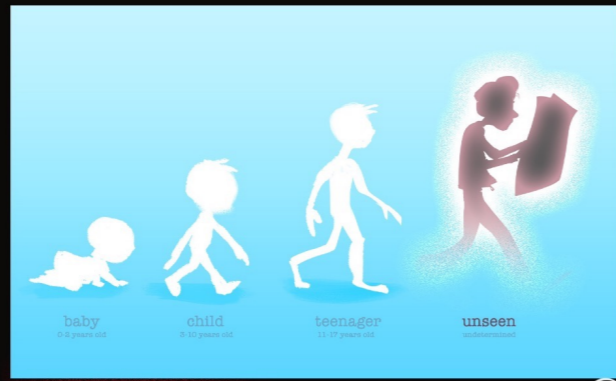
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4



5



6



7



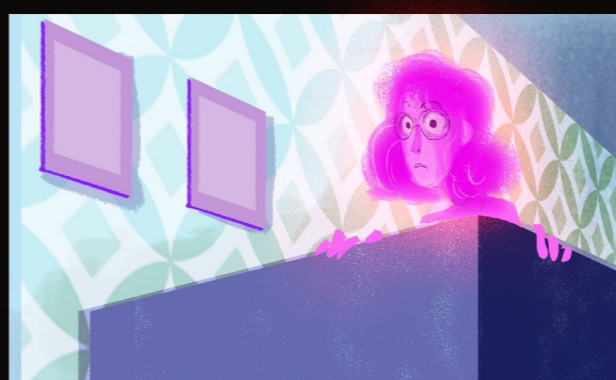
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9



10



11



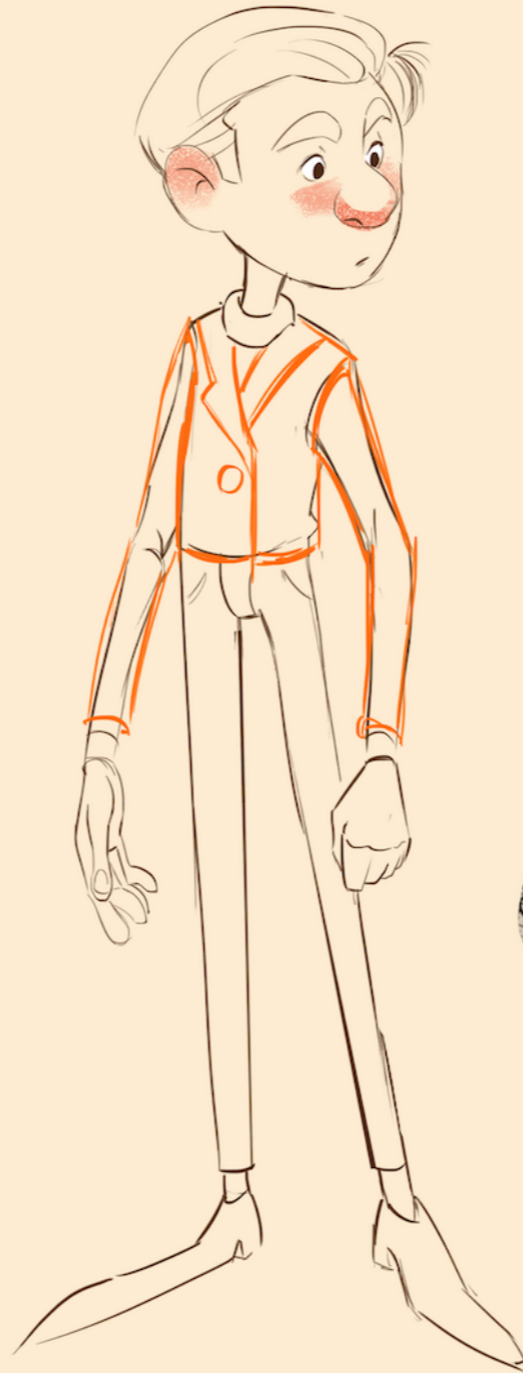
12



DESIGN

TED

EARLY CONCEPTS



TED

EARLY CONCEPTS



- Monotone the entire short.
- Tone changes from living to ghost
- Flat color, maybe just texture for cavity, normal map, etc.



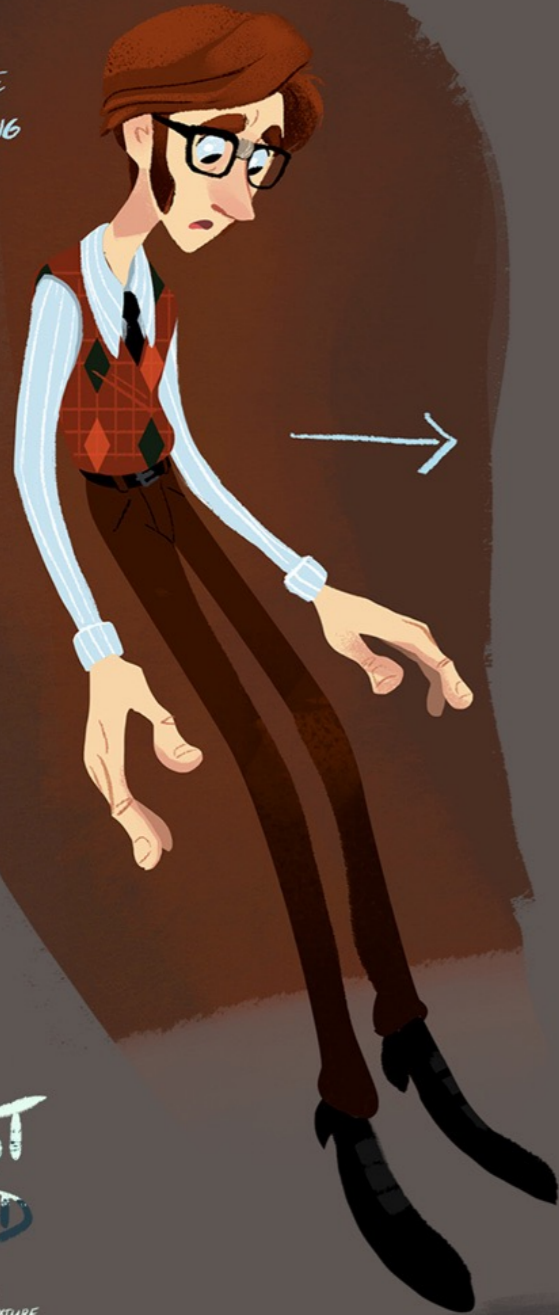
Orientation Center for the Unseen - Environment & prop explorations



* Bigger bowtie?
* hands fall at knee



* TED'S APPEARANCE AT BEGINNING OF SHORT



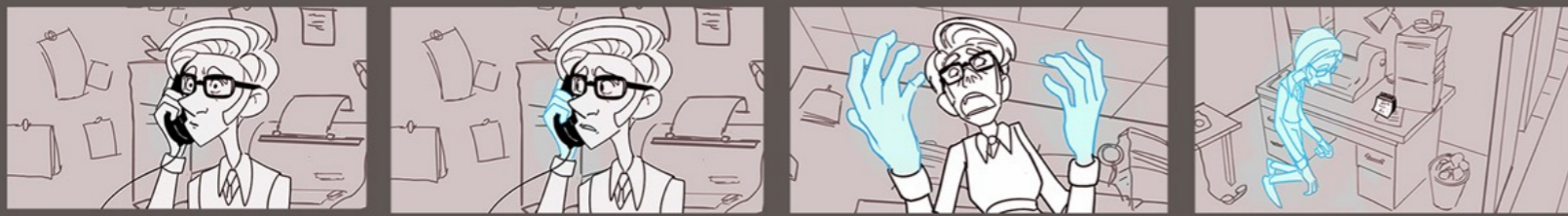
ORIENTATION CENTER FOR THE UNSEEN



GHOST TED

* THIS IS GOING TO BE DONE WITH A NEW TEXTURE SET AND SOME SHADER TRICKS. THE TRANSPARENCY SHOULD BE DONE IN AFTER EFFECTS.

VEST & SHIRT PATTERNS



CAR DESIGNS OUTDOOR ENVIRONMENT

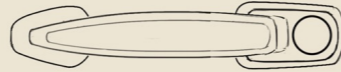
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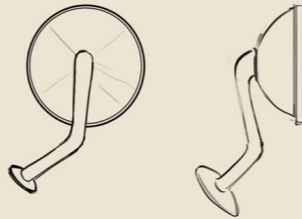
- 1) Chevrolet Nova (Long tail)
- 2) Falcon (Big head)
- 3)



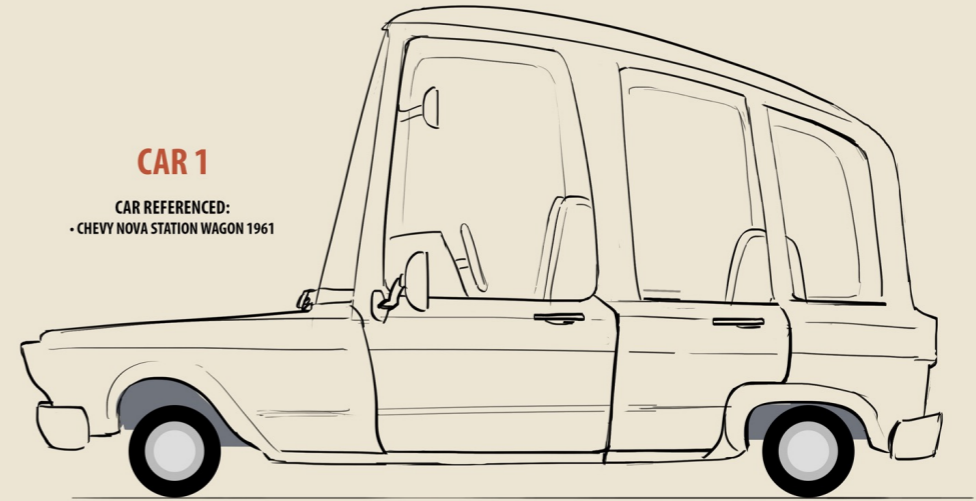
HANDLE FRONT VIEW



MIRROR



THE CARS HAVE ONLY 1,
DRIVERS SIDE



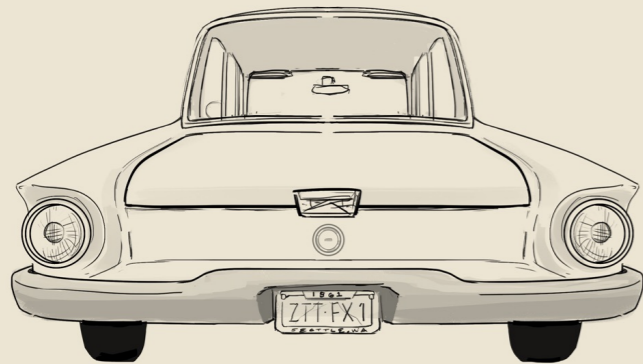
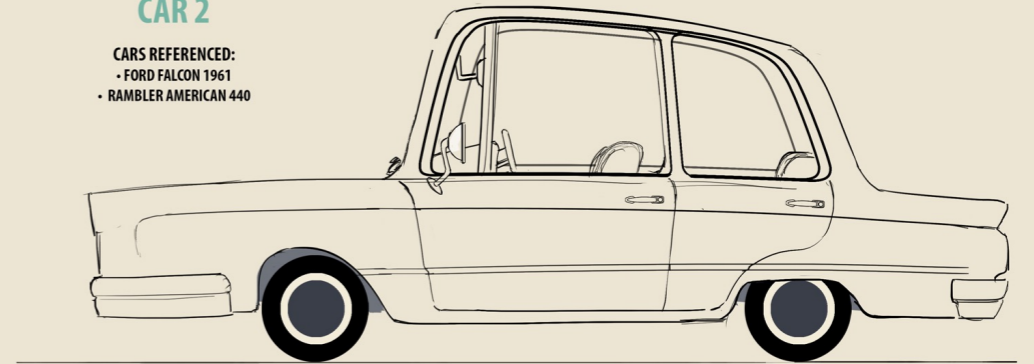
CAR 1

CAR REFERENCED:
- CHEVY NOVA STATION WAGON 1961

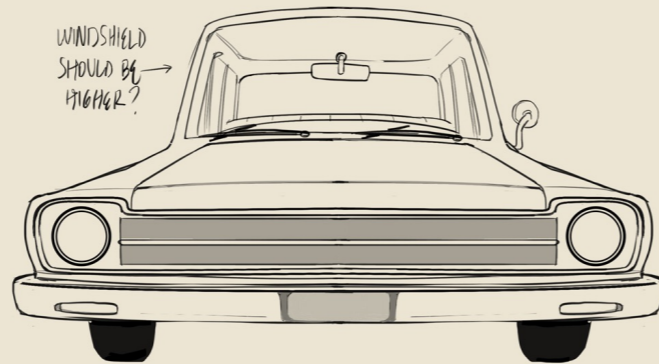


CAR 2

CARS REFERENCED:
- FORD FALCON 1961
- RAMBLER AMERICAN 440



BACK VIEW
(DESIGN REF)



WINDSHIELD
SHOULD BE
HIGHER?

FRONT VIEW
(ONLY FOR DESIGN REF,
NOT ALIGNED WITH SIDE VIEW)



GIL'S DINNER
 Beverages (Mission script)
 GROCERIES 19¢
 NEWS & MAGAZINES
CAFE (BAUHAUS93)

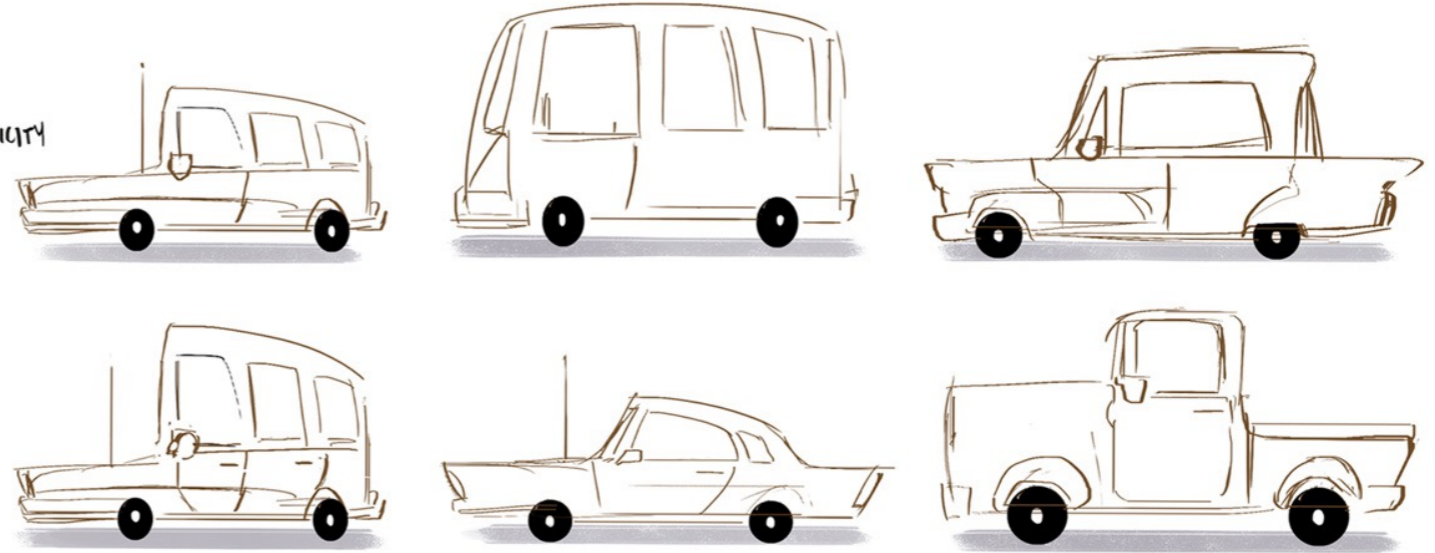


ORIENTATION CENTER
 FOR THE UNSEEN

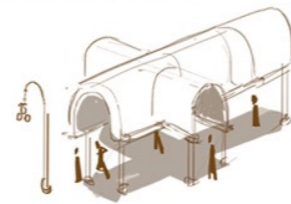
• ENVIRONMENT EXPLORATIONS AND PROP DESIGN •



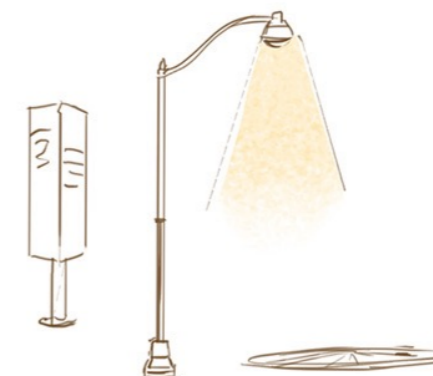
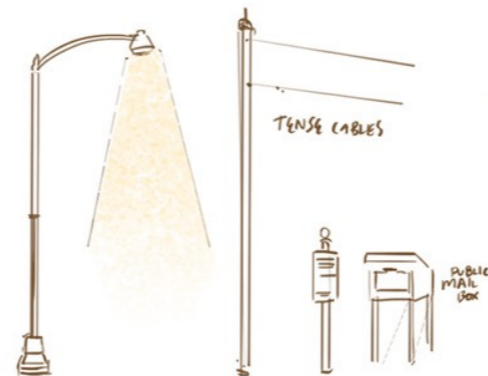
CHECK
 ELECTRICITY
 CABLE
 REF.



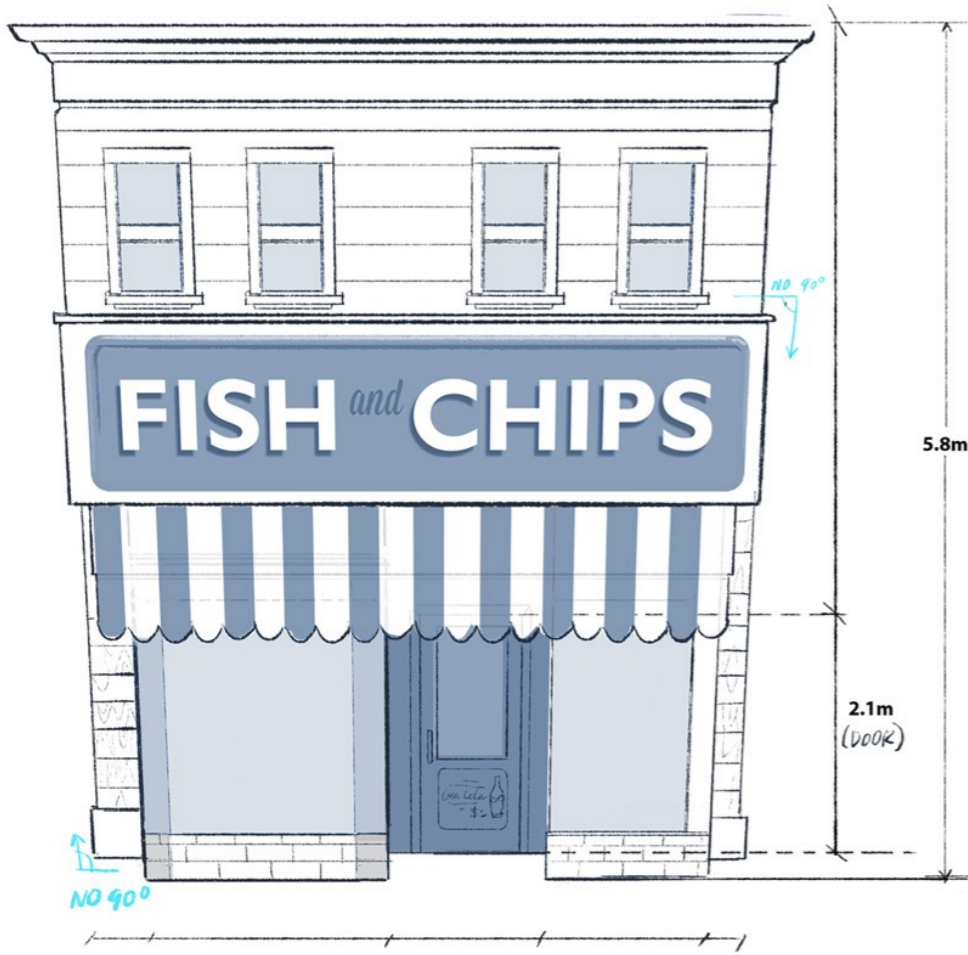
Sephia color / ANALOG COLOR PALETTE
 FOR CITYRAVES



COULD BE A VAN OR
 PICKUP THAT KILLS TED.

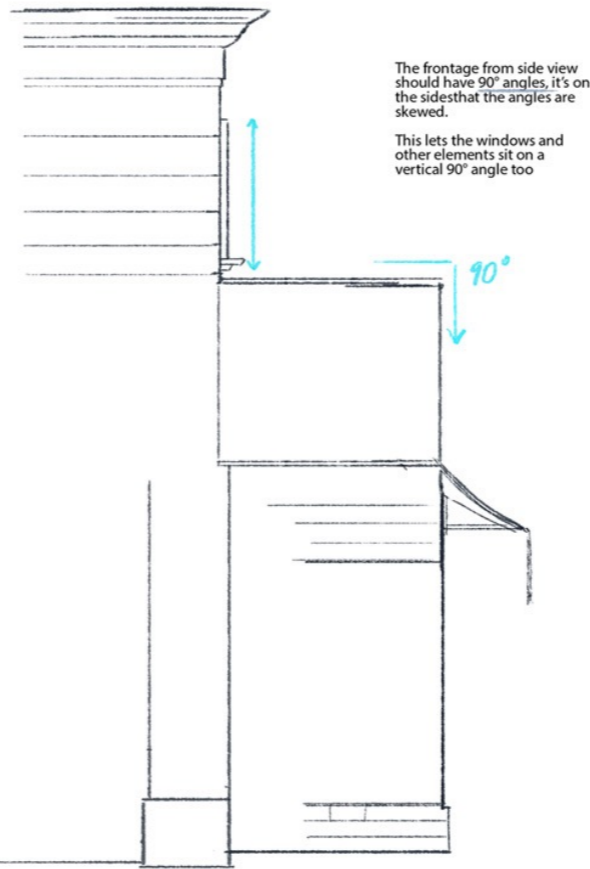


FRONT VIEW



* BUILDING IS ASYMMETRIC

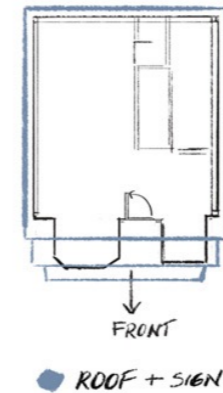
FRONTAGE



ENVIRONMENT

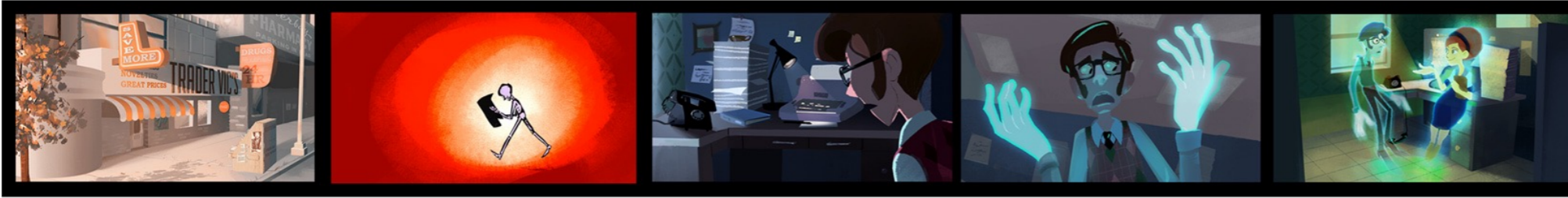
PROP DESIGNS AND CONCEPTS

TOP VIEW



STREET ADS AND BILLBOARDS





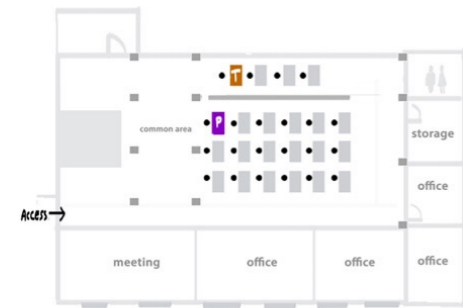
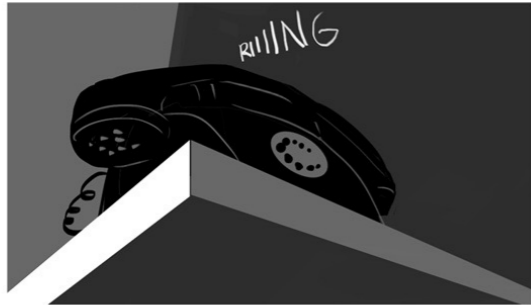
• ENVIRONMENT EXPLORATIONS / COLOR KEYS



ORIENTATION CENTER
FOR THE UNSEEN







ORIENTATION CENTER
FOR THE UNSEEN

• ENVIRONMENT EXPLORATIONS AND PROP DESIGN •

Ted's office and props
2014 - Photoshop

Environment design and explorations for the short-film "Orientation Center for the Unseen".

Floor Plan office floor

- The stranger
- Helix: Countercultural mag.

- Newspapers in Seattle:
- Seattle Times
 - Seattle Weekly
 - Seattle Post-Intelligencer

- + Cubicle wall
- in order to frame Ted's cubi
 - the rest of the office can be an open space.

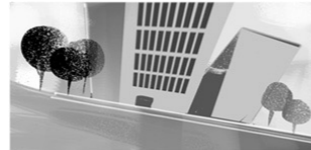
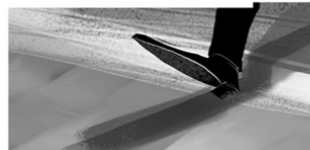
Chair design adjusts to proportion.

The chair's pillar has to be very tall to fit Ted's proportion.

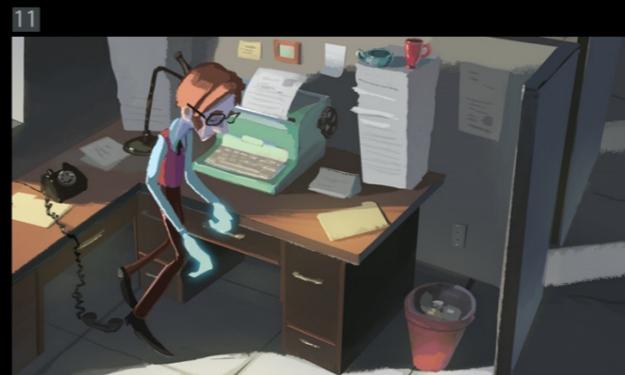
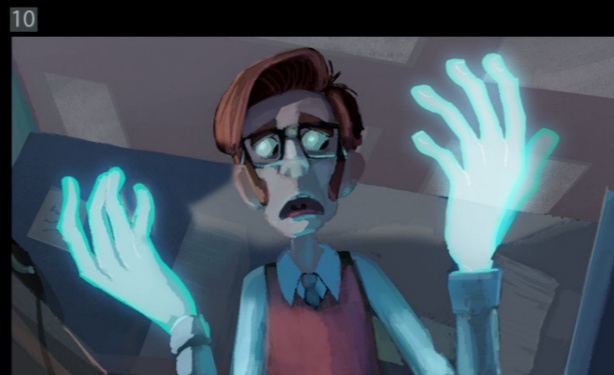
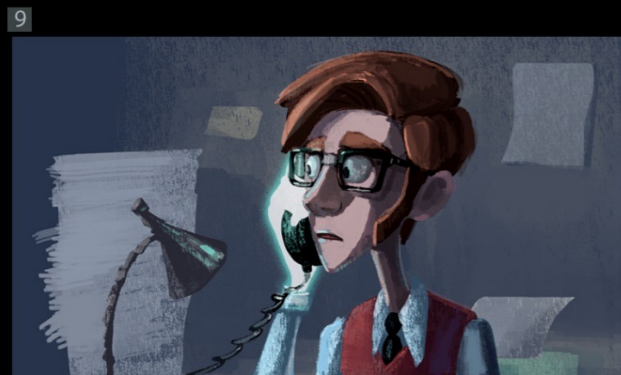


Building exploration

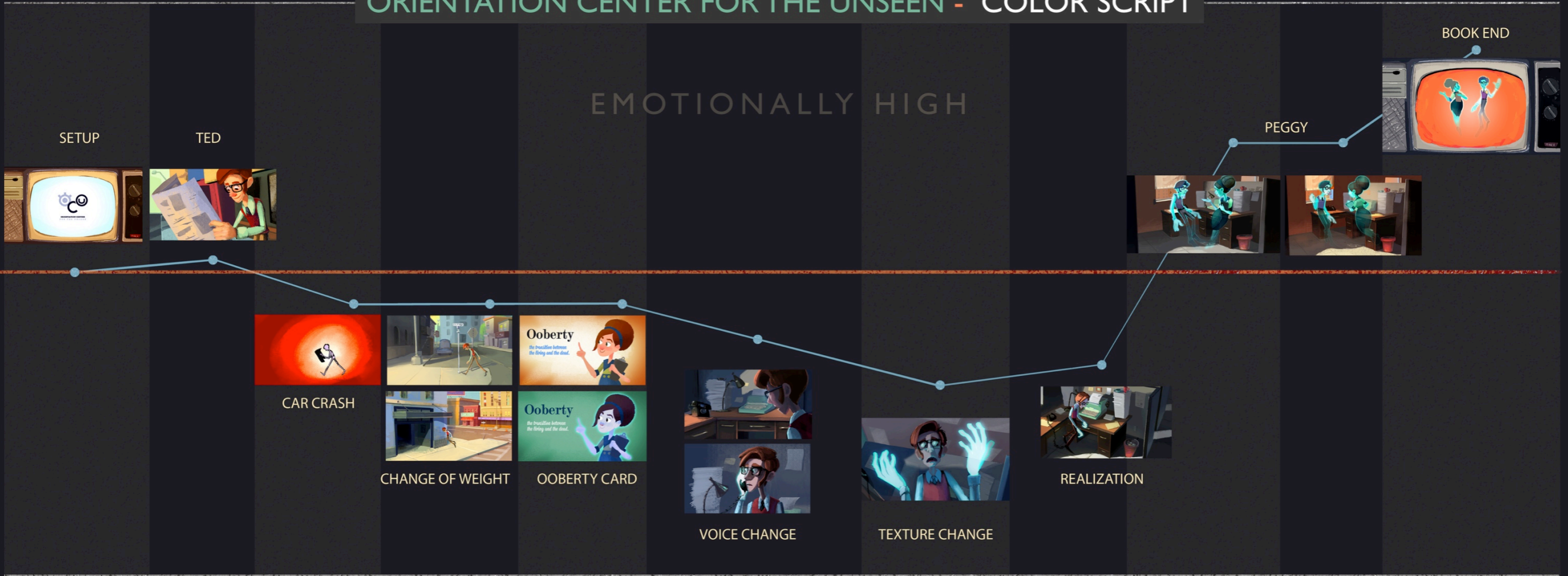
- Modern
- Box style
- Sleek
- Post 70s



COLOR SCRIPT

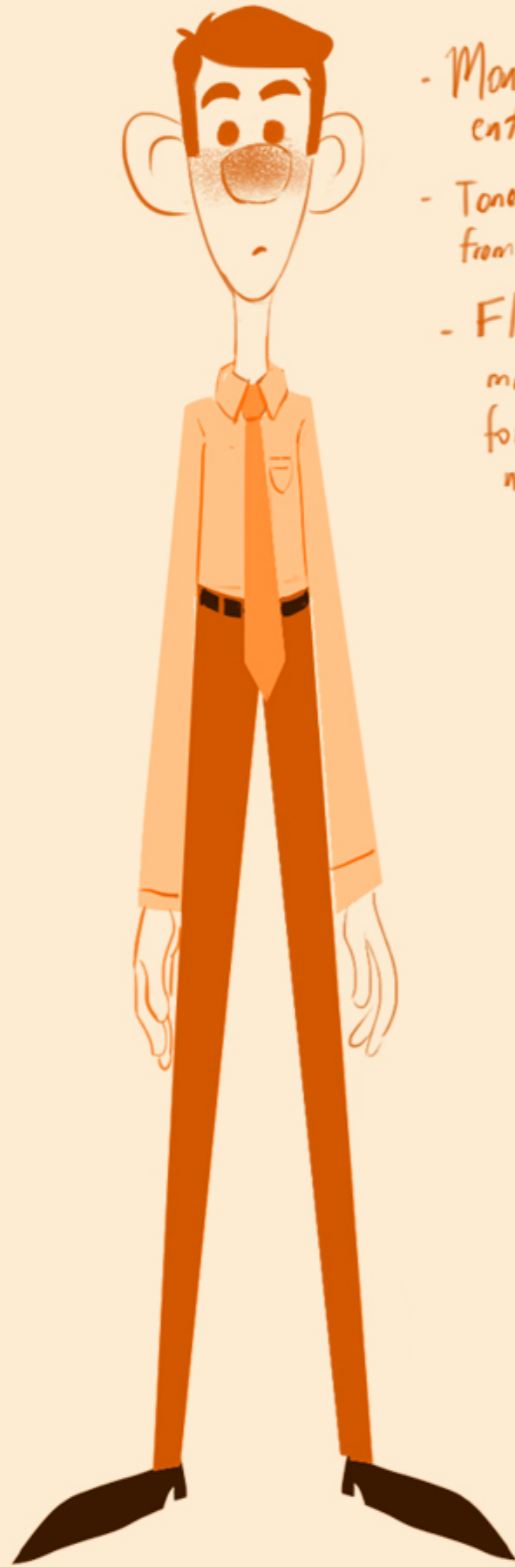


ORIENTATION CENTER FOR THE UNSEEN - COLOR SCRIPT





GHOST EFFECT

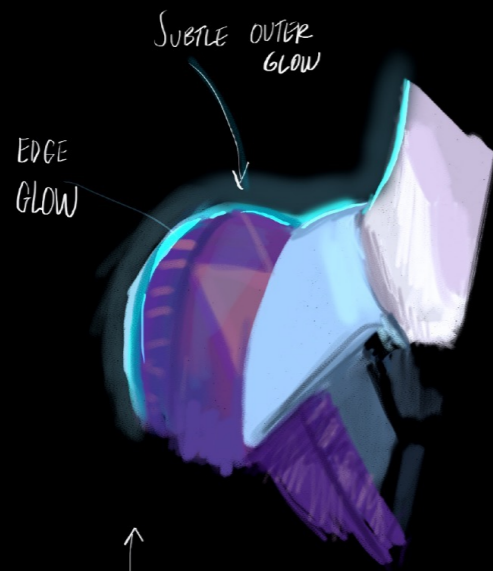


- Monotone the entire short.
- Tone changes from living to ghost
- Flat color, maybe just texture for cavity map, normal map, etc.

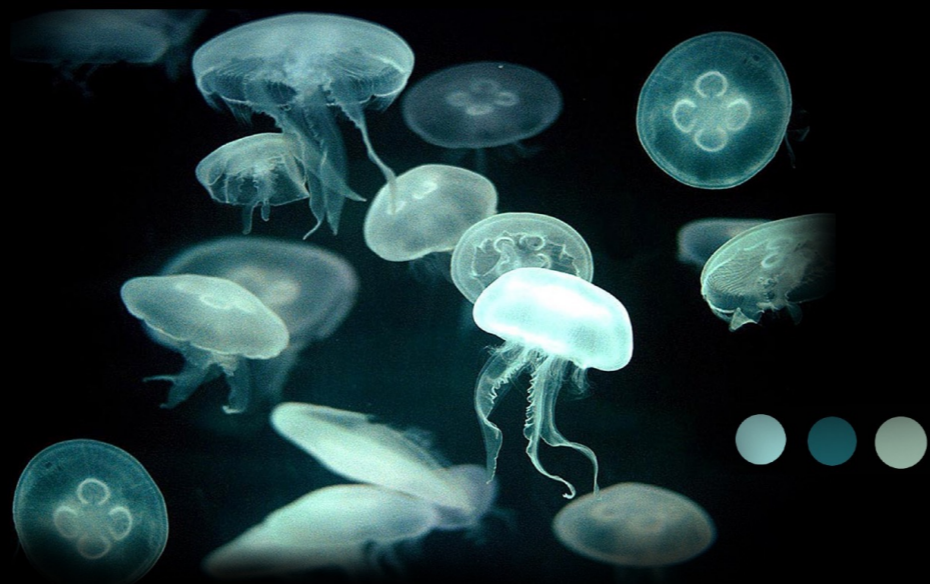


GHOST TED

EARLY CONCEPTS



* DESATURATION IN COLOR.
 * HUE SHIFTS TO PURPLE / VIOLET / BLUE



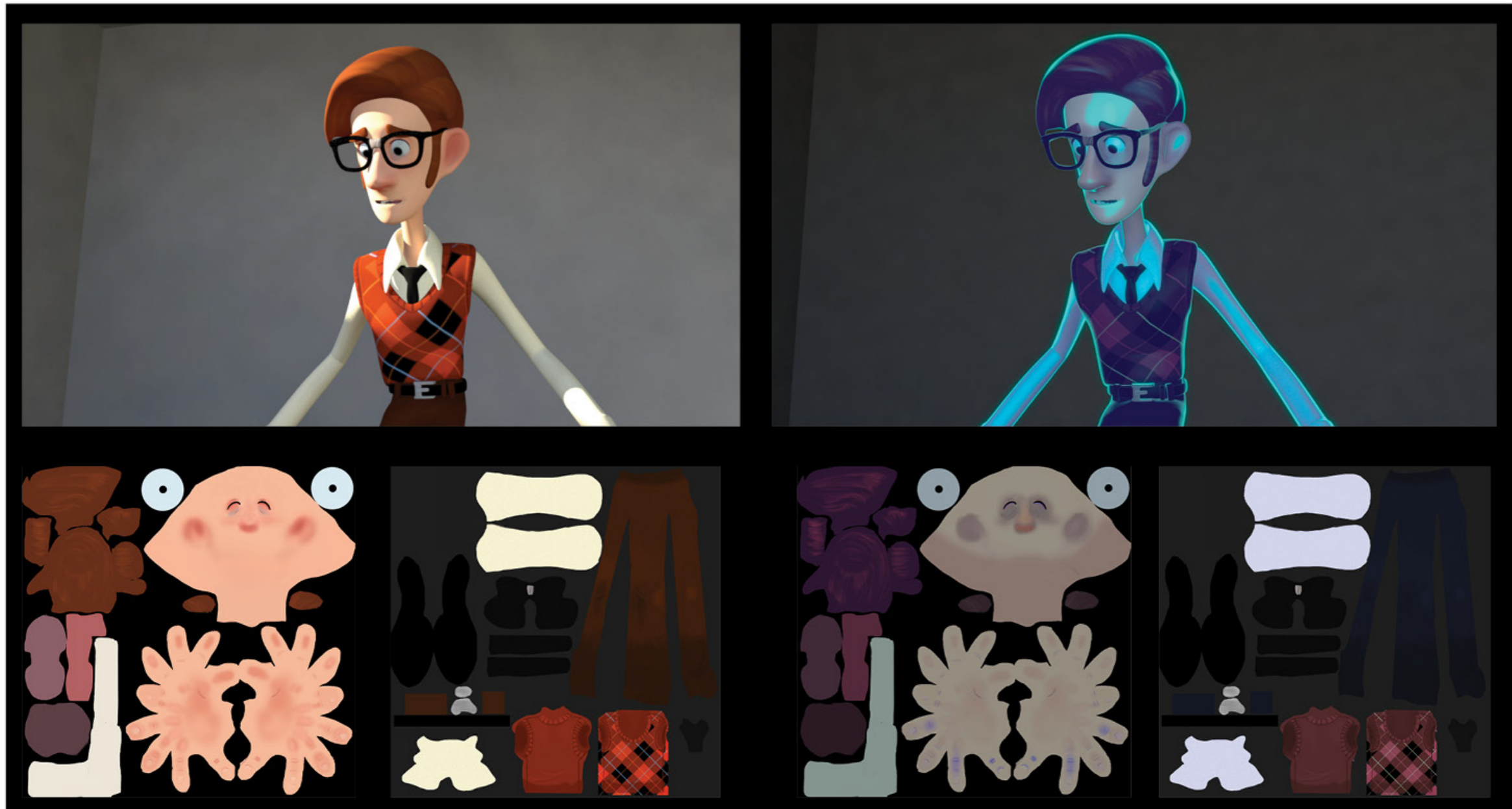
CONCEPT ILLUSTRATION

BIOLUMINESCENCE IN SEA CREATURES

- RIM GLOW INSIDE OF BODY
- TRANSPARENCY VARIES WITH BODY MASS
- BLUE/PURPLE/CYAN HUES
- IT EMITS A VER SUBTLE LIGHT. WHAT IS ACTUALLY GLOWING IS THE INTERIOR OF THE BODY.
- PARTICLES FLOATING AROUND THE BIOLUMINESCENT CREATURE ARE REVEALED BY EMMITED LIGHT.

“TO MAKE LIGHT, YOU NEED THREE INGREDIENTS: OXYGEN, A LUCIFERIN, AND A LUCIFERASE”

- LUCIFERIN IS ANY MOLECULE THAT REACTS WITH OXYGEN AND IN DOING SO EMITS ENERGY IN THE FORM OF A PHOTON—A FLASH OF LIGHT
- A LUCIFERASE IS A MOLECULE THAT TRIGGERS THE REACTION BETWEEN OXYGEN AND THE LUCIFERIN (PLENTY OF SUBSTANCES CAN ACT AS LUCIFERASE, SUCH AS EGG)
- LUCIFERIN IS EASY TO GET IN THE OCEAN, (OUT OF DIET). SMALLER ORGANISMS ACTUALLY PRODUCE IT THEMSELVES



(Above left) **Alive Ted Render test and texture maps**
 Francisco Guerrero - Digital paint / Mental Ray render using
 Physical Sun & Sky

(Above right) **Ghost Ted Render test and texture maps**
 Francisco Guerrero - Digital paint / Mental Ray render using
 Physical Sun & Sky

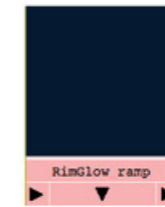
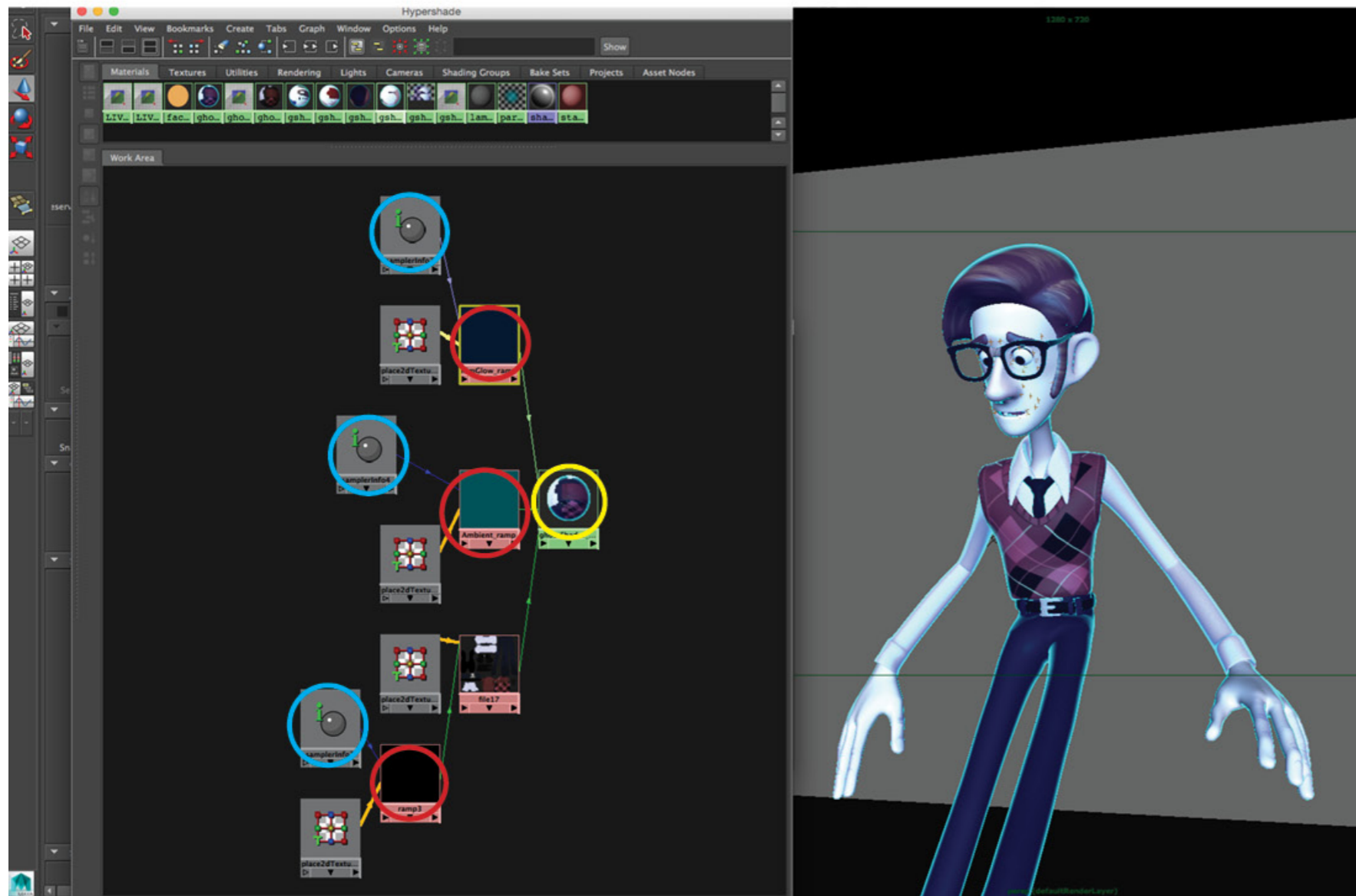
TED'S LOOK

Ted's alive look consists only on a lambert material with a 2D texture attached to the diffuse color. This means that the textures are achieved only by 2D painting in photoshop. There's no specular or bump maps, since we decided to go after a 2D look. Further development to achieve the 2D feel in our 3D short is still in development, and would require a separate document to explain its creation.

Ted's ghost look is a combination of desaturated color maps (non-destructively using Photoshop's adjustment layers) and ramp nodes applied in Maya. The current renders are a result of constant tweaking the ramp nodes and attaching *Sampler info nodes* to them, which will be explained more thoroughly when we get to Maya's hypershade window.

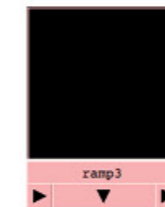
HYPERSHADE SETUP

GHOST SHADER



The **RimGlow ramp** node is what we can see as a blue inner glow in Ted's model.

It is connected in the ***incandescence*** input.



The **ramp3** node is connected to the ***color offset*** input. This ramp is a secondary node that is useful to reveal more of the form of the model, since it tends to lose volume by many factors such as light setups, gamma correction, and the ghost shader itself.



The **Ambient ramp** node is connected to the ***ambient color*** input, which gives an additional cold colored ramp to the 2d ghost texture (compare viewport look of Ted with the actual 2D texture map in the previous page).

(Above) Example of hypershade network for ghost shader

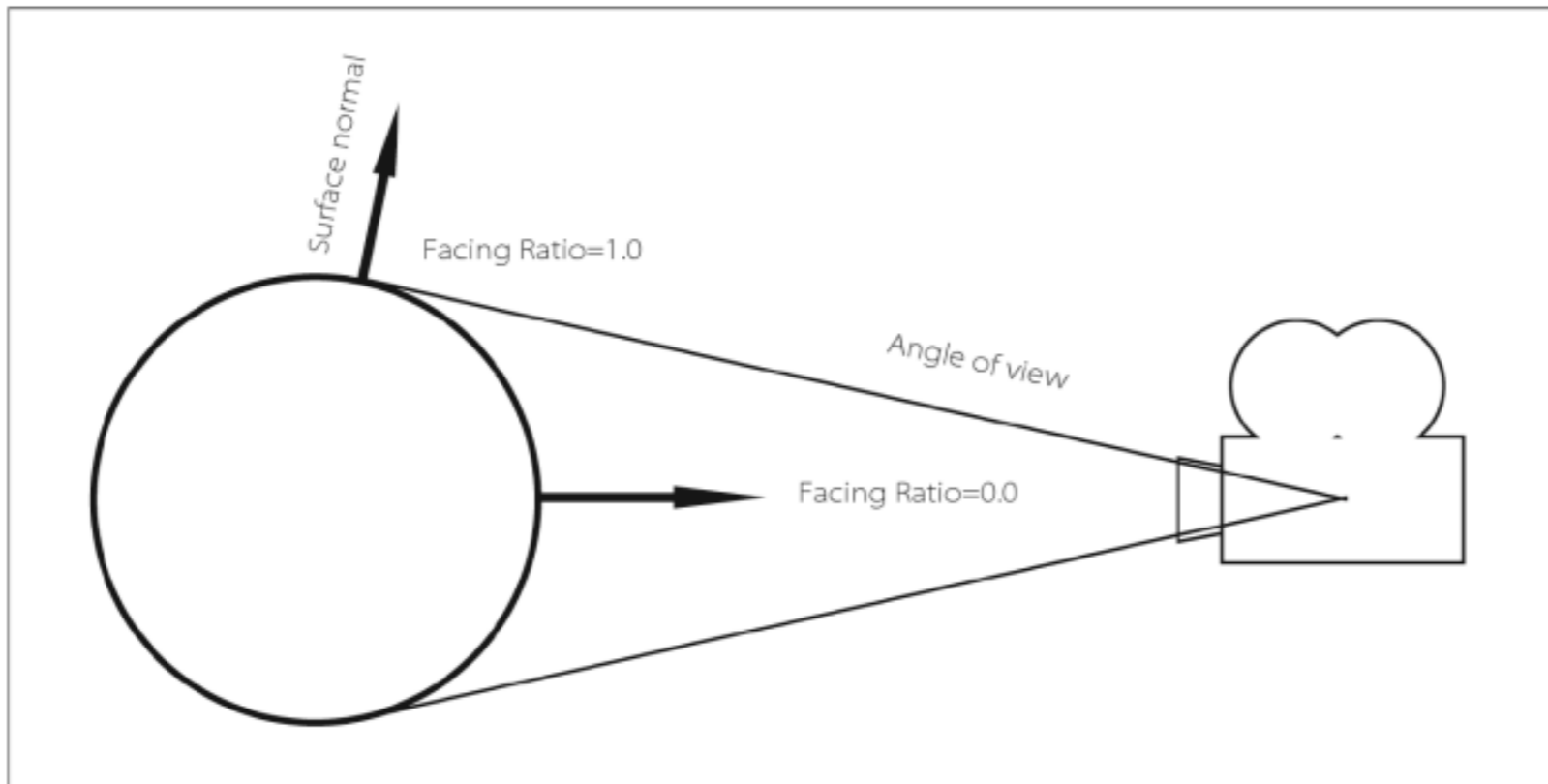


Figure 12.13

A normal that is perpendicular to the camera (top arrow) has a 0.0 Facing Ratio, and one pointing toward the camera (arrow pointing right) has a 1.0 Facing Ratio.

SOURCE: MASTERING MAYA 8.5

BY JOHN KUNDERT-GIBBS, MICK LARKINS, DARIUSH DERAKHSHANI, ERIC KUNZENDORF. PAGE 387. USA. 2007





LIGHTING AND RENDERING

LIGHTING PROGRESSION • shot A2

1



4



2



5



3



6



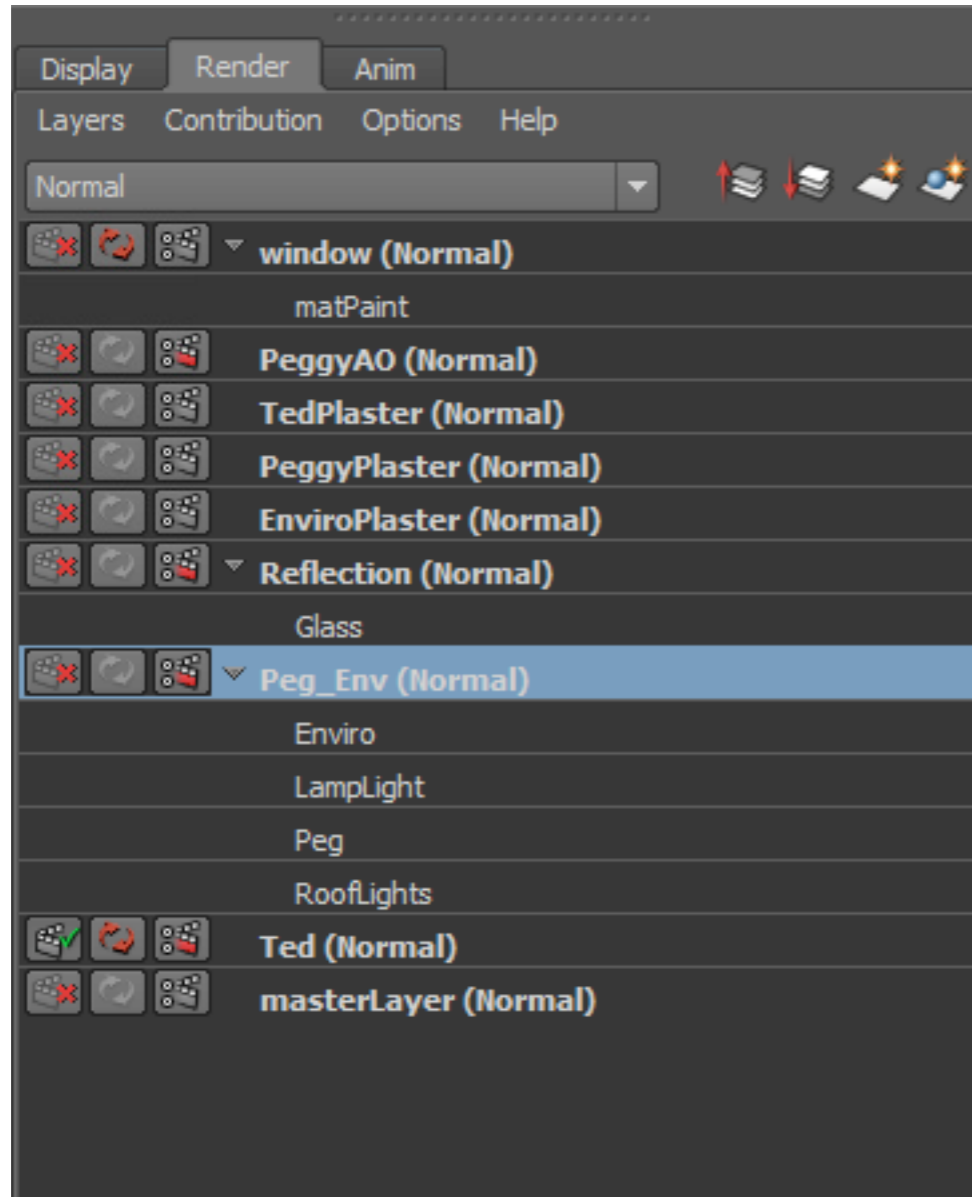
LIGHTING PROGRESSION • shot B1



size: 960 x 540 zoom: 1.000 (mental ray)
Frame: 141 Render Time: 3:59 Camera: scene_B1_blocking:shot Layers: Composite

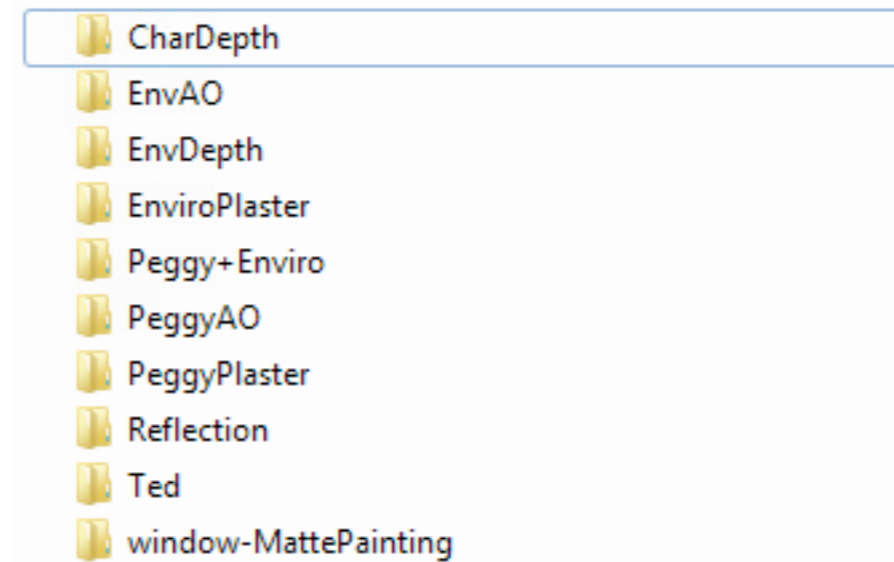
RENDER LAYER SETUP

CONTRIBUTION MAPS AND OUTPUTS OVERVIEW



FILE FORMAT: OPEN EXR MULTICHANNEL SEQUENCES

TOTAL CG FRAMES: 2574 DISTRIBUTED IN 11 SHOTS

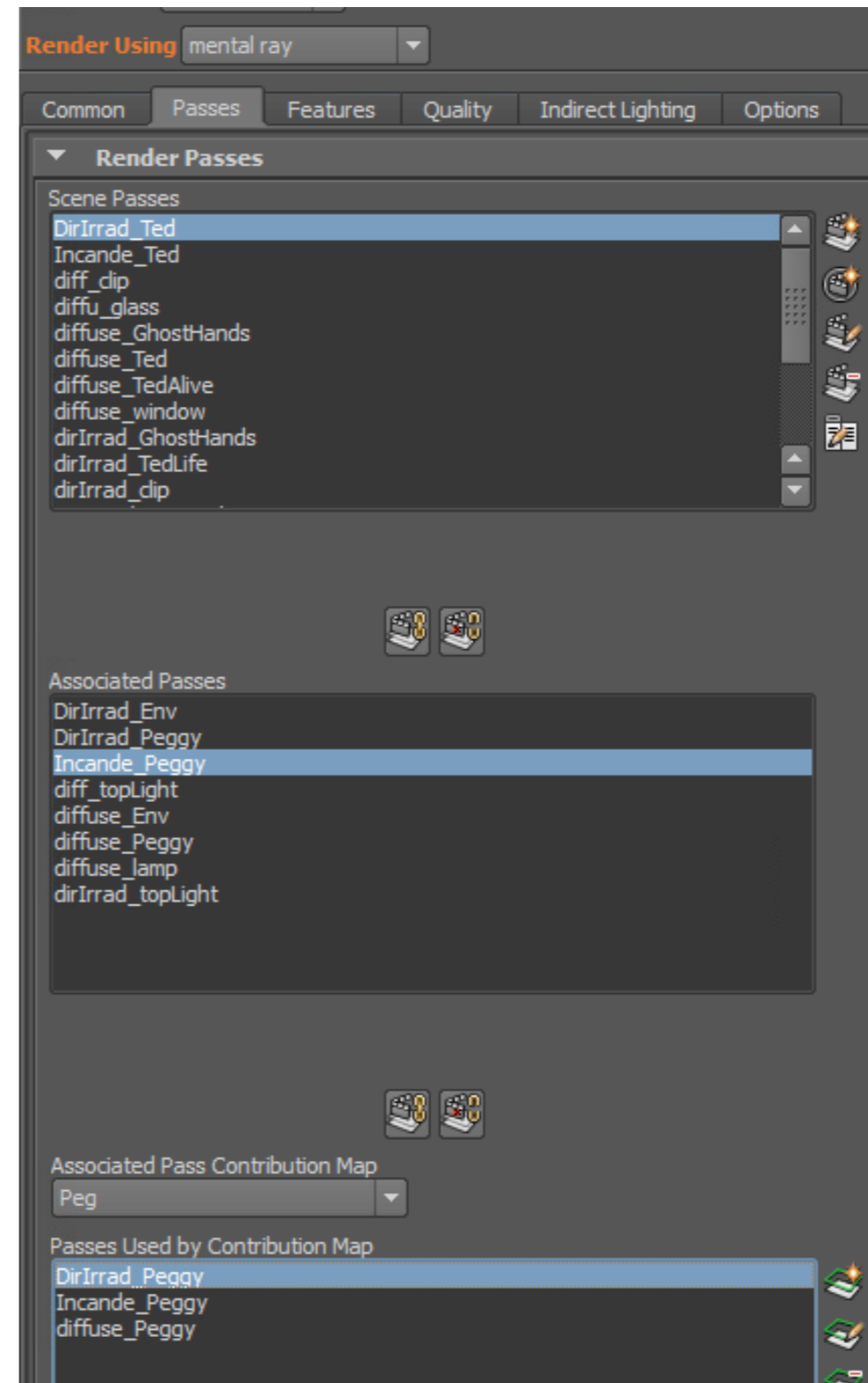
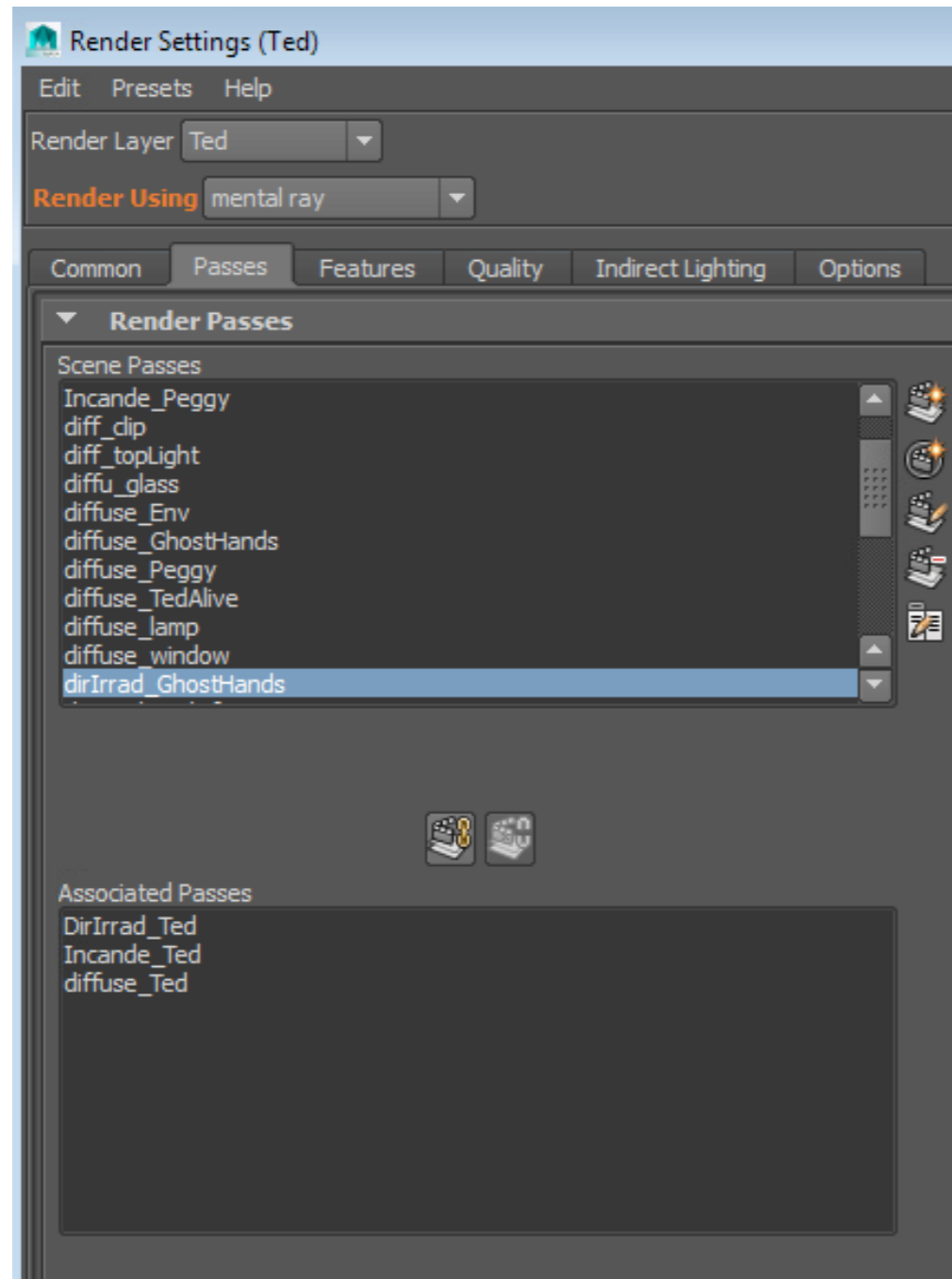


FILE TRANSFER COMPRESSION

B5-Chunk1	7,792,358 KB
B5-Chunk2	3,307,709 KB

RENDER LAYER PASSES

CONTRIBUTION MAPS AND OUTPUTS OVERVIEW





ART PRODUCING

TASK SCHEDULE AND ORGANIZATION

THEESIS PROJECT	SUMMER												MEMBERS INVOLVED	Done	Extended	
	WEEKS															
	MAY				JUNE				JULY							
TASK	week 1 (4th-10th)	week 2 (11th-17th)	week 3 (18th-24th)	week 4 (25th-31st)	week 5 (1st-7th)	week 6 (8th-14th)	week 7 (15th-21th)	week 8 (22th-28th)	week 9 (29th-5th)	week 10 (6th-12th)	week 11 (13th-19th)	week 12 (20th-24th)		IP	canceled	OnHold
Animatic iteration	Done												Zahra/Francisco			
3D animatic (shots 5-8)													Xlaoran			
3D animatic (shots 9-11)													Scott/Nemo			
Final Rig: Ted													Tara			
Final Rig: Peggy													Tara			
Final Rig: Props			IP										Tara			
Ghost shader development		IP	IP	IP									Zahra/Francisco			
Final light setup environment 1													Francisco			
Final light setup environment 2													Zahra			
Music and sound design (scratch)													Audio team			
Music and sound design final													Audio team			
Flash 2D card / skeleton Ted							Done						Francisco			
Ooberty 2D card / Peggy							Done						Zahra			
Car interior guy / Newspaper model		IP	IP	IP									Tal			
TV Model/ Texture			IP	IP									Tal			
Populating the interior environment			IP										Tal			
Animation																
Shot A2A3A4							polish		Done				Xlaoran			
Shot A5							polish		polish				Xlaoran			
Shot B1			layout						Done				Xlaoran			
Shot B2			layout				polish		polish	polish			Xlaoran			
Shot B3			layout						polish	polish			Xlaoran			
Shot B4			layout	blocking	blocking+	polish			Done				Nemo			
Shot B5			layout	blocking	blocking+	polish			polish				Scott			
Shot B6			layout				blocking	blocking+	polish	polish			Scott			
Shot B7			layout				blocking	blocking+	polish	polish			Scott			
Lighting																
Lighting shots A1-A5													Zahra/Francisco			
Lighting shots B1-B2													Zahra/Francisco			
Lighting shots B3-B4													Zahra/Francisco			
Lighting shots B5-B6													Zahra/Francisco			
Lighting shots B7													Zahra/Francisco			
Render & composite																
													Zahra/Francisco			



SUMMARY OF ACTIVITIES

FRANCISCO GUERRERO

- CHARACTER DESIGN (TED)
- ENVIRONMENT DESIGN (EXTERIOR)
- STORYBOARD & LAYOUT
- 2D ILLUSTRATION CARDS
- COLOR SCRIPT
- GRAPHIC DESIGN
- MODELING & TEXTURING (EXTERIOR)
- SHADER DEVELOPMENT
- LIGHTING (9 SHOTS)
- RENDERING



THANK YOU!