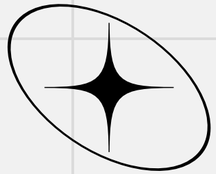
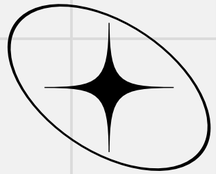


VISUAL EFFECTS ON SET 101

CLICK HERE VIEW VIDEO



KEY POINTS

- terminology
- preproduction
- production
- common pitfalls with VFX
- advanced methods

SFX
VFX

SFX

VFX

SPECIAL EFFECTS
ARE
THE ON-SET
MECHANICAL
AND IN-CAMERA
OPTICAL EFFECTS,
WHICH ARE
CREATED IN FRONT
OF
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VFX

USING COMPUTERS
TO ALTER MEDIA
USING 2D/3D
COMPOSITING

TO ACHIEVE THIS, WE MUST REVIEW KEY TERMINOLOGY

TERMINOLOGY FOR VFX

Basic Visual Effects Vocabulary

TO ACHIEVE THIS, WE MUST REVIEW KEY TERMINOLOGY

SOME KEY TERMINOLOGY FOR VFX

1. PLATES
2. KEYING
3. ROTOSCOPING
4. TRACKING
5. ELEMENTS
6. CGI
7. COMPOSITING

WHAT IS A PLATE?

this could refer to a split screen or green screen composite. The keyed element could be your FG plate and the backplate is your BG plate.

this could also refer to split screens, where you lock the camera and introduce another shot.

ALSO... clean plates are useful for removing unwanted items or for pickup shots.

CLEAN PLATE EXAMPLE

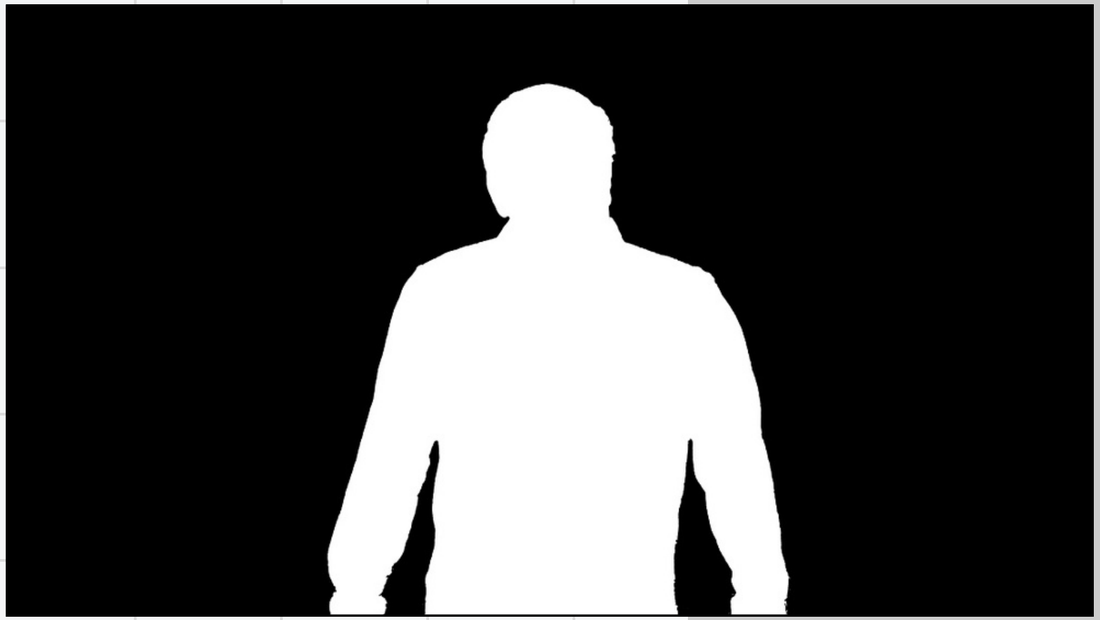
KEYING

keying is the process of isolating the subject on the screen to composited onto a BG plate

It is important to know what your background plate is before shooting so you can light the subject properly.

KEYING

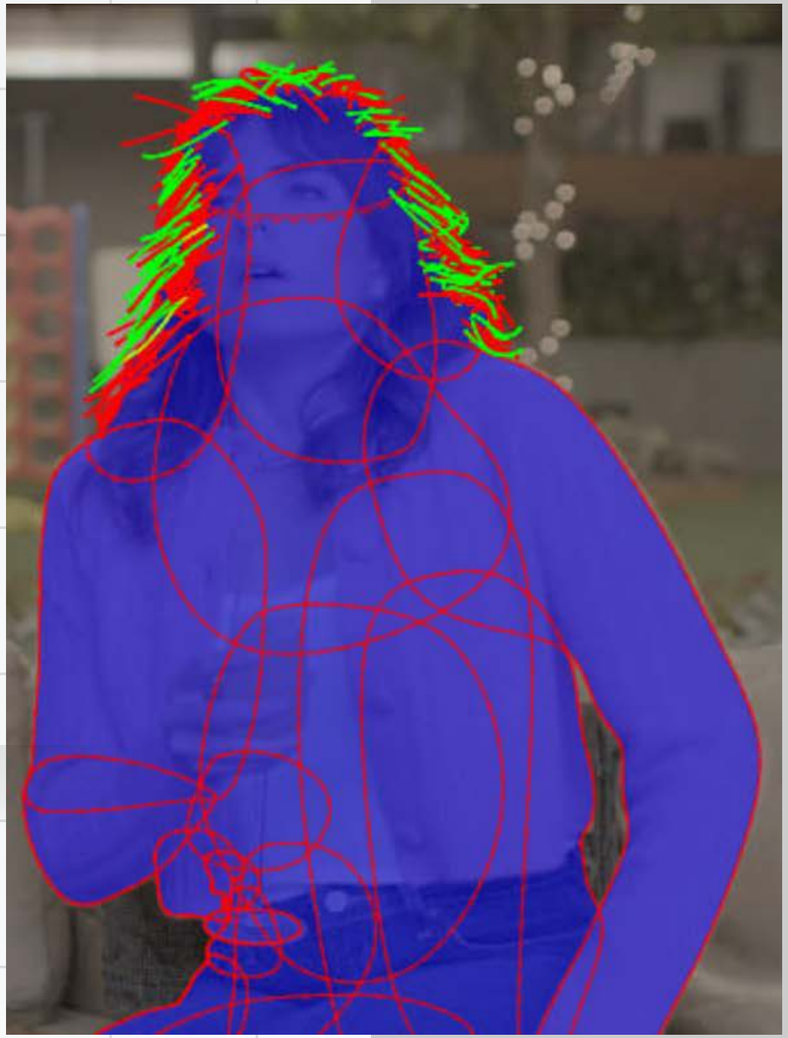
keying is a subtractive operation to create a transparency matte through an alpha channel



ROTOSCOPING

roto is the process of “cutting out” an element from a plate and compositing it into another plate

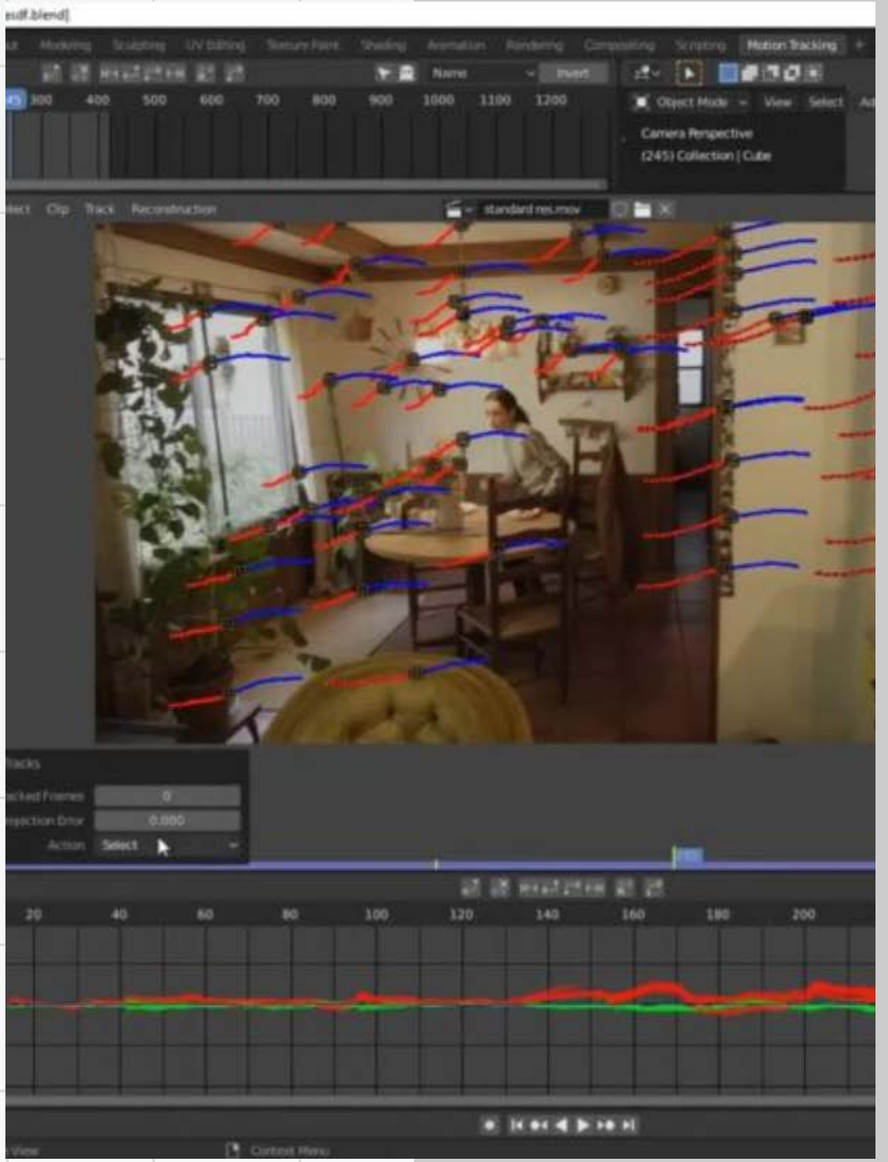
This is usually a lengthy process done by hand, some tools have sped up this process like adobe’s roto brush and nuke’s machine learning, but nothing beats a person doing it by hand



TRACKING

The process of emulating the camera movement, can exist as point tracking, planar tracking, or 3D tracking

these methods vary in complexity

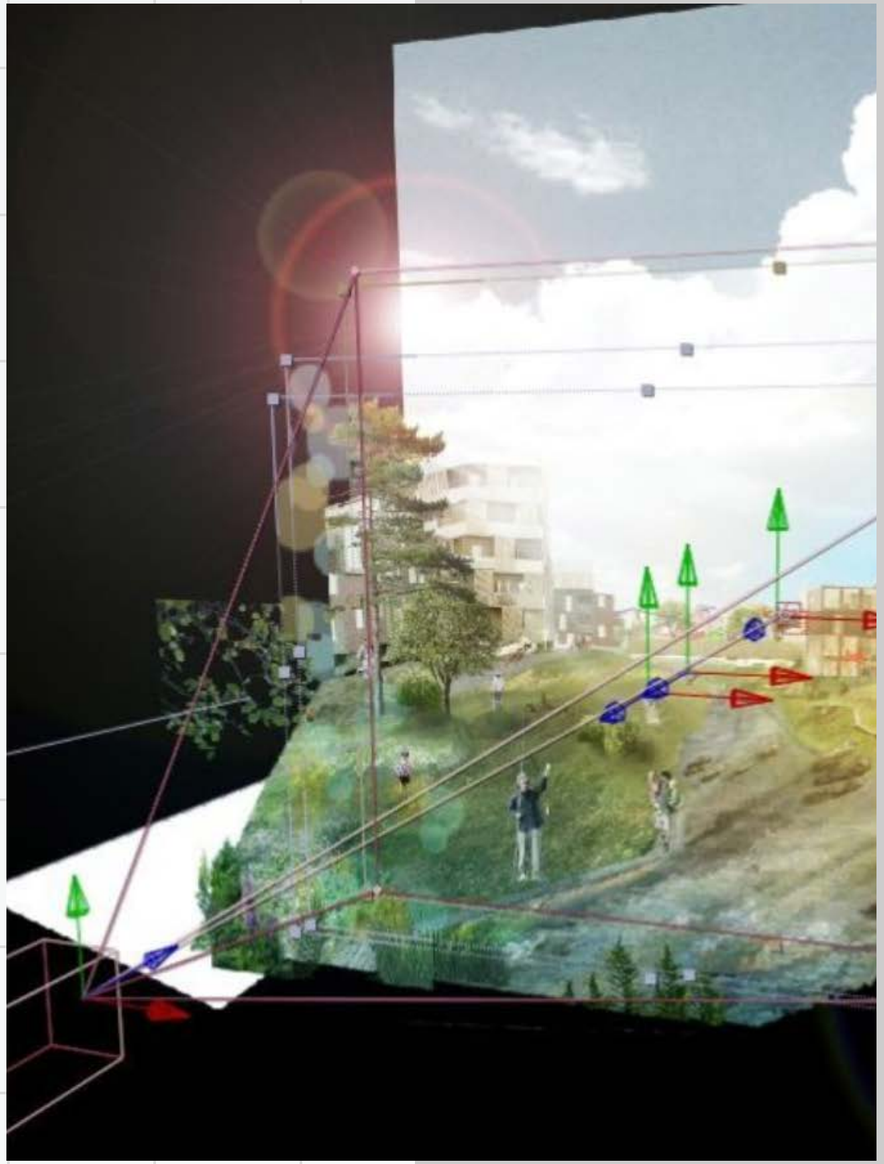


TRACKING MARKERS

PARALLAX

avoid long camera takes with dynamic camera movements, unless you’ve planned for this

make you life easier and lock the camera



PARALLAX

ELEMENTS

elements can be shots you shoot separately to be used in compositing (fire, smoke, a person running in bg, etc)

Elements can also be purchased elements you introduce in compositing, like fire, smoke, explosions from packs

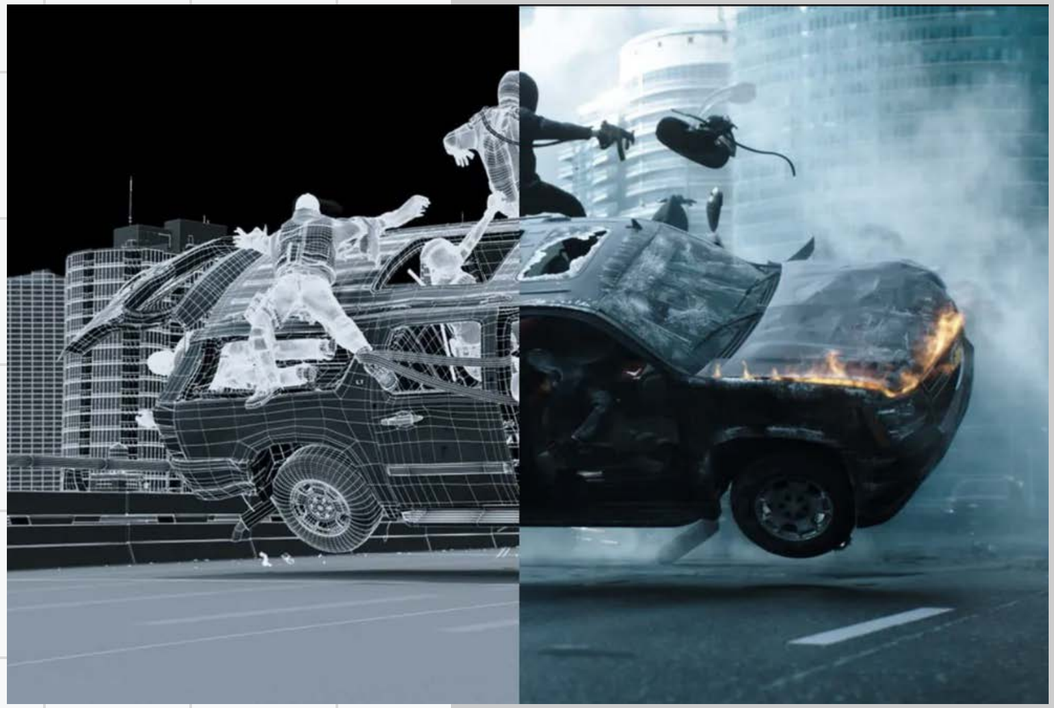
CGI: COMPUTER GENERATED IMAGERY

CGI

CGI is the most complicated/ costly aspects of VFX

its important to know when to use CG VFX

THE CG TEAM
NEEDS CERTAIN REQUIREMENTS



COMPOSITING

The act of bringing it all together

this is what a VFX artist does

WHAT IS THE JOB OF A VFX SUPERVISOR?

PRE-PREDUCTION

figure out how the director wants to show what's on paper visually, while staying in budget

PRODUCTION

figure out what the restrictions in production are and what can be accomplished

FOLLOW THROUGH

execute the plan through completion

PREPRODUCTION

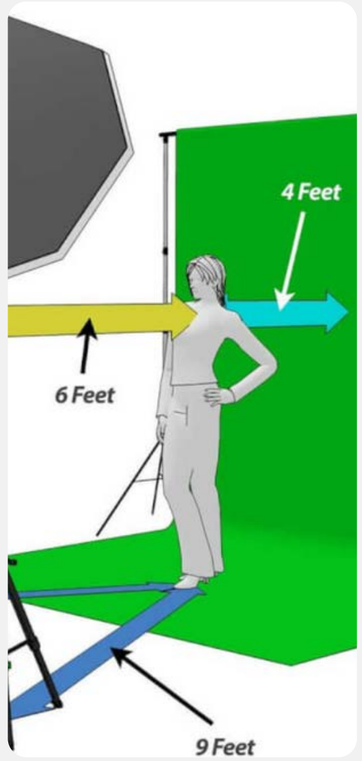
- **read the script**

When reading the script make notes for potential VFX.

This will lead to communication with production/stunt team so what you need is available on set.

If the script mentions a cell phone, you will probably need to replace the screen

a stunt sequence will likely require a full rig removal



common scenarios often require some type of prop extension or green screen

SCRIPT BREAKDOWN

45 **INT. HELICOPTER - NIGHT SKY - MEANWHILE** 45

1:40 AM

Gary Bunney and **PILOT JOHN WESTOVER**, 28, ride in a Bell 47G, a small single-engine helicopter. Outside it's pitch black.

Bunney tries to read a topographical map in the red glow of the instrument panel. But:

GARY BUNNEY
It's too dark. I can't see a damn thing.

PILOT WESTOVER
You and me both.

Bunney turns to Westover, hoping he's kidding.

PILOT WESTOVER (CONT'D)
See where there are stars and then no stars.

Bunney peers out and sees that some sections of the c
are filled with stars -- and some are not.

JERRY CHASE
Go. Now!

Sharon and the six Girl Scouts begin scrambling up the hill.

Jerry takes a can of beans out of his backpack and rolls it toward the grizzly. *God, please work.*

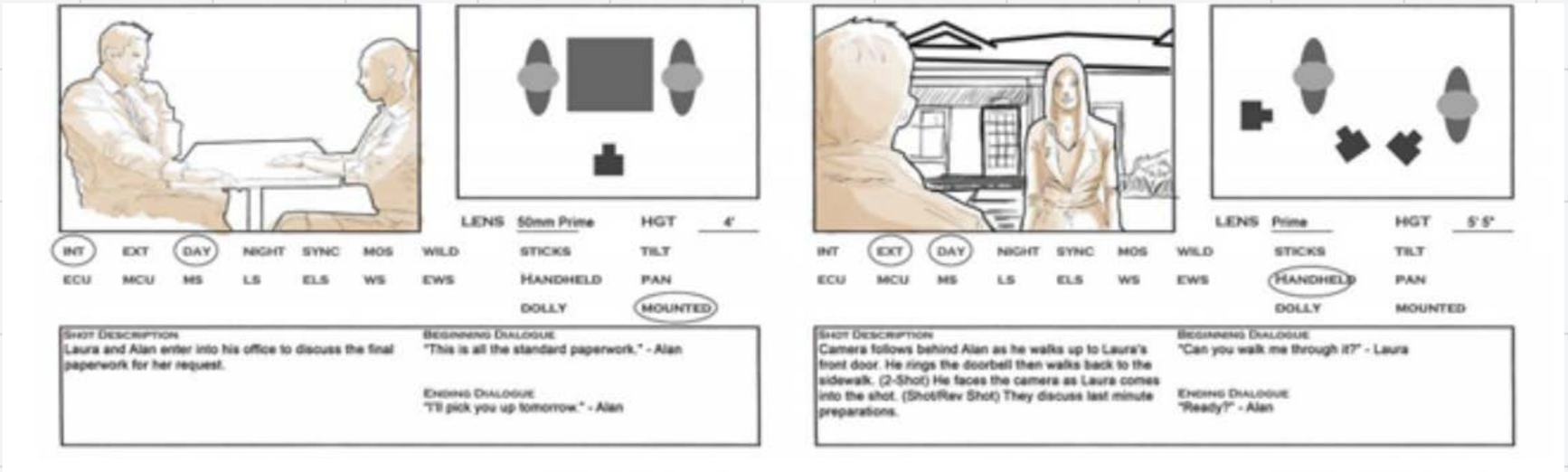
The bear stops. Sniffs the can. Then bites into it.

With the bear preoccupied, Jerry takes off up the hill.

Forty feet later, he reaches Sharon and the Girl Scouts. But they're all just standing there. On the ground.

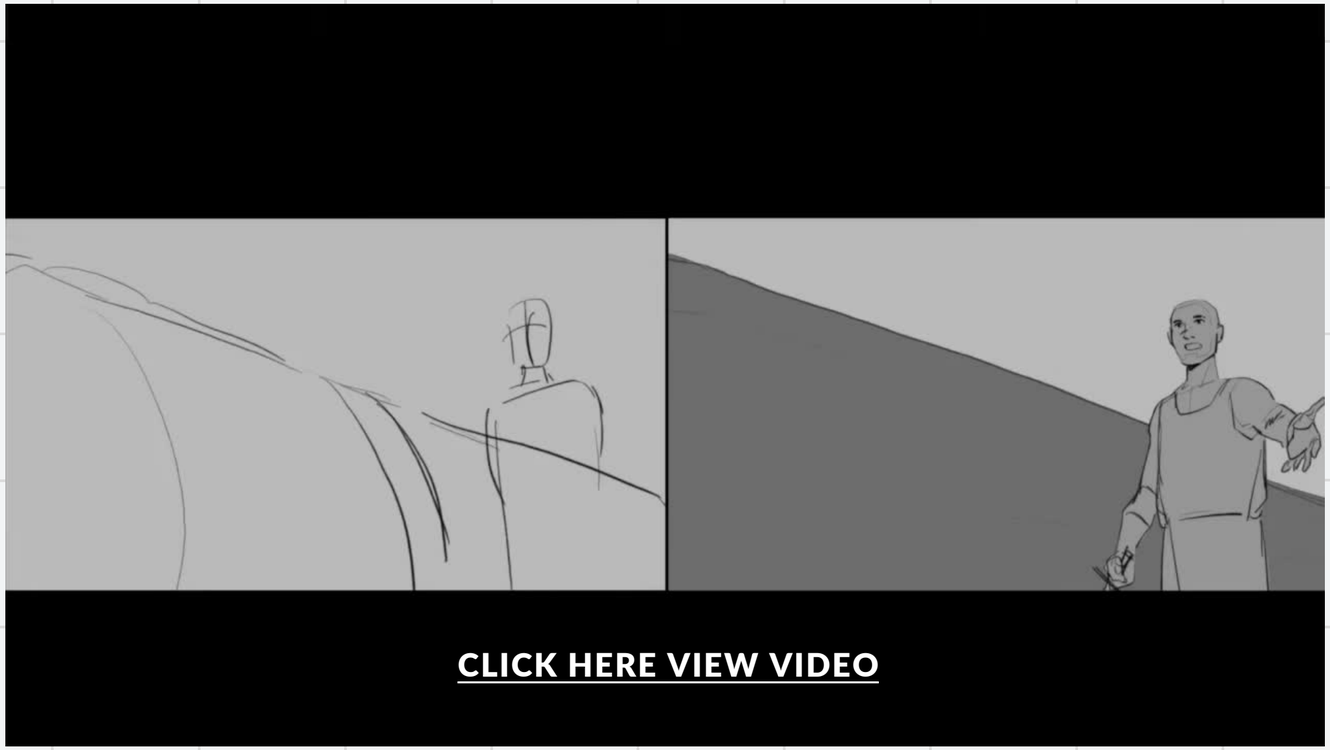
STORYBOARD

- a method to visually represent the sequence of events in a story or project before it is produced
- this is where we iron out details for when something requires VFX or not
- crucial for any kind of complicated action/ VFX sequences



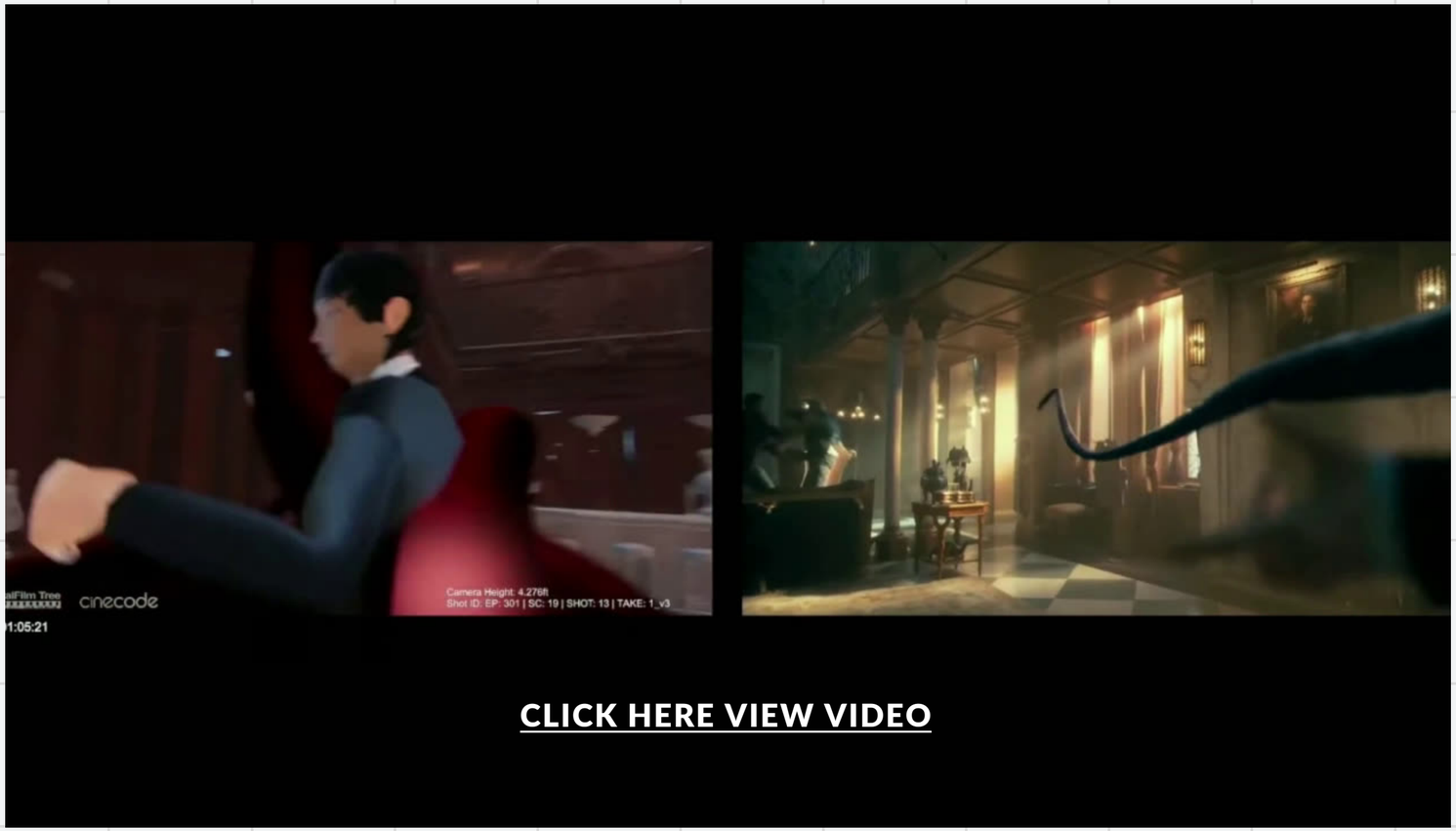
AN ANIMATIC

- a preview of how a scene or entire project will play out in terms of pacing, timing, and overall visual flow before full animation or production begins
- technical details like camera moves and/or editing beats will be figured out here



PREVIZ

- an advanced method of planning a project before the actual production or implementation begins, usaully with a game engine like unreal or unity
- technical details like camera moves and/or editing beats will be figured out here in detail
- this allows filmmakers, directors, or creators to make informed decisions on set



BEFORE WE GET TO SET...

WE NEED TO PREPARE FOR VFX

AND LET PRODUCTION KNOW
WHAT THEY WILL NEED

NEED A GREEN SCREEN?

- talk to production about what kind of screen you need so you can be there the day of shooting

CHROMA VS DIGI VS BLUE SCREENS

SWITCHER

A switcher can align multiple plates on set, they can do a live key when the plates are shot and put it over a backplate when on set

WARDROBE

AKA DON’T HAVE THE ACTOR WEAR GREEN IN FRONT OF A GREENSCREEN

TALK TO WARDROBE ABOUT THIS SO THEY'RE
COMPLIANT WITH VFX NEEDS

ARE THERE STUNTS?

WE SHOULD STORYBOARD THIS AND TALK TO THE STUNT TEAM, IN CASE THERE IS WIRE OR RIG REMOVALS

OR MAYBE WE DON’T NEED WIRES AT ALL

COMMON ISSUES WITH GREEN/BLUE SCREENS

COMMON ISSUES WITH GREEN/BLUE SCREENS

WHATEVER IS GREEN INFRONT OF THE ACTOR IS GONE

YOU CANT JUST REVEAL ANYTHING BEHIND A GREEN OBJECT

MORE EXAMPLES

- anything that is additive to a shot does not need to be green
- you only need to make it green when somebody or something is crossing infront of the VFX addition

be careful shooting anything thats green infront of your actor unless everybody has signed off the the VFX being used

often times the green part is just for the VFX team to know what is being replaced

PRODUCTION

VFX ONSET SUPERVISION AND GOALS

- TO GATHER ALL THE DATA: LENS INFO, CAMERA MODEL, LENS DISTORTION
- SHOOT ALL THE PLATES IN A MANNER NEEDED FOR VFX, WHILE STAYING IN BUDGET
- BE A SECURITY BLANKET AND ANSWER ANY QUESTIONS FROM THE CREW.

WHEN YOU GET TO SET

FIND OUT WHO THE 1ST AND 2ND AD'S ARE

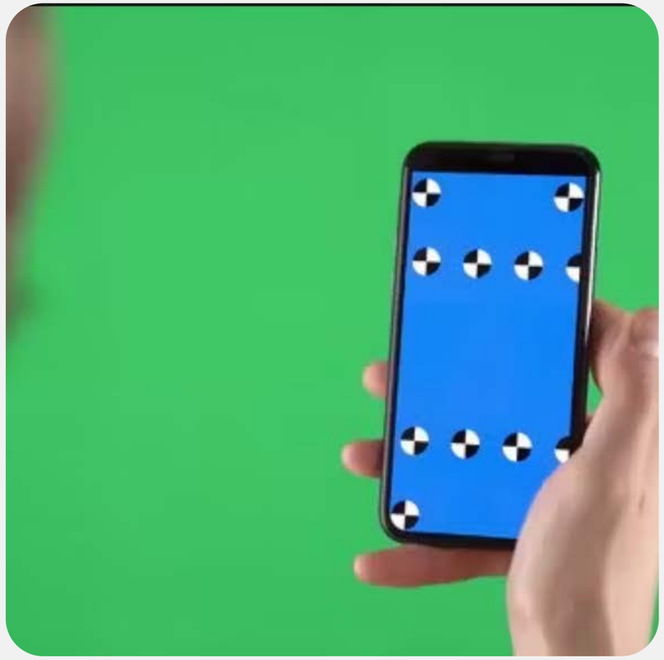
- BE THERE WHEN A SHOT IS GETTING SET UP
- MAKE YOURSELF AVAILABLE
- PREVENT HICCUPS

MOST COMMON VFX SCENARIOS

0012 7482901 2744103 0592346 8774510 7255

SCREEN COMPS

- AKA a burn in, any kind of screen replacement
- tracking marker issue
- maybe turn off the cell phone or tv



too many tracking markers

maybe turn it off

BASIC GREEN SCREEN MISTAKES

- light your screen evenly
- light your FG actor to match the BG plate
- luma keying is also an option

this is expensive

this is also expensive

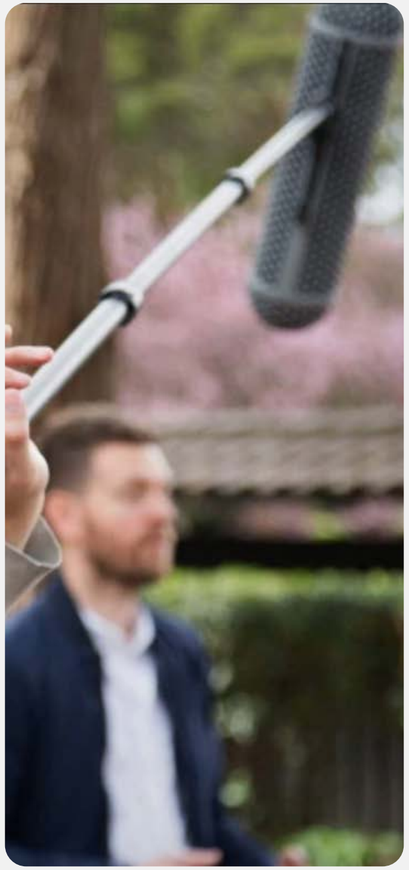
PAINT OUTS

Using VFX to paint out a wire, crew, or light that has popped into the shot.

could be more cost effective to shoot with these things in frame, knowing its cheaper to paint them out rather than to pause production

production lights can often appear in frame when the camera person swoops around

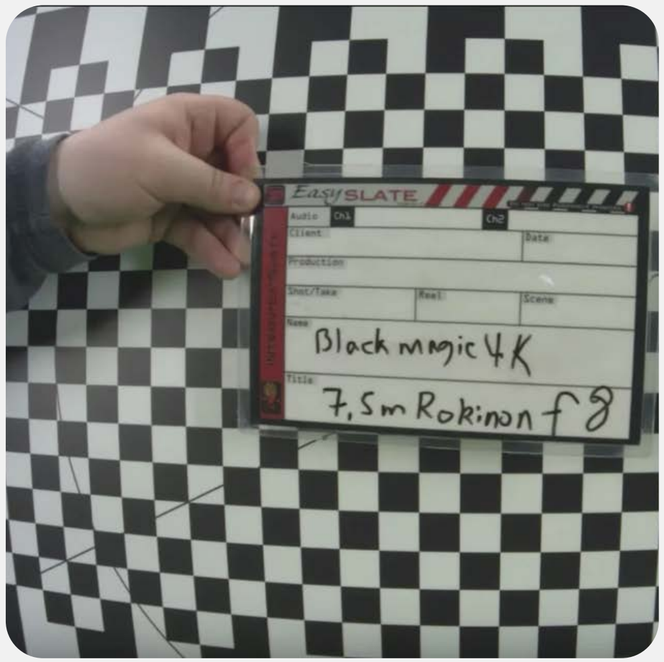
stingers or wires can make it into a shot accidentally



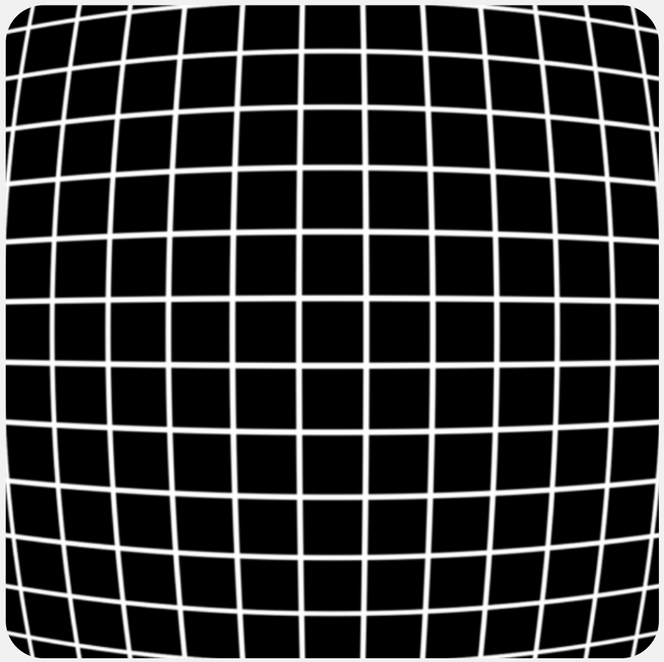
boom poles are often common paintouts we endure

DISTORTION MAPPING

a crucial element to successful VFX



some lenses introduce alot more distortion than others



shooting it live on set will allow us to calculate the distortion and apply it to our VFX

HDRI PHOTOGRAPHY

This is used for CG lighting in 3D software

can be achieved with a chrome ball and a DSLR camera with HDRI capabilities

THE VFX KIT

- **Chrome ball is for HDRI mapping**
- **The matte ball is for lighting data**
- **The color pallet is also crucial**

This matte ball gives us an idea of where the lighting is hitting the new CG areas of the scene

5K 5K 5K

@reallygreatsite

This chrome ball is great for global illumination, which will help us immensely with lighting our scene. We are able to use this as a lighting reference and project it on a sphere around VFX addition, which will save time by helping us with lighting

5K 5K 5K

WINTER 2030

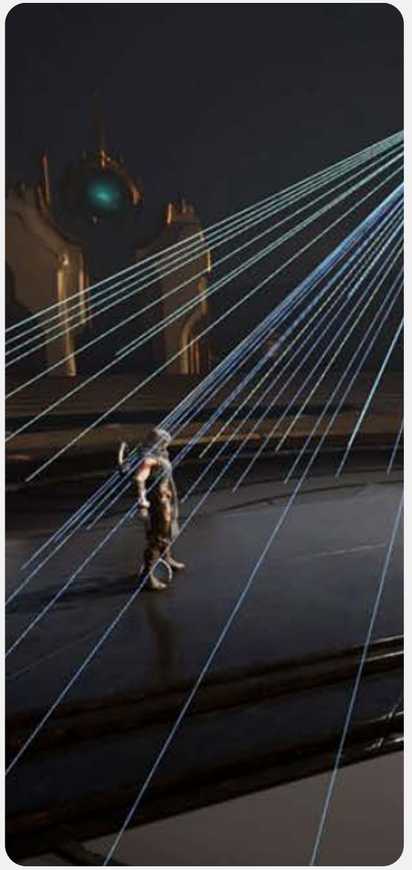
THE MORE ADVANCED STUFF

MODERN VFX

nowadays there's much more modern vfx methods that can be achieved

motion control camera

LED screens!!



virtual production

5K 5K 5K

MOTION CONTROL

CLICK HERE VIEW VIDEO

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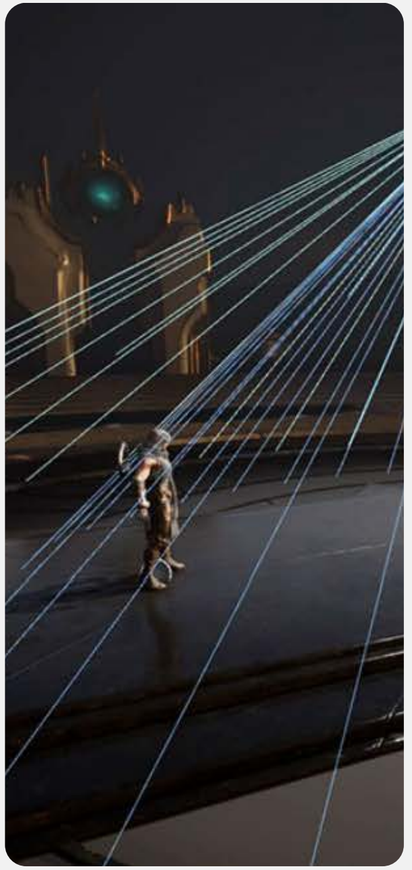

virtual production

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VIRTUAL PRODUCTION

THANK YOU!!

NOW GO AND SHOOT!