

VFX Shot Planning Process

Concept/Managing the meeting point

- Do you have a visual reference for the shot?
- Why is VFX necessary?
- What is the no-VFX equivalent?
- What is the objective of the shot VFX?

- Where is the meeting point? What's the best way of hiding it?
- Is there real-on-digital interaction at the meeting point? Is there any way to have the meeting point as real-on-real or digital-on-digital?
- What are the hidden costs/non-obvious side effects of using VFX?
 - Real objects that need to receive digital light and shadows
 - Digital objects that need to receive real light and shadows
- Does the digital element need to be embedded into the plate?
 - What are the consequences of using chroma or luma keying?
 - What are the consequences of roto?
- How long do you think the shot and effect will be?

Production and pipeline considerations

- Have you done an effect like this before? Are you relying on magic?
- What RnD can you do to get reliable data on the process?
- Can you engineer the shot around an effect that you've done before?
- What's the best and worst case scenario?
- What would be good milestones to reach to track your progress through the shot?

Camera

- Does the camera move?
- Is the camera hand-held? Does it really need to be hand held, or can the movement be faked in post?
- Is there camera movement that needs to be tracked?
- Is the set going to create any problems for tracking (sea and sky, for example)
- Is there a focus pull, and will that affect tracking?
- Do the lenses have a lot of distortion?
- Are you using motion controlled cameras?

Set/Props

- Can you access the set/props before or after shooting? Can you scan them pre-shooting?
- Is there anything that could be 3D printed to bring props and assets closer?

Pre-visualization

What data can you get before shooting?

- Camera placement based on set build/scan
- Camera moved based on set build/scan
- Colour scripts (lighting concepts)
- Shot proof-of-concept

Lighting considerations

- How dark will the shot be?
 - Tracking markers
 - Motion blur
- Is there changing lighting?
- Is there any light generated by a digital object that you can fake in shot?
- Do you need to re-light anything in post?
 - Clue...no

FX considerations

- Does the shot have effects?
- Do the effects need to be 3D? Why?
- Do you need real simulation, or can it be faked?
- Can you use digital FX to avoid continuity issues?
- Have you found elements that seem like they will work?
- Could you shoot your own elements?
- Will there be smoke on set? Could that interfere with FX?

Chroma/Luma keying and roto considerations

- Can you even get a chroma screen for the necessary area?
- If chroma isn't an option, can you luma key?
- How big is the area needed for chroma?
- How will you replace the area behind the screen?
- Do you have very reflective objects?
- Do you need roto? Are the objects easily rotoscopable

Asset Build considerations

- Do any assets need a concept?
- What fully digital assets are needed? Why?
- Do you have to build the asset, or can you buy or scan it?
- Can you use a practical prop to manage the meeting point?
- Do the assets contain any challenges that you haven't faced?
- Are these needed for multiple shots?
- Is texturing also required?
- How complex is the shading?
- Will you need hair or fur?
- Will you need a digital double of any of the actors?
- Does the asset need animation?
 - Can it be auto-rigged?
 - Will that be motion captured?
- Can assets be replaced with paintings, or 2.5D?

Animation Considerations

- Is character animation necessary? Will motion capture be suitable?
 - Can you use existing motion capture?
- If you can't animate well, and can't use motion capture, can you roto the animation?
- Does the animated asset interact with things in the plate?

Rendering

- Do you need to render any of the following:
 - Depth of field
 - Motion blur
 - Transmission/translucency
 - Lot's of geometry in a single shot
- Do you have access to the necessary render power? If not, is a render farm an option?
- Will you be able to render lower resolution?