**Simulation of Light Scattering and Propagation HW1**

**R10945062 陳政霆**

What are the factors that make movie special effects look real? Why?

The reason why movie special effects look real is because of **visual effects (VFX)**. The movies added visual effects, which is the process by which imagery is created or manipulated outside the context of a live-action shot in filmmaking and video production. VFX involves the integration of live-action footage (which may include in-camera special effects) and generated-imagery (digital or optics, animals or creatures) which look realistic, but would be dangerous, expensive, impractical, time-consuming or impossible to capture on film [1].

**Difference between SFX and VFX**

Special Effects (which are sometimes called **SFX** or **practical effects**) usually refers to on-set techniques that were done in real time, in camera on the day and this would be things like pyrotechnics, rain machines, animatronics or puppets, miniatures, or perhaps stage blood and prosthetic makeup. Visual Effects (which gets referred to as VFX or sometimes Video Effects) normally refer to things that weren’t there on the day but are digitally added later now this might be things that were filmed separately such as weather or action elements, or shots done with green screen where you are removing a background and adding another one which is often called a ‘plate’, or maybe it’s full computer generated imagery or CGI [2].

In conclusion, Visual effects using computer-generated imagery have recently become accessible to the independent filmmaker with affordable and easy-to-use animation and compositing software, which has changed the environment of this kind of industry nowadays.

**Reference:**

[1] <https://en.wikipedia.org/wiki/Visual_effects>

[2] <https://www.youtube.com/watch?v=QxQxDNrcHJM>