

Jeydan Usta

"Lights, Camera, iPhone!"

The Impact of iPhone on Filmmaking:



The iPhone Camera and its Role in Cinema

Jeydan Usta

The release of the iPhone in 2007 marked a global redefining of cellphone functionality and visual aesthetic. In the thirteen years since its release the iPhone has grown more and more technically advanced with each iteration. iPhone's specs have not only redefined the role of the smartphone, but over time through *camera advancements* have set an unprecedented impact to the *entire* filmmaking process. In 2007 the iPhone advertised a **2-megapixel** camera that could capture standard definition **480p resolution**. With **no video capability** or front-facing camera the original iPhone had *no filmmaking capacity* at all.

The *iPhone 6* released in 2014 was the first big leap for iPhone into the world of filmmaking. Previous models had posed useable for home video or photos with friends, but the iPhone 6 introduced camera quality *equivalent* to that of older model *DSLR cameras* of the time. Unlike previous models, iPhone 6 could capture **1080p 60 frames-per-second**.

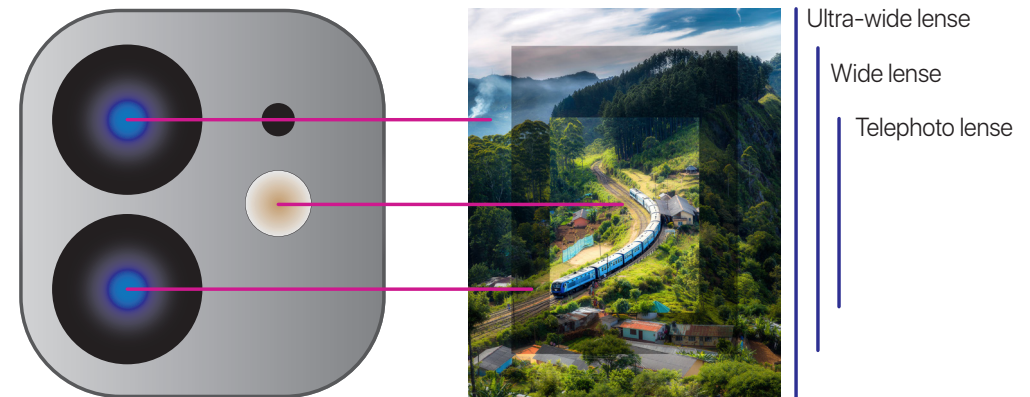
It was also the first portable device to feature **240 frames-per-second slow-motion**, only accomplishable by high-frame-rate camera gear at the time. Pair that with the introduction of **digital stabilization** that adjusted to movement as well as allowing for **add-on lenses** to be attached to the camera and this iPhone was the *biggest technical leap* for filmmaking since the introduction of *Steadicam*.

It wasn't until the *iPhone 11 Pro* in 2019 that Apple showcased their seriousness in providing an alternative to proper DSLR rigs. iPhone 11 Pro added a **transformative triple-camera system** that made capturing quality images with **higher light-sensitivity** significantly easier. Included was an **ultra-wide lens** with *13mm focal*

length, 120 degree field of view and a **12-megapixel** sensor, riveling professional cameras and lenses. The resolution capability was four times better than the iPhone 6 with the addition of shooting in **4K with high dynamic range at 60 frames-per-second**.

Despite the radical improvement of the iPhone camera over this thirteen-year period, it still is not the dominant tool used to capture large-scale productions. Reason being that there are plenty of risks when using iPhone to balance out the positives.

Transformative Triple-Camera System



Benefits:

Filmmakers utilising iPhone over traditional camera gear have grown larger as the camera evolved. The main reason being **cost**. Independent filmmakers can often not afford high-end camera gear, with *IMAX cameras* costing upwards of *\$500,000 USD* in comparison to the *\$999 USD* starting price for an *iPhone 11 Pro*. Another huge benefit for shooting on iPhone is manageable **size and weight**. Camera rigs are larger and less versatile for space, whereas iPhones fit into areas to *achieve angles at a faster pace* than achievable with larger rigs. **Stabilizers** for iPhone are also smaller and cheaper than those for DSLR cameras. Shoots could be done quicker, easier and more affordably with little difference in the quality.

Risks:

The risks with shooting on iPhone involve internal technical limitations. Shooting in 1080p or 4K at 60 frames-per-second can result in *400 megabytes of storage per-*

minute. Zooms are still digital compared to adjusting the focus polar on regular DSLRs which increases the **risk of shooting high-pixelated video**. This also means for mediums and close-ups the camera needs to *physically* move closer to the subject rather than manually zooming the lens. iPhones *shut down when in environments above 45 or below -20 degrees celsius* since extreme temperatures affect the iPhone's lithium-ion battery. **Noisy images** can also result in extreme-low lighting and when rendering video on iPhone images may risk **colour-banding**, where colour balance is inaccurate when rendered. These issues are *typical for shooting on iPhone with gradients*, something proper DSLR camera gear and lenses deal with much easier. Risks:

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Feature Films:

The gradual improvements of the iPhone Camera have seen it utilised as the alternative to traditional camera gear for several feature films. Most notably was Sean Baker's directorial feature "**Tangerine**", shot entirely on an *iPhone 5S* with the Filmic Pro app and a Moondog labs anamorphic adapter. While not the first feature shot on iPhone, *Tangerine* was the

most successful and high-profile feature shot on iPhone at the time, receiving huge success and praise premiering at Sundance Film Festival in 2015. This showcases **positive audience reception** to iPhone's impact on the filmmaking industry.

Notorious director Steven Soderbergh continued iPhone's introduction into professional productions with his psychological thriller "**Unsane**" released in 2018. Shot entirely on an *iPhone 7 Plus in 4K* with Filmic Pro app, Soderbergh stated "*I think this is the future. Anybody going to see this movie who has no idea of the backstory to the production will have **no idea this was shot on the phone.** That's not part of the conceit.*" This showcases the **radical evolution** of iPhone's camera specs in comparison to high-profile camera rigs. The following year, Soderbergh released the feature "**High-Flying Bird**" on Netflix, shot entirely on an *iPhone 8* taking merely *three weeks to shoot and three hours to edit a rough cut*. This showcases the unprecedented speed in completing filmmaking with iPhone in contrast to

the length needed for using traditional photography techniques.

New Media

iPhone's introduction saw a flood of entertainment catered towards the multi-functional device. As screen-resolution increased over iterations, content designed specifically for iPhone over TV or theatrical release has seen an increase. In 2019 a *mobile-centric* subscription based streaming service called **Quibi** was released. The service delivered seven to ten minute *short-format content designed for mobile users with short attention span*.

The project's founder, Jeffery Katzenberg, stated Quibi has "*created a new way to watch on the phone,*" with its *turn-style mode feature* that seamlessly shifts video from portrait to landscape mode with *different aspect ratios to reduce letterboxing*. This was never done by streaming services prior and is a **direct response to the impact of iPhone** on audience members. For filmmakers this was seen as a *detriment*, requiring the need

for *two different shoots* for the different modes, and was **restrictive to audience members** who wanted to watch Quibi's content on TV. Quibi had an *unsuccessful launch* and struggled to match the success of other streaming platforms, showcasing **negative audience reception** to iPhone's impact on the filmmaking industry. In 2020 Apple published "*Shot on iPhone by Damien Chazelle – Vertical Cinema*". It advertised the potential of using iPhone to approach *new top-to-bottom framing* that fits scenes proportionally as a new form of cinema, showcasing iPhone's technical finesse and their **impact on the filmmaking process**.

iPhone Camera and Screen Quality Evolution

iPhone Original



SD 480P

No Video Capability

iPhone 6



HD 1080p

60 frames-per-second

iPhone 11 Pro



4K 2160P

60 frames-per-second

Maximum Screen Resolution and Frame-Rate

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