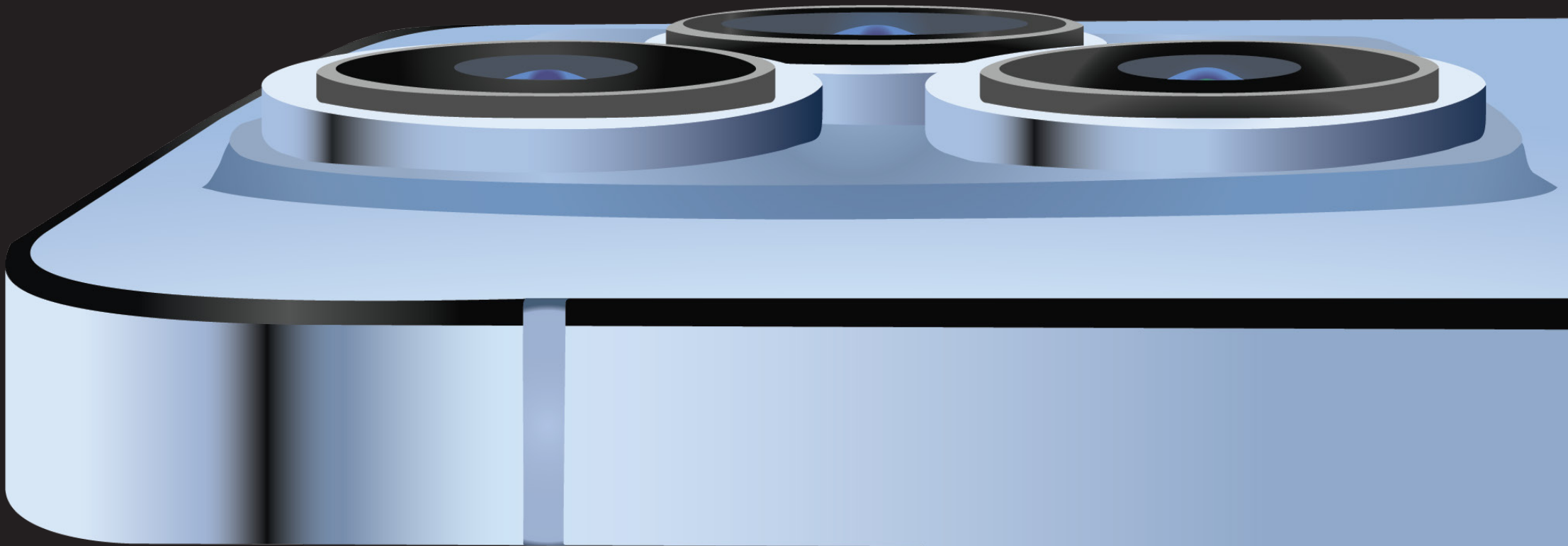


*Patra Hayavuchanurak*

# Through the lens

Quality memories through quality cameras

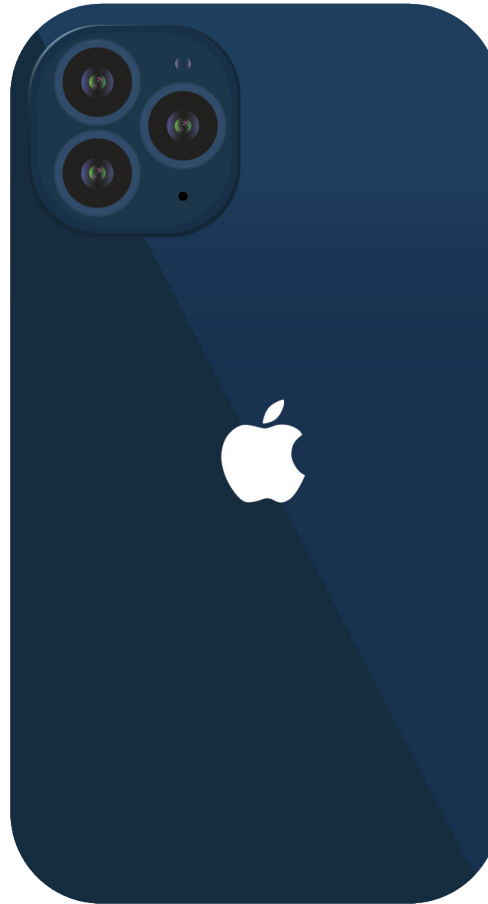


# Through the lens

*Patra Hayavuchanurak*

With Apple's continuation of the iPhone, the past 14 years show us how much the quality of their cameras have improved reaching new heights to even competing against the digital camera industry. As the company continues to shock the public with new technology, how have their cameras now differed in comparison to their very first iPhone back in 2007?

Having its very first release back in 2007, the iPhone was displayed with only one lens & 2 megapixels worth of camera resolution. Featuring with only a 1600x1200 pixel resolution & no front-facing camera the first iPhone was only the start of Apples climb up to the cinematic world as the iPhone 7 became its catalyst. The iPhone 7 & iPhone 7 plus did not only impact Apple's company, but it had also changed the industry of photography with its premium features. Being the first dual-camera phone, it had given people the chance to capture photos of with various depth of fields in just one hand, with an even faster image processor being 60% faster than the iPhone 6. The 2 lens consists of a 28mm wide-angle lens & a 56 telephoto mm lens on the back



allowing consumers to take photos of further or closer distance whilst still being in focus. Alongside with this brand-new concept, Apple had also added in various updates to its cameras features such as improved aperture, longer exposure time & a 12-megapixel sensor in the iPhone 7 Plus behind the telephoto lens which reduced the motion of a person's hand when taking a photo for better quality.

After the success of the iPhone 7, it wasn't until the iPhone 11 Pro & its Pro Max counterpart debuted on September 10, 2019, that had caught the eyes of both the public & the digital technology industry. With it having Apple's first triple-lens rear camera, this new feature allowed those who had it an even better photographic experience. The triple-lens camera system provided professional quality videos & photos in the palm of your hand with each lens having a different purpose. With all three lenses measuring up to 12-megapixels, this new phone contained a telephoto lens with an 2.0 aperture which contains an optimal zoom of 2x allowing more control over the depth within your

images, a wide-angle lens with a 1.8 aperture having a fast-pace autofocus mechanism when taking quick photos & finally the new ultra-wide lens with an aperture of 2.4 that allows you to capture an image with 4 times more of its scenery, allowing those who take group photos or landscape views a better experience. The Pro & Max also contains a new feature called Night Mode which allows users to take refined images in a low-light setting, taking a few seconds to process the amount of light needed.

Focusing on the iPhone 13 Pro & Pro Max, the device contains the same triple-lens camera as the previous lines of iPhone Max's, whilst containing a similar aperture as the iPhone 12 Pro with the wide-lens at 1.5 & the ultra-wide at 1.8. The most noticeable lens update comes from the telephoto lens, with a 77mm-equivalent in comparison to the 12 Pro's 52mm, this boosts the zoom quality within a far distance scene without risk of image quality. With small updates to its camera, Apple's new feature known as Cinematic Mode was

what peaked interests of those in the film industry.

With the new function in the camera app, the Cinematic Mode allows individuals to shoot videos with a bokeh effect as it produces a distinct blur that separates the background from its focal point. According to Apple, the individual components added to make this new feature includes image over scan/in-camera stabilization, subject recognition/tracking, lens blur & a post-shot editing mode which allows users to alter the focus point after shooting.

Starting off with just one lens, Apple continues to evolve through the years with their quality cameras showing no signs of stopping. With the company expanding themselves within the film/camera industry, the future of cameras doesn't seem to falter.

#### Telephoto

77 mm focal length  
3x optical zoom  
f/2.8 aperture  
Focus Pixels  
6-element lens  
OIS



#### Ultra Wide

13 mm focal length  
f/1.8 aperture  
Faster sensor  
Focus Pixels  
6-element lens

#### Wide

26 mm focal length  
1.9 um pixels  
f/1.5 aperture  
100% Focus Pixels  
7-element lens  
Sensor-shift OIS

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4032x3024  
iPhone 11 Pro  
image resolution  
(pixels)

4032x3024  
iPhone 11 Pro  
image resolution  
(pixels)

4032x3024  
iPhone 11 Pro  
image resolution  
(pixels)

## Worldwide Sales iPhone vs Digital Camera (millions)

