Get in Touch!

Say goodbye to 3D touch and welcome back haptic touch.
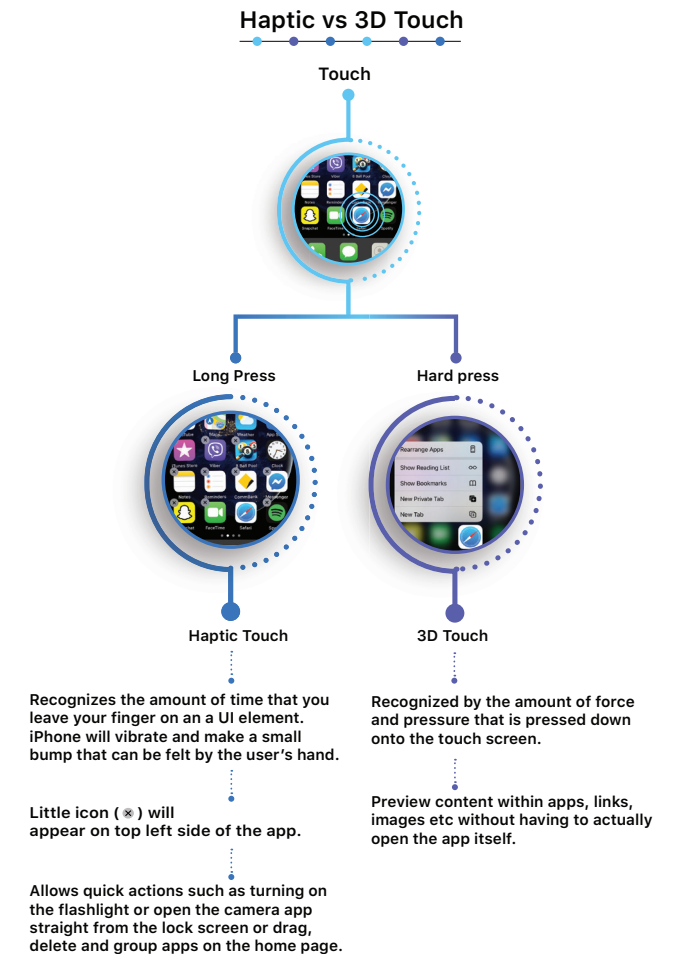
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Apple recently revealed their new offerings for its most successful product in the brand that is the iPhone. However, people have pointed out the massive diversion in their product strategy when Apple decided to eliminate the 3D touch feature in the iPhone XR and replace it with the haptic touch option that was introduced way back in the iPhone 6. It has now rolled out to the entire 2019 line-up which iPhone 11 has proven to do so. This move is an extremely rare product decision that confused most people why Apple would take a step back. Could this decision shape the future of the iPhone touch screen and change the way its produced and marketed? Or maybe taking a few steps back is Apple's strategic plan to increase in profit and potentially use those costs for something bigger and better in the future?

What exactly is 3D touch? 3D Touch is a pressure-sensitive feature that was introduced by Apple in 2015 on the iPhone 6 and 6s. 3D touch is an extra feature on the iPhone that allows you to preview content within apps, links, images, etc without having to open the app itself, hence why

they call this feature "Peek and Pop". The technology is recognized by the amount of force and pressure that is pressed down onto the touch screen, allowing the apps to be more accessible with extra options. The 3D touch senses three degrees of pressure pressed onto the capacitance layers which generates forces that are detected by sensors called strain gauges, this layer sits on top of the iPhone's taptic engine.

On the other hand, instead of detecting the amount of pressure (like the 3D touch), haptic touch recognizes the amount of time that you leave your finger on a UI element. Once you leave your finger on the required amount of time, the iPhone gives you the haptic feedback which allows access to pop-up menus that offer quick actions. These quick actions allow you to do stuff such as turning on the flashlight or open the camera app straight from the lock screen, allows you to turn the keyboard into a track-pad, trigger live photo movement and the most common use of dragging, deleting and grouping apps on the home page.

Haptic vs 3D Touch

Touch

Long Press

Hard press

Haptic Touch

3D Touch

Recognizes the amount of time that you leave your finger on an a UI element. iPhone will vibrate and make a small bump that can be felt by the user's hand.

Little icon (⚇) will appear on top left side of the app.

Allows quick actions such as turning on the flashlight or open the camera app straight from the lock screen or drag, delete and group apps on the home page.

Recognized by the amount of force and pressure that is pressed down onto the touch screen.

Preview content within apps, links, images etc without having to actually open the app itself.

So why did Apple decide to officially replace the 3D touch with haptic touch? In other words, why did the 3D touch fail? Recurring criticism about the 3D touch was that it simply did not benefit the iPhone users at all. As a consequence, users felt as if it didn't serve navigation purposes at all, or they didn't even know it was there, to begin with. Others voiced confusion about when or how 3D touch could be used and most app developers also decided not to include support for the feature.

For a company such as Apple that promotes and markets their iPhone as easy to use, they had finally admitted to the problem that the 3D Touch mostly served to add more menu items that didn't exist before, arguably needlessly complicating the phones' interface. Apple pundit John Gruber pointed out "It's baffling that there's no visual indication of what can be 3D touched". Apple works towards being as simplistic as possible but the new technology did not functionally demonstrate this at all. Not only does it add complication to the phone's interface but it adds extra cost for Apple to make, also meaning an underused feature that can be removed to increase profits for the business and, potentially, use the space for something else, such as touchless gesture in the future? Could a possibility be that users will be able to initiate functions without even touching the iPhone screen? This could be opening a text message, app or answering a phone call simply by hovering your hand over the device. We'll have to wait and find out.

With the launch of the iPhone 11, 11 Pro and 11 Pro Max, Apple is officially going all-in on Haptic Touch. While others are sad to see 3D touch gone, Apple's simplistic and easy-to-use promises on their devices meant getting rid of the 3D touch was the solution to possibly introduce something bigger and more effective.

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Structure of the 3D touch

Sensing Layer

Transmitting Layer

Capacitance Layers

Microscopic Changes

With each press, these sensors measure micro-scopic changes in the distance between the cover glass and the backlight.

Strain Sensors

Designed to measure microscopic changes in pressure. These mea-surements are then combined with signals from the touch sensor and accelerometer to provide fast, accurate and continuous respons-es using a series of complex algorithms.

Taptic Engine

The iPhone gives you real time feedback both onscreen and in the form of subtle tabs from the taptic engine. These responses correspond to the amount of pressure and they let you know what actions you're perfoming and what you can expect to happen.