(Approx. 1003 words)

HEIC File Type – Should I care about this file type?

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HEIC is the name of the file format that Apple uses for images taken with an iPhone or iPad. Even if you don’t have Apple equipment, you may have received a picture with the .heic file type from someone with an iPhone. I got one just a few weeks ago. (Though I have read that when a photo is sent or exported from an iOS device to a non-iOS device, the image is typically converted from an HEIC file to a JPEG file.)

HEIC stands for High Efficiency Image Container. Advanced, modern compression methods allow photos to be created in smaller file sizes while retaining a higher image quality than JPEG. Since Apple’s release of iOS 11 in 2017, the iPhone has, by default, produced images in the HEIC format, so it’s been around for quite a while. HEIC, also known as HEIF, is a more efficient format than JPEG because it creates smaller files, in some cases up to half the size, even though the quality of the images is about the same. (Similarly, High-Efficiency Video Coding (HEVC) is the default video file type for video files for some Apple products.) In switching from JPEG to HEIC, Apple has lowered the space needed to store the image files so they can keep up with the increasing quality and resolution of their smartphone cameras. This has led other manufacturers, including Microsoft and Canon, to embrace the HEIF format. The Moving Picture Experts Group (MPEG) is the developer of the original HEIF and HEVC technologies and JPEG.

An HEIC file contains one or more images saved in the High-Efficiency Image Format (HEIF) and metadata describing each image. HEIC files are most commonly saved with the .hemic extension but may also use the .heif extension. This newer standard offers 25% to 50% better data compression at the same quality level. HEIC allows you to store multiple images in one file. If your phone has burst mode functionality, you can capture multiple high-quality action shots of a moving subject with a single click. Then, with multiple images in a file, you can convert HEIC files into GIFs to make moving animations from your stored sequences of images. (The GIF file type is an animation created from a sequence of still images.)

A brief technical review shows two main types of digital image files: raster and vector. JPG, JPEG, and JPE are all file extensions that refer to the same file format: JPEG is probably the most common name. Each refers to the Joint Photographic Experts Group “Raster Image” file type. Raster Image file types are images produced when scanning or photographing an object. The image is compiled using a matrix of pixels, or tiny dots containing unique color and tonal information, organized into rows and columns, or a grid, that creates the image. Other common Image file types are bmp, png, tiff, and raw (raw being the largest of all the file types). Wikipedia provides a comparison between JPEG and HEIF.



Can you tell the difference?

And just for completeness, Vector images are made up of points, lines, curves, and shapes based on mathematical formulas. When you scale up a vector image file, there is no loss of quality, so it can be sized to however large or small you need it. When you scale up a raster image, it can become pixilated, blocky, and possibly unrecognizable.

Remember that iOS is Apple’s mobile device OS (iPhone and iPad), and MacOS is the Apple computer OS. When Apple added HEIF support to iOS, they also added HEIF support to MacOS. Then, in 2018, Google followed suit by adding HEIF support to Android (smartphones and tablets), and Microsoft added HEIF support to Windows. To open HEIC files in Microsoft applications, however, users may have to manually install the Microsoft HEIF Image Extensions and HEVC Video Extensions packages from the Microsoft Store, though that was not my experience.

If you have an .heic image on a Windows 10 system that you want to view, locate the file with File Explorer and then double-click the image; if it opens, great. If it doesn’t open, right-click the image and select “Open With > Photos.” If the Photos app prompts you to download the HEIF Image Extension, click the “Download and Install it now” link to get it free from the Microsoft Store. But if your Windows 10 is up to date, the .heic file will probably open with Photos. Although the Extension software for Images (HEIC Image Viewer, Converter) is free, there is a one-time cost of $0.99 for the Video Extension software (HECV Video Extensions). (Note that photos here refer to Microsoft Photos, not Google Photos.) If you have Windows 11, you might not notice that the .heic image is any different than any other picture on your system, most likely because .heic support is included in the Windows 11 Photos App. You will not notice a difference if you don’t have the Show “File name extensions” option checked” because then the file type part of the file name (the part after the. “”) is not shown, and you won’t see the type of file you are viewing.

HEIC and JPEG have advantages and disadvantages depending on their intended use. The OS developer’s and a computer user’s point of view may differ. HEIC files take up less space than JPEG files and still produce the same –if not better- quality images. However, HEIC is currently limited to specific platforms and software due to its lack of compatibility and acceptance. In these instances, you may first have to use a converter to convert the HEIC files to JPEG. In the long run, you may not need to care much about the HEIC format, but it will not be a mystery if you find one on your system.