## **JPEG File Format**

JPEG file format is a popular method of lossy compressions for digital images, particularly for images created by digital cameras. Its compression rate can be adjusted between image quality and storage size concerns.

JPEG compression method is being used in lots of file formats alongside EXIF, JFIF which are commonly being used today by cameras and while transmitting images across the World wide web. Despite of using JPEG with another file format, these formats are simply called JPEG.

The term JPEG is an acronym for the Joint Photographic Experts Group, which also created the standard.

JPEG uses a lossy compression technique. Which requires less storage space but also gives low image quality. Although, there is a lossless mode in JPEG. But it requires much more space and because of this many products don’t support it.

Encoding as JPEG offers many options but they’re not widely used as JFIF format. Color Space Transformation, Down Sampling, Block Splitting, Discrete Cosine Transform, Quantization, Entropy Coding are some of encoding options that JPEG offers.

## **File Specifications**

Files that only contains JPEG compressions are rarely used because of its difficulties while both encoding and decoding. JPEG standard has some flaws for implementing its all aspects. Color space definition, component sub-sampling registration and pixel aspect ratio definition are its biggest flaws. And throughout years, several solutions have evolved. First of them was JPEG File Interchange Format (JFIF), followed in recent years by Exchangable File Format(EXIF) and ICC Color Profiles. These formats help JPEG compression to express itself better.

Image files that implements JPEG compression are commonly called “JPEG files”, not just JPEG compression itself. But it benefits from other formats. For example, recent digital cameras creates .jpeg files but they also contain EXIF format as its metadata. But still both aren’t fully completes each other. JFIF must be used for color profiles etc. Today most image editing sofware stores JPEG in JFIF format.