

## **Technology**

### **computer**

A machine that can be programmed to manipulate symbols, perform complex and repetitive procedures quickly, precisely and reliably, and can quickly store and retrieve large amounts of data.

### **motherboard**

Also called a logic board, is the primary silicone-based circuit board in most electronic devices. It contains sub-systems such as the CPU and RAM while also housing expansion capabilities.

### **central processing unit (CPU)**

Has evolved down onto a single microchip, or “chip.” It is a microprocessor that executes programs, telling the computer what to do. It is the part of the computer that controls all the other parts.

### **disk space**

The space available on a storage device, measured in gigabytes (GB) and now terabytes (TB).

### **graphics processing unit (GPU)**

Located on a video card or on the motherboard, this circuit is designed to rapidly manipulate memory. This accelerates the creation of images in a frame buffer for display devices. Because it is faster than the CPU at processing large blocks of images, the industry is pushing the GPU’s capabilities.

### **memory**

Refers to either volatile (RAM) or storage media. Measured by the quantity of bits (MB, GB, TB)

### **random access memory (RAM)**

RAM is volatile: it temporarily stores data and instructions used by the CPU. Data can not be saved.

### **storage**

A memory device that stores digital data, such as disk drives or flash.

### **folder**

Also called “directory,” contains other folders and documents.

### **aliases**

Types of files that point to a document, folder, or application. (Called “shortcuts” on Windows.)

### **file importing**

Linking to or embedding an external file into a project.

### **file/folder organization**

Logically organizing files and folders on your drive.

### **resolution**

The “size” of a raster image, measured in pixels per inch (ppi) for files on the computer. Dots per inch (dpi) is used for scanner resolution and printing capabilities.

### **bit (b)**

As either a ‘1’ or a ‘0’, a single binary unit is the smallest unit of memory on a computer. Think of it as On/Off.

### **Byte (B)**

A group of 8 bits. Can form one alpha-numeric character or represent 256 possible colors or grays.

### **Kilobyte (KB)**

1024 bytes. 1K of memory holds about one page of text.

### **Megabyte (MB)**

1024 KB (1048576 bytes).

### **Gigabyte (GB)**

1024 MB (1,073,741,284 bytes).

### **Terabyte (TB)**

1,024 GB (1,099,511,627,776 bytes).

### **USB flash drive**

Quick transportation. Comes in 32GB–1TB (as of Jan/22).

### **Blu-ray disk**

Delivery or storage 25GB or 50GB capacities. Optical. It is the evolved form of a DVD which held a maximum of 8GB.

### **Hard Drive Disk (HDD)**

Storage with spinning disks. Available from 256GB – 12TB

### **Solid State Drive (SSD)**

Flash memory (no spinning disks). Much faster than HDD’s, less prone to damage, but more expensive. 128GB – 2TB.

### **Input/Output (I/O)**

Getting data into (keyboard, mouse, camera, microphone) and out of (monitor, speakers, printer) the computer.

### **Operating System (OS)**

The software that is always running, controlling file structure, interface, other applications.

### **applications**

The software you use to create documents and files.

### **swap memory**

A process that some computers use (such as M1 Mac’s) to allow disc memory to be used as RAM to improve performance.

### **upload/download rate**

The speed at which an electronic device can send or receive data, measured in Megabits per second (Mbps).

### **file transfer rate / interface bit rate**

Speed at which data can transmit between devices. Common connection types & speeds (as of Jan/22): USB 2 (480Mbit/s); Blu-ray (576Mbit/s); USB 3.0 (5Gbit/s); Thunderbolt 2 (20Gbit/s); USB4 (40Gbit/s); Thunderbolt 3/4 (40Gbit/s).

### **quantum computing**

Next generation computing using quantum-mechanical phenomena, such as superposition and entanglement. It is completely different than traditional binary and instead relies on quantum bits or qbits. Quantum computers are still in their infancy stage, but one day they will be light years faster.