***Crossing the Digital Divide (v157)***

“Principally Speaking”

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for the Observer

Springtime is here, those two wonderful weeks each year between mud and dust.

Owning and operating a computer isn’t the domain of engineer, scientist or academic any longer – from grade school to nursing home, it seems most everyone has some kind of computer or device that can communicate via the Internet.

Each week I choose topics based on feedback from the community. There are times I share new applications, dispel untruths, and generally strive to keep things simple for all involved. While most of “it” is far easier than most expect, the inner workings of a computer (whether Mac, Linux or Windows) eludes many.

Fundamentally, every computer has a motherboard. The motherboard is a foundation for the electronic relays, pathways, and connectors. Internal devices are connected to the motherboard, categorically described as storage (hard disk or solid state), memory (RAM is akin to desktop space), and I/O (input/output) devices (keyboard, network, video). Each motherboard “runs” using system BIOS (a simple machine language that, once power is applied, instructs the motherboard to enable disk, memory and I/O. Once that happens, the Operating System takes over.

This week, we’re going to focus on storage. The hard disk drive in your computer, whether an older, slower, 5400RPM SATA drive, or an ultra high-speed, Solid State provide space for the Operating System (Windows, Mac, Linux, etc.) as well as user applications and user data.

Why do we stress backups? Simply stated: disk drives of all kinds fail. Some never, most at some point, and some sooner than the manufacturers warranty suggests. If your data is important (of course it is, or you wouldn’t bother saving it or worrying about it if the computer dies), you’ve learned (or want to learn) how to use USB Thumb Drives, an external Hard Disk, or Cloud Backup, right?

Windows and Mac Operating Systems both have native (as in built-in) backup utilities. Windows setup is a matter of accessing Control Panel, then clicking on the link for Backup/Recovery. Plug in a backup device, run the program, and let it finish. Do it regularly.

Mac users will find Time Machine even easier to setup than the Windows equivalent.

Backup today, backup often.

Also, remember that backups, maintenance updates, software patches, your documents, pictures, tax returns, videos, and music use space on your storage device. Storage media (internal or external) can be as limited as a few Gigabytes, to well into the Terabyte range. The “average” disk is 250-500GB in a home computer. When a disk become full, things don’t work. When your disk passes the 75% mark, and you’ve been good about deleting trash and temporary files, it’s time to consider archiving old files, or upgrading storage capacity. Every application (that which runs under Windows or MacOS) require updates, generate log files, and misbehave if they can’t expand when needed.

So, before springtime becomes dust/summer season, check out your computer. Make sure you’ve got space on your hard disk. Make sure you’ve got a backup routine going. Don’t let a disk failure ruin your day. Disks are relatively cheap. Data recovery (when possible) from a failed disk can be very expensive.

Control the things you can and keep the surprises to a minimum.