



BUG-BYTES

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SOFTWARE REVIEW – REG ORGANIZERS 4.1 AND REGISTRY FIRST AID



THESE HELPFUL REGISTRY PROGRAMS GET EVEN BETTER

Both Chemtable's *Reg Organizer 3.0* and Rose City Software's *Registry First Aid 4.1* offer major new releases of their popular registry maintenance software.

Major releases are indicated by a change in the first number of a release version, as in 3.x versus the previous 2.x. Interim releases and bug fixes are indicated by changes in the number or numbers after the period.

Major releases, may include changes in the appearance of menus as well as in a wealth of new features and improvements to their products. Such is the case for both of these very helpful automated registry cleanup tools.

See the initial review on these two products in the March 2005 issue of Bug-Bytes. As it just so happens, both

companies have issued new versions of their products covered by the earlier reviews. If you recently purchased either or both of the products, decide whether or not you want to upgrade at this time, or wait until a later date. It costs \$16.77 to upgrade Registry First Aid and \$19.95 to upgrade Reg Organizer from previous versions.

Is it worth it to upgrade? Download the free 30-day trial from either vendor and see for yourself. I think it is.

Let's backup for a moment. What is the registry? It is the learning center for your computer. The registry contains information about all of the hardware and almost all of the software installed on your computer. Your computer reads the information as it starts up to learn how to handle differ-

ent computer tasks.

The registry is subject to corruption, bad data, damage from malware, and is replete with useless zero length files, dead fonts, and links to non-existent files that bloat the registry. Hence, it takes longer to read the registry as your computer starts up (boots) than it should.

Editing the registry is dangerous for all but very knowledgeable computer user. It is too easy to manually remove something that your computer needs to operate. That's where these two products shine. They create a backup before they start, list the errors they find, and suggest fixes for the problems. They can then safely remove an accumulation of unwanted stuff from your registry.

AN UNINTERRUPTIBLE POWER SUPPLY (UPS) TO THE RESCUE



IT'S ANOTHER SIDE TO SAFE COMPUTING

Uninterruptible power supplies provide voltage protection (on some models), surge and spike protection, and battery backup during power outages and brown outs. UPS units protect your valuable computer



Belkin F6C550-AVR

and its data from surges over your power line, and some units also protect against damage caused by surges over your cable or modem connection. Many vendors include an insurance policy with their UPS products covering your equipment in the unlikely event of damage to your equipment while your computer is connected to their products

Battery backup provided by UPS units

enables you to save your work and gracefully shutdown your computer during a power outage (an alarm goes off) or other such events, or to have your computer automatically do it for you for a certain number of minutes depending on the battery capacity of your UPS. Your UPS will switch to battery backup in milliseconds upon detecting a power failure, such as during lightning activity. Many models include software monitoring of the

battery status of the UPS.

So, how much does this protection cost? The price of a UPS depends on how long you want to be able to continue to work on battery power and the wattage of the unit. For instance, a Belkin Six-Outlet UPS, 550VA USB Battery Backup costs about \$60. AVR in the model number stands for Automatic Voltage Regulation. This particular UPS gives you up to 28 minutes on battery depending on the load. Take your pick.

Think of a UPS as computer insurance. Most units provide four battery backup outlets and may also include two or more surge-only outlets. UPS units

come in different sizes, shapes, and levels of protection, and protection is rated in joules. The higher the number the better.

Battery replacements are available locally. I purchased a replacement battery (\$20) for one of my UPS units from BatteriesPlus™ near Costco in Medford. Some of the better known brands for home use are APC, Belkin, Cyberpower, and Tripp.

BATTERY BACKUP VERSUS SURGE PROTECTORS. Both surge protectors and battery backup protect your computer against damage. However, UPS with battery backup offers additional pro-

tection.

- Evens out line fluctuations
- Offers auto shutdown software
- Offers data line protection to cover Internet, Fax, modem, DSL, or cable connections.
- Sufficient run time to complete what you were doing and to save your files.
- Protects you during blackouts as well as brownouts.

Summer thunderstorms can put your computer equipment at risk. Consider connecting your computer to a UPS.

USE YOUR VENDOR'S SUPPORT SERVICES

ASSUME THE BEST, DOCUMENT THE REST



Reputable hardware and software vendors work to improve their customer support. Some employ new tools to make communicating with them much easier. For instance, **Dell** offers a form of online chat to interactively answer questions about their products and services. I found this to be very helpful. Similarly, I contacted **Trend Micro** (PC-Cillin and AdSubtract) with some technical questions via e-mail and got prompt responses back

the next day. They aim to answer your questions within 12 to 24 hours and continue to work with you until the problem or problems are resolved.

So, if you have a particular question or problem, see if you can get the answers you need from your vendor by e-mail. The nice thing about e-mail is that you don't have to hang around waiting for a call-back, and you have a written record of what was said. Sup-

port people may sometimes be hard to understand on the phone. With text it is easy to see what was said and you have a written record including a case number. If you later have a question about the same problem, refer to the case number. The person helping you will refer to that case number and pickup where you left off. They have all of the details of your problem and what was done to solve it..

BUILD A SECOND COMPUTER

IT IS EDUCATIONAL AND FUN



Is one of your goals to better understand computing and what makes a computer tick? If so, building a computer, or upgrading an old one, may be just what you need. I suggest that you do such a project with a second computer. That way, you will have continuous access to a working computer and to all of your files. When you are finished, you will end up with a second computer in the

event your primary computer fails. You'll also have the satisfaction of creating a working computer using your new found skills. Network the second computer to store backup data files and to gain an understanding of printer and file sharing, or to provide a computer for someone else in your household.

Do you want how-to steps to build your own com-

puter? See <http://www.pcguide.com/byop/index.htm>. It provides very useful information BEFORE you start your project. See also Intel's info at <http://www.intel.com/personal/build/index.htm>.

Don't approach this project as a means to save money on the second computer. You will probably spend more than you would for a new computer. Do it because you want to have hands-on experience in building a computer, or in upgrading an old computer, as an educational project. If you save money, that is a bonus.

If you need a new primary computer, I suggest, strongly, that you buy one. With today's very low prices for computers, a new computer offers the latest hardware (with the most recent BIOS), and the best match of components and drivers to make them work. Vendors create a bundle of hardware and software that costs much less than buying individual components one-at-a-time.

You can buy bundles that include a new operating system and all the system drivers already installed on a hard disk, and get discount prices on other software and hardware. Or, you can buy a "barebones" system that includes what you need except for a monitor, memory, CD, and hard drive (and sometimes a keyboard and mouse). You add memory and an existing monitor, hard drive, and anything else not included in the kit. (Sometimes you also have to furnish a CPU cooler).

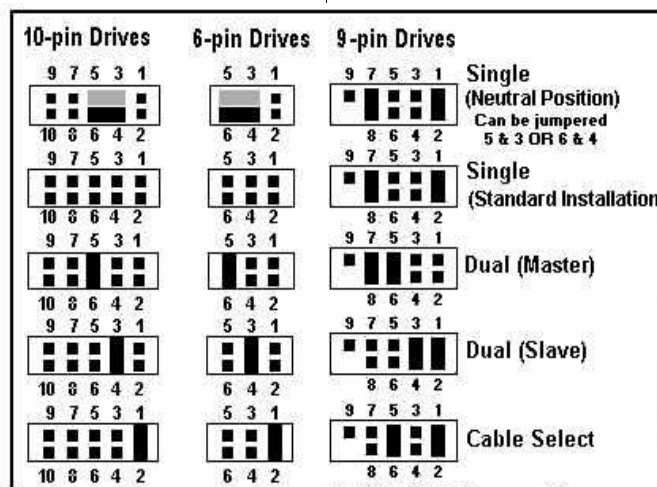
See a sample of barebone kits at www.tigerdirect.com, barebone kits.

THERE ARE DIFFERENT APPROACHES

UPGRADE AN OLD COMPUTER with a new hard drive if you are satisfied with the speed (responsiveness) of your existing CPU and the peripherals that you have. Shoot for a 7,200 RPM hard drive instead of a 5,400 RPM drive. 5,400 RPM drives are very slow and are a drag on performance. **Note, that if your BIOS is four or five years old, it probably will not support one of the new multi-gigabyte hard drives** and may not support newer peripherals such as a DVD burner. A workaround is to upgrade the flash BIOS. However, that doesn't work in all cases. If you have an Award or Phoenix BIOS you

can upgrade them from www.esupport.com. They are the upgrade source for Award, Phoenix, American Megatrends, and MR BIOS. The cost is about \$60 via download or \$70 for the files and manual on floppy disk. If you elect to buy the files on disk, they come via UPS ground in about 10 days. I recently ordered a flash BIOS upgrade for an old computer from them.

The flash BIOS memory chip in a computer allows for the updating of BIOS information stored in the chip. That's the data you see when you press the Delete key or some other key to enter setup as indicated when you computer starts. Software is run to replace that information in the Flash BIOS chip. In the case of older ROM BIOS chips, it meant pulling the old chip out and replacing it with a new chip. **BIOS stands for Basic Input Output System.** It is a set of routines stored in memory used by your computer as it starts to communicate with devices such as your keyboard, mouse, hard drive, etc.



WESTERN DIGITAL EIDE JUMPER SETTINGS

If you buy a new hard drive, be sure to correctly set the jumpers on the back of the drive per your manufacturers instructions. Incorrect jumper settings will prevent your computer from recognizing the new hard disk. A jumper is a small plastic block with metal contacts that is used to electrically bridge two pins. One, two, or no jumper may be used depending on whether you have a single hard disk, or a two hard disks.

The hard disk with the operating system is normally set as the master and second hard disk as the slave. If you can't locate your manual, or your hard drive didn't come with one, access the information on your hard drive vendor's web site. If you use cable select, both drives must be jumpered for cable select. The drive at the end of the cable is recognized as the master drive the second drive connected to the middle ribbon cable connector is recognized as the slave.

USE PARTS FROM YOUR OLD COMPUTER to build a new computer. **Don't attempt this with very old hardware.** You may end up with obsolete and incompatible peripherals that are not supported by your new computer and

operating system, or that lack the new features that you want for your new computer. For example, you might want a burner that handles DVDs and CDs, to use a video capture device, and to add USB or firewire devices.

If it makes sense, use your existing computer case, power supply, CD drive, floppy drive, video card, modem, and network interface card keeping the age criteria in mind. Replace the motherboard with a new motherboard, CPU (Central Processing Unit) and matching memory, or upgrade just the CPU if your motherboard will support it and it is as fast as you want. **Normally you want a processor at least twice as fast as your old processor to really notice the difference.**

Pick a motherboard that will support your power supply connectors and that matches your style of computer case (for instance, ATX format) and that will support your new CPU. Check your manual or vendor to see what CPU speeds are supported. You may be already “maxed out.” Chances are that you will need to buy new memory to match your new motherboard. Generally, the new memory modules will provide better performance than older-style memory chips.

BUY A BAREBONES kit and use your existing hard drive and peripherals. The same caveat exists as above. Peripherals are relatively inexpensive in the scheme of things in relation to the cost of a motherboard, CPU, and RAM. Carefully check to see what you get in the kit and what items you will need to furnish to finish the computer. Usually it is best to buy everything you don't have or need at the same time as you buy the kit. You save money that way, including shipping costs. With a barebones kit, you know that the case, motherboard, and power supply are compatible. (For instance, the holes in the back of the case line up properly with your motherboards connectors).



BUY A NEW COMPUTER WITH A MONITOR and use your old monitor with your old computer. CRTs (Cathode Ray Tubes) are much less expensive than new LCD (Liquid Crystal Display) flat panel displays. However, a CRT takes up much greater space from front to back due to the long neck of the display tube. If desk space, and aesthetics from the side are issues for you, go for the LCD flat

panel monitor.

With a new computer you get factory optimized components that have been thoroughly tested and benchmarked to work well together, plus a warranty on parts and labor, and support. If you want to save big bucks, don't go for the very latest processor (CPU). Pick something a little more modest that meets your needs. Many vendors let you configure your new computer from a list of options. Pick and choose and then click the button to recompute the price of the computer. That way you buy a computer with the features, options, software, and components that you want and need. It is the ultimate out-of-box experience.

Check the prices of CPUs. Note that the very fastest processors go for a premium price while last years model goes for many hundreds of dollars less. At Tigerdirect a Pentium 4 model 520 2.8GHz 775 processor lists for \$169.99 and a model 570 3.8GHz processor for \$669.99.

Be comparison, an AMD Athlon 64 3000+ Socket 939 processor is \$149.99 and an AMD Athlon 64 4000+ Socket 939 processor is \$649.99. You get the idea. There are a range of offerings in between, and other processors as well.

(Proper cooling becomes very important as processor speeds increase).

A word or two about CPU power. The CPU you need depends on what you do with your computer. If all you do, or ever plan to do, is to read and write e-mail messages and use a word processor, then a modest 1,000MHz to 2,000MHz CPU will probably suit you just fine. However, if you do a lot of number crunching, do photo editing, stream video files, play 3D games, or want to edit movies, then you will want a faster processor.

Note that the numbering system used for AMD processors, such as the AMD Athlon XP **2700** indicates performance similar to an Intel processor rated at 2.7GHz although that particular AMD processor has an operating frequency of 2.167MHz. Newer Intel processors are switching away from speed ratings in favor of model numbers, in series such as 300, 500, and 600 series. Supposedly, they want you to consider on-die cache, clock speed, bus speed, and the number of data pipelines built into the chip. Sigh. It will take a while to digest all of that. For the moment, think of the newer model Intel chips like the models of BMW autos. The higher model number series indicate more deluxe CPU chips.