

OCIPUG Hardware SIG

October 14, 2008

OCIPUG Hardware SIG

- Agenda – October 14, 2008
 - 7:00 – 7:05 Administration
 - 7:05 – 8:30 Featured Topic: “Building Your Own System: Installing Your OS and Device Drivers and Functional Testing”
 - 8:30 – 9:00 Hardware News
 - 9:00 – 9:10 Break
 - 9:10 – 9:55 Hardware Submission and Random Access (Q&A)
 - 9:55 – 10:00 Recap, Preview, and Close

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- Administration
 - Welcome! Please Sign In.
 - This SIG is a resource for computer users and potential computer users.
 - Random Access “Log” – sets response sequence
 - Hardware Assistance **RELEASE** Form
 - This presentation will be posted on the OCIPUG Hardware SIG web site:
 - Click the “Hardware” link at <http://www.ocipug.org/>

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- Administration (continued)
 - Also posted on that web site:
 - SIG info and meeting schedule
 - Prior presentations (back to “Day One”, April 11, 2000)
 - Hardware links (to press releases and product pages)
 - “Resource” links (to product reviews, product news, “self help”, PC technology and industry/standard organizations, e-tailers, and pricing engines)

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- Building...('08): OS, Drivers, and Testing
 - Givens (from the last meeting) – you have:
 - Completed the assembly of your system.
 - Successfully performed a system-level test.
 - Set up your BIOS (baseline).

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- Building...('08): OS, Drivers, Testing (cont.)
 - The Process
 - Assemble and review your software and associated docs
 - Decide whether to FDISK your drive; as applicable, run FDISK and/or set the BIOS to boot from CD
 - Install the operating system (OS) – we'll install XP/Pro
 - Set up Internet access; check for later BIOS and drivers
 - Install motherboard-based drivers
 - Install other drivers and utilities
 - Perform a functional test.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Assemble/review your software and associated docs
 - Operating system – CD and “Product Key” label
 - Motherboard CD and user docs; note driver loading sequence
 - Adapter card CDs and docs (video, sound, modem, NIC)
 - Peripheral CDs and docs (keyboard, mouse, printer...)
 - Utility CDs and docs (CD-R/-RW, DVD...)

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- Building...('08): OS, Drivers, Testing (cont.)
 - FDISK?
 - FDISK allows you to ‘clear” the master boot record and, if you want, set up partitions and/or set the drive “active”
 - With a large hard drive the “numbers” may not “match”
 - Requires a boot floppy – preferably a Win 98 boot floppy
 - Since XP (all versions) won’t support setting up a FAT 32-formatted install partition larger than roughly 30GBs, if you want to use FAT 32 on a large drive, you’ll also need to format the drive from the Win 98 boot floppy BEFORE the OS installation – ignore the resulting numbers.

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- Building...('08): OS, Drivers, Testing (cont.)
 - FDISK? (continued)
 - If you want to use a drive larger than 30GB under FAT 32, and you don't have a Win 98 boot disk, borrow one from someone else or build a boot CD (see www.bootdisk.com) – include FDISK and “format”.
 - I do NOT recommend using free boot disk images available on the web other than those at “bootdisk”.
 - If you can't get a Win 98 boot disk, you're options are:
 - Set up XP under NTFS (rather than FAT 32)
 - Partition the drive during XP installation (~30GB)
 - If you're going to use FDISK, set your BIOS to boot from Floppy (or boot CD), and run FDISK now.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS)
 - If not already set, set the BIOS to boot from CD.
 - Put the OS CD in your “CD drive” (CD, CD-R, CD-RW, DVD...) and reboot the system.
 - Watch for the “Press any key to boot from CD” prompt and hit any key.
 - If your boot drive is connected to a RAID or SCSI controller, hit F6 when prompted (bottom of the screen – first message displayed) and load the driver from floppy when prompted (“S” option).

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS) (continued)
 - At the “Welcome to Setup” screen, hit Enter.
 - Wait for the EULA to appear; hold down the “Page Down” key and scroll to the bottom of the page; hit F8 (acknowledges acceptance of the EULA).
 - At the next pause (setup partition screen) you need to accept the identified partition, create a partition in unpartitioned space, or delete the current partition and create a new one. Proceed accordingly. NOTE: Even if “C” is not the selected partition, some XP base files will still be loaded into it.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS) (continued)
 - Select your desired file system, NTFS or FAT (FAT 32) – scroll and hit Enter. [I recommend FAT since NTFS partitions cannot be accessed from a Win 95/98/Me boot floppy – i.e., you may lose the opportunity to recover files from a damaged XP installation.] Hit Enter again to confirm OK to format.
 - When formatting completes, the operating system files will start to be installed from the CD.
 - If applicable, remove the RAID driver floppy before the system does the first auto-reboot. No need to hit a key during reboot.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS) (continued)
 - XP will continue to load files – and load a generic mouse driver.
 - At the “Regional and Language Options” screen click “Next”.
 - On the next screen enter your “name” and “organization” and click “Next”.
 - Enter the “Product Key” from your doc package; click “Next”.
 - Enter your computer’s “name” (max 15 characters, no special characters, no spaces); if desired, enter & confirm an Administrator’s password; click “Next”.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS) (continued)
 - At “Date and Time Settings” confirm (or adjust) and click “Next”
 - At “Network Settings” accept “typical”; click “Next”.
 - At “Workgroup or Computer Domain” accept “Workgroup”; click “Next”.
 - XP will continue to load files and set up the system and then auto-reboot again. No need to hit a key during reboot.
 - At one point the screen will go blank as the OS tests for VGA display quality. It will only be blank for a moment. When prompted, click “OK” and then “OK” again.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS) (continued)
 - At “Welcome to Microsoft Windows” click “Next”.
 - IF network drivers have been loaded and you have a cable inserted, the “Internet Connection” screen will appear. Select “Next” to acknowledge connection through a LAN – or select “direct” if you’ll connect through an ISP and then “Next”. XP will now attempt to reach Microsoft’s Internet Product Activation server. For “demo” purposes, select “No” when prompted, then click “Next”.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS) (continued)
 - At the “Who will use...?” screen enter the names of users you want to set up – the primary login at the top; click “Next”
 - At the “Thank You” screen hit “Finish” and XP will proceed to boot to the desktop.
 - Use Start/Turn Off Computer/Restart to restart the system.
 - During restart enter the BIOS and reset to boot from your boot hard drive. Eject the CD. Save the BIOS settings and reboot.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing the Operating System (OS) (continued)
 - You have now completed OS installation.
 - If an OS Service Pack (SP) is available, and you have the CD, load the SP now. If you don't have the CD, download and install the SP ASAP after obtaining Internet access.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Set Up Internet Access; Check for...
 - If XP has identified and installed your NIC driver, and you have DSL or cable access (and the cable is plugged in), you should have immediate access to the Internet. Else install your NIC driver, etc.
 - If XP has identified and installed your modem, you should now proceed to log on using your ISP; setup will be required. Else install your modem driver, etc.
 - If you have Internet connectivity, and are adventuresome, check for BIOS and driver updates. If desired, download into separate “temp” folders. Do NOT attempt to install (yet).

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing Motherboard-Based Drivers
 - Insert the motherboard CD and let it auto-start.
 - Depending on the installation program “menu” that’s provided, you may be able to select all the drivers to be installed, or you may need to step through two or more selection “levels”. Start with the top item on the first menu and proceed accordingly. When you are given the option to restart, take the conservative approach and restart each time. If necessary, eject and put the CD back in as many times as are required to get all the drivers loaded.

NOTE: The “INF” MUST be installed FIRST!!!

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- Building...('08): OS, Drivers, Testing (cont.)
 - Installing Motherboard-Based Drivers (continued)
 - Ignore Windows' driver "not signed" messages.
 - Installing Other Drivers and Utilities
 - Insert the associated CD and let it auto-start.
 - If the CD does not auto-start or auto-starts with a Readme screen displayed, you may need to install a driver through Device Manager. Read the provided setup or readme doc and proceed accordingly.

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- Building...('08): OS, Drivers, Testing (cont.)
 - Perform a Functional Test
 - Check Device Manager to make sure all devices are identified as functional; fix yellow blobs.
 - As applicable, write to and read from your floppy, hard drive(s), and optical drive(s).
 - As applicable, connect speakers or headphones and test for audio output (Start / Control Panel / Sounds... / Sounds... / Sounds tab / select a “Program event” and click the arrowhead)
 - If not already done, and as applicable, test your Internet connection.

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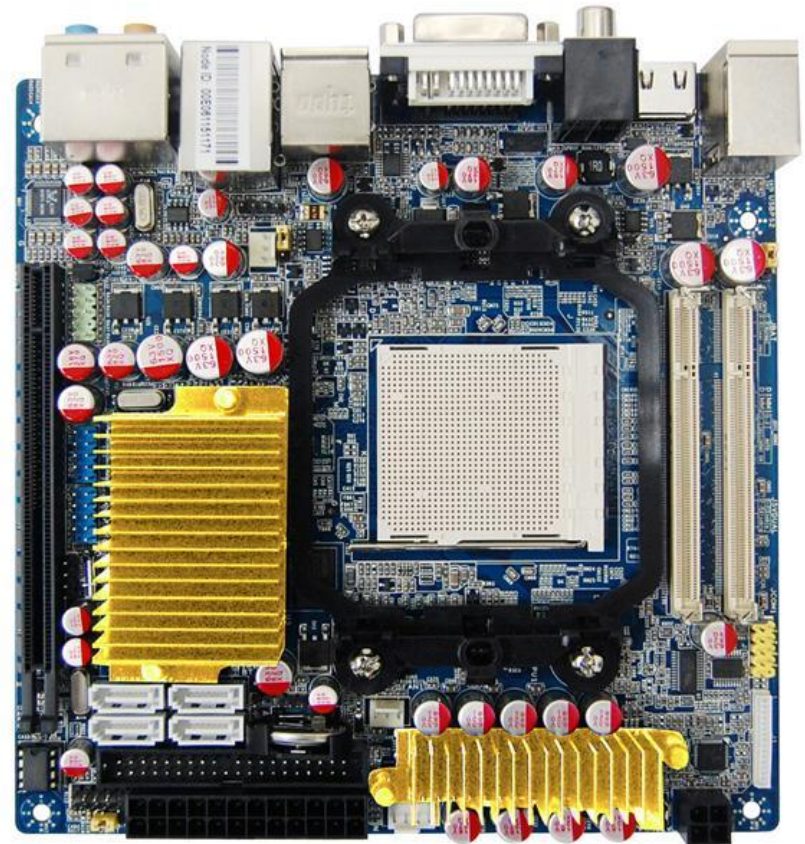
- Building...('08): OS, Drivers, Testing (cont.)
 - That concludes this series. During the series we have:
 - Evaluated options and developed a “plan” (system configuration/“spec”),
 - Considered how to source and sourced our components,
 - Gone through a two-phase assembly process, and
 - Installed our operating system and did a functional test.
 - Now its your turn. Good luck!

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- Hardware News
 - Processors – nothing new
 - Core Logic (Chipsets) – nothing new

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- Hardware News (continued)
 - Motherboards
 - Albatron KI780G
 - ATI/AMD 780G/SB700
 - Socket AM2+ (<65W)
 - (2) SO-DIMM slots
 - (1) PCIe x16 slot
 - mini-ITX form factor (6.7" square)



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- Hardware News (continued)
 - System RAM
 - Kingston announced 2GHz HyperX DDR3 modules (PC3-16000) – 9-9-9-27 at 1.9v; MSRP: \$227 (2 x 1GB kit)

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- Hardware News (continued)
 - Graphics Processors and Cards
 - ATI (AMD) released:
 - Radeon HD 4600 series:
 - 4670 – 320 stream processors, 128-bit interface, 750MHz core clock, 1GHz memory clock; <60W full load; ref 512MB GDDR3/DDR3; MSRP: \$79
 - 4650 – 320 stream processors, 128-bit interface, 600MHz core clock, 400MHz memory clock; <50W full load, ref 512MB GDDR2/DDR2; MSRP: \$69
 - Radeon HD 4550:
 - 80 stream processors, 64-bit interface, 600MHz core clock, 800MHz memory clock; <20W, ref 512MB DDR3/2; MSRP: \$59
 - Radeon HD 4350:
 - 80 stream processors, 64-bit interface, 600MHz core clock, 400MHz memory clock; <20W, ref 512MB DDR2; MSRP: undisclosed
 - Cards released by all larger partners.

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- Hardware News (continued)
 - Hard Drives
 - Seagate introduced its Fall 2008 additions:
 - 1.5TB “FreeAgent Desk Drive” (external) – USB 2.0; MSRP: \$280
 - 1.5TB “FreeAgent XTreme Drive” (external) – USB 2.0, FireWire/800, and eSATA/300; MSRP: \$300
 - Western Digital introduced “ShareSpace” 4-bay, network storage systems with 2 or 4 drives (2 or 4TB), GbE primary interface plus 3 x USB 2.0 for add-ons, supports RAID 0, 1, and 5 (4 drives), remote access; MSRP: \$700 (2TB) or \$1000 (4TB).
 - http://www.wdc.com/en/flash/index.asp?family=wdfSharespace_4NC

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- Hardware News (continued)
 - Hard Drive Controllers – nothing new
 - Optical and Other Drives
 - LiteOn introduced the “iHES206” 6x BD reader/DVD-multi burner – internal drive with SATA interface; MSRP: unk
 - Sound Processors and Cards – nothing new
 - Modems and NICs – nothing new

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- Hardware News (continued)
 - Power Supplies – nothing new
 - Misc
 - Antec about to announce “[Skeleton](#)” chassis.

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- Break
 - No more than 10 minutes, please.

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- Hardware Assistance & Random Access (Q&A)
 - Hardware Assistance **RELEASE** Form
 - Random Access Log

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- Recap, Preview, and Close
 - Recap
 - Preview
 - Featured Topic for November 11, 2008: “Backing Up Your Data and Your System (including use of RAID technology)”
 - Close (please police up the area)