

Windows 7 on the Dell Dimension 2350

Written by Tim Wray
Friday, 18 February 2011 07:27

In June 2003, I purchased my first brand new computer. All the other computers in my life had been purchased by others (while I lived at home), or they were 3+ year old hand-me-downs from others (for which I was quite thankful.)

I didn't have a lot of money, but I wanted to get into the VHS-to-DVD conversion business and needed a machine with a lot more kick than I had at the time. My current machine was an IBM Aptiva AMD K6-350 (circa 1999), which still worked fine, but was limiting in it's capabilities.

So, I went to Dell's website, since they were the hot manufacturer at the time (dooooood, you got a Dell!), and ordered their cheapest model with middle of the group options. I did add a DVD+R Burner (\$200 at the time...ouch!) and selected the top available system bus speed (400MHz).

There were a few processor options, a Pentium 4 2.2 GHz and a Pentium 4 2.4 GHz, and some Celerons I didn't even look at, naturally. The price difference in the P4s was significant enough that I chose the 2.2 clock speed to save some cash. After all, moving from 350MHz to 2200MHz was not too shabby, I felt I could stand to lose 200MHz and live with it.

I kept the 256MB of Ram (128 and 512 were other options), Windows XP Home (Version 2002, better known as Service Pack 1), added a DVD-ROM to go with the Burner (for quick disc copying) and ordered it. It came in around \$800 for the system itself.

It should be noted that I am notoriously tight with money. My wife and I were poor, struggling newlywed-ish people at the time. I worked at a grocery store and had just finished college, waiting on the IT field to want me in the ranks.

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I loved this computer. It didn't get any real upgrades to speak of, other than a video capture card that I had in the IBM unit, until 2007, when I upgraded the memory to 1GB and put a second hard drive in it, bringing it up from it's original 30GB storage to 70GB.

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In that same year, I decided to give Windows Vista a try on the machine, even though it plainly said that the computer's Intel 845GL chipset was NOT supported, nor would it be, particularly the video chipset.

Let's just say I like a challenge.

Installation on the 2350 went fine. It took several tries of installing the XPDM drivers for the display chipset to show anything other than 4-bit (yes, 4-BIT) color, but on about the 3rd reboot, it worked. It was slower than snot, but it worked.

In 2008, I found an Nvidia GeForce 9400 GT based PCI video card for around \$79 and installed that. Now, the old Dimension 2350 had modern graphics. (PCI was used because the 2350 series didn't have an AGP slot at all. It had a spot on the motherboard for it, but it was not actually present. Probably a cost cutting measure to keep the unit super cheap, since it was pretty much a budget model.) With this card, Aero began working and the PC's score was somewhere around 2.1 in the Windows Experience Index. Response felt better since GDI didn't have to render the windows and use as much processor power.

I also installed a PCI SATA controller and installed a 500GB hard drive. (That's certainly something that wasn't around in summer 2003!)

It was still rather laggy. Perfectly usable, but laggy. I blamed this on the age of the computer. I was also a staunch Vista supporter.

Then there was 7.

About a week ago, the 40GB IDE hard drive died that was the basis of the Vista OS install. The 500GB, with our lifeline of photos, personal data, etc, was fine on the SATA 500GB drive.

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It was up for debate as to whether or not I would install XP or Windows 7 on the machine. I have already delayed building a new Quad-core (or more) PC for home by two years, as our finances (You know, house and three kids) don't always allow for a new PC...except every several years apparently.

I thought I might as well try Windows 7 on the machine. I had to procure another IDE hard drive, as the 2350's BIOS cannot boot from the SATA card (which is expected.) I did that, installed Windows 7, and....

It has been impressive. Applications that ran slow under Vista seem to have improved in execution time in some areas as much as 50%.

I don't know if it's the kernel redesign they did for Windows 7 or what, but it does, in fact, execute better and faster than Vista could have hoped.

There really was something wrong with Windows Vista. (Some of you are scornful of me that it took this long for me to decide, I know.)

Here are the PC's Specs, as it stands. There were MUCH slower 2350 models, I believe mine is one of the latest/last ones, as the 2400 Model which was more advanced, came out before 2003 was over. Some even had PC133 memory, mine had PC2700 from the start. It was also one of the first several USB 2.0 Dell desktops (thank goodness!)

- Processor: Pentium 4 2.2GHz
- System Bus Speed: 400MHz
- Memory Type: PC2700 DDR SDRAM
- Memory Amount: 1.0GB
- Video: Nvidia GeForce 9400GT PCI, 512MB Memory
- Hard Drives:
- IDE: 40GB Western Digital Caviar, OS only
- SATA 3.0: 500GB Western Digital Caviar, Program Files/Data Storage
- SATA 3.0: 640GB Western Digital Caviar, Backups of data on 500GB Drive

- VIA-chipset based PCI SATA Controller

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- Atheros-based PCI Wireless NIC
- SATA DVD Dual-Layer burner (Superdrive)
- IDE DVD+R Burner (yes, the original 2003 2.4x unit, \$200 item, still works fine!)

Tips to get your Dimension 2350 Running Windows 7:

Probably the most important item is to upgrade the video adapter to a modern PCI one. You will have a hard time trying to use the original Intel Extreme Graphics 845GL on board video with Windows 7, and even if you get it working, it will be greivouslyunder-performing. This is the one I purchased: <http://www.newegg.com/Product/Product.aspx?Item=N82E16814187057> . This card seems to run a little hot from time to time, I cut a hole in the side of the case with a Dremel tool and installed an 80MM cooling fan pushing air toward the PCI area of the 2350, solved the problem. Alternatively, buy a card that has a fan on it already. Most do.

Once you've upgraded, you may get a "boink" in the Windows device manager once 7 is installed. It will be under "Other Devices", listed as "Video Controller". This is Windows picking up on that Intel video chipset that there are no modern drivers for. Simply right click it in device manager and select "Disable" to keep it from prompting you to check your hardware each boot and the like.

I wouldn't attempt this without the maximum amount of memory in the 2350, which is 1024MB, or two 512MB Chips. It would possibly work with as low as 512, but it would probably badly hamper performance.

I wrote this article and did all research on my Dimension 2350. I didn't have to wait on it one time, everything launched quickly and efficiently.

I clocked boot time, starting at the push of the power button and stopping when I had a loaded, usable desktop, at 1 minute 39 seconds. Not too shabby considering the age of the machine, which at this moment is 7 1/2 years old.

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Good luck!

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