

Digital Music SIG

Home Theater PC Project (Part 1)

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This month we will begin following a project I'm working on at home to set up a "Home Theater PC" – one that can record and play music and videos to a PC's hard drive, act as a bridge for streaming Internet video, music and other content and also support regular Internet surfing, using my HDTV as the PC's monitor.



Part 1 will look at the overall project plan and then look specifically at the Windows 7 Media Center, which will provide the command and control interface.

Project Plan:

Adapt and upgrade an existing HP Pavilion PC to make it serve as a home theater PC, part of the home entertainment center. The current specs on the PC are:

- HP Pavilion a1610n
- 3 GB of DDR-2 533 RAM (originally was 1 GB)
- AMD Athlon 64x2 4200+ CPU (dual core, 2.2 GHz)
- Onboard NVidia GeForce 6150LE video chip (no HDMI or DVI)
- 250 GB SATA hard drive
- 6 USB 2 ports
- 100 M-bit Ethernet chip/connector (wired)
- DVD burner
- Windows XP Media Center Edition (SP3)

Planned Upgrades:

- Add an NVidia GeForce video card with HDMI output (\$50)
- Possibly add an HD video capture/tuner card or USB device (for recording) (\$50-\$75)
- Upgrade to Windows 7 Home Premium (better version of Media Center) (\$0 – MS Technet license)
- Add a wireless N USB network adapter
- Add a wireless keyboard and mouse (\$25)

Steps:

- Perform the upgrade to Windows 7 Home Premium (clean install, reformat).
- Install required applications: - iTunes, VLC Player, FireFox, MSE, WLE, ...
- Buy and install the new NVidia video card and drivers (Newegg).
- Buy and add the USB wireless network adapter and drivers. TEST!!!
- Buy and install the wireless keyboard and mouse. TEST!!!
- Move to the entertainment center, plug in power.
- Connect to the HDTV with a HDMI cable – (may need a HDMI switch).
- Start up the PC; start up the HDTV; Select the HDMI input from the PC.
- Should see the PC desktop on the HDTV.
- Start IE or FireFox and do some surfing (tests the wireless LAN)
- Go to a site like Fox.com, find a recent TV episode and play it to see how the video quality is on the TV.

Now let's look at the Windows 7 Media Center.

Demo of Windows 7 Media Center