



Intel Corporation (Intel) commissioned Principled Technologies (PT) to compare the performance in common business scenarios that utilize advanced user interface features in Microsoft Windows Vista of an Intel vPro technology based PC with that of three other platforms. We tested a scenario that took advantage of dual-monitor support in Windows Vista. We made subjective quality assessments on the following systems:

- Intel vPro technology with Intel Core 2 Duo processor E6700 on an Intel 965 (DQ965GF) motherboard
- Intel Pentium D processor 930 on an Intel D945GTP motherboard
- Intel Pentium 4 processor 630 on an Intel D945GTP motherboard
- Intel Pentium 4 processor on an Intel D865GBF motherboard

Scenario: viewing a slideshow while an HD video plays

Andy Granton is a program manager at the Melcore Robotics Company. He has two monitors attached to his PC so he can multitask more efficiently. Andy has the job of developing a video to showcase his company's actuator arms. He's considering Web based HD video that looks very high-tech, so he visits Microsoft's Web site and checks out an HD video promo for HD WMV. He watches the windowed video on one monitor, while on the other he has open some photos for a candidate location for a video shoot. While the Microsoft demo video plays, he uses Windows Photo Gallery to open the folder of JPEG pictures into list view and then clicks slideshow to get a rotating show of the images. We analyzed the quality of the slideshow transitions, which use a fade effect between photographs, and note whether those transitions are smooth or choppy.

The Intel vPro technology based PC with the Intel Core 2 Duo processor E6700 was able to handle the slide transitions smoothly on one monitor and play the HD video on the other monitor with no problems. By contrast, on the Intel Pentium D processor 930 based PC the transitions between 37 of the 50 slides were not fluid. The frames repeatedly froze for a fraction of a second throughout the transition. The quality was clearly worse than that of the Intel vPro technology based PC with the Intel Core 2 Duo processor E6700. On the Intel Pentium 4 processor 630 based system, the transitions between all slides were hesitant and not fluid. The frames repeatedly froze for a fraction of a second throughout the transitions. The transition quality for all slides was clearly worse than that of the PC with the Intel Pentium D processor 930 and the Intel vPro technology based PC with the Intel Core 2 Duo processor E6700. These differences represent significant improvements in how a user would experience the Windows Vista user interface in the increasingly common dual-monitor setup. HD Video playback was smooth on all the systems that could play the video.

For more information on these tests and to see the full test report, visit:

www.principledtechnologies.com/clients/reports/Intel/vProVistaAero.pdf

KEY FINDINGS

- The Intel® vPro™ technology based PC featuring the Intel® Core™2 Duo processor E6700 yielded significant advantages for users on our sample test that takes advantage of some of the new user-interface features in Windows Vista.
- For example, only the Intel vPro technology based PC was able to handle slide transitions smoothly and play HD video with no problems in a dual monitor setup.
- The system with the Intel® Pentium® 4 processor 630 and Intel® Pentium® D processor 930 played video smoothly but displayed choppy transitions between slides on dual-monitors.
- This test illustrates the significant improvements a user would experience in the Windows Vista interface in the increasingly common dual-monitor setup.

TASKS	PERFORMANCE RESULTS (subjective)			
	Intel Pentium 4 processor 2.8 GHz on Intel D865GBF	Intel Pentium 4 processor 630 on Intel D945GTP	Intel Pentium D processor 930 on Intel D945GTP	Intel vPro with Core 2 Duo processor E6700 on Intel DQ965GF
Task: Viewing a slideshow	NA*	Choppy: The transition between all slides showed pronounced stuttering. The quality was third out of the three systems that could do the transitions.	Choppy: The transition between 37 of the 50 slides showed some stuttering. The quality was second out of the three systems that could do the transitions.	smooth
Task: Playing a video	NA*	smooth	smooth	smooth

*The system with the Intel Pentium 4 processor 2.8GHz on the Intel D865GBF motherboard did not support dual monitors, and it could not play the HD video. Windows Vista also defaulted to a less capable slide transition style on it.