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WHITE PAPER

ENHANCED POWER MANAGEMENT OPTIONS FOR DELL PRECISION MOBILE WORKSTATIONS

John Neumann, Ph.D., Usability Engineer

Dell Precision™ workstations are the choice of many professionals who require outstanding performance for graphics, video production, audio engineering and scientific research. These applications tax CPUs much more than office computing tasks, requiring more granular control over thermal tables to achieve the right balance of performance and cooling. This is especially important for high-performance mobile workstations, given the inherent cooling challenges and battery life concerns.

These Dell enhanced power options integrate directly with Microsoft Windows Vista and Windows 7 power options, giving the user a single point of control. What's more, Dell takes Precision mobile workstation users beyond the default Windows options, offering more choices optimized for different computing tasks.*

Fight latency with Pro A/V mode

The three power plan options that ship with Windows—Balanced, Power Saver and High Performance—do not specifically address the needs of pro audio and video users who need to eliminate as much processing latency as possible to achieve “real time” monitoring of their recordings.

Dell has developed a Pro Audio/Video (Pro A/V) mode that increases throughput by removing unnecessary background processes and conserves power by optimizing hardware

settings, for example by temporarily disabling wireless connectivity at the driver level to stop power from running to the antenna. In this mode, latency can be reduced to four milliseconds or less, which for practical purposes is indiscernible to the human ear.

Pro A/V mode is currently available on Dell Precision M6500 17-inch and Dell Precision M4500 15.6-inch mobile workstations.

Keep quiet, stay cool

If the workstation is being used on a sound stage or other location where fan noise is disruptive, Quiet Mode keeps the fan noise level below 3.5 sones, throttling the CPU if necessary to avoid overheating.

In hot environments or in situations where the workstation must be placed on a user's lap, Dell Precision mobile workstations offer a Cool mode. Cool mode regulates CPU performance and fan speed to keep the surface temperature of the unit at or below acceptable levels.

Maximum performance when you need it

For tasks that demand all-out performance, such as video rendering sessions or scientific number-crunching, Ultra Performance mode allows the fans to run at higher RPMs, enabling the processors to run hotter for longer periods of time.

Since Dell Precision workstations are designed with demanding tasks in mind, most users will never need to enable Ultra Performance mode—just think of it as extra horsepower you can access in a pinch when it's necessary to squeeze every last bit of performance out of the processors.

Go farther with extended battery life

All currently shipping Dell Precision mobile workstations have the Extended Battery Life option. This mode powers

down non-essential features and adjusts graphics performance to lower the overall power draw of the system. Professionals who use their mobile workstations for both resource-intensive tasks and mobile office computing can benefit from this feature.

* Note that these power plans are mutually exclusive and cannot be used in combination with one another

