

HP Z WORKSTATIONS SHINE ON DASSAULT SYSTEMES CATIA DMU CLASH AND PHS RENDERING

Introduction: The new quad-core HP Z400, HP Z600 and HP Z800 Workstations deliver increased performance for CATIA projects that are computation intensive.

CATIA DMU clash analysis tools provide iterative capabilities to quickly check, analyze and ensure the integrity of the mock-up. Photo Studio* 2 (PHS) uses a powerful rendering engine to generate high quality photo-realistic images. Both CATIA DMU clash and PHS image rendering are CPU intensive and mutli-threaded providing increased performance on workstations with more cores.

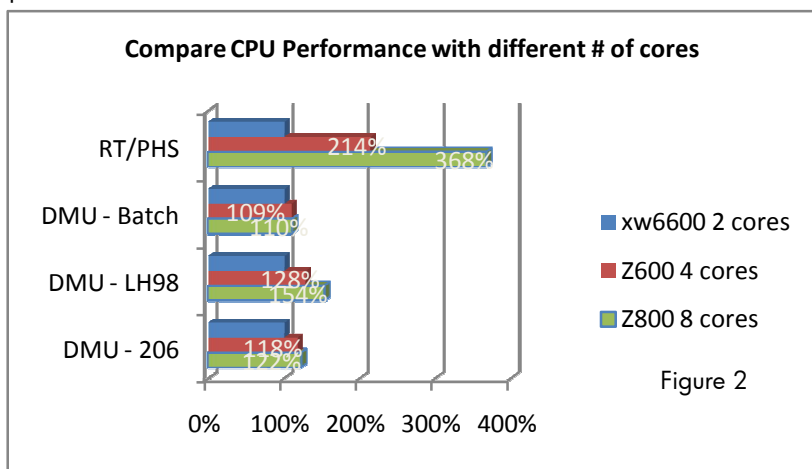
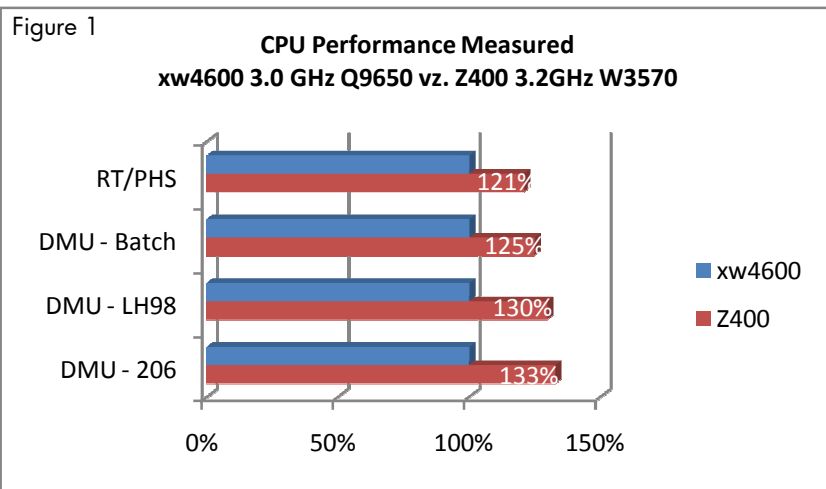
Results: The workstations were configured with the Microsoft® Windows® XP x32-bit SP3 operating system, professional 3D graphics and 4GB physical memory running CATIA V5R18 SP4. The HP Z Workstations were tested with the following system default BIOS settings:

- **Hardware Power Management/Intel Turbo Boost Technology: Enable**
- **Hardware Power Management/Enhanced Intel Turbo Boost Technology: Disable**
- **Processors/Hyper-Threading: Disable**

The RT/PHS benchmark renders a high quality image. DMU 206, LH98 and Batch benchmarks measure CPU performance with clash analysis between 2 elements, all elements and also measure the analysis from within a batch file.

Figure 1 compares two quad core workstations with top bin processors, the HP xw4600 and HP Z400. The HP Z400 Workstation includes Intel® Quickpath and Turbo Boost Technology which shows increased performance over the HP xw4600. The HP xw4600 is normalized on the X axis.

Figure 2 shows that more cores improve performance with CATIA operations that are threaded. The HP xw6600 is a 3.3GHz x5260 dual core single processor. The HP Z600 is 2.9GHz quad-core single processor. The HP Z800 is a 3.2GHz W5580 quad core dual processor. The HP xw6600 is normalized on the X axis



While more cores shows some improvement with the DMU clash analysis benchmarks, the RT/PHS image rendering shows significant improvement over workstations with fewer cores.

Conclusion: Rendering and DMU Clash analysis performance improves on the HP Z Workstations with turbo boost technology. These operations are CPU intensive and threaded taking advantage of more cores.

