

6/26/06

To: *All Computer Stakeholders*

Subject: *Revised Workstation Definition and Continued Historical Data Collection*

This message is being sent to you on behalf of EPA and DOE's ENERGY STAR® program.

Dear ENERGY STAR Computer Partners and Other Interested Stakeholders,

Workstation Definition

On June 12, 2006, EPA distributed a Computer Specification Update which included a draft workstation definition. EPA has revised this definition very slightly in response to stakeholder comments. The revised definition, which will be reflected in the Draft 3 Computer Specification to be circulated on June 30, 2006, follows:

To qualify a computer for ENERGY STAR as a workstation the system must:

- A. Be marketed as a Workstation
- B. Have a MTBF of at least 15,000 hours based on Bellcore TR- NWT-000332, issue 6, 12/97
- C. Support ECC and/or buffered memory

In addition, a workstation must meet three of the following six optional characteristics:

- 1. Have supplemental power support for high end graphics (i.e., PCI-E 6-pin 12V supplemental power feed);
- 2. System is wired for 4x or 8x PCI-E on motherboard in addition to graphics slot(s) and/or PCI-X support;
- 3. Does not support Uniform Memory Access (UMA) graphics
- 4. 5 or more PCI, PCI-E , PCI-X slots;
- 5. Capable of supporting at least two processor chips (must support physically separate processor packages/sockets, i.e. not met with support for a single multi core processor); and/or
- 6. Be qualified by at least 2 Independent Software Vendor (ISV) product certifications; these certifications can be in process but must be completed within 3 months of qualification

Historical Data Collection to Allow for Assessment of Scalable Classifier for Workstations

As indicated in the June 23, 2006 notice to stakeholders regarding a scalable classifier for workstations, EPA is asking partners to share additional historical data to allow EPA to assess the viability of a scalable classifier as proposed by

stakeholders. EPA hosted a call with stakeholders today to discuss data gaps in greater detail. During the call, EPA also shared the following comments and requests for feedback specific to the workstation data collection sheet:

- There is an error on the spread sheet where it says "minimum installable RAM" where it should say "maximum installable RAM". EPA is not asking manufacturers to re-submit data based on this error. For manufacturers who have not yet shared data, please submit maximum installable RAM.
- SPEC apc is not stressing the graphics and machine adequately. Running a program like viewperf while simultaneously running fp rate may be a more accurate measure. Internal testing that relied on pixel shading far exceeded any other efforts to stress the systems but we are not sure if viewperf has pixel shading as a component of one of its tests.
- Topics on which EPA seeks feedback are:
 - Does viewperf do pixel shading?
 - Does running viewperf simultaneously with fp rate make sense? (i.e.; will it get the machine to burn more power?)
 - Should EPA change the apc test to be fp rate w/ viewperf simultaneously or add it to the list of data points?

Please share feedback on the above questions no later than Wednesday, June 28, 2006, at 12 pm EST.

Another point of note is that there is no need to run the full SPEC tests if running a small subset gets the best peak believed to be possible. In the case of SPEC fp rate, the addition of the command line options "--size=test" & "-- rate" cuts the test time down to 8 minutes and reportedly (mileage may vary) has the same effect as running the entire test. Also, increasing the number of users proportional to the number of cores (likely cores x processors...) in the system will load each core with one instance of fp rate.

Following is the command line in its entirety.

```
runspec --config=intel_nt_visual_studio --iterations=3 --noreportable  
--size=test --rate --users=3 fp
```

Lastly, a request has been made to denote in the system info whether high or low density RAM was used. Please feel free to include such additional system information in the notes section when submitting any additional data. EPA will amend the workstation spreadsheet based on the feedback on the three bullets above, and will distribute an amended spreadsheet by Wednesday, June 28, 2006.

Please direct all questions specific to this data collection effort and next steps to Katharine Kaplan Osdoba (osdoba.katharine@epa.gov) or Thomas Bolioli at (617) 923-4132 or tbolioli@terranovum.com.