From: Bill Weihl [mailto:weihl@google.com]
Sent: Friday, March 14, 2008 5:38 PM
To: Duff, Rebecca M.
Cc: Erik Teetzel
Subject: Re: ENERGY STAR Draft 1 Server Specification

Rebecca,

Here are our comments on the draft spec. Please let us know if you have any questions about them.

Regards,
Bill
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1. We strongly support the inclusion of specific efficiency targets for server power supplies as a way to drive high-efficiency across the entire power supply industry and in the process drive down the cost of efficient power supplies. We encourage the EPA to align their targets with the targets adopted by the Climate Savers Computing Initiative.

2. For power supply criteria, we suggest specifying power factor at 50% load level rather than 100% load level.

3. We would be supportive of criteria that drive systems toward "right-sizing" the power supply so that it runs at a more efficient point on its load curve. Details here are obviously still to be determined.

4. It might be useful to specify a server by market rather than by physical attributes. Perhaps something like "a computer primarily deployed in datacenters". Our systems, for example, are designed holistically in concert with our data centers, and might not meet all the criteria in the draft definitions of a "server".

5. For idle power, it might make sense to publish a sequence of low power numbers, together with the latency to wake up from each of those low-power states.

6. Some of the draft material crosses the line from server manufacture to end user usage models. Utilization and idle ratio are not something that most manufacturers have control over. Those might make sense for a data center Energy Star spec, at least if it is intended to address the commissioning and operation of the entire facility -- but not for a server by itself.

7. The requirement for virtualization hardware support seems odd. Virtualization can be done in many ways, and the hardware support involved can vary from almost none (or even none in some schemes) to substantial. It seems that either this requirement will be so vague as to be meaningless, or it will rule out important solution approaches. We recommend eliminating this requirement. A recommendation for virtualization support seems fine; a requirement seems unduly restrictive.

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