Date: May 21, 2010

To: Una Song
         United States Environmental Protection Agency

CC: Evan Haines
         ICF International

From: Silicon Graphics International Corporation

Re: ENERGY STAR® Program Requirements for Computer Servers
         Draft 1 Version 2.0

This document may be published on the appropriate ENERGY STAR website.

SGI welcomes the opportunity to participate as a valued stakeholder in the development of the ENERGY STAR Program Requirements for Computer Servers Version 2.0 document and offers the following comments:

Line 213 iv) Blade Network Equipment [TBD]. The Network Equipment definition (lines 335-338) contains a good portion of the needed Blade Network Equipment definition.

Blade-based systems generally contain network interface adaptor/s on the blade server whose primary function is to pass data among various network interfaces (e.g. routers and switches) providing data connectivity among connected devices. Data connectivity is achieved via the routing of data packets encapsulated according to the Internet Protocol, Fibre Channel, InfiniBand, or similar protocol. The blade chassis may or may not contain integral routers or switches to provide a layer of the network fabric.

Line 262-264   The document states that a HPC system includes a larger number of memory controllers compared to a general-purpose computer server in order to maximize data bandwidth available to the processors. SGI agrees with the premise that maximizing local memory bandwidth to the processors is a key HPC system attribute, but disagrees with assertion that it requires a larger number of memory controllers. Today's COTS processors are equipped with embedded memory controllers which has the effect of making equal memory bandwidth possible between general-purpose compute servers and HPC systems.

Lines 438 Maximum Configuration may intuitively be interpreted to mean the highest power processors, fully configured and highest power DIMMs, fully configured IO, etc. It would seem possible that the maximum active mode efficiency result may be returned by a lower power processor and memory configuration.

Lines 440 Minimum Configuration may intuitively be interpreted to mean the lowest power processors, minimally configured and lowest power DIMMs, minimally configured IO, etc. It would seem possible that the minimum active mode efficiency result may be returned by a slightly higher power processor and memory configuration.

Lines 439 & 441 Active Mode Efficiency doesn't appear to be introduced in the document until Line 602. It might be helpful to add Active Mode Efficiency to the Definitions section (Line 161).

Respectfully submitted,

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