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Note: (continued from previous page)

Understanding that a class of media servers intended to host data but not applications does not fit the scope of the current Computer Server specification, and that a class of formerly Desktop-Derived Servers contain baseboard management capabilities unparalleled in this primarily client-based Computer Specification, the *Desktop-Derived* category has been redefined as the **Small-Scale Server with Desktop Components** category. With these definitions, it is the intent of EPA to a) prevent gaps in program coverage to the extent possible for AC powered computer products and b) provide appropriate requirements for products scoped under the two programs.

The changes in definition provided with this document are intended to cover a class of small and low-end server designed to store and distribute data to networked client computers and not to host applications for the clients. This represents a compute model common in homes and some small businesses, where the client computers host applications and processing resources locally, utilizing the small-scale server only for file access and backup purposes. As this type of small-scale server becomes more prevalent in the digitally-connected home, EPA believes it is important to minimize the energy consumption of these devices by recognizing those that minimize idle power and take advantage of low power modes to the extent possible.

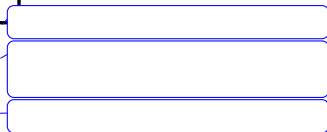
Finally, EPA is further considering digital front ends (DFE) devices for imaging equipment, currently subject to desktop-derived server requirements under the ENERGY STAR Computer Version 4.0 specification. Stakeholders have relayed that DFEs have different applications and different usage scenarios from products proposed for coverage by the ENERGY STAR Computer and Server Specifications. As such, stakeholders have proposed that tailored DFE requirements be developed and hosted in the Imaging Specification. EPA supports such an approach and will discuss a DFE definition and requirements (proposed for inclusion in the Version 1.1 Imaging Specification currently under revision) on a conference call **this Thursday, May 15, 2008, from 11:00am – 12:00pm Eastern**. RSVPs for this call should be directed to Bijit Kundu, ICF International, at bkundu@icfi.com. EPA anticipates that this call will be followed by subsequent discussion with stakeholders and interested parties are welcome to participate. Please let Bijit Kundu know of your interest.

G. **Game Console:** A stand-alone computer whose primary use is to play video games. For the purposes of this specification, game consoles must use a hardware architecture based on typical computer components (e.g., processors, system memory, video architecture, optical and/or hard drives, etc.). The primary input for game consoles are special hand held controllers rather than the mouse and keyboard used by more conventional computer types. Game consoles are also equipped with audio visual outputs for use with televisions as the primary display, rather than an external monitor or integrated display. These devices do not typically use a conventional operating system, but often perform a variety of multimedia functions such as: DVD/CD playback, digital picture viewing, and digital music playback.

H. **Integrated Desktop Computer:** A desktop system in which the computer and display function as a single unit which receives its ac power through a single cable. Integrated [desktop](#) computers come in one of two possible forms: (1) a system where the display and computer are physically combined into a single unit; or (2) a system packaged as a single system where the display is separate but is connected to the main chassis by a dc power cord and both the computer and display are powered from a single power supply. As a subset of desktop computers, integrated [desktop](#) computers are typically designed to provide similar functionality as desktop systems.

Note: The *Integrated Computer* product type has been changed to *Integrated Desktop Computer* here and in all other locations in the document to clearly reflect that this product type is a subset of the desktop computer category rather than one intended for portable use.

I. **Thin Client:** A computer [independently powered by an internal or external power supply](#) that relies on a connection to [remote computing resources](#) to obtain primary functionality. Main computing



(e.g. program execution, data storage, interaction with other Internet resources, etc.) takes place using the remote computing resources. Thin Clients covered by this specification are limited to devices with no rotational storage media integral to the computer.

Deleted: i

Deleted: e

Deleted: centralized server

Note: The revisions to the thin client definition were developed based on stakeholder feedback to Draft 1 and in a thin client conference call on April 21, 2008. Stakeholders on that call reached consensus around ENERGY STAR addressing only desktop thin clients, with mobile TCs left for future versions of the program. EPA is interested in Stakeholder thoughts on how this definition could be modified to clearly communicate this point based on products on the market.

This definition focuses only on the client devices. In the future, EPA intends to investigate potential intersections with the Computer Server Specification (e.g. a requirement for servers sold with ENERGY STAR qualified Thin Clients Computers to also be ENERGY STAR qualified).

- J. **Notebook and Tablet Computers:** A computer designed specifically for portability and to be operated for extended periods of time both with and without a direct connection to an ac power source. Notebooks and tablets must utilize an integrated monitor and be capable of operation off an integrated battery or other portable power source. In addition, most notebooks and tablets use an external power supply and have an integrated keyboard and pointing device, though tablets use touch-sensitive screens. Notebook and tablet computers are typically designed to provide similar functionality to desktops, including installation and operation of software in common with desktops, except within a portable device. For the purposes of this specification, docking stations are considered accessories and therefore, the performance levels associated with notebooks presented in Section 3, below, do not include them.

Note: The revisions listed above have been added to better delineate Notebooks/Tablets covered by this specification from Handhelds/PDAs. Stakeholders commented that a clearer split needed to be included and EPA believes that the modifications above effectively solidify the Notebook/Tablet category around products of similar capability to desktops that function through normal use on ac power in addition to portable operation.

- K. **Workstation:** For the purposes of this specification, to qualify as a workstation, a computer must:

- Be marketed as a workstation;
- Have a mean time between failures (MTBF) of at least 15,000 hours based on either Bellcore TR-NWT-000332, issue 6, 12/97 or field collected data; and
- Support error-correcting code (ECC) and/or buffered memory.

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

- Have supplemental power support for high-end graphics (i.e., PCI-E 6-pin 12V supplemental power feed);
- System is wired for greater than x4 PCI-E on the motherboard in addition to the graphics slot(s) and/or PCI-X support;
- Does not support Uniform Memory Access (UMA) graphics;
- Includes 5 or more PCI, PCIe or PCI-X slots;
- Capable of multi-processor support for two or more processors (must support physically separate processor packages/sockets, i.e., not met with support for a single multi core processor); and/or
- 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.

