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Comments on the Energy Star Imaging Equipment Version 2 Test Method Draft 2

Lexmark offers the following comments on the Energy Star Imaging Equipment Version 2 Test Method, Draft 2, Rev Nov-2011. Comments are divided into technical and editorial sections

Technical comments

- Lexmark supports the continued use of Monochrome test patterns for TEC testing as our testing has not shown significant energy differences between using color or monochrome printing in TEC testing. Continuing to use monochrome test patterns allow for more continuity between Test Method 1 and Test Method 2, and reduces test burden.
- 6.1.B - No direction is given as to what to do when a color product is incapable of printing in black text. Following the intention to use monochrome or single color printing or copying, we recommend the following changes.
“Color: Color-capable products shall be tested making monochrome images. If the color-capable product is incapable of rendering a black text test pattern, then the test pattern may be modified to be rendered in a single color consisting of a single toner or ink color plane.”
- 6.1.C.3 - Lexmark opposed the additional requirement in 6.1.C.3 as many manufacturer’s lab, which make up the bulk of imaging equipment certification testing, use connections to WANs/Internet. This is usually done to allow for data integrity backups of the testing systems and easy access to print drivers in development. Limiting testing to only LAN connections is an overly restrictive requirement that will reduce the integrity and quality of the testing systems currently in place.
- 6.1.c - Table 6
 - Lexmark is okay with having 1 table for all products, but we question the appropriateness of mandating Wireless as the lowest possible connection. This does not seem representative of consumer use.
 - Lexmark also recommends clarifications on Table 6 such that the external test lab understands that network and data connections are determined by the functions available on the product under test
- 6.1.c.4 - Energy Efficient Ethernet.
 - The addition of 1 GB ethernet and IEEE 802.3AZ will affect the existing measurements for products. In the case of GB ethernet, this will increase the power for some products as the NIC power is based on frequency of the ethernet line. In the case of IEEE 802.3AZ, this will reduce the power of some products.
- 6.1.d - Lexmark strongly supports this change to disable maintenance and calibration modes prior to testing.
- 6.2.b - Lexmark is confused by the statement, “Unless sending jobs via phone line” - this sentence is in the fax setup section - We are unclear as fax machines are required to be connected and tested by a phone line.
- 7.A.1.B - Print Driver Settings - Lexmark believes that print driver settings can affect the energy

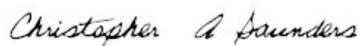
consumption of products under test. This can be affected if the incorrect paper type is chosen in the print driver. In this situation, it needs to be understood that the key driver parameters will change with each test voltage and will not be consistent across the testing of a single model.

- 7.A.5 - Preconditioning
 - Lexmark does not see a benefit to the preconditioning of EP products. The product can achieve the same result by sitting in the unpowered state prior to testing. This requirement would be an undue burden on test laboratories add substantial additional time to the testing. Lexmark recommends removing the 2 hours before each test and replacing with a requirement that the UUT is placed in the laboratory environment for at least 4 hours prior to the start of testing.
- 8.1.b - Equation 2 - Lexmark appreciates the correction of this equation to match table 11.
- 8.1.d-Print Jobs
 - Add inclusion of fax line for sending print jobs to fax machines
- 8.2 - Measurement procedures
 - Note that Table 8 and 9 are not the same units as the OPS database.
 - Active time should be in seconds, not minutes.
 - In addition, please include resolution requirements for the others units. How many significant digits shall be recorded for each wh and time measurement?
- 9.1 - OM Test procedure
 - Lexmark supports the user of average power or accumulated energy for sleep power. We do not support the use of instantaneous power.

Editorial Comments

- Numerous sections are inconsistent with numbering. After the section headers, the document does not follow a pattern with the rest of the organizational headers. Some are numbers (6.2.a.1), while some are letters (7.a.1.i)
- Table 1
 - ensure that this table does not span multiple pages
 - Include a footnote directing the the reader to look at the definitions section for clarifications on the marking technology
- Pg 4, line 63 - Edit the note to indicate that other time recording options are available. - "Time Measurement: Time measurements may be performed with a standard stopwatch *or other time keeping mechanism* with resolution of at least 1 second."
- 6.1.d - pg 8 - the sub points are in letters, all others are numbers.
- 8.2.a.1 - add statement that paper must also adhere to requirements in table 4
- Table 8, 9 and 10 - Lexmark recommends that Energy Star ensure that the units in the test method are the same as in the OPS system.
 - "Active" times should be specified in units of seconds, not minutes

Regards,



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