Océ Technologies BV

Memo

Venlo, 30 November 2011

from
Jos Beekwilder

reference
JBEE|11-0275

to
C. Kent (EPA)
M. Malinowkski (ICFI)

subject
**Comments to draft 2 revised test method
(ENERGY STAR for Imaging Equipment)**

Introduction

Océ Welcomes the opportunity to provide further comments on the draft Test Method for Determining Imaging Equipment Energy Use, Version 2.0. In general, Océ postitively appreciates that numerous comments provided by industry on the previous version have been taken into account. However, a small number of concerns are remaining, all focussed on the need for maximum clarity of the Test Method and avoiding ambiguity.

The below comments will be focussed on topics that are of concern for Océ, for other topics, it can be assumed that Océ does not have any feedback.

Detailed Comments

Measurement uncertainty (lines 58-62)

Océ would like to bring to EPA's attention that the accuracy requirements proposed here are more strict than the accuracy requirements in IEC62302, Ed 2.0. The IEC standard uses an uncertainty not less than 0.02W or 2%, whichever is bigger. This is a change from the previous draft of the test method, that referred 1:1 to IEC62301 Ed. 2.

Océ requests to use the IEC62301, Ed. 2 uncertainty requirements, because these are accepted globally and it is difficult to find power meters that are fit to do the TEC and OM measurements (i.e have the appropriate range of power levels and are sufficiently accurate) with the requirements currently in lines 58-62.

Network connections (line 115-123).

Océ welcomes the requirement to use only one network connection during the test. This is much more clear than the requirements in previous versions of the test method. However, there is a remaining question: the energy consumption in sleep mode of a product may be dependent on the level of activity on the network, i.e. the activity on OSI level 5 (application level), especially for the ethernet and WiFi connections. If the test labs have different levels of activities on their test network than the verification labs, this will lead to different results of sleepmode power.

Océ requests EPA and DOE to specify that no communication takes place on OSI level 5 over the network, apart from the print-jobs that need to be sent for the TEC tests (if applicable). Though this may not be the realistic situation, we think that it is the only way to create uniform test conditions across

laboratories without specifying circumstances that are related to certain types of network software or proprietary applications..

Further, related to subclause 6.1 C) 2) on line 118, we propose to require that the "topmost available connection" includes optional connections available for the product. The inclusion of optionals is needed to create uniformity in testing conditions as well, as the type of network connection will have impact on the power level of the product.

Connection to a computer (line 164).
The current text suggests that the requirement to use the latest driver version in default settings only applies if there is a direct connection (e.g. USB, RS232) between the computer and the printer, and does not apply when the printer communicates with the imaging product over a network (like ethernet). It is proposed to change the text into "if the product is connected to a computer during the test, either directly or via the network, the computer shall be ….." (etc.).

Auto-off for TEC products (line 190).
Océ finds it strange that an energy saving feature (auto-off) must be disabled during the test. Moreover, the requirement in line 190 is in contradiction with the requirements in step 10 of table 8 and 9, where it is required to take into account the auto-off mode. Océ can understand that DOE and EPA do not want the auto-off feature to interfere with the TEC test procedure (earlier steps of the tables 8 and 9) . In order to accommodate this, it is proposed that this requirement is changed to the effect that the auto-off feature will not appear within 1 hour from the moment the product goes into sleep, or within the timeframe of any of the steps 1-8 of the tables 8 and 9.

Sending Print jobs (line 225).
It is requested to clarify if print jobs have to be sent to the product over the network immediately prior to printing, i.e. during the test cycle. Products having an electronic mailbox may have the job in this mailbox waiting to be printed without network interaction. Especially for products evaluated under the TEC test procedure, the network traffic may affect energy consumption during the test. For this reason, Océ would like to see clarified when these jobs should be sent: either prior to each job, prior to the first job or at an arbitrary moment in the beginning of the test cycle.

Unit preconditioning in the test tables (lines 259, 261, and 279).
The test method requires a 2 hour preconditioning period. For optimal clarity, it is requested to insert the preconditioning period above the first rows of into the tables 8, 9 and 10 that list the test procedures.

Default delay time measurements (line 279 and 289)
Océ understands that the default delay time measurement starts at the end of the print-job, not after the measurement of the ready power. It is proposed to change the requirement into: *Default delay times are to be measured in parallel fashion, cumulative from the end of step 2.*

DFE testing (chapter 10, line 300).
Line 300 states that following retesting "DFE energy consumption requirements may be proposed". This sentence in the draft text of the test method suggests that DFE energy consumption requirements will not be proposed until the revision of the ENERGY STAR requirements that follows after version v2.0. Océ

requests clarification on the status of the DFE requirements in version 2.0 of the ENERGY STAR program requirements for imaging equipment.

For the purpose of clarity, Océ would like to understand if DFE testing has to be done with the DFE connected to a separate power meter from the main imaging product during testing of both the DFE and the engine, (2 power meters would be needed). Especially for the proposed type B DFE's (no separate power cord) it is important to know how to ensure that the DFE power is not included in the power measured for the main product.

Different results for type A and B DFE's (lines 304-310).
The power results found for type A (AC powered) and type B (DC powered) DFE's will be different, because power losses in AC-DC conversion are not included in the type B DFE results. Océ requests that EPA clarifies that the results of type A and type B DFE's will not be directly compared with the same power limits.

Incentives to encourage ProxZzzy technology (note below line 320).
Océ requests clarification as to what would be the incentives to encourage ProxZzzy technology. Further it is requested to understand why DOE and EPA are encouraging a specific technology, while there may be other ways to save energy during sleepmodes of DFE's, Focussing on a single technology for energy efficiency might frustrate alternative technologies to achieve the same level of energy efficiency. It would be preferable to refer to ECMA 393, that describes a framework of functionality defined as ProxZzzy.

Conclusion

It is concluded that the 2nd draft test method for ENERGY STAR for imaging equipment has resolved a number of ambiguities present in the 1st draft. Hoewever instead of these, new issues have returned, such as the accuracy requirements for power meters, the set-up of network connections and ambiguous requirements for DFE-testing. In order to avoid different results in tests done by different laboratories, Océ wants to urge EPA to resolve these ambiguities in a pragmatic way.