To whom it may concern,

Conexant Systems has concerns regarding the proposed power allowances for primary functional adders as stated in Table 1 of the document "ENERGY STAR Imaging Equipment Version 2.0 Draft Test Method Cover Memo." There is some inconsistency in the rate of reduction amongst the six primary adder categories. This points to some detailed analysis that must have been done in each of the six categories that led to individualized reduction factors. It would be helpful to see this analysis.

The specific concern lies with category "D. Wireless LAN." This category receives the highest rate of reduction yet the complexities of its support in sleep mode vary depending on the wireless protocol.

The first concern is the categorization of Bluetooth and 802.11 in the same class. Bluetooth is a low bandwidth wireless protocol. IEEE 802.11 is a higher bandwidth protocol and contains multiple tiers of bandwidth via the versions a, b, g and the various MIMO configurations of 802.11 n. In the very same way that wired categories A, B and C are broken into bins based on bandwidth, a similar scheme should be considered for wireless LAN. This would allow EnergyStar to differentiate sleep allowances for wireless based on bandwidth with the goal of capturing more higher bandwidth devices under the EnergyStar guidelines.

The second concern is the reduction amount for wireless LAN. The wireless LAN category sees the biggest drop, one sixth of the current sleep allowance. The average reduction for the other five categories is about 35% of the current allowance. It is not clear why the wireless LAN category is more heavily impacted in the proposal. The current proposal is fair for the low end of the wireless LAN bandwidth spectrum but not so for the high end of the wireless bandwidth spectrum.

The third concern is technical in nature. Wake from sleep in a wireless 802.11 environment requires digesting just as much traffic as normal, non-sleep operation. There is very little power which can be saved. As wireless networks in home and office environments get more crowded with the proliferation of wireless devices it becomes more difficult for the imaging device to ever achieve a sleep power state that is differentiated from active. As such the test procedures should be updated to reflect the construction of the wireless network used in test so that power consumption of wireless imaging products as measured by EnergyStar testing can be adequately predicted in the product design processes.

The final concern covers the broader topic of product development timelines. System on a chip controller and image processing silicon solutions for MFDs require development cycles of 1.5-2 years from inception to shipping product. MFD systems vendors require an additional 1-2 years to reach production once silicon is in hand. While silicon vendors strive to reduce power consumption with each silicon generation, large steps are difficult to digest in the short term but manageable given adequate notice. We hope that EnergyStar considers the realities of long MFD product development cycles in its future plans.

Sincerely,
Mike Schaffstein
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