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Sent: Friday, December 28, 2012 12:35 PM
To: imagingequipment@energystar.gov
Subject: ENERGY STAR Imaging Equipment Specification Final Draft Version 2.0 Comments
Attachments: X56BR-01U.pdf; copier_iRADV_C5000Srs_SpecSht_ReadOnly.pdf; iRADVC5200Srs_SpSht_ReadOnly.pdf; GX400_Brochure_Read-Only.pdf

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To whom it may concern:

Electronics For Imaging (EFI) has been a long term stakeholder in the ENERGY STAR Imaging Equipment Specification process, and we are deeply concerned that if the proposed version 2.0 final draft Imaging Equipment Specification were to become final, it could force a number of third party Digital Front End (DFE) manufacturers, including EFI, out of the DFE market. Our concern is centered on paragraph 2.2.2ii (page 6, line 219) which excludes Imaging Equipment that can be sold with multiple DFEs from receiving ENERGY STAR certification. Please be aware that ENERGY STAR certification is a requirement for a product to be considered for purchase by the U.S. Federal Government, as well as various state, local, and foreign governmental bodies that leverage the U.S. Federal purchasing guidelines. Therefore being excluded from the ENERGY STAR program is equivalent to "failing to meet" ENERGY STAR certification, which eliminates the product from purchase consideration.

Immediately following paragraph 2.2.2ii is an informational note which states the reason for excluding imaging equipment sold with multiple DFEs was due to a lack of information concerning the "prevalence of these products in the marketplace and clear understanding of the effect of using two DFEs on energy consumption." While we have stated in the past that we believe the type of information being requested by EPA should come from the Imaging Equipment manufacturers, since it is their equipment that receives ENERGY STAR certification and they are responsible for how the product is configured for sale, the issue concerning paragraph 2.2.2ii is too important to wait for their reply. The following presents information gathered from the Canon and Xerox websites to illustrate the ramifications that paragraph 2.2.2ii could have on these products. Note, Canon and Xerox were chosen simply because the information required was readily available on their websites, in other words other Imaging Equipment manufacturers may face similar issues.

- **Xerox Color 550/560 Printer Brochure (enclosure X56BR-01U.pdf)** – According to Xerox's website, this printer is a multifunction device that provides professional color in an office environment. And it can be configured to perform a wide range of operations from simple printing (cover page photo), to a system that has multiple finishing options (page 5). The brochure also states that the Xerox 550/560 Printer is environmentally friendly (page 3). This appears to be a product that would be widely accepted in the market, and is probably a major seller for Xerox. But unfortunately, the Xerox Color 550/560 Printer supports five different DFEs (i.e., "Xerox Integrated Color Server and four other server options", "Choice of print servers allows you to boost color management and streamline labor-intensive processes ", pages 2 and 6) which therefore excludes this product from receiving ENERGY STAR certification. In addition, according to the specifications for the "Xerox Integrated Color Server" (page 8) the integrated controller is responsible for driving the "10.4" color, touch screen flat-panel display" and continues to perform scan functions, including scan to email or network folder, even after an external print controller is connected to the system (i.e., a system where a Type 2 DFE (integrated controller) and Type 1 DFE (print server option) can be connected and operated in concert). A configuration which is also excluded from ENERGY STAR certification based on the note appearing on page 6 of the proposed ENERGY STAR Imaging Equipment Specification.

- **Canon imageRUNNER ADVANCE C5051 Color Copier (enclosure copier_iRADV_C5000Srs_SpecSht_ReadOnly.pdf)** – Like the previous example, this copier is also marketed as

office equipment and contains an integrated printer controller that uses a "Canon Dual Custom Processor" (Print Specifications, Processor, page 2) which is "shared" between other copier functions (Type 2 DFE). And an optional "imagePASS-B1" printer controller (Type 1 DFE) can also be connected to this copier. As with the Xerox printer, this copier is also excluded from ENERGY STAR certification because it supports multiple DFEs, and given the shared nature of the integrated print controller, the Type 1 DFE and Type 2 DFE could be operating simultaneously or the Type 1 DFE could be sleeping while the Type 2 DFE performs tasks unrelated to the Type 1 DFE's purpose, for example scanning to email or a network folder (Universal Send Specifications, Sending Method, page 2).

- **Canon ColorPASS-GX400 (enclosure GX400_Brochure_Read-Only.pdf)** – The purpose of this example device is to show that Canon also sells DFEs as stand-alone options. In fact, the Canon website lists three Color Copier Print Controllers, the ColorPASS-GX200, ColorPASS-GX300, and the ColorPASS-GX400. And in the example ColorPASS-GX400 case, it is designed to connect to a imageRUNNER ADVANCE C5255. But a major difference here is that while the imageRUNNER ADVANCE C5255 (enclosure iRADVC5200Srs_SpSht_ReadOnly.pdf) contains the same internal print controller (Type 2 DFE) as the ENERGY STAR excluded imageRUNNER ADVANCE C5051 Color Copier listed above, the specification for the C5252 does not list the ColorPASS-GX400 as an option. Which means that the imageRUNNER ADVANCE C5255 can receive ENERGY STAR certification because it is not technically sold with multiple DFEs. Though a second DFE (ColorPASS-GX400) could be added at a later date or on a separate sales/purchase order.

Hopefully the examples above have presented sufficient evidence to show that an Imaging Equipment supporting multiple DFEs may be common, and that in most cases an external Type 1 DFE may be working in concert with an integrated Type 2 DFE. Which leads us to the second concern noted on page 6 of the proposed ENERGY STAR Imaging Equipment Specification, and that is the "effect of using two DFEs on energy consumption." The approved Imaging Equipment test methodology only measures/reports DFE "Ready Mode Power" or "Sleep Mode Power", not active power. Therefore the amount of power consumed while the system is in ready or sleep mode is the sum of the ready or sleep mode power for all connected DFEs. Now there may be a case in a multiple DFE configuration where the external Type 1 DFE is sleeping while the Imaging Equipment and internal Type 2 DFE are in active mode (e.g., a scan to a network folder is being performed). While this and other similar cases where some parts of the system are sleeping while other parts are active may occur, these cases are probably not high on the purchaser's mind when trying to decide which system to buy. Therefore, these cases should not be used to exclude multiple DFE Imaging Equipment configurations from receiving ENERGY STAR certification.

From previous DFE conference calls and other DFE related ENERGY STAR discussions, it seemed the primary reason for wanting to exclude Imaging Equipment products that could be connected to multiple DFEs was not knowing how to report the data. We believe there is a simple solution to this problem and that is that each Type 1 DFE has its data reported separately from the Imaging Equipment (i.e., each Type 1 DFE has its own database row), and that the data for the highest power consuming Type 2 DFE that can be integrated into an Imaging Equipment model be reported with that Imaging Equipment model. This technique allows for multiple Type 1 DFEs to be associated with an Imaging Equipment model, through the Imaging Equipment manufacturer's documentation, and if a potential customer wants to know the power consumption of a specific Type 1 DFE they simply look it up by name (e.g., ColorPASS-GX400). Please note that no change is required to either the test method or test reporting template to support this proposal for allowing Type 1 DFEs to have their own database entry.

Now assuming the information and proposed solution (i.e., allowing Type 1 DFEs their own database entry) are sufficient to permit the removal of paragraph 2.2.2ii, a possible inequity may need to be addressed related to which DFEs must be tested. Specifically the requirement that a Type 1 DFE only needs to meet DFE_{TEC} if it is "sold with or as an option with the Imaging Equipment product at the time of purchase." For example, in the case of the Canon ColorPASS-GX400, it does not need to meet DFE_{TEC} since it is not a option for the imageRUNNER ADVANCE C5255; but the DFE sold with the Canon imageRUNNER ADVANCE C5051 Color Copier must meet DFE_{TEC} because it is sold as an option. In addition the phrase "time of purchase" is vague and open to wide interpretation, for example, if a customer were to sign a purchase order that contained the imageRUNNER ADVANCE C5255 and ColorPASS-GX400, would the ColorPASS-GX400 now have to meet DFE_{TEC} since they were both sold at the same time (i.e., is the ColorPASS-GX400 an option to the imageRUNNER

ADVANCE C5255 even if it is not listed on the imageRUNNER ADVANCE C5255 specification, since it can only be connected to that model copier)? Plus there is also the issue where a dealer may bundle an Imaging Equipment with a DFE, a configuration not intended by the equipment manufacturer, and then offer that package for sale. Technically under the ENERGY STAR Imaging Equipment specification, the Imaging Equipment and DFE are being sold together and at the same time, so does this combination mean that the Imaging Equipment loses its ENERGY STAR certification because the DFE has not been tested to see whether it meets the DFE_{TEC} requirement? To prevent confusion, we recommend that all Type 1 DFEs be tested and reported to the ENERGY STAR Imaging Equipment database. We know from previous ENERGY STAR Imaging Equipment discussions that the primary reason for adding the "option" and "time of purchase" language was to not place an undue test burden on third party DFE manufacturers. But it is our belief that third party DFE manufactures may find themselves losing business because they would constantly need to explain why their DFE does not need to meet DFE_{TEC} to potential customers or purchasing authorities (assuming they even become aware that not being tested to verify their products met DFE_{TEC} was the reason sales dropped).

At the beginning of these comments I mentioned retaining paragraph 2.2.2ii could force third party DFE manufacturers out of business, without providing details. Now that the other issues related to paragraph 2.2.2ii have been presented, the following attempts to explain how retaining paragraph 2.2.2ii could destroy the Type 1 DFE market. Imaging Equipment manufacturers are not going to allow any of their products that meet ENERGY STAR Imaging Equipment Specification energy criteria to be excluded from ENERGY STAR merely due to the offering of multiple DFEs. Therefore, these Imaging Equipment manufacturers will simply remove the multiple DFEs from their product documentation and price book. While on the surface, this action may appear to have negligible impact on Type 1 DFE manufacturers, since the Imaging Equipment Dealer could simply write two purchase orders (one for the imaging equipment and the other for the Type 1 DFE), or the third party DFE manufacturers could sell directly to the imaging equipment purchaser. The reality is that very few DFEs are sold post imaging equipment purchase, due to the fact that the purchaser wants a single lease and service plan that covers all aspects of the imaging equipment (i.e., the purchaser wants to make a single payment, and if the purchaser decides to upgrade their copier to a more efficient model prior to lease end, they don't want to be stuck with a DFE that is incompatible with the new copier). If the DFE and Imaging Equipment cannot be leased/sold together, then third party DFE sales will drop, possibly to the point where it no longer makes sense to continue manufacturing Type 1 DFEs.

It is our hope that the information presented above is sufficient to get paragraph 2.2.2ii removed from the final "ENERGY STAR Product Specification for Imaging Equipment Specification", version 2.0. But if it should remain in the final specification, EFI reserves its right to challenge the final rules in all applicable regulatory and legal venues. Should you require further information to support our position, or you would like to discuss alternative solutions, please let me know. Also all information presented here can be placed on the public ENERGY STAR website for review.

Regards,

Brett

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