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Ms. Katharine Kaplan
EPA Product Manager
ENERGY STAR for Consumer Electronics
United States Environmental Protection Agency
1310 L Street, NW
Washington, DC 20005

Dear Ms. Kaplan,

Thank you for inviting us to provide comments on the ENERGY STAR program requirements for Service Providers and Manufacturers of Set-top Boxes (STBs). Based on the review of the draft 3 of the ENERGY STAR STB technical specifications, the meeting on February 1, 2008 in Washington D.C., and the follow-up conference call on February 5, 2008, below are Verizon's comments on three issues:

1. Service Provider document: Line 100:

- **Original text:** The ENERGY STAR mark must be displayed as part of the auto power down notification, or at another event/location proposed by partner and approved by EPA in advance of distribution to subscribers."
- **Verizon Comments:** We support the view of those who stated that graphics/on-screen display over compressed digital interfaces is problematic in that available capacity on display devices is scarce. Verizon does not believe that a manufacturer should be required to expend the resources to render a logo for 5 seconds once or twice a day where the STB does not display any other graphics over the interface.
- **Verizon Proposed change:** We support the view of those who stated that a qualified STB is not required to display the ENERGY STAR mark over compressed digital interfaces (e.g., IEEE-1394) as long as the ENERGY STAR mark is displayed in the case of all other uncompressed outputs, where the STB does not normally support on-screen display or graphics over said compressed digital interface and the STB has at least one uncompressed output.

2. **Manufacturer document:**

Line 290:

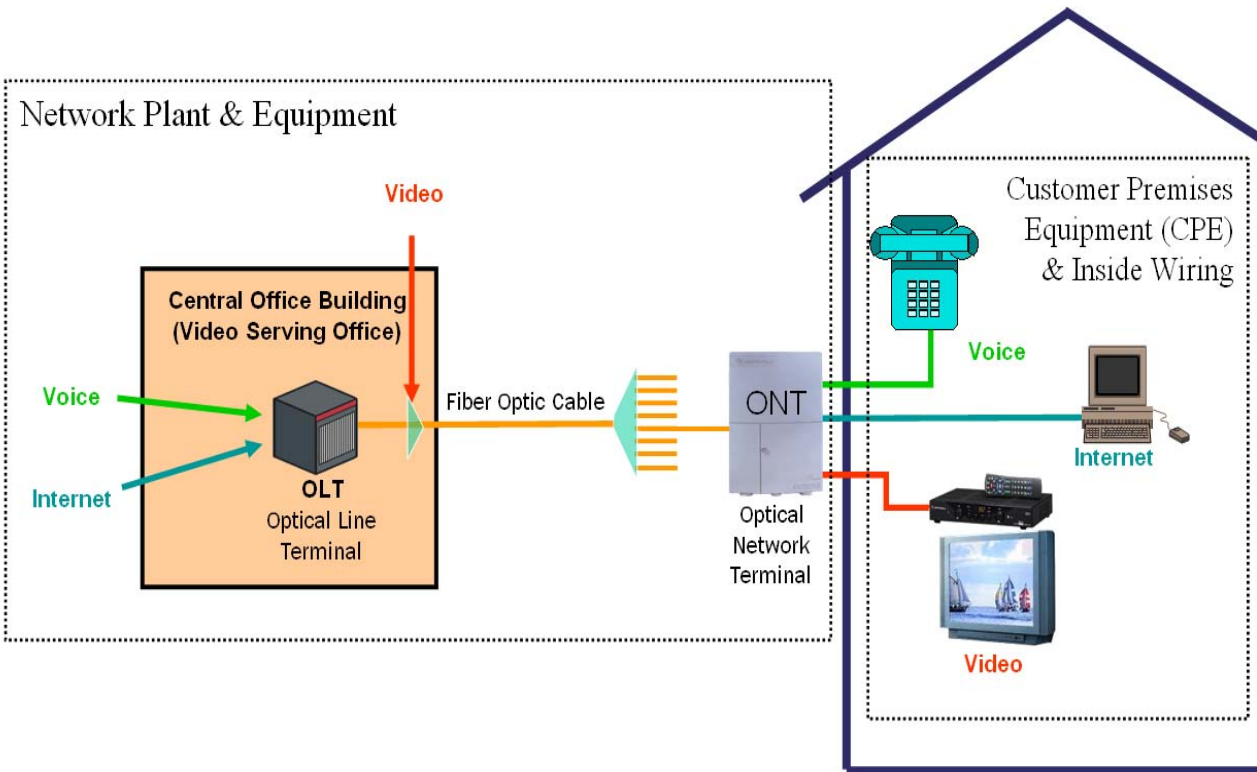
- **Original text:** S. Gateway STB: A STB that meets the definition for Cable, Satellite, IP or Terrestrial STB above and is capable of providing independent content to multiple TVs.
- **Verizon Comments:** We support the view of those who stated that a Gateway STB should be considered unique from other STB types. This type of consumer premises equipment inside the end user's home includes a home network interface which interacts with other equipment or the home network in the end user's home. This additional functionality, which may require additional power, distinguishes these devices from other STBs.
- **Verizon proposed change:** S. Home Network Interface: Technologies (e.g., MoCA, 802.11, 802.3u, HPNA, etc) utilized to connect the STB to a service provider and /or an end user's home network and/or to create a home network within the end user's home.

Line 437:

- **Table 2:** In a related matter, we support the view of those who stated that to account for the energy contribution of a home network interface, such as MoCA and WiFi that are used in non-Gateway set-top boxes, add "Home Network Interface" to Table 2 and assign a value of 35 kWh/year under the Tier 1 column. Tier 2 value TBD. Add a note indicating that this allowance would not apply to Gateway devices.

3. **Optical Network Terminal (ONT)**

As we discussed at the 2/1 meeting, as well as on the 2/5 call, the ONT is an integral part of Verizon's FiOS network, much more analogous to the neighborhood nodes used by cable operators in the hybrid-fiber-coaxial networks than to the STBs those providers' deploy. It is at the ONT – typically attached to the side of a subscriber's home – that Verizon's fiber network terminates so that all services delivered over the fiber network may be translated from the optical signals to electrical signals that are delivered to the customers' home equipment (*e.g.*, telephones, computers, routers, STBs, television sets). The ONT's place in Verizon's network architecture is reflected in the following diagram.



A FiOS customer must have an ONT to receive any services over Verizon's fiber network. Thus, an ONT must be installed for voice or data customers, even if they do not subscribe to Verizon's FiOS TV video services. Likewise, a FiOS TV customer has only one ONT, regardless of how many television sets are attached to Verizon's video service. Unlike the STBs that FiOS TV subscribers typically rent from Verizon, Verizon does not consider its ONT to be customer premises equipment and does not rent or sell ONTs to customers. In fact, under the Federal Communications Commission's regulations, Verizon considers the ONT to be the "demarcation point" for Verizon's services. As such, the ONT includes separate operator and customer access areas at the ONT, and any facilities on the customer's side of the ONT are typically the customer's responsibility, while the ONT and all facilities moving away from the customer's home are considered network equipment.

The ONT performs several technical functions for each of Verizon's services. Included among them are optical-electrical signal conversion, signal and service multiplexing/demultiplexing, Operations, Administration and Maintenance (OAM) functions, and service conversion and interface functions. In short, however, the ONT is the interface between Verizon's fiber network and the end-user's sub-network. The ONT thus receives the optical signals sent from Verizon's central office, and converts them into the appropriate format for delivery over the end user's inside wire and use by the customer premises equipment within the customer's home. So, for example, if a customer subscribes to FiOS TV, the customer's STBs typically are attached to the ONT via coaxial cable and receive the video signals in much the same way that a traditional cable operator's STB receives signals delivered from the neighborhood node. Likewise, the

customer's telephones and computers/home network also are attached to the ONT using CAT-5E and/or RJ11 wiring in order to receive the appropriate signals for voice and data services.

As this makes clear, the ONTs deployed by Verizon are an integral piece of network equipment, much more similar to the nodes used by traditional cable operators, and should not be considered a STB for purposes of the EPA's Energy Star standards.

If you have any questions or need additional information, please do not hesitate, to contact me.

Regards,

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