

January 25, 2010

Kathleen Vokes  
ENERGY STAR Set-Top Box Program  
U.S. Environmental Protection Agency  
1310 L Street, NW  
Washington, DC 20460

Subject: Set-top Box Specification Revision Supplemental Comments from DIRECTV

Dear Kathleen:

DIRECTV offers the following comments regarding the ENERGY STAR Set-top Box Specification Revision, which supplement those provided in a letter to you dated December 11, 2009. International CES 2010 proved to be an excellent opportunity to witness DIRECTV's progress in a number of set-top box development initiatives, and these additional comments are provided in that context.

### **Multi-room DVR and Advanced Home Networking Allowances**

In the December 11 letter, DIRECTV declared that in the next 2-3 years a great shift in DIRECTV's product deployments would occur. At CES 2010, prototype set-top boxes were unveiled for the first time that implement our new multi-room HD-DVR architecture featuring the new RVU remote user interface technology standard ([www.rvualliance.org](http://www.rvualliance.org)). Thin HD client prototypes as well as prototype HD televisions were shown operating with a prototype DIRECTV Home Media Center server, using live DIRECTV feeds, at a variety of locations around the show. These prototypes were connected in most cases via the MoCA Advanced Home Networking technology ([www.mocalliance.org](http://www.mocalliance.org)); however some were connected via simple Ethernet and in one case, at Airgain's suite ([www.airgain.com](http://www.airgain.com)), connected via their innovative wireless Advanced Home Networking solution.

The energy savings achieved by allowing HD and DVR services to be available throughout customers' homes without the need for an HD-DVR at each television will be great. Even greater energy savings will be achieved over time as, assuming success of the RVU standard, fewer and fewer set-top boxes will be needed at all.

These demonstrations also underscore some important points that are relevant to the ENERGY STAR STB Allowances:

- Multi-room products invariably support a baseline Ethernet network capability, however they do not all necessarily have Advanced Home Network capabilities. As a result, the energy allowances for Multi-Room STBs and thin-client/remote STBs must

account for integrated Ethernet support, but should not have an allowance for Advanced Home Network capability built in.

- Advanced Home Networking technologies are still in a phase of rapid innovation and the implementation of these technologies in set-top boxes in a manner that is both fully integrated and incorporates customer friendly power management features is still a generation or two away.

DIRECTV recommends that not only must Advanced Home Networking be available as an additional functionality for Multi-Room STBs and thin-client/remote STBs, but any steep drop in the the annual energy allowance for this (e.g. from 20 kWh/yr to 10 kWh/yr) would not be appropriate until a later revision of the guidelines. Specifically, DIRECTV requests the following edits to the STB Program Requirements:

- **Definition L. Advanced Home Network Interface**: delete the sentence “This allowance can be applied only to devices that are NOT Multi-Room or thin client devices (as the network capability of those devices is already accounted for in their allowances).”.

- **Table 2**: Replace “Home Network Interface” with “Advanced Home Network Interface”, and replace “10” in the last column with “20”.

### **Version 3.0 Effective Date**

DIRECTV continues to support delaying the effective date of Version 3.0 for the reasons given in the December 11 letter. Furthermore, DIRECTV continues to support the broader industry request for a delay as described in the December 3 presentation from Bill Belt of CEA.

That said, a concern has been expressed that a delay of more than a year results in the current Tier 1 limits being left in effect for too long. One way to address this concern would be to introduce a new interim phase that could demonstrate continued ENERGY STAR progress in driving energy efficiency prior to the substantial improvements represented by the current draft Tier 2 limits. This possible new interim phase could be very simple to develop: for example, it could be patterned after the “SAVE MORE” utility programs that promote purchases of television models meeting “ENERGY STAR + 15%”. DIRECTV is prepared to support discussions with EPA and STB program stakeholders about a possible “ENERGY STAR Tier 1 plus [TBD]” interim phase for STBs.

Sincerely,

Steve Dulac  
Director, Engineering