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Via email only: stbs@energystar.gov

United States Environmental Protection Agency
Attention: Katharine Kaplan
Manager, Energy Star Product Development and Program Administration
Office of Air and Radiation
Washington, D.C. 20460

**Re: January 23, 2014 Final Draft Energy Star Version 4.1 Specification
for Set Top Boxes**

Dear Ms. Kaplan:

AT&T Inc. (“AT&T”), on behalf of itself and its affiliates, respectfully submits these comments in response to the U.S. Environmental Protection Agency’s (“EPA”) January 23, 2014 request for comments on its Final Draft ENERGY STAR Version 4.1 (“Final Draft”) Specification for set top boxes (“STBs”).

A. Introduction.

Through the open-stakeholder process, the EPA has succeeded in constructing specifications for set top boxes in Version 4.1 that promote energy efficiency without compromising the consumer experience. The EPA appropriately considered the exchange of ideas and information between itself, product manufacturers, service providers, and other parties to set a standard that reflects current technology and, at the same time, supports innovative advances in this industry.

These brief comments address two proposed sets of edits to the Final Draft. First, the notation used to identify spatial streams for MIMO requires further clarification for both the specification and expected common usage. Second, sections 3.3.1 and 3.3.4 of the Final Draft appear to contain erroneous parameter names and equation information possibly due to a corrupted file.

A. Clarification of MIMO notification.

The Final Draft should include a definition of the notation used to define MIMO. Specifically, AT&T recommends adding the following text at Section I.D.4.i, titled, “Multi-Input Multi-Output (MIMO) Wireless NHI:”

When using the notation MIMO $A \times B$: A is considered the number of spatial streams where B is the number of antennas supported. A

spatial stream is an independent and separately encoded data signal.

With this clarification, AT&T also recommends deleting the parenthetical on lines 53-54 and footnote 3.

The WiFi functionalities listed in Table 3 should also be modified to reflect the means by which the MIMO Wi-Fi HNI allowance would apply. AT&T recommends the following edits:

Additional Functionality (Current Version)	Proposed Modification
MIMO Wi-Fi HNI: 2.4 GHz Stream	MIMO Wi-Fi HNI: for each 2.4 GHz Spatial Stream
MIMO Wi-Fi HNI: 5 GHz Stream	MIMO Wi-Fi HNI: per 5 GHz Spatial Stream

B. Correction of equations.

The equations in sections 3.3.1,¹ 3.3.2² and 3.3.4³ of the Final Draft appear to contain errors, such as missing operators and inconsistency in subscripts to variables. This may be an isolated issue of file corruption only experienced by AT&T. Nevertheless, out of an abundance of caution, AT&T suggests that Energy Star verify that its master version of the specification is free of corruption and that subsequent downloads do not contain erroneous formulas.

C. Conclusion.

With adoption of the foregoing modifications, Version 4.1 shall become an appropriate set of standards for STBs that reflect state of the art performance judged technically feasible given current technology. AT&T appreciates the opportunity to work with the EPA and industry participants in finalizing these specifications.

Sincerely,

/s/ _____
Anna Kapetanakos

¹ See Lines 223-234.

² See Lines 239, 250-260, and Table 1 at 262.

³ See Line 324.