

# NRDC Comments on Draft 2 Version 5.0 ENERGY STAR Computer Specification 9/14/08

Dear Katharine/Tom,

I just completed a cursory review of the game console portion of the draft computer specification and offer the following for your consideration. I'd appreciate it if you would forward these to the manufacturer stakeholders for their input/improvements.

## AUTO POWER DOWN

Ideally the next generation of consoles and games allows the user to save a game at any point (even if they are in the middle of a level, etc.) and for the box to be equipped with an auto power down feature that goes into effect after an extended period of time (1 hour?). This feature should come enabled from the factory and not require the owner/user to "opt in" as Microsoft's current system requires. After the box powers down the device would use very low levels of power but be ready for an input from the controller to resume play, receive an update or movie/game download online, etc.

NRDC Comment on the draft: The current auto power down section talks about auto power down being implemented when the game is paused. Per the above, the device should go into auto power down from idle or on mode, not just when "paused". Also, we don't define, use the term "paused" elsewhere. I think you really mean idle here.

Besides including a pre-set auto power down feature after x hour(s) of inactivity, ***it would also be helpful to require a Sleep button directly on the controller itself.*** Once pushed it would then force the machine to save your place and then put the device in low power mode. This prevents us from having to rely on the user keeping the auto power down feature activated, and delivers at least an hour's worth of additional savings by not having to wait the full hour of inactivity that is envisioned by the auto power down scheme being developed. (this will add up, as each hour of sleep instead of on/idle power will yield >100Whr in today's xbox 360 and ps3)

## SLEEP LEVEL

Why 5W? This is inconsistent with other ESTAR specs and efficiency standards that have 1 or 3W. If there is additional functionality and power draw required, then please state them. Otherwise you'll come into criticism from those advocating an across the board 1W standby level around the world. (I do recognize that the amount of incremental savings here is smaller than many of the other items being discussed.)

## MOVIE PLAY

All sections should accommodate/apply to movie play whether its from a disc or from a streaming or previously downloaded movie.

Care should be taken for the movie section to be compatible with the overall auto power down requirement. We don't for example want a console to go into auto power down after 1 hour, right in the middle of the movie, simply because the user did not touch the remote in the last hour. We believe the device should be able to distinguish between a loaded game and loaded movie, and as such we can have a different set of requirement for movie play.

For movies we need the following concepts to be incorporated into the spec: a) when the disc is removed from the device and no activity is seen, the console should go to sleep after x minutes,

b) establish a maximum allowable power level for movie play( power draw for movie play should be much lower than that for hi end game play), c) x hours after the movie has started/a signal is received from the user, the device should automatically go into the low power sleep mode; 4 hours since the last user input should be sufficient for virtually all movies (even the Godfather?) We would lose a lot of savings by having a universal 4 hour auto power down, as games don't warrant such a long period.

Our measurements showed various stand alone Blu Ray players drawing 20 -29W. ESTAR should pick a level 15 to 20W? to help drive this aspect of energy use down. We can also expect further improvement due to innovations that are likely to be made to portable Blu-Ray players which will have optimized chip sets for preserving battery life.

## GETTING THE GAME SOFTWARE RIGHT

Successful implementation of "auto power down"/"getting users to turn their devices off when they are done using them" requires both: a) game consoles that have power scaling chips and architecture and the ability to respond to software instructions to save the game before powering down; also need to quickly reboot upon request and go back to the place where the game was left at, and b) the video game software to include the code to make this possible. In order to make sure the new games ("the software" have this feature, we'd like to work with ENERGY STAR and key stakeholders to figure out how to:

a) add a requirement to the game console partner agreement that would require all games sold under their name ( /made under their direct control?) include an autosave capability, and

b) explore a creative way for those games that include an autosave capability to be recognized in some way by ENERGY STAR on their package. You could also develop a scheme to reward a company such as ELECTRONIC ARTS as an ENERGY STAR partner if more than x% of their games meet your requirement.

If this concept resonates with you and the manufacturers, I'm sure some good descriptors could be developed by some marketing folks to come up with a much sexier name than ENERGY STAR video game compatible or qualified.

If we don't get the games right, we could be looking at a scenario where the boxes are capable of going to lower power mode, but since the games can't be easily saved, users disable this feature out of frustration ( they will instead leave their video game on over night so they don't lose their place and use dramatically more energy each year.)

## ON MODE POWER USE OVERALL POWER CEILING

The spec as currently written does not include an on mode test procedure for measuring power use during active game play. We think the spec needs to include this and also require manufacturers to report it. We'd also like ENERGY STAR to consider establishing a maximum power level for video game consoles. Otherwise we have no way to prevent a future game console design to achieve ENERGY STAR even though it uses twice as much power to play a game as today's consoles. We need to find a way to cap game play power use via an on mode limit of X Watts ( 100 Watts?). This will force designers to work around a maximum power budget when considering adding new features and prevent continuous future growth of game console power use.

## SPEC FORMATTING

We encourage ESTAR to prepare a selfstanding game console specification. It is very challenging to determine what the applicable definitions and requirements are with the current layout which has the computer and game console spec combined. If keeping the game console

spec linked to the computer spec is desirable then simply add the game console spec in its entirety at the back as Part II – Game Consoles.

#### CLOSING

Thanks for the opportunity to provide this input. We hope your are open to these suggestions and that we can reach consensus with the industry on many of these points or some modification to them.

Regards,  
Noah

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