

2 September 2011

## **POSITION PAPER EUP NETWORK STANDBY DRAFT IMPLEMENTING MEASURE**

### **1- INTRODUCTION**

On July 28, the European Commission distributed a draft implementing measure on Network standby losses, within the framework of the Ecodesign Directive 2009/125/EC. Though DIGITALEUROPE finds positive elements in the proposal, we also have deep concerns about the effect of the proposed requirements on the availability of IT equipment and consumer electronics products on the EU market. This paper gives a detailed DIGITALEUROPE position intended to contribute to the consultation forum on the draft implementing measure that will be held on September 14, 2011.

The paper starts with a short summary of the DIGITALEUROPE assessment of the draft implementing measure, followed by a detailed discussion of the individual items. Where possible, DIGITALEUROPE proposes alternative solutions for implementing requirements, that are focussed on pragmatic and unambiguous implementation of the Commission's policy goals.

### **2- SUMMARY**

#### **2- 1- Positive elements of the proposal**

- The proposed implementing measure is cast as an amendment to the existing Standby Regulation 1275/2008. Product scope and most of the definitions are thereby clear and understandable for stakeholders.
- The Commission proposes to classify networked products in only two classes:
  - products where immediate response is required when they are approached over a network.
  - other networked products, where a slight delay in response is allowable.
- This classification is the minimal necessary partition of products for setting requirements, thus avoiding a too complex set of rules.

#### **2- 2- Concerns about the proposal**

- The proposed horizontal approach (one power level threshold for a broad class of product categories) has the disadvantage that it is either ambitious but not feasible for many product categories, or feasible for the majority of products but consequently not very ambitious. DIGITALEUROPE proposes to use a feasible horizontal power threshold level and use the existing ecodesign implementing measures for networked product categories to impose more ambitious power threshold levels depending on the state of technology of specific product categories.

- The proposed power levels for so-called Low Network Availability (LoNA) products are not feasible for the vast majority of networked products within 5-6 years from now (e.g. complex set-top boxes, multifunctional printer/scanner devices, home audio products). The Commission has thereby ignored the recommendations from the preparatory study and from industry to implement more gradual requirements. The existing power architectures of networked products need to be thoroughly redesigned if the proposed requirements are to be met. DIGITALEUROPE thinks that the current proposals are the result of a misunderstanding<sup>1</sup> that needs to be clarified during the public consultation process that will now start. While we understand a concern that HiNA does not save much power, the proposed LoNA requires such low power that the resume times may be very long. LoNA specifies anything greater than 1 second, which would allow OEMs to have resume times over 10 seconds. This may not be “convenient” for end users. Disabling such LoNA states because it is not convenient is a concern for computers. The intention of the MeNA category proposed by the preparatory study is to allow for relatively quick resume times with good power savings.
- Products are classified on the basis of their resume time. While this classification is important to understand why some products need to remain active for undetermined periods of time and others can enter into a sleep mode without affecting their user friendliness, the concept of resume time is by no means fit for use in a technical regulation: due to its ambiguity it is not possible to accurately and consistently determine a product’s resume time in a standard quantitative manner. DIGITALEUROPE proposes instead to use the High Network Availability (HiNA) requirements for so-called Customer Premises Equipment (CPE) as defined in the code of conduct for broadband equipment, where other networked equipment would fall into the “networked” category.

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<sup>1</sup> in previous communication, DIGITALEUROPE has indicated that the Low Network Availability (LoNA) category as defined in the preparatory study has no meaning for our industry, as products with long resume time are not accepted by users. We suggested joining the Medium Network Availability (MeNA) and LoNA categories.

### **3- DETAILED COMMENTS**

The comments below will follow the order of the text of the draft implementing measure as distributed by the EU commission.

#### **3- 1- Chapter 1, Definitions:**

##### **3- 1- 1- Network:**

The concept of network as defined in the proposal is not entirely clear for the manufacturers. On one hand, it is very clear that the proposed implementing measure applies to products that communicate over networks like local area networks (LAN) using internet protocols, or via HDMI bus-systems. On the other hand, it is not clear if peripherals around a PC (e.g. mouse, keyboard) or a home entertainment product (e.g. remote control console) are supposed to communicate over a network as defined by the draft implementing measure. DIGITALEUROPE's members active in home entertainment products strongly feel that systems that come with multiple components (e.g. a system and remote control or a transmitter and powered receiving speakers) and which use the same networking technologies that are recognized to require the extra power allowance of Lot 26 to reasonably implement network standby, should be considered networked products with remote activation and be permitted to operate under Lot 26 regulations rather than being held to Lot 6 power limits.

We also believe that systems which include complex remote controls that implement two way wireless RF communications and have displays should not be considered in the same category as those with simple one-way IR remote controls. We propose to consider a product that is equipped with a network interface intended to communicate with a complex RF control to be networked, whereas products equipped with simple one-way IR remote controls will be falling under the definition of standby in the existing regulation.

Finally, our members observe that there is some clarification needed for proprietary communication protocol : Could a proprietary protocol which would not be used by a large number of products be outside of the scope of the energy efficiency of networked devices as there would not be significant impact on energy saving?

##### **3- 1- 2- Remotely initiated trigger:**

Clarification request: these definitions do not rule out the possibility that a remote control/receiver circuit is considered to be included in the scope of the network standby requirements. Whereas currently a product waiting in standby for an input from a remote control is considered to be in "standby" (as defined in regulation (EC) 1275/2008), it seems that it is now considered to be in "networked standby". Is this correct?

##### **3- 1- 3- Network port**

The definition states that reactivation is a necessary function of a network port. DIGITALEUROPE members observe that products with multiple network interfaces will not

have the network standby function on all of these networks: when a product goes to a low power mode, some of the networks will simply be disabled (e.g. Bluetooth, USB, HDMI on PC's). This will be different on a product by product basis (HDMI in TV's will be used as a network standby interface). We believe that it is up to the manufacturer to specify (for the power management) which networks will remain active in the reduced power mode and which networks will shut down in the reduced power mode. The consequence of this is, that not all network interfaces in a product count as Network ports as defined by the draft implementing measure.

Finally, DIGITALEUROPE members believe that it should be possible to enable the user of the product to "configure" the network standby mode: set which networks will be enabled/disabled in reduced power modes.

It is requested to confirm the above understanding of this definition.

### **3- 1- 4- Resume time:**

DIGITALEUROPE thinks that the definition of "resume time" for use in a future horizontal regulation will be very complicated and would require an established standard test methodology in order to determine resume time and demonstrate it in compliance documentation. Such a test standard does not exist today. Although we are prepared to work within Ecma International (industry standardization body for the ICT industry) on such a definition, there is a significant risk that the resulting definition cannot be applied to all product categories in scope of Lot26 as it appears to be very specific to a given product as to when resume time starts and ends.

While resume time may be defined as "the time needed to return from a lower power state into a state where at least one main function is active", this definition still is not sufficiently accurate, for a number of reasons:

- While most resume trigger points should be simple to determine and detect, we anticipate an issue with wireless technologies that periodically send out beacon signals to establish a connection. Depending on the frequency of the beacon (which is a user controllable setting), this will introduce variability in when one considers the trigger event to have taken place.
- Further inaccuracy will be introduced in determining the resume time because it is not apparent how it will be established when this main function is active. We provide a number of examples from the audio/video/TV sector:
  - When a TV is reactivating and displays a progress bar on the screen, is the main function restored when the display is able to display the progress bar or when the display is actually able to display program material?
  - When reactivation of an audio system is accomplished remotely (e.g. from another room) is the main function restored when the remote control gets an acknowledgement that the power on command has been received or the user in that room hears music being reproduced?
  - How would one determine when the main function is reestablished when a television needs to negotiate with a cable box or some other 3rd party device before the desired program material is displayed? For a speaker system used

- with an iPod, is the main function reestablished when the speaker system begins to communicate with the iPod or when the iPod begins to provide audio input (which can take up to 5s)?
- For an audio product that ramps up the volume slowly when reactivated, is the main function established when the ramp starts or when it finishes?
  - When an overhead projector is reactivated the lamp needs time to warm up to a state where it can project enough light to display some picture then to a state when it has reached full brightness. When would resume time in this case be measured, when the lamp first starts to warm up (~1s) or when the customer can just see a picture (~60s), or when the lamp reaches full brightness (>60s)?
  - The resume time varies depending on the command even if the trigger is initiated by the same network port. For example, resume time for play back video stream command and recording video stream command may be different. In this case, we would propose that the shorter resume time shall be considered as the resume time of the network port.
  - Further examples are found in the section on imaging equipment below. In these cases, how could a 3<sup>rd</sup> party verification body be expected to determine and/or have the right equipment to measure the reactivation time?
  - Given the proposed reactivation times, the required accuracy for testing these will be in the order of 0.1 seconds (for the border between MeNA and LoNA) or even 0.01 seconds (for the border between HiNA and MeNA. In order to achieve such accuracies, a precise definition of “active” is needed and it needs to be ensured that the moment the function is active can be determined automatically. In light of this issue, we have the following concerns:
    - It is unclear if: ‘resume time’ shall be measured only with equipment that can be reactivated with a remotely initiated trigger, and the equipment transmitting the trigger for reactivation is not covered in said measurement

It will be difficult to determine what is a “main function”: with technologies like network proxying (Ecma-393) the user can get “immediate” response to a subset of communication messages (e.g. status requests), but still need to wait several seconds to resume to the “main function” (e.g. operating system of the PC or network application). Similar when sending a message to a TV/recorder over a network, instructing it to record a specific broadcast program, the TV/recorder will interact with the sender through a programming menu, but not go to the main recording function. It remains unclear what can be defined as the main function of such devices with many functions. Our understanding is that the point of time of reactivation shall not be defined according to product-specific features such as start of display on a TV screen or start of printing on paper, but according to the time when the reactivation is visibly/audibly indicated by a certain method such as indicator, picture display, or sound for the user. Is our understanding correct?

#### **No need for the concept of resume time.**

All of the above, plus the proposal to define HiNA products not on the basis of their resume time, raises the question if the concept of resume time is needed for the regulation. While this concept proved to be very valuable for the preparatory study to understand the wake-up

behavior of products and the user requirements for it, DIGITALEUROPE believes that it would be unnecessary and too complicated to use the concept of resume time in a horizontal network standby regulation.

DIGITALEUROPE experts have experienced that users of networked products need short resume times when working with these products over a network. It is believed that many users leave their networked products in idle mode in order to be sure of short resume time. For these users to accept states of reduced power they will be critical about delays and when the delay is too long, they will be tempted to disable the power management. This reasoning is in line with findings in the preparatory study.

As a consequence, our experts observe a competition to achieve short resume times, especially for products that are reactivated multiple times a day. While the preparatory study quotes 10 seconds as an acceptable delay, it is found for PC's to be unacceptable: PC experts have found that currently 5 seconds delay time before active network communication by a main function can be started is more likely the limit of acceptance.

Because there is a natural drive for manufacturers to reduce the resume time for their networked products, DIGITALEUROPE believes that it is not necessary to regulate resume time: most likely there will be very few or no products that take longer than 10 seconds to resume network communication after a trigger.

### **3- 1- 5- High Network Availability:**

Abandoning the concept of resume time, implies that a different way has to be found to define products that are designed and required to respond "immediately" to network communication requests ("remotely initiated triggers" as defined by the draft implementing measure. As in the Lot 26 Task 8 report (section 8.1.2.1), it is proposed to use the Customer Premises Equipment (CPE) definition in the current Broadband Equipment Code of Conduct Version 4.0, as issued by the JRC (Ispra) in February 2011. More specifically, it is proposed to define HiNA equipment as:

Broadband access equipment is defined by its incorporation of a transmission technology capable of providing more than 2048 kbit/s (ITU-T recommendation I.113 [1]) full-rate capacity in at least one direction.

When equipment is in an idle state, it needs to be able to provide services with the same quality as in the on-state, or to be able transition to the on-state to deliver the service without introducing a significant additional delay from the user perspective. This requirement holds regardless of whether the service is initiated from the WAN-side, or the LAN-side.

[In this Code of Conduct] these categories of equipment will subsequently be referred to as "customer premises equipment" (CPE) and "network equipment" or "broadband equipment" in general.

It is proposed not to use a list of in scope product types, because of the envisaged emergence of multi-functional products that will have the functions of more than one existing

product type. The list of products given in the Code of Conduct Broadband Equipment can serve as an example of the products that will be CPE.

The CoC Broadband Equipment defines idle state, and we propose to use this definition for the network standby implementing measure.

It is understood that the scope definition in the existing Standby regulation (EC) 1275/2008 will equal the HiNA products covered to Customer premises equipment.

**Therefore it is proposed to define HiNA products as Customer Premises Equipment and use this term throughout the implementing measure.**

**3- 1- 6- Low Network Availability:**

The draft implementing measure defines Low Network Availability (LoNA) products as ‘network availability with a resume time of more than 1 second’. In the preparatory study, the contractors distinguished two categories of products with a resume time of more than 1 second: Medium Network Availability (MeNA) and LoNA products. As argued in the section on the resume time definition, LoNA products will have very little applicability in the current networks: users expect products to have a main function alive within 5 seconds from the network trigger. The distinction made in the preparatory study was based on the time it takes to have *the* main function active, which is not a realistic distinction. DIGITALEUROPE thinks that current networked products are in fact all MeNA products and should be defined to be such products.

**In line with the proposal to define HiNA products as Customer Premises Equipment, it is proposed to define the rest of the covered products as Networked Products, defined as products with network capability that are not CPE.**

**3- 2- Chapter 2, Ecodesign Requirements - power management**

DIGITALEUROPE members are encouraged to see that as it has already been recognised in Regulation (EC) 1275/2008, power management is only necessary if the product is not performing a main function.

The chapter describing the ecodesign requirements relies heavily on the concept of resume time and network availability. Due to the reasons outlined above, this distinction is not reflecting reality. DIGITALEUROPE proposes the following changes to the current text:

Current text in IM	Proposed new text
(a) When a networked product is not providing a main function, or when other energy-using product(s) are not dependent on its functions, the product shall, unless inappropriate for the intended use, offer a power management function, or a similar function, that switches the product after the shortest possible time automatically into a mode having networked	(a) When a networked product <b>having network ports capable of responding to remote reactivation, that are both activated and connected,</b> is not providing a main function, and when other energy-using product(s) are not dependent on its functions, the product shall, unless inappropriate for the intended use, offer a power management function, or a similar

<p>standby with Low network availability. If Low network availability is not appropriate for the intended use, as it has to be technically justified by the manufacturer in the technical documentation, the product may be switched to a mode having High network availability.</p> <p>If the network availability specified by the manufacturer is low then the power management function may switch the product first into a mode of High network availability before switching the product into a mode of Low network availability. The product shall be in a mode of Low network availability after the shortest possible time and after 1 hour the latest.</p>	<p>function, that switches the product after the shortest possible <b>appropriate</b> time automatically into a mode <b>with reduced energy consumption</b> having networked standby <del>with Low network availability. If Low network availability is not appropriate for the intended use, as it has to be technically justified by the manufacturer in the technical documentation, the product may be switched to a mode having High network availability.</del></p> <p><del>If the network availability specified by the manufacturer is low then the power management function may switch the product first into a mode of High network availability before switching the product into a mode of Low network availability. The product shall be in a mode of Low network availability after the shortest possible time and after 1 hour the latest.</del></p> <p><b>(aa) For CPE, power management is not required.</b></p>
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**Justification:**

- not all network ports will have the possibility to respond to remote reactivation, see also the justification given in the next section.
- by clearly defining which products are CPE (and thus required to always respond immediately) it is no longer necessary to define provisions for products that are first in a HiNA mode and after that in a LoNA mode. Networked products that are not CPE simply need to have power management that brings them into a mode with network standby.
- limiting the delay time to 1 hour for all covered products imposes an artificial limitation on the usability of products. It is proposed that the manufacturer argues what is the shortest appropriate time.
- For CPE, the concept of power management is often not applicable in the way it is used in the above requirement: such products, when in idle mode, are continuously receiving “keep alive” communication from both networked products connected to them via the LAN and from the WAN. Maintaining the “keep alive” communication is a main function of CPE so that these will (according to the definition) never be in a situation of power management. DIGITALEUROPE thinks that it should be sufficient to define power threshold levels for CPE in idle mode.

***Network standby for all network ports***

Not all network ports of a product may be designed to enable remote wake-up, we propose the following:

Current text	Proposed text
(b) The power management function shall be available for all network ports of the networked product.	<delete>

**Justification:**

The power management function is a property of the entire product, not of the network port. The product with the network port can have a network standby condition.

**Relation standby - network standby**

The requirement for standby mode is unclear for industry.

In the first place, the preparatory study recommends the following:

*"It is recommended that products offering networked standby modes (i.e. reactivation over one or more network connections), are excluded from the requirement of EC 1275/2008 to power down into a standby or off mode."<sup>2</sup>*

Thus it is surprising to see in the draft implementing measure a requirement for standby mode. It is proposed to delete the following sub-clause:

Current text	Proposed text
(c) Products that have a standby mode as defined in Regulation (EC) 1275/2008 shall comply with the requirements for this standby mode if no network port is connected or, for wireless network ports, the network ports are switched off.	<delete>

**Justification:** The current text can be read to the effect that disconnecting the network ports (or switching off the wireless network) would be the same as switching the product into standby mode. Such function is not implemented in most products manufactured by our membership, there is no added value in implementing this, because many of these networked products do not have a meaningful function when the network is disconnected (e.g. printers, scanners, projectors).

Further it is hard to expect that products with a power management function intended to go to network standby can use this same function to go into standby or off-mode. The latter requires a completely different power management architecture that is not available on the market right now. For most networked products, automatic standby/off-mode is not appropriate for the intended use, so requiring this does not have added value, but instead

<sup>2</sup> See [http://ecostandby.org/open\\_docs/final/Lot26\\_Task-8\\_Final\\_print.pdf](http://ecostandby.org/open_docs/final/Lot26_Task-8_Final_print.pdf)

represent disproportionate burden to the manufacturers of these products, that DIGITALEUROPE strongly objects to.

For computers, as currently covered by the preparatory study known as Lot3 and a draft implementing measure, the situation will become even more complicated: for computers, off-mode and low power modes with wake on LAN are all well-defined power states, however with possibly 3 regulations addressing these power states, the energy consumption of computers risks to be over-regulated. DIGITALEUROPE calls upon the commission to regulate energy consumption for such products in a single, product specific implementing measure.

Finally, it is unclear what is the status of the so-called RF-through connection found in recorders (DVD recorders, Blu-ray Disk recorders) and the HDMI bus-through function found in audio equipment: according to the definitions in regulation (EC) 1275/2008, when such a connection is functioning the product is not in an off-mode (or standby mode). On the other hand, the RF-through or HDMI bus-through connections are not intended to wake-up the product.

### ***Enabling before delivery***

It is unclear what the following section is exactly requiring:

(e) The power management function shall be activated before delivery, unless all network ports are switched off before delivery. In that case the power management function shall be activated if one of the network ports is switched on.

The above sub-clause seems to require two things:

1. The power management function which automatically switches the system to a low power mode in the shortest period of time should be enabled. This is fully in line with the intention of the draft implementing measure.
2. The automated reactivation in response to a remotely enabled trigger should be enabled. In line with our comment on sub-clause (b) of this chapter, DIGITALEUROPE thinks that this may have a counterproductive effect: it seems to require reactivation via all enabled network ports, including those representing a function which is not used (for reactivation there needs to be a network service that would be active when the system goes into a low power state, which is not always the case). Apart from local communication ports that are not designed to reactivate the product, the specific network service to enable reactivation in response to remotely activated triggers may be absent at the time a network port is switched on. For the latter case, computers are sometimes designed to automatically enable/disable reactivation upon specific remotely activated triggers, depending on availability of the network service at the time the product powers down.

### ***Timeline for power management unclear***

The effective date of the requirements phrased in Chapter 2 (Power Management) of the draft implementing measure is not clearly defined. However power management should not be required independent of Chapter 3 (Power consumption limits) because the requirements for power management depend on power consumption limits.

We recommend defining effective dates of power management. Those should be the same as that of power consumption limits.

### **3- 3- Chapter 3, Ecodesign Requirements - Power limits.**

#### ***Power levels for networked products:***

First of all, the proposed power levels in the draft implementing measure seem to be the result of a misunderstanding:

- The reactivation times that are required are corresponding with the MeNA category as defined in the preparatory study. DIGITALEUROPE thinks that most if not all networked products are in this category.
- The power levels that are required are corresponding with those proposed for the LoNA category as mentioned in the preparatory study.

The result of this would be, that products have to be redesigned to meet low power levels and thereby possibly create long delay times for reactivation, which would mean not just a massive redesign action for industry, that is not feasible within the proposed timeframe of the draft implementing measure, but also serious user dissatisfaction, when confronted with increased waiting times for reactivation.

It is therefore proposed to use the power levels as proposed in the preparatory study for the MeNA category as the starting point for setting power limits.

On top of these proposals, DIGITALEUROPE wishes to reiterate comments that we submitted regarding the recommendations of the preparatory study:

For a number of product categories, DIGITALEUROPE experts have studied the feasibility of the proposed MeNA power levels as mentioned in the preparatory study. This paper will mention those product categories, where we have found an issue, and give an estimate of the roadmap towards a network communication technology that will meet the requirements.

#### ***Audio products***

For audio products, the network communication technology is in general not very advanced, so that the power levels will in general be close to 10W in network standby mode. This is due to the power architecture. The power architecture of audio products can be improved, however this will take 4-5 years until it becomes a reality in the market, as we have explained and illustrated in our previous position paper on the preparatory study.

#### ***Products with high rated power***

For imaging equipment with a printing function (e.g. printers), there is the issue of power supply losses: products with a high rated power will have more difficulty to achieve the proposed power levels than products with a low rated power, due to inherent losses of a power supply at very low load situations (see appendix with examples). It is believed that this is not just an issue for imaging equipment, but for any product with a rated power above 400W. Thus DIGITALEUROPE believes that it

will be necessary to allow additional power levels for products with high rated power (see the example of imaging equipment in the next section), above 400W.

It is felt, that desktop computers with greater than 4Gbytes of memory will have a difficult time meeting the 2W power requirement due to a combination of desktop memory technologies (x1 memory DIMMs) the needed user memory capacities for these sorts of low cost systems.

***Products with multiple network interfaces.***

Typical imaging products, as a result of customer demand, have to have multiple interfaces available. For example a MFP could have Fax (POTs), Wired Ethernet, Wireless LAN, Bluetooth, DECT and USB all available in a single product; it is then up to the user to configure the machine for its particular application. Of course each interface whilst active consumes an amount of power. Under the Energy Star Functional adder requirements (primary and secondary) each interface fitted to the equipment has a power allowance-whether that interface is active or not. We would like to see allowances made in a similar manner; but only for interfaces which are active on the product either by default or selected by the user.

For products with more than one network communication interface on board, the demand to disable individual network interfaces (cut the network by each interface) is not feasible. When the product has two or more same network interface, (for instance, when the product has one WiFi line, two Ether-net lines and three USB lines), it is in many existing cases impossible to control each one separately to disable it due to the chip design restrictions, examples of this are found for among others imaging equipment and PC's. For individual disabling of network communication interfaces, a redesign is needed with an expected time to market of 4-5 years. Therefore it should not be required to disable the network individually.

***Products with new types of interfaces***

The proposed power consumption Limits in the Working Document seem to assume a simple method such as Magic Packet which is used for PCs and the such, which can easily identify an equipment start up, based on LAN (local network such as in the home).

However, as mobile products are becoming more mainstream, it is obvious that future products will have to take WAN (connect to home from outside via a router) into consideration.

For example, in addition to LAN, WAN is also assumed as a method to start up game consoles from outside, thus game consoles have a function to identify and start up consoles remotely by sending an ARP packet (wake up packet), i.e. a function that is equivalent to WoWLAN (Wake on Wireless LAN). For such a function, around 2W more power is necessary compared to Magic Packet using LAN.

***The disadvantages of a horizontal power threshold limit***

The above argumentation shows that there are multiple reasons why classes of products cannot meet the proposed power limits. DIGITALEUROPE thinks that it is problematic to set

power limits horizontally irrespective of product category. “Problematic” refers to the fact that horizontal power levels would appear either insufficiently ambitious (compared to e.g. the preparatory study) or that many product categories will be practically banned off the EU market (e.g. many ENERGY STAR qualified printers, see the appendix).

A horizontal implementing measure that strives to place minimum requirements on all CPE and networked products will have to take into account the existence of numerous product categories that are not able to meet the power levels found in the preparatory study for exemplary products of a very specific kind. DIGITALEUROPE proposes to create product specific power levels for networked standby modes in vertical implementing measures. Such power levels may, for a number of product categories, be significantly stricter than for other product categories.

A horizontal, “catch all” implementing measure intended to regulate the network standby power of newly emerging product categories should have true “minimum requirements”, ensuring that all new networked products are designed to have power management, and all new types of CPE are designed to not exceed the power levels of current “good practice products”.

As an example: some of our members plan to implement various push network services (automatically provide various service data) in the future, and we think one of our missions in the network era is to provide different services to customers with dynamically varying power consumption. If network standby function and the time of APD, etc. are defined and other severe requirements are imposed, it will be difficult to use such services in the future, which might damage the merchantability that customers require. Therefore it is necessary to regulate a number of product categories using existing vertical regulations (such as is now the case for TV’s and simple Set Top Boxes, that are excepted from the scope of the Standby Regulation). If power down targets were set horizontally, the characteristics of each product category’s network function and differences of power consumption should be taken into account and adopt requirements that could be widely accomplished by CE products.

### ***Disadvantage of proposed timeline.***

DIGITALEUROPE considers that networked products that are currently in scope of the existing regulation (EC) 1275/2008 are heavily burdened by the proposed implementing measure: by the existing regulation (EC) 1275/2008, such products will be required by January 2013 to have a power management function switching them into standby or off-mode; the additional requirement proposed in the draft implementing measure, to implement another power management function that switches them into a mode with network standby, comes into effect within 1 year from the previous one. Apart from the technical capabilities of the products, the administrative burden for the manufacturers of such products is considered to be disproportionate, having to adapt the documentation in 2 consecutive years. Further, DIGITALEUROPE wants to urge the Commission that, if requirements are imposed that force manufacturers to redesign a significant number of products, 2014 as the effective date for the first phase of requirements (Chapter 3 clause (a) of the draft implementing measure) is not feasible.

### 3- 4- Chapter 4, Ecodesign Requirements - Measurements.

DIGITALEUROPE supports the repeal of Annex II (3). Now that the harmonized test standard EN 50564 has been published, the declared use of this standard will provide an unambiguous way to do the measurements to demonstrate conformity with the requirements of the future regulation.

### 3- 5- Chapter 5, Information to be provided by the manufacturers

At the current time there is no recognized standard for measuring the power consumption of Ethernet or USB network ports, for example. Without such a standard it is impossible to measure or provide information on the power consumption of such network ports.

Further, DIGITALEUROPE requests confirmation that the required information is only relevant for network ports, i.e. network interfaces that are designed to enable reactivation from a network standby condition.

Clarification request: The final 2 bullets of point (b), “the (maximum) performance specifications” and “the (maximum) power consumption of the product if only this port is used” are unclear and should be clarified.

### 3- 6- Chapter 6: Verification procedure

It is proposed to remove all references to resume time verification, in line with our argumentation on the definitions.

Further it is proposed to phrase the section on accuracy in the same way as the corresponding sections in the regulation (EC) 1275/2008:

Current text	Proposed text
If the unit meets the requirements regarding power management, power consumption requirement (tolerance 5 %) and resume time (tolerance 10 %) in any of these tests, the model is deemed to comply.	If the unit meets the requirements regarding power management, the power consumption <b>does not exceed the requirement by more than 5 %</b> <del>and the resume time does not exceed the specified time by more than 10 %</del> , the model is deemed to comply.

## 4- CONCLUSIONS

The draft implementing measure to regulate network standby losses is an important step in the deployment of the ecodesign directive. By choosing to amend the existing standby regulation (EC) 1275/2008, the European Commission clearly sets the boundaries of the product scope to a well known group of product categories.

However the implementation of the requirements that is proposed in the draft implementing measure raises many concerns with industry, most importantly with respect to the apparent

misunderstanding about resume times and the associated power levels: Low Network Availability power levels are combined with resume time requirements for Medium network availability, which would create a disproportionate feasibility risk for industry and the availability of products.

Apart from this major concern, many practical issues arise with the draft text that was issued by the commission, for which DIGITALEUROPE proposes practical solutions or kindly requests clarification.

DIGITALEUROPE is prepared to continue the work with the Commission, the Member State experts and other stakeholders to achieve a network standby implementing measure that meets the targets of the commission energy efficiency policy and at the same time is pragmatically in line with best available technology options.

## 5- APPENDIX: EXPLANATION OF ISSUE FOR PRODUCTS WITH HIGH RATED POWER.

The explanation below is done for imaging equipment as an example. It is believed to be valid for all products with a high rated power.

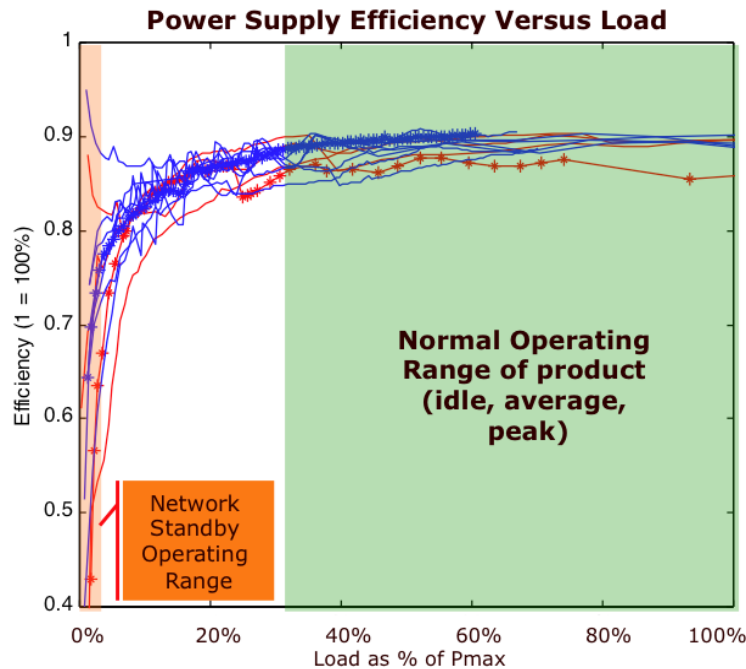
Network standby for imaging equipment is understood to be equal to the “sleep-mode” as defined by ENERGY STAR. It should be understood that sleep-mode as defined by ENERGY STAR not just requires network reactivation, but “permits operation of all product features (including maintenance of network connectivity), albeit with a possible delay to transition into Active State.”<sup>3</sup>

Because the network sleep-mode power is so much lower than the normal operating power of the equipment, the power supply must now supply power across a large load range (from network standby loads through peak power loads), however the power supplies for most equipment have been optimized for the typical operating modes (idle, average and peak power), and not this much lower sleep mode power. The below graph shows the power supply efficiency versus load measurement of several AC to DC power supplies (so-called AC bricks). The load is expressed as a per cent of the rated maximum load of the power supply ( $P_{max}$ ), or  $P_{load}/P_{max}$ . As can be seen, the efficiency for the AC bricks is very high for the typical operating modes for the main function of these devices (in the green operating range); however the efficiency starts to dramatically fall off at low loads where sleep-mode power levels are being specified. As can be seen, low load efficiencies (red area represents sleep-mode loads) the power supplies have very low efficiencies.

The graph also shows two AC bricks which have special circuits to optimize power at low levels (tails move upwards towards to 85%+ efficiencies) as an illustration that there are technologies which can address this issue (which must be designed into the products).

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<sup>3</sup> See ENERGY STAR program requirements for imaging equipment v1.2

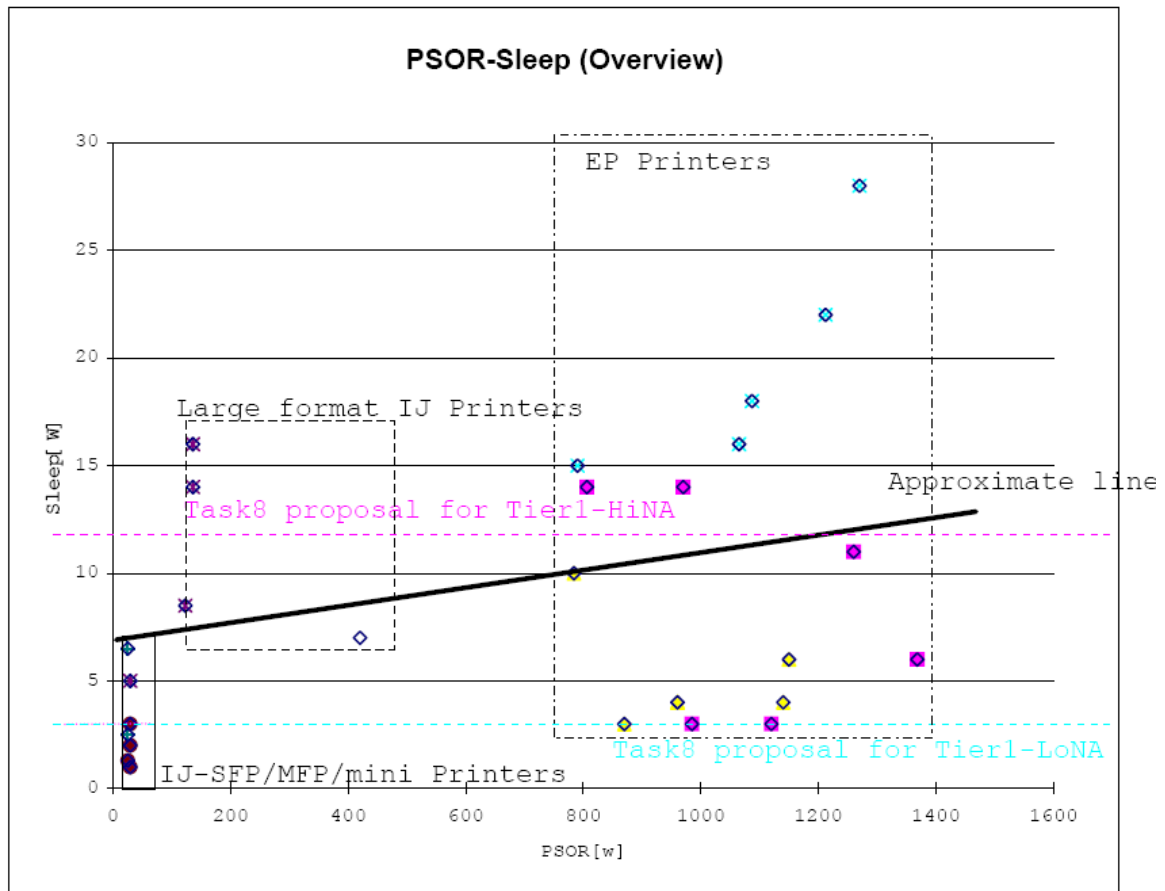


For printers used in the household and office environments, power supply ratings range from values < 50W to as much as 3kW, depending on the printer performance (e.g. number of pages per minute) and functionality (e.g. additional scanning, copying and/or fax function).

For a network standby power of 10W (for example), this would mean that the 50 W power supply would have to have high efficiencies at 20% of the rated power supply level, while for a 500W power supply the power supply would have to have high efficiencies at a 2% load. So while the sleep mode circuits can be designed to achieve these low power levels as individual components, the power supply would need to be redesigned to achieve acceptable loads at these power levels, and this becomes much more difficult when the power supply has a much higher power output rating.

Thus the sleep mode power of the printer as a whole is seen to be dependent on the power supply output rating, as is shown in the below graph prepared by Epson for a range of it's products, that are thought to be representative of printer technology in terms of sleepmode power levels.

It can be seen that the power levels proposed by the contractors will effectively ban most printers from the market, regardless if they are considered LoNA, MeNA or HiNA.



It should be mentioned that the above graph was drafted for products that all comply to ENERGY STAR. According to a recent study by IDC, approximately 75% of all imaging products sold in the EU are carrying the ENERGY STAR label at the moment. We can see that the proposals done in the Task8 report would eliminate approximately 50% of these products from the market (or force them to do a redesign). DIGITALEUROPE thinks that this is a disproportionate burden for the printer industry so we propose to take the power supply output rating (PSOR) into account. Further proposals can be found in section 2 of this document.

For these types of products, creating a sleep-mode with a power level as proposed in the preparatory study not only requires a redesign of the network portion of the product to achieve the required power levels, but the power supply of the system must be redesigned to provide higher efficiencies at these new low power levels. This becomes more complex for products with higher power output ratings because the sleep-mode load level becomes a much smaller percentage of rated output (e.g. 10W/500W is more complex to make highly efficient than 10W/50W output efficiency range).

It should be understood, that apart from power supply losses, imaging equipment is designed to maintain other product functions “alive” during sleep-mode, intended to facilitate quick reactivation of the product. Because of the complexity of imaging equipment, such reactivation functions require more power than in other products, e.g. personal computers.

## ABOUT DIGITALEUROPE

**DIGITALEUROPE** is the voice of the European digital economy including information and communication technologies and consumer electronics. DIGITALEUROPE is dedicated to improving the business environment for the European digital technology industry and to promoting our sector's contribution to economic growth and social progress in the European Union.

**DIGITALEUROPE** ensures industry participation in the development and implementation of EU policies. DIGITALEUROPE's members include 61 global corporations and 37 national trade associations from across Europe. In total, 10,000 companies employing two million citizens and generating €1 trillion in revenues. Our website provides further information on our recent news and activities: <http://www.digitaleurope.org>

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