Recommendations on the final Commission's proposal for Ecodesign requirements on servers and data storage products

Ahead of the Member States vote scheduled on 17 September 2018, we would like to welcome the draft Ecodesign requirements[1] proposed by the European Commission and make the following recommendations.

Maintain the idle requirements (Annex II section 2.1)

We welcome the attention that the European Commission gives to idle power consumption in its final proposal and urge Member States to maintain the proposed requirements. Given the large number of servers which are run as redundant servers (waiting in idle to provide an alternative server in the event of a failure) combined with the significant share of time that many servers actually in use spend in idle mode, tackling server idle power is critical.

The Commission's approach is the right way forward in our opinion, and we prefer it to the use of the SERT metrics at this stage for the following reasons:

- **The SERT tool lacks maturity,** certain parameters being still in discussion.
- The most recent release came **too late in the European decision process** (post-preparatory study) to enable sufficient assessment and discussion for it to form the basis of a European Ecodesign measure.
- European institutions **do not have a sufficient data set** to define solid thresholds that will provide certainty of energy savings. The information requirement on active state efficiency and performance as set in the regulation will enable SERT-based requirements to be set with confidence on a solid evidence base in the next revision of the regulation.
- To tackle energy losses in idle state, we need to focus on **energy consumption not just energy efficiency:** with the SERT efficiency metric, a small increase in server performance is easy to achieve and can allow for large unaccounted increases in idle power demand. Whilst addressing active efficiency is useful, if the SERT metric is the only focus, there is a scope for the idle power demand to go very high, which could have a significant impact on total energy consumption.
- It is worth noting that the Commission has adapted its idle approach for industry concerns, including: simplified server categories for idle requirements, incorporation of

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[1] Version released on 3rd July 2018 as part of the European Commission feedback period

CPU performance allowance to better align with SERT approach, inclusion of additional network port categories / allowances.

Reinforce the disassembly requirements (Annex II section 1.2.1)

We strongly support the shift in terminology **from dismantling to disassembly** and recommend further refinements:

- **Expand the list of components to include**:
  - **Batteries:** as these are included specifically in the information requirements around CRM (section 3.a)
  - **Chassis:** as it can represent a large proportion of the weight of the server (e.g. 44% in a rack server according to the Task 5 preparatory study report), and has high potential to be recycled or reused.

- **Reinforce the text as follows:**
  *"From 1 March 2020, manufacturers shall ensure that joining, fastening or sealing techniques do not prevent the **reversible** disassembly **and replacement** of the following **parts**[2] when present, **and that these operations can be carried out by third parties at a fair transparent and non-discriminatory cost**:"*

Maintain the data deletion functionality (Annex II section 1.2.2)

We support the inclusion of the data deletion requirement (see appendix A) and underline the importance of the information requirement on this tool.

We suggest the text is refined as follows:
*"1.2.2. From 1 March 2020, a built-in functionality for secure data deletion shall be made available **without charge** for the deletion of data contained in all the data storage devices of the product."*

Make the firmware updates available for free (Annex II section 1.2.3)

We support requirements on firmware availability as unavailability of firmware often poses a barrier to reuse and repair of servers. Further support for firmware requirements is detailed in Appendix B of this document.

However, we consider it necessary that firmware updates and upgrades are treated differently in the regulatory text. The user has the right to expect that their product as placed on the market is capable of performing in line with its specifications. They can therefore expect to receive free of charge **firmware updates** to correct errors and security leaks. **Firmware upgrades** on the other hand, that improve the capabilities of the product (e.g. add functionality or improve performance) may be charged at a reasonable and non-

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[2] Change terminology from "component" to "part" to be consistent with CEN/CENELEC TC10 material efficiency standards currently being finalised.

discriminatory fee, although many manufacturers do provide firmware without restrictions or charge to their customers.

In addition, as there are already systems in place to supply and distribute firmware, there is no technical or operational obstacle to delay the date of implementation of this requirement, and we suggest the same date for entry into force is used as for data deletion tools.

We therefore propose the following amendments to the wording:

> *"1.2.3. From 1 March **2020**,*
>
> *(a) the latest available **updates for each version** of the firmware shall be made available **free of charge** for a minimum period of eight years after the placing on the market of the product.*
>
> *(b) **the latest available upgrade (new version) of the firmware shall be made available either free of charge or at a fair, transparent and non-discriminatory cost for a minimum period of eight years after the placing on the market of the product".**

Go further on material efficiency

Require availability of diagnostic tools

Diagnostic tools facilitate the diagnosis and resolution of problems with the product hardware (e.g. information on which components have failed). These are often made available as software embedded within products and accessed via a connector or other interface. Access to full diagnostics is sometimes limited to the manufacturer (with only the more general diagnostics being available to other parties), or restricted completely by the need to input a username/password.[3] We therefore suggest the following additional text is included:

> *"1.2.4. From 1 March 2020, manufacturers, their authorised representatives and importers will provide full access to embedded diagnostics to third parties dealing with maintenance, repair, reuse, recycling and upgrading of servers (including brokers, spare parts repairers, spare parts providers, recyclers and third party maintenance) upon registration by the interested third party on a website.*

Declare duration of spare parts availability

A requirement on information provision regarding the duration (in years) of availability of spare parts should be included. Like the firmware availability requirement, this information could be provided for at least eight years after the last product is placed on the market.

Facilitate plastics recycling

To facilitate plastics recycling, a requirement should be included that all plastic parts greater than 100g should be made of single polymer or directly recyclable polymer blend (to limit the

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[3] In legal terms, there are grounds to support the obligatory provision of diagnostic information to the product owner. According the EU position in Free Flow of Data (DG JUST, https://ec.europa.eu/digital-single-market/en/news/staff-working-document-free-flow-data-and-emerging-issues-european-data-economy), the owner/user will have ownership of the data produced by a machine. This data includes error codes/logs and operating information that is required for the diagnostics.

variety of materials used). Examples are available in the voluntary agreement for imaging equipment.

Ensure durability

To improve product durability, a requirement should be included for compliance with certain levels of standard MIL-STD810G (or IEC 60068/60529) relating to shocks and other damages. Examples are available in the JRC technical report for the Ecolabel of computers (2015).

Contact:
ECOS – European Environmental Citizens' Organisation for Standardisation
Chloé Fayole, chloe.fayole@ecostandard.org

Appendix A – Support for requirements on built-in data deletion functionality

We consider that this requirement will facilitate the durability, reusability and upgradability of servers for the following reasons:

- **Reduces e-Waste:** Currently around 65-70% of HDD's are destroyed after first use, according IT Asset Disposal information. To reduce e-Waste, data deletion is key.
- **Reduces security risk relating to reuse:** Reuse becomes a more secure process when business can be assured that data is successfully deleted. Developments in software and hardware enable such functionality to be built-in whilst ensuring the security of data.
- **Enables further improvements:** Provides an incentive to increase reuse of servers, storage systems and parts beyond current levels.
- **Requires no software license:** Such functionality can and should be offered on the same terms that printer drivers are offered – i.e. as free features to support the hardware. Therefore, there is no need for the server user to be tied into a software license or any contractual agreement.

Appendix B – Support for availability of latest firmware

Common material efficiency issues encountered with firmware availability include:

- **Repair:** Rejection of replacement parts by the system if the firmware has the wrong level. It may be that the part does not function correctly, or it may even appear to be defective. In the case that the replacement part does not have the correct level of firmware, it may be necessary to discard this part and seek an alternative part with the correct level of firmware (if possible). This can substantially delay the repair process for field engineers, sometimes making it unfeasible in commercial environments.
- **Reuse:** In a server park, a complete system that needs to be replaced usually needs to have firmware levels that correspond with the other systems. When updates are not available, this can block the reuse of a product.

Firmware licenses are generally purchased with the hardware. However, market mechanisms do not currently exist for all resellers and refurbishers to gain access to firmware, as a protectionist approach is taken by manufacturers with regards to intellectual property and service contracts. We have listed below some specific examples where firmware is used to tie-in server and storage users to their current service provider:

- **HP Proliant servers:** Firmware availability is restricted to third parties, preventing them from being able to maintain and repair equipment. This policy has been communicated to customers.
- **IBM P series (and some storage units using a P series inside):** If it is necessary to replace a Service Processor card and the spare part used does not have the correct firmware, there is no way to upgrade or even downgrade the firmware of the PCB. IBM offers this service (at least in Spain) at a rate of 700€/hour and a minimum charge of 3 hours.
- **Oracle tape library:** In order to upgrade a large Oracle tape library to LTO7, it is possible to purchase the LTO7 drives independently, but the new firmware necessary cannot be obtained from Oracle without an expensive service contract which can include a penalty

clause if support has not been maintained for the full duration of use. This pushes the storage user to purchase an entirely new library.

We consider therefore that a requirement on firmware availability will facilitate the durability, reusability and reparability of servers for the following reasons:

- **Enables further improvements**: Provides an incentive to increase reuse of servers beyond current levels. The reuse of server and storage equipment is frequently limited by the availability of firmware and legal terms of use to only involve the manufacturers and their certified vendors.

- **Protects the consumer**: When consumers purchase a product, it is important that they are able to continue using this product until the end of its useful life without planned obsolescence caused by software or firmware changes. Further, <u>firmware is distinctly different from software as the firmware license is acquired when purchasing the hardware.</u> It is therefore important that when the ownership of the hardware is transferred, the firmware (and access to related updates) is also available to the new user without limitations (e.g. support contract conditions), otherwise reuse will often not be possible.

- **Opens the supply chain for reused products:** as shown in the examples, server users may be tied into the support services of their service provider, which may include the need to upgrade or renew products within set timescales. Enabling free access to firmware updates opens up new possibilities for other companies to reuse products and creates a more even playing field in the market.

- **Limited manufacturer liability:** If a user is able to contract an independent service provider to support them (due to the opening up of the market resulting from wider availability of firmware), the user and the service provider take on board any related risks within their legal agreements.

Further, there should be no charge for firmware updates, for the following reasons:

- Manufacturers are obliged to provide updates free of charge where these provide corrections to products to ensure that they provide the advertised functionality. Firmware corrections such as patches and fixes are similar to digital "recalls" of products, and have historically never been charged for (other than a potential charge for media or shipping).

- Buyers have the right to updates for free that enable their product to provide the advertised functionality. Customers should never have to pay for corrections to flaws in their product.

- Allowing the charging of a fee for updates provides opportunities for dishonest manufacturers to:
  - place faulty products on the market and exploit customers for further fees to fix them
  - artificially increase frequency of updates for increased incomes
  - use availability of updates as a means to lock product owners into maintenance and repair contracts.