

Ecodesign Sound and Imaging Equipment (ENTR Lot3)

Draft Minutes of Third Stakeholder Meeting

14 June 2010, Brussels

Participants

Representatives of:

- The European Commission, DG Enterprise
- Canon
- ECOS
- Epson Europe
- European Environmental Bureau
- Federal public service health, food chain safety and environment, DG Leefmilieu Productbeleid, BE
- HIGH END SOCIETY e.V.
- Hitachi
- Interel Cabinet Stewart European Affairs
- Microsoft
- Naim Audio
- Nintendo of Europe GmbH
- NL Energie en Klimaat / NL Energy and Climate Change
- Öko-Institut e.V.
- Ökopol GmbH on behalf of Federal Environment Agency
- Panasonic Europe Ltd.
- PEGI SA / ISFE
- Pioneer Europe NV
- Ricoh Europe PLC
- SANYO
- SONY
- Texas Instruments
- The Danish Energy Agency
- Toshiba Information Systems (UK) Ltd.
- Zetacast
- The consultants – AEA and Intertek

Overview

The 3rd final stakeholder meeting for ENTR Lot 3 Sound and Imaging Equipment took place in Brussels on 14 June 2010.

It was mainly comprised of four sections. The first, summarised conclusions from the 2nd stakeholder meeting and provided an overview on tasks 4 and 5, the second, presented stakeholders feedback for all three product groups for tasks 1 to 5 and the third and the fourth which were concerned with task 6 and 7 respectively.

In addition the EU Commission presented and discussed the results of the stakeholder questionnaire on audio equipment.

Follow up - second stakeholder meeting

The study team provided a brief summary of the main points discussed during the second stakeholder meeting. Topics of discussion and main conclusions are shown in table 1.

Table 1: Main points of discussion in 2nd stakeholder meeting

Topic	Points of discussion & main conclusions
Task 1 - Product definition	Agreement on the preliminary definitions Main points discussed: • Definition scope (what's in and what's out) • Battery powered equipment
Task 2 - Market data	Paucity of public available data
Task 3 - User behaviour	Important to include concrete data as it affects overall energy consumption
Task 4 - Base cases	Use phase – need to be very clear on the way electricity consumption is presented EOL phase – study team willing to revise its 'compliance with the WEEE Directive' approach, provided that industry forwards new figures. LCC – need to revise maintenance costs of projects with respect to lamp replacement.
Task 5 - BAT & BNAT	VP/VRs – usage patterns and user friendliness related to power management issues. Projectors – definition of the efficiency of a projector. GCs – relation between performance and power consumption.
Regulatory concepts	Voluntary agreements – thorough examination needed before any suggestions put forward. Standardisation – industry group involvement deemed necessary.
Improvement potential	RoHS requirements vs energy efficiency – important and complex issue. Professional equipment – definition needs to distinguish from a standard product. Issue of resource scarcity

Discussion on feedback on Task 1-5 report

The study team allowed for two overall periods throughout the project where stakeholders were able to feed back any comments they had relevant to the product groups of Lot 3 study. The first period ran until 01/04/2010 and was mainly concerned with comments around task 1 to 5.

Following a brief summary of 2nd stakeholder meeting the study team presented for each product group the main points received as stakeholder's feedback.

As an opening remark the consultants thanked all stakeholders for their cooperation up to that point and flagged their commitment to take into consideration and respond to any feedback that stakeholders put forward. Stakeholders from their side verified their commitment to continue provide feedback provided that the study team will be very cautious on how these is being treated, with special reference made to publishing industry confidential data.

Video Players (VPs) / Video Recorders (VRs)

The main comments received for VPs and VRs concerned the product definition, product features, use profile and base cases.

The study team underlined that the definition for VPs/VRs was based on the idea that the vertical measures for simple set top boxes, complex set top boxes, PCs, TVs should not overlap. With regard to set top boxes, comments were received surrounding the definition of the 'tuner' and the inclusion of the: *'No tuner unless it records to a removable library media'* statement. While regarding PCs, the problem rests on the fact that technological developments have brought into the market products that use search functionalities integrated with set top boxes and use PCs atom processor, thus making categorisation of these products very difficult.

The study team acknowledge these issues and stressed its willingness to liaise with the industry to understand how the definition can be further refined to account for similar issues.

According to the study team, comments were also received regarding the state of the market in future years. Some of the future key features will be 3D products. These have only been launched recently in the market and thus no detailed information on their power impact exists. In addition, their wider introduction to market is not expected to happen in the short to medium term, and taking into consideration the timeframes, that policy recommendation in task 7 should not consider these products for the purposes of this study.

The use profile of VPs/VRs products was built using historic data from the UK's Market Transformation Program (MTP) and the team's own assumptions (e.g. unless there is a power management feature, devices stay on for an average 8 hours per day, and fast start mode will always be enabled).

Finally the study team stressed the issues around the approach of defining the product's base case and asked for stakeholder's contribution on how possibly some of these issues might be tackled. The study team tried to limit the number of products considered for the base case and that might have potentially resulted in a less robust assessment of the savings potential. To compensate, the study team used in the screening exercise a large number of products with different profiles and use patterns with the aim to reflect changes such as a DVD which has not a fast start mode and Blu-Ray that has fast start mode.

From the stakeholder side representatives from the HIGH END SOCIETY e.V. were the first to comment and requested to know if the issue around the specifying technically a high performance video player/recorder is still valid and if any response from their side was required.

The study team mentioned that in this study, similar to other studies, the issue around effectively addressing high end products remains valid and would be willing to define a robust approach to address that. HIGH END SOCIETY e.V. promised to work with the consulting team to define a suitable approach but underlined that any suggestion put forward should be around technical requirements and not price.

Other industry representatives sought clarification regarding how fast start mode works and what makes energy consumption in that mode higher than normal stand-by mode. They also asked the study team to outline their proposals on how to tackle fast start mode energy consumption.

The consultants explained that the fast start mode requires all components of a player to be ready to communicate with each other so as to respond to a command immediately. A solution would be either to speed up the process that these components initialise (high cost option) or simple switch off some of these interfaces.

On the fast start mode issue, representatives of consumer organisations questioned the need for a fast start mode for play back devices. They used as an example the German Blue Angel specifications where play back devices with fast start mode have been excluded.

Studies show that energy consumption in fast start mode should be something between 7 to 10 kWh per year, while the Blue Angel specifies 9kWh as minimum threshold. In that context, representatives of consumer organisations were extremely happy with the threshold of 7kWh per year suggested by the consultants and asked how the team concluded in that value. The study team replied by saying that the threshold of 7kWh used so that any benefits from the standby regulation are not lost. However the study team recognised the difficulties of achieving such a threshold and requested further input from the industry so as to address that issue in task 7.

Finally industry representatives raised their concerns for the proposed TEC value for idle mode for video products of 7 kWh per year. They underlined that this value constitutes a good starting point for discussions but seems technically impossible to achieve even with new generation products.

Projectors

Feedback on projectors covered mainly professional products, testing methodology, lamp life thresholds, user behaviour and issues around the Best Next Available Technology (BNAT).

Stakeholders asked for a more clear differentiation between professional and domestic projectors, while requested that a 3-chip DLP projector should be classed as professional product. The latter was not accepted by the study team because a 3-chip DLP projector could well come into the scope of a domestic and light industrial product.

According to the consultants, the testing methodology for total luminous flux was an area that attracted great number of comments with the study team agreeing that no real harmony among manufacturers existed and this remains an issue to be resolved (i.e. identify an acceptable methodology).

Many stakeholders also commented on the projector lamp life and their impact on recycling. Most of the comments however were rejected based on the fact that the industry has over the last years improved life and cost of lamps and also introduced on a large scale mercury-free lamps. Similarly comments regarding the qualification of cost of long life lamps were also rejected as evidence provided to support the argument were not robust enough.

The study team underlined that any comments around the usage pattern analysis will be addressed at the end of the report and all data (mainly from industry and consumer organisations) will be taken into consideration.

Finally comments around BNAT, like RoHS implications of nanocrystal heavy metal coating of LEDs are in the course of being addressed and for that purpose the team is engaging in discussions with industry.

Industry representatives sought clarification on the part of the report mentioning that projector lamp replacement by LEDs in small projectors resulted in no improvement in on-mode energy efficiency.

The study team replied that the technology that most manufacturers are currently using is not solely LED but rather a mixture of lasers and LEDs. For personal-use projectors, battery operated part of the time, that doesn't represent an efficient solution.

Game Consoles (GCs)

According to the consultants the first set of comments for GCs were on the product use profile, where some commentators stressed that the hours of usage considered in the screening exercise were too high while others stressed that these were too low. The study team underlined that the usage profile for the purposes of task 7 has now been adjusted in the light of the comments received.

Secondly, comments related to the energy consumption in the active mode were discussed. Here, the study team assumed that, for the next generation consoles, consumption in active mode will/should

be the same as in BAT (i.e. 100W). Industry raised their concerns on this assumption and asked for it to be removed as they were not sure how their products will perform in the future.

Similarly the values that the consultants used for the power consumption of the idle mode was criticised as too high by some manufacturers. The study team explained that the values used reflected the idle mode power consumption of the high specification consoles that were currently available in the market and were based on the assumption that all products will move in this direction in the future.

In addition, comments were received on the auto power down function of GCs. The majority of those stressed the importance of this feature in terms of energy savings but asked the consultants to take into consideration the fact that is not usually set as a default feature.

The study team presented also the comments regarding GCs other environmental impacts (e.g. material content, recyclability) and recognised the fact that those impacts haven't been looked in detail up until task 5 but a more thorough analysis was conducted for the purposes of task 7.

Finally through their comments, the industry stressed the need to look at products with similar functionalities like PCs. According to the study team response that would be addressed in task 7.

From the stakeholder side and after the presentation of the main comments around GCs came to an end GC manufacturers representatives were first to comment. They appreciated the fact that the study has looked at issues such as products with similar functionalities (i.e. PCs) and agreed that current generation technologies will not have to be redesigned at chip level. However, they underlined that there are specific areas where more work is necessary. Therefore they put forward a proposal for a more sophisticated auto power down feature and highlighted to the study team the importance of not considering the US EPA standard (was never approved) because it was not developed based on any kind of technical analysis. The standards they put forward are based on a thorough technical analysis and will give the EU the lead on the discussions for implementing measures at a worldwide scale.

In addition, the GC manufacturers raised their concerns about the power thresholds assumed for next generation consoles which essentially indicate that the industry will not move further than Playstation 3. That, according to the GC manufacturer representatives is not true and offered to provide the consultants evidence without giving away confidential technical information.

Finally, GC manufacturers underlined the importance of having a detailed cost analysis before any measures are suggested but they also recognised that information to do such an analysis will need to be provided to the study team.

Presentation and discussion of Task 6

The study team outlined the overall purpose of task 6, explained the methodology followed, presented the results of their analysis, and finally opened the floor for any questions arising.

For the purposes of task 6 the consultants took into consideration the following options:

- Auto Power Down (APD) feature
- Operational mode requirements (efficiency improvement of active/idle/quick start mode)
- Hard On/Off switch
- Product Lightweighting
- PVC-free products
- BFR-free products
- Improved recyclability
- Increased product durability (lifetime)
- Reusable components
- Recycled content level for plastics

And analysed these individually but also in combination to determine the Least Life Cycle Cost (LLCC) point and the best available option on the LLCC curve.

The analysis showed that a common theme of improvement suggestions exists that appear to offer the LLCC point. A combination of two or more of the below could yield the least life cycle point.

- Operational mode requirements
- Product lightweighting
- APD feature
- Reusable components

Interestingly, for all product groups the combination of operational mode requirements and product lightweighting was required for achieving the LLCC point.

The discussions opened with Environmental NGOs asking the consultants to explain the criteria of selecting those specific design options. Being more specific, in their view a combination of on-mode requirements, product lightweighting and auto power down should result in the LLCC.

The study team accepted the point and promised to revise the analysis to include that option.

In addition, environmental NGOs referred to the need to include additional materials options, like PVC-free or flame retardant-free. They understand however that due to the LCA method followed (i.e. eco report tool) it would be difficult to assess those options but nevertheless they should be taken into account in task 7.

The study team agreed on the point raised and underlined that options are not ignored in task 7 because of their low based scoring from the task 6 approach.

Industry representatives, on the other hand, expressed their concerns regarding the assumptions made that no additional costs will occur to apply changes to operations mode requirements. They underlined that assumptions such as that could mislead the study and impose significant cost burden to industry.

The study team explained that the assumption was based on the idea that any changes in operational requirements will be part of the design cycle of the product. But if industry had any input as to the likely cost then they should provide it to the consultants who would be happy to take into consideration.

An Environmental agency Representative questioned the relation between task 6 and task 5 - interesting ideas in task 5 are not reflected in task 6. Task 6 constitutes a high level approach while task 5 goes into details and thus more interlinking should be followed.

The study team was interested to hear more on this issue and asked for relevant suggestions to be forwarded to the team.

GC manufacture representatives asked the consultants to clearly state the limitations of task 6 approach and results. As there are many LCA studies with differences from this study's results, it will be important for the team to contextualise the results. In addition – in line with industry representatives from other sectors - they stressed once more the need to avoid technical, unjustifiable assumptions on costs as these could impose significant economic burden on the industry. The study team invited GC industry to provide these LCA studies and better data on costs.

The Danish Energy Agency representative asked to know why the BAT 25 W consumption in idle mode suggested in task 5 was not taken into consideration in task 7. The team replied that the specific threshold looked in their view quite ambitious to achieve but would be happy to refine their views provided that evidence was provided.

The Danish Energy Agency representative suggested that the team looked at the Energy Star specifications, with GC manufacture representatives stressing at this point that the Energy Star was only a draft legislation and was never accepted because some of the requirements outlined in it were unachievable.

Stakeholders commented on the auto power down option selected for the purposes of task 6 and underlined the fact that currently even more devices are interlinked not allowing thus this function to fulfil its potential. For that and other similar issues the study team should look at the overall picture of power management and would like to task 6 to address in more detail power management in all functionalities.

The consultants replied that task 6 is more focussed on LCC and this technical issue could be addressed in task 7. They also reminded stakeholders that studies like the networked standby in combination with this study will help the Commission to address all these issues.

Stakeholders raised also the issue of the study looking at recycling of precious metals like gold as it is their understanding that the recycling industry is mostly interested in such kind of high value materials.

The study team agreed with that view but underlined that this used to be the case some years back. Nowadays the amount of precious metals in devices has significantly decreased and since the team is working on the basis of the eco report tool that makes the assumption that 95% of metals are recycled it won't be possible to change those numbers.

Adding to the point of precious metals, environmental NGOs thought it would be of value to add an option that addresses scarcity of materials and if that is not possible in task 6, that will need to be looked at in task 7.

As a closing point, the study team thanked panellists for their comments and underlined the importance of providing feedback on the assumptions carried forward for the purposes of the task 6 analysis.

Presentation and discussion of Task 7

In the afternoon session of the Lot 3 third stakeholder meeting the study team presented the results of task 7 analysis.

Task 7 considered suitable policy measures to achieve potential power consumption improvements for the three product groups (Video Players / Recorders, Projectors, Games Consoles) and also examined broader environmental impacts associated with these products.

For each of the product groups the study team presented the final product definitions. These were slightly different from those suggested in task 1 to reflect stakeholders' comments and the team's increased knowledge gained from moving through the subsequent tasks of the study.

The study team also presented their recommendations for energy efficient requirements, suggesting (where possible) power levels for different modes and functions but also their proposals for an auto power down function.

Finally, for each product group they discussed other related environmental impacts and examined the suitability or not of an energy- or eco-label.

The study team presented initially the VP/VR task 7 analysis results. A brief summary of the VP/VR task 7 results (table 2) as well as a summary of the discussion followed is presented in the following sections.

Video Players (VPs) / Video Recorders (VRs)

Table 2: Summary of draft Task 7 results – VP/VRs [as of 21 May 2010 the date of website publication]

Product definition	Power and energy requirements	Auto power down requirements and other efficient features	Other environmental impacts	Energy/Ecolabel, GPP procurement
<p>A video player/recorder is a standalone device whose primary function:</p> <ul style="list-style-type: none"> • Decodes video to a to an output audio/video signal • from recorded or recordable media via a powered or integrated media interface such as an optical drive, USB or HDD interface • Has no tuner unless it records on a removable media in a standard library format • Is primarily mains powered • Does not have a display for viewing video • A tuner decodes broadcast signals to audio/video signal. • An industry agreed format defining file structure, media encoding and physical format which is provides media compatibility across products. 	<p>Idle – TEC 7 kWh/year Risk of 8+W for 18hr/day of 1W under standby reg Restrict to 19Wh/day including declaration of time in fast start</p> <p>Play mode (local media) 10 W for SD (inc upscale) 20W for HD or 15W average for SD and HD</p> <p>Live pause tv – 13W No adders for network or anything else since no reason to be active</p>	<p>½ hr for player only 3 hr for recorder APD must be active by default and has secondary warning if deactivated in initial set up menu</p>	<p>PVCs, BFRs etc</p> <p>Light weighting</p> <ul style="list-style-type: none"> - How to specify? - Trade off between substances - Form factor <p>Continue with horizontal measures</p>	<p>Labels and procurement to recognise most efficient products</p> <ul style="list-style-type: none"> • But narrowed range in power with MEP • Instead require high energy consuming modes to be permanently disabled? • Or LCA label - EPEAT

Representatives of consumer organisations asked the study team to explain the rationale for not including power limits on the recording mode. Especially when considering that energy requirements for that mode are available through the Energy Star specification.

The study team replied that recording mode was not taken into consideration because (a) over the years there has been no significant difference between the recording power and the on-mode power (b) the existence of several different recording modes (e.g. tuner to blue ray) made it difficult to choose one over another and (c) the use profile in that mode is not more than ¼ hour per day.

VP/VR industry representatives questioned the power requirements suggested for the on-play mode. They commented that the suggested levels did not meet the requirements of the recorders. When a recorder is in play back only it still requires a lot more energy than a player in the same mode.

In addition, they questioned the proposed limits for the idle mode and asked the study team to explain how they concluded in that figure. They believed that the values suggested were far from what can really be achieved and to resolve that they were willing to provide more input.

The study team replied that in terms of on-play, most of the power limits introduced in the study were from the Energy Star and any further information from the industry on those issues would be very helpful.

They also noted that there was a lack of technical data and thus strong technical evidence was missing from the study. In addition, the rate of innovation that these products are experiencing is such that the consultants could only form assumptions based on past evolution in order to achieve a future picture. The study team invited industry to provide better data.

Environmental NGOs requested that a comment be added to the VP/VR product group. They suggested that the study team should introduce a second Tier (beyond 2012) with the aim of giving industry a longer view.

The study team agreed with the Tier 2 recommendation but underlined that there will be a great difficulty regarding the financial aspects of introducing a Tier 2. Similar problems were encountered by the study team while introducing Tier 1 simply because there were many new products coming into the market with so many different functionalities.

Projectors

Table 3: Summary of draft Task 7 results – Projectors [as of 21 May 2010]

Product definition	Power and energy requirements	Auto power down requirements and other efficient features	Other environmental impacts	Energy/Ecolabel, GPP procurement
<p>A projector is a primarily mains powered, optical device, for processing analogue or digital video image information, in any, broadcasting, storage or networking format, to modulate a light source and project the resulting image onto an external screen. Audio information, in analogue or digital format, may be processed as an optional function of the projector.</p>	<p>Idle Mode (Based on the use pattern of non-professional projectors and Standby Regulation No 1275/2008)</p> <ul style="list-style-type: none"> • Schools Projector: 4.4 kWh / annum • Office Projector: 5.6 kWh / annum • Home Cinema Projector: 7.3 kWh / annum <p>Active mode (projecting an image) including background secondary supporting functions</p> <p>Tier 1 (Based on a projected light output efficiency of .09 W/ lumen)</p> <ul style="list-style-type: none"> • Schools Projector: 247 kWh / annum • Office Projector: 110 kWh / annum • Home Cinema Projector: 42 kWh / annum <p>Tier 2 (Based on a projected light output efficiency of .05 W/ lumen)</p> <ul style="list-style-type: none"> • Schools Projector: 137 kWh / annum • Office Projector: 61 kWh / annum • Home Cinema Projector: 23 kWh / annum 	<p>Auto power down is currently a default function. It is primarily a lamp life protection feature. It should continue to apply to projectors with new lamp technologies where lamp life is not an issue in the context of the product lifetime.</p> <p>HDMI-CEC should be incorporated in any projector with Home Cinema application.</p>	<p>These should continue to be positively qualified by adherence to the general product design guidance given in IEC 62075: (Environmentally conscious design of AV and IT Equipment)</p> <p>Mercury in projector lamps and lead in light path optical glass is already being eliminated in some industry products. An Industry VA to expedite this procedure is suggested.</p>	<p>Largest European market for projectors is Schools</p> <p>This market is principally serviced by public procurement and the product's Ecodesign qualities could be very positively influenced by Energy labelling and Eco Labelling.</p>

A representative of a large projector manufacturer questioned the values suggested as power limits for projectors. They referred to the fact that there is no standard method for measuring the efficiency of a projector and thus extra care is needed on what method is used as this can have a large impact on the measured values.

The study team agreed with the comment and also stressed the importance to establish a better approach that will form the basis for measuring the efficiency of a projector.

The same projector manufacturer representative also commented on industry's efforts to eliminate mercury in the lamps. If a suggestion for mercury free lamps put forward from the study team, extra consideration will need to be taken for those projectors that are currently available in the market in terms of replacing their lamps with mercury free lamps. Concerns were raised that for some projectors the efficiency will be affected.

Environmental NGOs asked the study team to provide more information regarding their suggested approach for an energy/ecolabel. They supported the idea of an energy/ecolabel and suggested that any proposals should be followed by specific values (e.g. energy efficiency).

The study team responded that the idea of an energy/ecolabel was suggested based on the fact that the biggest market for these products is schools and therefore exists a potential for GPP. However for the study team to suggest any specific values there will be a need to identify and agree on a robust power measurement methodology.

Representatives of consumer organisations asked the study team to take into consideration the environmental impact of the production and disposal of lamps and underlined the importance of finding a standard way to measure the lamp life. For that purpose, they suggested to the study team to consult the German Blue Angel and/or the CD magazine that publishes results of tests in that area. The study team agreed with the comment and raised the importance of finding a measurement methodology that is also compatible with the methodology used to measure a projectors efficiency. That, according to the consultants, would make an accurate calculation of lamp life from a consumer point of view but would also make sure that it suits the projector’s specific technology.

Environmental NGOs, finally requested that manufactures should on a mandatory basis provide information on the amount of mercury include in a projector.

The study team highlighted the fact that the industry is working towards mercury-free lamps and a voluntary agreement was suggested on the basis that it will speed up the process of creating mercury- free lamps.

Table 4: Summary of draft Task 7 results – Games Consoles [as of 21 May 2010]

Product definition	Power and energy requirements	Auto power down requirements and other efficient features	Other environmental impacts	Energy/Ecolabel, GPP procurement
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<p>Largely unchanged compared to task 1</p> <p>Small changes to allow scope for changes in future products (e.g. Inclusion of optical drives)</p>	<p>Active mode – proposed limits on power could impact functionality</p> <p>Idle mode – proposed requirements based on inclusion of currently available technology</p> <p>Idle mode requirements suggested at 45W to meet draft ENERGY STAR specification</p> <p>Idle mode – proposed requirements for secondary functions</p> <ul style="list-style-type: none"> • DVD playback ≤ 55.0 W • CD, BD and MPEG playback ≤ 62.0W • Internet browsing ≤ 62.0 W <p>Idle mode requirements based on the inclusion of power management in current components</p>	<p>Tier I – Implement 6 months after publication of ecodesign measure</p> <ul style="list-style-type: none"> • All high definition games consoles in any power mode other than Game Play, Game Pause, Game Play Idle or Media Play must auto-power down to a sleep/network standby/standby mode within 30 minutes of user inactivity. <p>Tier II – Implement in line with the APD requirements in Com Reg No 1275/2008 (2013)</p> <ul style="list-style-type: none"> • All games consoles in System Idle, Game Play Idle, Game Pause, Media Play Idle and Media Pause, or any state other than Game Play or Media Play must autpower down to a sleep/network standby/standby mode within 30 minutes of user inactivity. <p>Tier II – Implement in line with the APD requirements in Com Reg No 1275/2008 (2013)</p> <ul style="list-style-type: none"> • All games placed on the market on or after the Tier II implementation date must support auto-save ahead of a games console powering down to a sleep/network standby/standby mode after a period of inactivity not exceeding 30 minutes. 	<p>Other impacts from resource extraction, material content, manufacturing, recycling and final disposal.</p> <ul style="list-style-type: none"> • Product light weighting • IEC 62075 • Truncated life cycle assessment methodologies for electronics products • Suggestion horizontal measure 	<ul style="list-style-type: none"> • EU ecolabel – difficult to apply one since only 3 main products in the market and product users often concentrate on the functionality of the product. • Benchmarks – suggest to separate in class A/B. Concern on the time these benchmarks remain relevant since not sure what products are coming into the market. • Financial incentive – any financial incentive that relates to product redesign (eg to increase efficiency) should be high. That will not be the case for products that are currently in a design stage. • Public procurement – not too relevant since only 3 main products
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Industry representatives were pleased that the study team had examined PCs when considering measures for games consoles.

They commented that if the PC allowance is to drop down to 65 W then GC manufacturers would be looking for equivalents. Although they might not fit the exact make of a PC since they are not a PC, GCs are very equivalent regarding the level of performance and the capabilities.

The study team replied that the installed RAM is definitely an issue that the team needs to consider and will ensure that will update this on the final report – it will need to be category B.

In addition, industry representatives underlined that the graph presented by the team showing the scalability is based on computers using Intel scalable chips which are considered as the most advanced and expensive in the market and although values are envisaged by the study team as the middle of the road they are actually advanced.

Industry also raised concerns regarding the definition of modes as introduced the draft report. They stressed that the way definitions are addressed it is difficult to apply them to GCs and thus sophistication in the definition of modes might be needed.

Regarding the auto power down, the industry recognised that it is very difficult to verify which games can have an auto-power down feature and therefore they tendered an alternative proposal which they claimed to be more elegant and enforceable at the level of a console and will avoid regulating thousands of games. Based on this, the console sends a signal to the game that it is about to go on a power down stage and that will allow the game to prepare before the system powers down.

What is more, according to GCs industry representatives they are also looking to implement a “suspend” through the RAM so as the system saves whatever is happening at the time- like a laptop.

If that were to be implemented, they would need to define an additional sleep mode through the suspended function.

For the industry, a mandatory measure would be better than a voluntary agreement but they are concerned with the level of investment needed and suggested that the study team should ensure that everybody is playing from the same playing field.

Finally industry representatives raised concerns regarding the wireless sleep proposal as GCs sleep function has slightly more functionality than a PC functions in the same mode.

Representatives of environmental NGOs raised their concerns regarding the measures suggested for GCs as these did not address the main function (i.e. on-mode) of the product. They understand however the difficulties around addressing the main function but suggested that the consultants should provide a roadmap on how power consumption on the gaming mode can be dealt – it would be disappointing to them to wait until the new generation of consoles comes out before consultants address the issue of gaming mode.

For the idle mode they accepted the limits suggested only a transition plan and could probably become tougher.

The study team consultants took notes of the comments.

Environmental NGOs commented around the auto power down function and welcomed the proposal that manufacturers put forward. They underlined that an auto power down function should cover all modes and should come as a mandatory function that user will not be able to turn off but rather adjust to the limits which are convenient for them.

Industry agreed that an auto power down function should cover all modes.

Environmental NGOs suggested that the only way forward to apply some efficiency limits to the gaming mode will be to clearly understand what the next generation of GCs will look like – that would require the industry to reveal information about the next generation products.

Industry representatives underlined that they simply don't know what the next generation products will look like and are not holding such information.

In general, environmental NGOs underlined the fact that most of the measures addressed in task 6 were not taken into consideration in task 7 and although they could understand that these were essentially horizontal issues, they still urged the study team for more investigation to identify and propose measures that will address environmental impacts other than energy consumption.

Task 7 - Impact analysis

The study team presented (for all three product groups) their initial thoughts (table 5) on the impact analysis before allowing stakeholders to comment.

Table 5: Main points – Impact analysis

VP/VR	Projectors	GCs
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<ul style="list-style-type: none"> • Allows sufficient time for integration in design cycle • No additional R&D but reallocation of budget • No additional cost or proprietary tech but might not fall as quickly – mitigate race to the bottom • Exclusion for high end products – allows innovation and reduces forward risk. Expectation of efficient implementation when mainstreamed. • Fast start limit may still be challenging, power vs transition time for consumer 	<ul style="list-style-type: none"> • A step change in the improved energy efficiency of projectors hinges totally on light source technology. The impact on the industry of incorporating high efficiency light source technology should be low. In this context the following should be considered. • Although projector lamp R&D investment is limited because of the comparatively small global market, the impact of suggested major improvements in lamp efficiency will be heavily supported by high R&D investment in lighting applications for other major Industries. • Initial BNAT light source development in projectors is currently proprietary but there is a clear indication of across-industry BNAT solutions in the pipeline. 	<ul style="list-style-type: none"> • Monetary impacts of suggested measures will be small as long as considered for products that are still on the design stage • Cost savings for users (eg reduce energy consumption) • Note competitive issues impacts • Functionality doesn't change provided that active mode limits do not apply • Impact will occur in game developers/manufacturers • Manufacturers will need to spend more on R&D budget for energy efficiency
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GCs industry representatives raised their concerns about the impact analysis part in the report referring to no financial impact for the industry as soon as any measures are clearly defined and only introduced to the next generation consoles. They would like to see a strong financial analysis.

The study team took note of the comment and requested industry to help towards a strong financial analysis by providing the study team more data.

The 'next steps' - schedule to completion

Finally the study team presented the next steps in the study including the schedule to completion

After the 3rd meeting:

- Stakeholders have until 28 June to comment on the published draft T6 & T7 reports.
- The Team will prepare minutes of the 3rd Meeting.
- The Team experts will prepare their Impact Analysis (T7.2) following discussions at the meeting.
- The Team will prepare the draft T1-7 report taking into account comments received and will prepare/update the Feedback Log
- Publish Minutes of 3rd Meeting, draft T1-7 report and Feedback Log after Commission's approval. (Final stakeholder comments on these within 2 weeks of publication)
- Agree revisions with Commission and prepare Final T1-7 Report.
- Publish Final T1-7 report following approval from Commission.

Next steps of the European Commission in the decision-making process under the Ecodesign Directive

The Commission explained that this preparatory study on sound and imaging equipment should analyse whether and which ecodesign requirements should be set for video players/recorders, projectors and game consoles. Based on the results of the study, including stakeholder comments,

the Commission will decide on possible next steps in the Ecodesign Decision Making Process (see http://ec.europa.eu/enterprise/policies/sustainable-business/ecodesign/index_en.htm).

Excursus: Questionnaire on Audio Equipment

The European Commission has chosen to screen the possible environmental impact and improvement potential of audio equipment in a separate (from ENTR Lot 3) piece of work. From comments from ENTR Lot 3 stakeholders and the study for the first working plan under the Ecodesign Directive it was not clear if "audio equipment" is an add-on to the product group "sound and imaging equipment" or a separate product group. To clarify this question but aiming also to receive recommendations on the type of products relevant for inclusion and their overall savings potential, the EU Commission distributed after the second stakeholder meeting to all stakeholders registered at ENTR Lot 3 a questionnaire and made the questionnaire available at the DG Enterprise ecodesign website.

Questionnaire responses were presented at the meeting and the floor opened for stakeholder discussions.

Overall, 15 evaluable questionnaire responses were received from stakeholders, including large organisations and SMEs inside and outside Europe, consultants and Member States.

The following products were suggested to be part of the scope of the study:

- Amplifiers in all kind
- Speakers, including powered subwoofers and iPod speaker systems
- Home theatre systems, including audio video receivers
- Audio signal processor (analogue and digital), including audio preamplifiers
- Compact HiFi products
- Radio
- Tuners
- CD players

The EU Commission also received comments on what products should be out of the scope of the study and recognised that for those further discussion is necessary.

Regarding the screening exercise for audio equipment, data were not made available via the questionnaire and therefore the EU Commission informed that at least at this stage decisions will be based on Prodcom data. Prodcom data for 2005-06 estimates there are 630,000,000 units of audio equipment including, however, other equipment like clocks and smaller radios.

In addition, through the questionnaire, the EU Commission tried to address the environmental impact and use patterns of these products in different modes. It was apparent that variations occur in the use profile ranging from 1 to 4 hours usage per day. Some stakeholders suggested 4-5 hours per day, others 2-3 hours per day.

Similarly the energy consumption of this product group in active mode ranges significantly across different products. For example, amplifiers could range from <20 W to >80 W, subwoofer 20-80 W, home theatre systems 60-150 W, audio signal processors 50 W, compact HiFi products 20-40 W, while CD players 10-15 W.

Furthermore, most of the stakeholder's views on a modular approach or a TEC approach seemed again to vary for different products. A TEC approach, for example, could be used for compact HiFi but elsewhere the suggestion was to choose a modular approach.

In terms of saving potential, questionnaire responses and EU Commission research indicate that improvement savings move in the direction of more efficient power amplification. The Commission however stressed that for audio products the important thing to consider is sound quality versus energy efficiency and that would need detail analysis.

Finally, in terms of existing measures, questionnaire responses provided comments on the following:

- The voluntary Energy Star legislation on audio video
- The voluntary German Blue Angel for compact HiFi
- The mandatory EU standby regulation 1275/2008, WEEE, RoHS, LVD, EMC

The questionnaire revealed that audio equipment includes a number of diverse products with data gaps and different assumptions and no stakeholder agreed to directly take over the U.S. Energy Star requirements. The EU Commission concluded that it is not possible to simply add "audio equipment" to the product group "sound and imaging equipment". It is a separate product group which the 2011 study on the second working plan under the Ecodesign Directive should analyse further to decide on an inclusion in the list of product groups of the second working plan for the period 2012-2014.

The result of the questionnaire is available at http://ec.europa.eu/enterprise/policies/sustainable-business/ecodesign/product-groups/sound-imaging/index_en.htm.

Audio product manufacturers' representatives welcomed the decision to address "audio equipment" as a separate group and endorsed the idea that there is huge variation especially when moving towards the high end of this product group. They also underlined that, especially with high-end products where the key feature is sound quality, equipment needs to be switched on for a long period of time to maintain that quality so the potential savings might therefore be smaller.

Audio product manufacturers' representatives also commented on the demarcation criteria that could apply, referring to price or volume as potential approaches.

The consultants responded that the price will be a difficult approach for the Commission as it is difficult to legislate in price terms because prices can change over time. A representative of the High End Society underlined the need to separate high end products on a technical basis while VP/VR industry representatives agreed with that view.

Adding to the last point, a representative of the German UBA suggested a distinction could take place based on a products functionality and not necessarily on purely technical requirements.

Finally, the issue of loud amplifiers in cars was raised by stakeholders, offering the view that these products should be included in a potential ecodesign study on audio equipment. The EU Commission replied that the Ecodesign Directive 2009/125/EC excludes means of transport, implying that products designed only for an application in a means of transport are excluded from the Directive. Furthermore, the Ecodesign Directive does only address environmental, no safety or health aspects.

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