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Notes from EuP Stakeholder Meeting, Lot 3 Personal Computers and Computer Monitors

Date of meeting April 20, 2007

Venue Centre Albert Borschette, Rue Froissart 36, 1040 Brussels

Present See list of participants
EuP Workshop Brussels 070420 Lot 3 Personal Computers

Agenda

10.00	Opening of meeting	<i>Stephan Kolb, DG TREN, EU</i>
10.15	Brief summary of main results of Tasks 1-3	<i>Anna Karin Jönbrink, IVF Helena Nordin TCO</i>
10.45	Presentation and discussion of main results of Tasks 4 and 5	<i>Mats Zackrisson, IVF</i>
12.30	Lunch	
13.30	Presentation and discussion of main results of Tasks 6 and 7	<i>Anna Karin Jönbrink, IVF Tomas Ekvall, IVL</i>
15.45 - 16.00	Next steps	

Introduction

Mr Stephan Kolb introduced the meeting and the Consortium. He emphasized the importance of feedback from the expertise in the room, in order to increase the quality of the study.

Presentation

The report of task 1-7 of Lot 3, Personal Computers and Monitors was presented by the Consortium, IVF, IVL and TCO development. The report and presentation is available at www.ecocomputer.org.

All participants were asked to come with their comments and questions during the presentation. The feedback on the reports available until Friday 13 April was sent out in advance. The feedback was considered when preparing the presentation in order to clarify things that was not clear enough in the report.



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Notes from discussions

Below follows brief notes from the meeting, mainly covering the discussions, not the report and the presentation itself.

Task 1

There was a discussion about the scope of the project. Why not include workstations? Some people stated that a workstation is also a personal computer. It was agreed that the market shares of Workstations is very limited, and that they because of that have no impact on the study. Therefore the Consortium claimed to stay with the definition, and exclude workstations.

Docking stations for laptops was asked for since they were not mentioned in the reports. One person commented that docking station mainly is a power supply, which is covered by lot 7.

The Consortium response is that docking station will be further evaluated regarding energy impact in order to decide whether to include them or not. Some companies (HP and Toshiba) promised to provide data for the evaluation. Preliminary data provided during the meeting indicate that docking stations would add about 1 W to the idle power consumption of a laptop.

Task 2

There was an opinion that the estimated life length for all products is too high. Other voices meant it was too low. Many industry representatives and other experts commented that the life length estimations in the report are valid.

The Consortium will stick to the values in task 2, and in the report further describe that the life length is the time in use, not including the time “in garage” before sending products to End of Life treatment.

Task 3

There were critics against the usage behaviour estimated, among others a comment that the monitor should not have a longer active time than the desktop active time. Other comments support that the active time for monitor can be longer than the desktop active time, it depends on the software used for power management, and the user. The opinions were differentiated, and some participants thought the usage in active time was far too low, while others had the opposite idea.

Some participants considered the data sources for the calculations not enough evaluated. There are some studies using logging methods, but covering only a small part of the user groups, such as only a few households in one single country, while other studies used questionnaires to many users



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in wide groups. Since no study is both having a very high quality of measurement (as logging) and at the same time covering enough users, the decision was to make a mean value of the studies available. The Consortium decided to stick to the usage behaviour described, and to use the sensitivity analysis to cope with the uncertainties, which was agreed with the audience.

Comment on that "real" active mode for computers is much more energy consuming than idle and that we have no estimate or measuring method for "real" active. Other comments that idle still are a good estimate since the time in "real" active mode normally is very short (gaming etc not included). Anyhow, ECMA is working in a project trying to define "real" active mode for computers and at least until they are finished at the end of 2007 there are no good estimates or measuring methods.

The conclusion was that since the energy use in active modes is very similar to idle in most cases (due to the very short times of high processor intensities), and that there for the time being is no alternative measuring method, the power consumption in idle mode will be used as an indicator for the active power consumption. References will be added to at least one study supporting that the idle mode value is a good indicator for the power consumption during "real" active mode.

Discussion about how the power management influences the usage behaviour estimated. According to Energy Star power management is normally activated in about 10% of the computers.

The suggestion from IVF was to handle this in the sensitivity analysis done later in the project, and describe the connection between power management enabling rates and the chosen values. Although there were not a total consensus on this suggestion, the majority of the meeting supported handling the large uncertainties concerning usage behaviour in the sensitivity analysis.

Task 4

There was a question if so called "white boxes" are included in the statistics. The answer is that white boxes are included in terms of sales volumes but not in terms of power values.

There was a request from several participants to have a better explanation of the basis for the statistics used and a better balance between the signed NDAs (Non-disclosure-agreement) with the industry and official figures. The Consortium will do all it can to include data on data, while respecting the NDAs, in the revised version of the study.

There was a comment about the estimated repair price. New data presented at the meeting from one company show that the repair cost for notebooks is 40% higher than for desktops. In addition to that a cost of about 85 Euro



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(end user price) to change the battery in the notebook is not included in the estimate. The information will in detail be sent to IVF after the meeting.

There was a comment that the estimate on idle for laptops is too low, it does not represent all high-volume products. The company in question have statistics on that another 17W compared to the estimate is normal for some home market laptop models.

The Consortium argued that a data from a single supplier this late in the process could not influence the calculations, however, it should be explicitly pointed out in the report that the power values used as representative for “an average” product in each segment should in no way be interpreted as suggested limit values. Furthermore, the existence of product categories with more than marginal sales volumes that, in energy terms, markedly deviates from the “average” product should be pointed out in the revised report.

Furthermore:

- IVF made clear that the effects of the uncertainties related to energy consumption and duration of a particular operational mode (cf. slide 34) will be considered separately in the sensitivity analysis.
- IVF assured that the terminology on "idle" and "active" will be used consistently for computers and monitors (cf. slide 35).
- IVF explained that for approx 10% of the computers in the Energy Star dataset used for 2007 technical specifications, energy consumption in "sleep" is lower than in "off". This dataset is considered representative for all computers on the market 2006. A technical explanation will be given/is given in the report.

Task 5

There was a request for an interpretation of figure 56 in the presentation (page 151 in the report) to create a better understanding of which areas are the most important to improve in addition to the use of energy.

The revised version of the report will contain a systematic analysis and interpretation both for the energy-related and non energy-related impact categories.

Task 6 and 7

A major issue clarified, was that the data for the base cases in the study are products from 2005. Using 2005 data for the base-cases was necessary because it was the most recent year for which sales data was available. Furthermore, the MEEUP methodology stipulates using 2005 data for all product categories to enable comparisons between categories. For



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assessment of BAT and BNYAT, the most current data was used and compared with the base-cases built upon 2005 data. One other clarification was that the improvement options described in the report, does not necessary describe the technologies, prices and performance available at the market today, but which will be available within some years. The prices for BAT used in the calculations are therefore estimated lower than the current BAT prices, in order to reflect the prices when the technology is mature.

There was a comment that the improvement activities suggested already is more or less implemented today since we compare with the year 2005. The Consortium claim that this is only partly true, since there are both improvement options available, and some not yet available described in the report. Regarding the improvement options already available on the market, they are only implemented in some products, and not in all products, thereby giving still an improvement potential if they would be implemented in all products in use. In task 8 the Consortium will come up with policy scenarios, varying the blending of the base case related to implementation of the improvement options.

Power supply unit

There was quite a debate about efficiency measurements for power supply units (psu). It was concluded by the meeting, that possible problems with the efficiency measurements for power supply units are of importance, but was not to be solved in this meeting.

One participant claimed that for laptops efficiency >80% is already common. Therefore the suggestion of requiring > 80% would only be applicable to desktops. The Consortium and some companies claimed that there are still many laptops available on the market with lower efficiency than 80% and that the higher efficiency might still be a solution. There will be a further evaluation of the power supplies for laptops and for desktops, to clarify the differences, based on new information that some of the participants (HP and Dell) promised to provide the Consortium. There was also a comment that internal psu can not have the same efficiency as external psu, which depends on the fact that internal psu almost always have multiple outputs.

The psu efficiency and improvement potential will be further investigated and described in the final report.

Improved processors

There also was a comment/clarification that the fact that dual core have better energy efficiency may depend on other things than the two cores. The meeting did not arrive at a clear understanding of the “dual core” potential. Based on intensive information exchanges with both processor



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developers and computers manufacturers after the meeting the “dual core” issue has since been clarified and this will be reflected in the revised report.

The improvement potential and technologies of different processor-related improvements will be further investigated and described in the final report.

LED backlight

There was a discussion about different types of backlight LEDs and the fact that some (red green clusters) not are energy efficient while others (white) are. Different types of LED also affect the picture quality. The general life length of LED is still worse compared to traditional LCDs but will most likely improve in the future.

Power Management

There was a request for a clarification of how the improvement potential with power management is calculated. A clarification of the power management used in the usage pattern described in task 3 and in the improvement calculations of the study will be inserted in the revised report. There also was some comments regarding the possibilities to introduce implementing measures related to EuP regarding power management. Some of the participants thought power management would be a possible implementing measure if handled in a smart way, and some other think it is not. The Consortium will try to describe this in task 8 of the study.

Flame-retardants and plastics

There was a comment about flame-retardants. A question was put if the text in the report should be read like one should avoid using plastics since the effect of the flame-retardants is not known. The text in the revised report will be changed so that this interpretation is avoided.

Comment about renewable/bio plastics. These types of plastics may reduce the total energy need but not always. There are studies published showing that the total energy consumption needed is only slightly diminished with renewable plastics.

In a longer perspective however, these plastics may be interesting.

Change from desktop to laptop

A discussion and a consensus among the audience that changing from a desktop to a laptop computer can not be generally recommended since there are a lot of other aspects to consider. There are for example ergonomic aspect for laptops, the need for extra accessories (e.g extra displays and keyboards) and the shorter life length when using laptops etc. It was clarified that in the calculations of improvement options, it is assumed that an office laptop needs an external monitor. Keyboard and mouse are assumed insignificant in the context. Computers manufacturers were



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requested to provide information on dockings stations for possible inclusion in the revised report if found significant.

Finally

The audience was asked to provide their feedback in written form, to make the content of the feedback very clear to the consultants.

Next step

The notes from the meeting, the list of participants, and the presentation will be published at the website.

Task 8 will be published at the website within some weeks, and then there is an opportunity for the stakeholders to give their feedback on it.

Secretary to the meeting: Helena Nordin/Mats Zackrisson/Anna Karin Jönbrink