The EPIC-ICT Project:

Development of Environmental Performance Indicators for ICT Products on the example of Personal Computer

Press release

Provided by the EPIC-ICT Consortium

www.epic-ict.org

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EPIC-ICT: A promising approach for Eco-design of electronic products

"How can the environmental impacts of electronic products be reduced"? This increasingly important question has unfortunately no easy answer. The key issue is the fact that there are many factors that influence the environmental performance of an electronic product. Many interactions between the product and the environmental need to be taken into account and this needs to happen over the whole life cycle of the product. First of all, electronic products need to be manufactured. To understand the environmental relevance, the effects of the production of all components and parts – sometimes hundreds and thousands in one product – needs to be taken into account. It has to be determined: What materials are these components made out of? How are they produced? How much energy and raw material was used for the production? Which and how much emissions and waste have been released?

Once, all this information is collected, the perspective needs to be enlarged to get the whole picture of the life cycle: How much energy (i.e. electricity) does the product consume during its life time? What happens to the product after its life time? Will it be recycled? Dumped? Incinerated?

Within the scope of the European Commission's framework directive for setting eco-design requirements for energy-using products (EuP), mechanisms for rapid, efficient and participatory decision-making for reducing the environmental impacts of electronic products are required. One mechanism to address the needs of decision-makers in product design as well as in policy is the application of "Environmental Performance Indicators" for products.

In the project "EPIC-ICT" industry and researchers together, supported by the European Commission, took on the challenge to combine available environmental and product information in an intelligent and systematic way with the goal of improving the overall environmental performance of products. A promising eco-design method for ICT products was developed, which is scientifically based and applicable, efficiently taking life cycle aspects into account". EPIC-ICT is the premier method to get "life cycle thinking" into product design.

The advantages of eco-design using EPIC-ICT are obvious: in the planning and design phase changes are much easier – and especially cheaper - to implement than for an existing products. If environmental know-how is already included at this product planning stage, environmental beneficial considerations can be taken into account, that are most likely impossible at a later stage.

EPIC-ICT addressed one of the main barriers for a wide-spread application of life cycle based eco-design: The translation of scientifically identified environmental issues into the language of product planners and designers. Substantially, the method is based on the general idea to carry out only one thorough environmental analysis, whose results can then efficiently be taken for the eco-design of various products in the same group.

Substantially, the method is based on the idea to carry out one thorough environmental analysis of the total product group (e.g. PCs, mobile phones), whose results can then efficiently be taken for the eco-design of various products in the same group. Summarized, the main outcomes of the EPIC-ICT project are:

- Environmental Performance Indicators allow using and working with environmental profile results for eco-design of complex products, without carrying out a study for every single product
- Applying the EPIC-ICT method identifies eco-design priorities of ICT products on general and specific product level (e.g. life cycle phase or component level)
- The EPIC-ICT method provides a systematic and flexible approach which combines environmental issues and the producers' constraints and translates environmental aspects into specific design options

EPIC-ICT facts:
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More information can be found at: www.epic-ict.org