CLASSIFICATION AND ANALYSIS OF SOFTWARE SUPPORT TOOLS FOR ENVIRONMENTALLY FRIENDLY PRODUCT DESIGN

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EXTENDED ABSTRACT

The implementation of the concept of Sustainable Development presupposes no further overspending and deterioration of natural resources. This can only be achieved by the implementation of various environmentally friendly strategies that will lead to the design of environmentally friendly products. The great capabilities that the computer technology offers lead to a great speed and accuracy of results.

The software tools that are available for Life Cycle Analysis (LCA) and Ecodesign (1) are many and although each has its own features, almost all of them are based on the same methodology and have many common characteristics. Their range of uses varies throughout product's development phases – from the product's concept conceiving to the phase that a product is ready for the market and to the phase that is disassembled and ready for reuse or final disposal.

The analysis done in this work refers to more than 30 software tools and databases that are the most widely known and used and is aimed at raising the awareness and knowledge of researchers in the field of analysis and design of products and processes.

The main specifications of these software tools have been identified. On this basis (i.e. using the specifications given by the software developers at their web site instead of a direct evaluation – benchmark because this would have been very costly and time consuming since not all developers release a demo of their software) a comparison was applied showing their main common specifications and differences.

Key words: Life Cycle Analysis, LCA, Ecodesign, Cleaner Production, Environmental Analysis and Management, DfE, EMS, software packages and/or tools.