



ELEKTRA: Eco-Integrated Wall-Pack Concept



Fig. 1: Standard Wall-Packs

Starting Point

Stand-by losses in office and household electronic equipment are estimated at 20TWh per year for Germany. 11% of the electricity production for households and offices goes to waste. Wall-packs, which are distributed in great numbers, contribute substantially to the overall stand-by losses. Most of all wall-packs feature the inefficient 50Hz linear technology, with the much more efficient switching mode technology being available at higher cost only. Almost everyone using wall-packs is familiar with the ‚warm‘ feeling that linear regulated devices have after continued use.

Realization



Technological means to reduce losses in wall-packs are ready at hand. However, the market seems to be in a deadlock. In close co-operation with Martel (Marienheide), the project *ELEKTRA* developed an integrated eco wall-pack concept. The product conceptualising phase comprised a wide range of aspects. Market research was done to establish the global market structure of the small power supply segment and to verify the price target. To establish the environmental performance of the pro-

posed eco-product, the life-cycle energy consumption was evaluated and the toxic potential of materials employed was determined. Environmentally friendly production technologies were singled out and a product marketing concept was co-established from the very beginning of the conceptualising phase. Industrial design studies were carried out: The aesthetic dimension of technology is viewed as an aspect of sustainability, a market opening and a means for conveying green design to market.

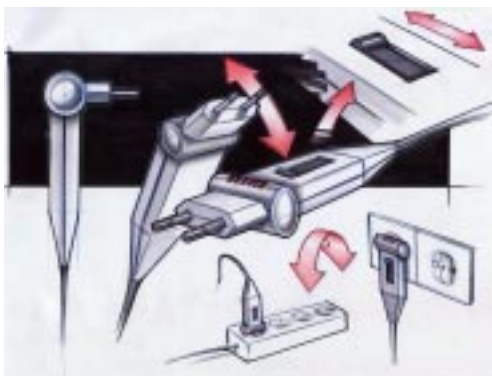


Fig. 2: Artists View. Design by formlos.com

Results

This development project supports a two-fold proposition. (1) Integration of a basic set of product aspects into a holistic eco-product concept requires a reorganization of standard product development processes in SMEs. (2) Co-operation of actors within the enterprise, between enterprises and with partners from applied science and product related influence groups is essential. Eco-product success starts by making the nucleus of an expanding network function. Regarding wall-pack technology the project has shown that a holistic concept is the key to making the switching mode technology cost-competitive.