Homespeed: the pan-European database for energy-efficient appliances, consumer electronics and office equipment

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Abstract

The market for appliances is becoming increasingly a European market. Consumers are also becoming more aware of energy and environmental issues regarding the equipment they purchase. In order to supply consumers comprehensive information on energy efficient household appliances, consumer electronics and office equipment a pan-European database has been developed. The pan-European database was started in a SAVE 2001 project in which five European countries participated (The Netherlands, Germany, Czech Republic, Sweden and United Kingdom). Recently the project has been expanded to include six more countries (Spain, France, Portugal, Poland, Romania, and Finland).

The pan-European database is publicly available on a European website (www.homespeed.org) and can be (partly) downloaded to be used for other public, non-commercial initiatives. Since there are cultural and language differences between the participating countries, the data will be disseminated to consumers via national Websites. Promotion will also be done on a national or regional level.

This paper provides a description of the principles, structure and functionality of the pan-European database. An overview of the national activities and results of the data dissemination in the participating countries is given. Furthermore, attention is paid to the possibilities for extension of the pan-European database principle and co-operation with manufacturers.

Introduction

The market for appliances across Europe is becoming increasingly streamlined. Consumers are also becoming ever more aware of energy and environmental issues regarding the equipment they purchase. There is therefore a clear demand to establish a pan-European database to supply comprehensive information on energy efficient household appliances, consumer electronics and office equipment. Several such databases already exist, but these have several drawbacks. They either do not provide a sufficiently wide range of product information, are not easily accessible/usable by consumers, or are not set-up on a European scale. Some commercial initiatives on product information also exist, but these often do not provide information on energy consumption.

Therefore, a SAVE project was proposed and accepted to develop and stimulate the use of a pan-European database of energy efficient appliances, which allows for information dissemination via national websites in eleven European pilot countries (NL, UK, SW, D,CZ, P, PL, FIN, E, RO, F). The database is publicly available on a European website and can be (partly) downloaded for use by other public, non-commercial initiatives.

The database, which provides a transparent European public data source on appliance energy consumption, has: an easy input platform, a platform for discussion about discrepancies between data sources, and enables the efficient use of test resources and available data from individual countries.

This paper is structured as follows. First the structure and functionality of the pan-European database that is realised under www.homespeed.org is given. Then the data dissemination and promotion activities are described. Finally, the conclusions and recommendations are given.

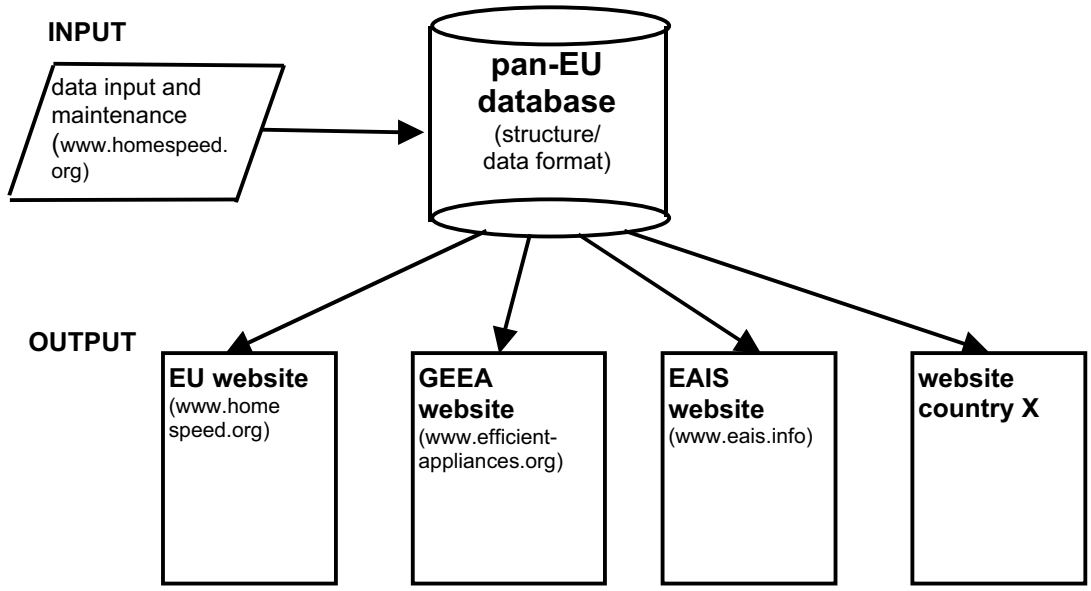

Figure 1. *The structure of the pan-EU database*

Table 1. Appliance types covered by the database

Appliance type	
Household appliances	Washing machine, Tumble dryer, Washer-dryer, Dishwasher and Cold appliances
Consumer electronics	TV, TV-VCR combi, VCR, DVD-player, IRD, Satellite receiver and Audio equipment
Office equipment	PC (system unit), Monitor, Printer/Multifunctional device, Copier, Fax and scanner

Structure and functionality of the pan-EU database

The pan EU-database and website (www.homespeed.org) provides a single input, multiple output platform for energy (related) data on appliances and equipment. Although the site itself provides some information, the database is the heart of it. The information function is to be provided by national websites, which is a logical choice in the European context because of the many different languages and cultural differences between countries. The participating countries are: Czech Republic, Finland, France, Germany, Netherlands, Poland, Portugal, Romania, Spain, Sweden, United Kingdom. Figure 1 shows the structure of the pan-EU database.

DATABASE STRUCTURE; DATA FORMAT

The core of the pan-EU database is the database structure. There is a basic part which is the same for each product type such as brand name, model name, data source and availability. The specific product fields differ per product type and are based on the EU-label characteristics. The data in the database should be objective and useable in each European country. Therefore, the pan-EU database contains no data on energy prices or prices of appliances. These data can be added by each country at the national level.

The following appliance types are currently covered in the database (see Table 1).

DATABASE DATA INPUT & OUTPUT

Each pilot country has designated an organisation that is responsible for the input of data into the pan-EU database, a so-called NRO (National Registration Office). Only the NROs and the webmaster can input and change data. In future it will also be possible for registered manufacturers to access input routines.

Besides data input the NRO checks the availability of products on the national market. For these actions the NRO uses the website www.homespeed.org. The database enables data to be entered from several sources, such as manufacturers' catalogues and consumer tests, but only data from manufacturers will be shown in the public website product list.The data from other sources can only be viewed by NROs and is not publicly available.

The pan-EU database is a database on energy efficient appliances. This means that only the following products are shown on the homespeed website:

- white goods with EU-energy label A (except for tumble dryers: for which also EU-energy label B is shown),
- consumer electronics with the GEEA-label (or meeting equivalent efficiency requirements),
- office equipment with the Energy Star label (or meeting equivalent efficiency requirements).

The database also contains products that are less efficient, because these products are needed for certain national websites. The less efficient products are however not shown in the list on www.homespeed.org.

The database content can be viewed and downloaded on the EU-website (see Figure 2. which shows an example of the output) . The NRO's have more download possibilities than other visitors of the site, e.g. downloading data of products less energy efficient than indicated above.

For each appliance in the database not only the energy label rating is shown but also the precise energy efficiency index value. This enables consumers to identify the most efficient appliance amongst a group of class A appliances.

Dissemination

The ultimate objective of spreading information on energy efficient appliances is to persuade consumers to buy energy efficient appliances. This means that consumers should be able to find the data and use this information as a criterion in the purchase decision making process. Consumers are best reached by national media. Therefore, the data of the pan-EU database is displayed in national websites. In Figure 3. two examples of national websites are shown. The promotion of the national websites is also done at a national level. This way each country can adjust their promotional activities to the current national or regional situation.

In general the target groups for the promotional activities are consumers, retailers, energy advisors, manufacturers and importers. The main promotional activities include: articles in relevant magazines, links from other websites to the national website, advertisements in (consumer) magazines, and leaflets for consumers with information on the national website.

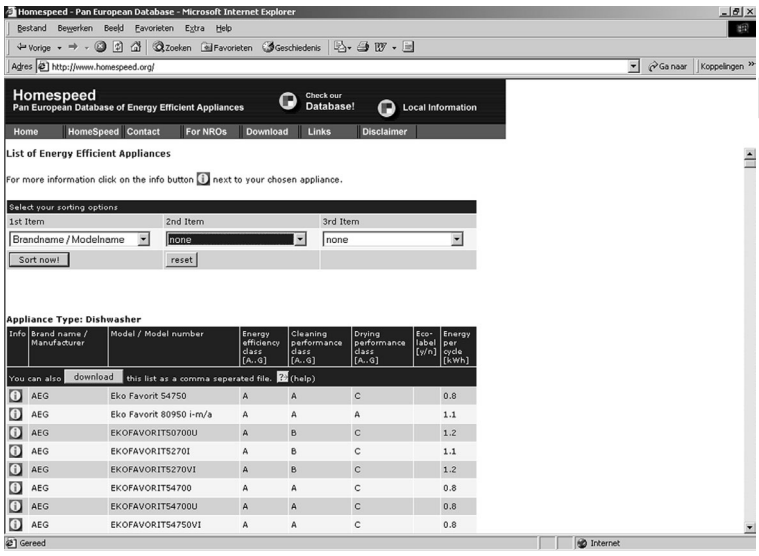

Figure 2. *Example of screen output*

Conclusions and recommendations

Until the advent of Homespeed, Europe had no publicly available database on energy efficient appliances. The Homespeed database has been operational since March 1, 2002 and new products are entered continuously. Currently, Homespeed includes 24 appliance groups and contains data on 8 913 appliances. Homespeed is a transparent, European public data source on appliance energy consumption. The website www.homespeed.org provides an easy platform for the National Registration Offices in each participating country.

Because data needs to be entered only once but can be used many times, Homespeed enables the efficient use of the available data. Furthermore, because of its' distributed input, Homespeed is a database with minimum overheads.

From the current experiences the following recommendations can be given.

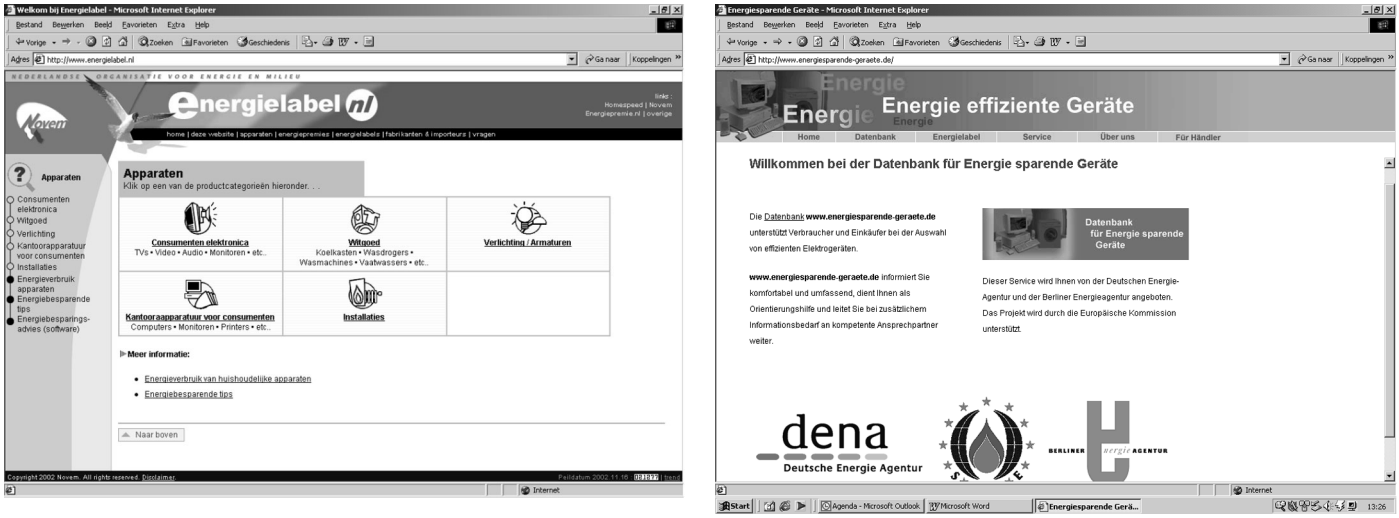

Figure 3. *Two examples of national websites*

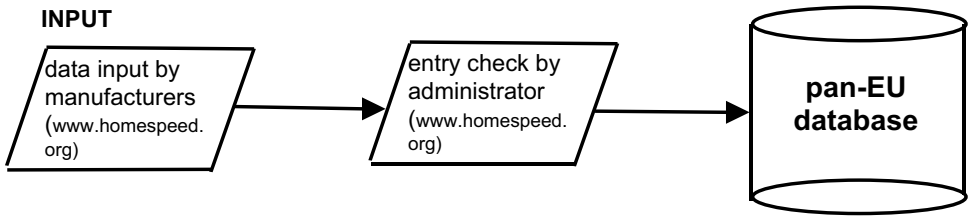

Figure 4. *Web data entry by manufacturers*

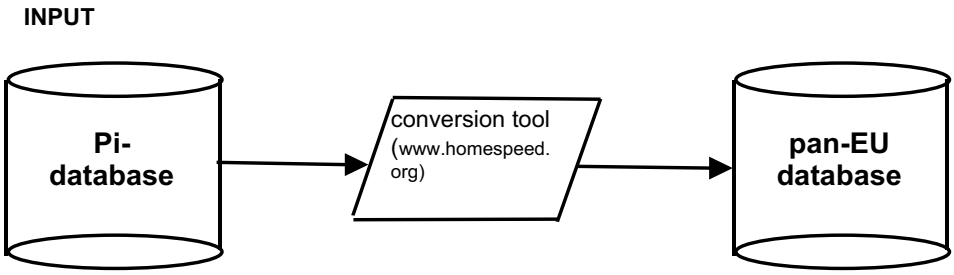

Figure 5. *Data download from Pi-standard*

DATA ENTRY BY MANUFACTURERS

Currently data is entered manually by the NROs. It might be more practical to enable web input by manufacturers with an entry check (face validity) by a central administrator.

It would be even more efficient to directly download the relevant data from the manufacturers databases.

The Pi (**Π**)-standard is set up by the European major household manufacturers' organisation, CECED, and covers large household appliances and vacuum cleaners. Besides energy characteristics many other characteristics are covered.

For white goods several large manufacturers have agreed on the Pi-format for a large set of data, including energy characteristics. The Pi-dataformat covers the same items regarding the energy efficient characteristics as the pan-European database. No central Pi-database exists, every participating manufacturer keeps its own database but uses the standard Pi-format.

However, also this solution, requires careful thoughts on the implementation. Firstly, also in this case, an entry check of the data might be useful. Secondly, from a manufacturers perspective it is clear when products are entering the market, but the point from which they are no longer available is not clear. After the manufacturing of a product is discontinued, it might take considerable time – which is unknown to the manufacturer – before the last product is sold in the shop. This means that the manufacturer can not delete the data and that another procedure for deletion has to be found, otherwise the database will become polluted with obsolete products. In the current SAVE project, the national registration office (NRO) checks whether products are still available and marks them accordingly. If the product is not marked "available" the product will not show on the national list.

POSSIBILITIES FOR EXPANDING THE DATABASE

The database can easily be expanded to include other appliance groups, such as the recently labelled ovens and air conditioners. Further data-input from other European countries which use the EU-energy label is also possible.

The principle of the pan-EU database- input once, download many times – could also be applied to other programmes such as Energy Star. Countries from all over the world participate in the Energy Star programme. These countries then have the possibility to input the Energy Star registration product data into one database, from which down-loads can be made to suit regional needs, e.g. all Energy Star appliances available in Europe or Japan. For the EU, Homespeed could serve as the European Energy Star database.