

Electronic paper reduces Eye and Back strain for schoolchildren 23jan07

The Dutch company Edupaper.nl, located in Maastricht, will make it possible for schoolchildren not to have to lug many kilograms of books in their backpacks each day. Beginning of February a project starts at the Bonnefanten College in Maastricht where - for the first time in the history - children will effectively use electronic paper in the classroom. The new product is based on innovations by E.INK Corporation and Royal Philips and is produced by the [iRex](#) company, a spin-off from Philips, located in Eindhoven, the Netherlands.



Now a backpack of 10 kg next time a shoulder bag of 4 ounce

Ease of use with hundreds of study books

On a flat device, named "iLiad" with a display the size of half an A4 (or folded letter size) page, all school books for one or more school years will be digitally stored. Through a new technique with "electronic ink", the device is as easy to read as paper, without any distracting reflections, and the text is - even in full daylight - very well readable. In contrast to a regular laptop, the device stays cool, weights less than 400 grams, and the battery runs out only after 15 hours. All these features facilitate the use of such devices in classrooms, as these devices will not disturb the education process as laptops tend to do.

Using a touchscreen, the students can make notes in their digital books and in - contrast to paper - these can simply be modified or removed. For each subject one large file is loaded containing the theory book, the workbook and the [Dokeos](#) "electronic learning environment". Handwritten notes can be stored and automatically converted to MS Word documents. Multiple-choice tests can be made and (automatically) checked by connecting the device to a central computer. Open questions can be filled out by means of special forms, whereupon they can be sent to the instructor. He, on his turn, can save his back as he no longer has to lug piles of exercise-books home with him.

Each morning and evening, the data will be synchronized with the central computer for backup and to bring the information up-to-date. An additional experiment will be to upload a daily newspaper for discussions on recent news in the classroom, which might spark renewed interest in the fading art of reading.

Prices of study books will fall

Already the three main Dutch publishers of school books are cooperating with Edupaper.nl. For this year they offer a reduction of 30% in price. For an average family with two children in the Netherlands this means they save 300,- € each year.

This also an excellent device for using the open Educational Resources (courses for free), published by the [Open University of the UK](#) or from the [OU of the Netherlands](#). Courses of

higher education will always have long texts and reading on an iLiad is much more easier and nicer.

Part of the solution for the world wide climate problem.

Now 70% of all forests are cut down for the use of paper production. If people will not print so much anymore and will use e-books we could save a lot of forest. These are very needed for reduction of CO2 and could be used in the near future as biomass for the production of electricity and warmth.

Not only for educational use

Edupaper.nl is developing solutions for education (of all levels) and training but also for knowledge management and innovation of organisations. Of course this could be the solution for paperless offices (or offices with less paper). For example the average civil servant in the Netherlands uses 57 kg of paper for printing. With the use of the iLiad this could save up to € 630,- each year per civil servant! And it would save a lot of trees!

Technical Specs:

Content formats supported

PDF, XHTML, TXT, APABI (China only), OEB, MP3

Interfaces

USB type A connector for USB memory stick.

WIFI 802.11g wireless LAN, 10/100MB wired LAN.

CF type II slot for memory extension or other applications

MMC slot for MMC memory cards.

3.5mm stereo audio jack for headset.

System specification

400MHz Intel X-Scale Processor, 64MB Ram

128 MB free internal FLASH memory for storing content

(sufficient for 1 month of newspapers, 30 books and many other documents).

Touch sensor input using stylus.

Rechargeable battery.

Travel hub included, connecting to wired LAN, power adapter and PC using USB.

Dimensions (wxhxd): 155x217x16 mm.

Screen dimensions (wxh): 122x163 mm.

Weight: 390 grams.

Operating temperature is 0°C to 50°C.

Storage temperature is -20°C to 70°C.

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