Audio reading for the visually impaired

A new portable scanning device combining a digital camera with a PDA handheld computer will allow visually impaired users to transform any printed text – such as timetables, labels, menus or receipts – into computer-generated speech

Canon IXUS i5
5 megapixels, set to auto focus and flash

Fujitsu-Siemens Pocket LOOX
Operating system Windows Mobile 5.0

READING OUT LOUD

1 **Digital camera:** Captures high-resolution image

2 **Backplate:** Transfers image to PDA via built-in USB

3 **PDA:** Reader software uses *optical character recognition* to process image into machine-readable text file and *text-to-speech* technology provides audio output in seconds

4 **Audio:** Computer-generated speech output from speaker or through earphones

Individual character shapes compared to shapes stored in software

Earphone plug

SD card stores thousands of files

Fabric case to hold devices

PDA keys with audio feedback

Distance from text 40cm

Backplate: *Camera and PDA connected by built-in USB*

MENU

MENU
ENTRÉES
Hungarian Paprikas 10.99
Scalloped Potatoes 10.99
Danube Fettuccine 9.99
Chicken Paprikas 8.99
Hunters Veal 8.99
SOUP and SALADS
Hungarian Bean Soup 10.99
Gulyas Soup 8.99
Salad 2.99
...rian Salad 3.99

Power outlet
Reset button