

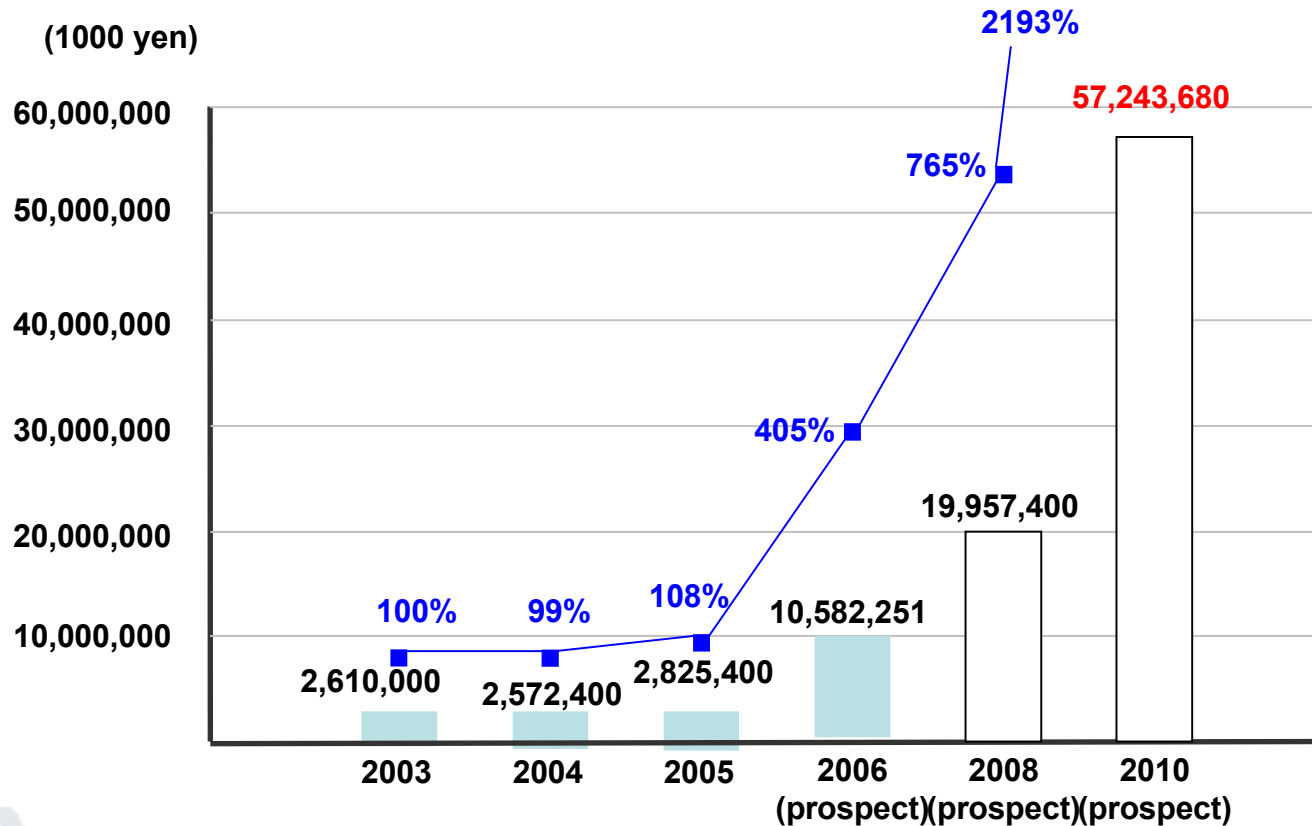
-Papier électronique communicant- Stratégies et enjeux

Haruko TSUJITA

Japanese e-paper market

Market size of e-paper will achieve to about 57.3 billions yen in 2010.

(Source: Yano research institute 05.2006)



E-book reader (1/2)

Sony e-book reader “ LIBRIé ”



Sony e-book reader «LIBRIé »

- Display:** E Ink e-paper
- Format of contents:** BBeB
- Dimensions:** 126mm x190mm x13mm
- Memory:** 10MB + Memory stick
(Maximum 500 books)
- Keyboard :** equipped
- Weight :** 190g
- Battery life:** 10,000pages
- Dictionary
- Audio system
- Zoom

E-book reader (2/2)

Matsushita Panasonic « WordsGear »

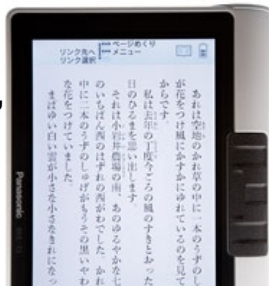


SD Memory card



E touch sensor

E-book,
photo,data(image),
movie, music...



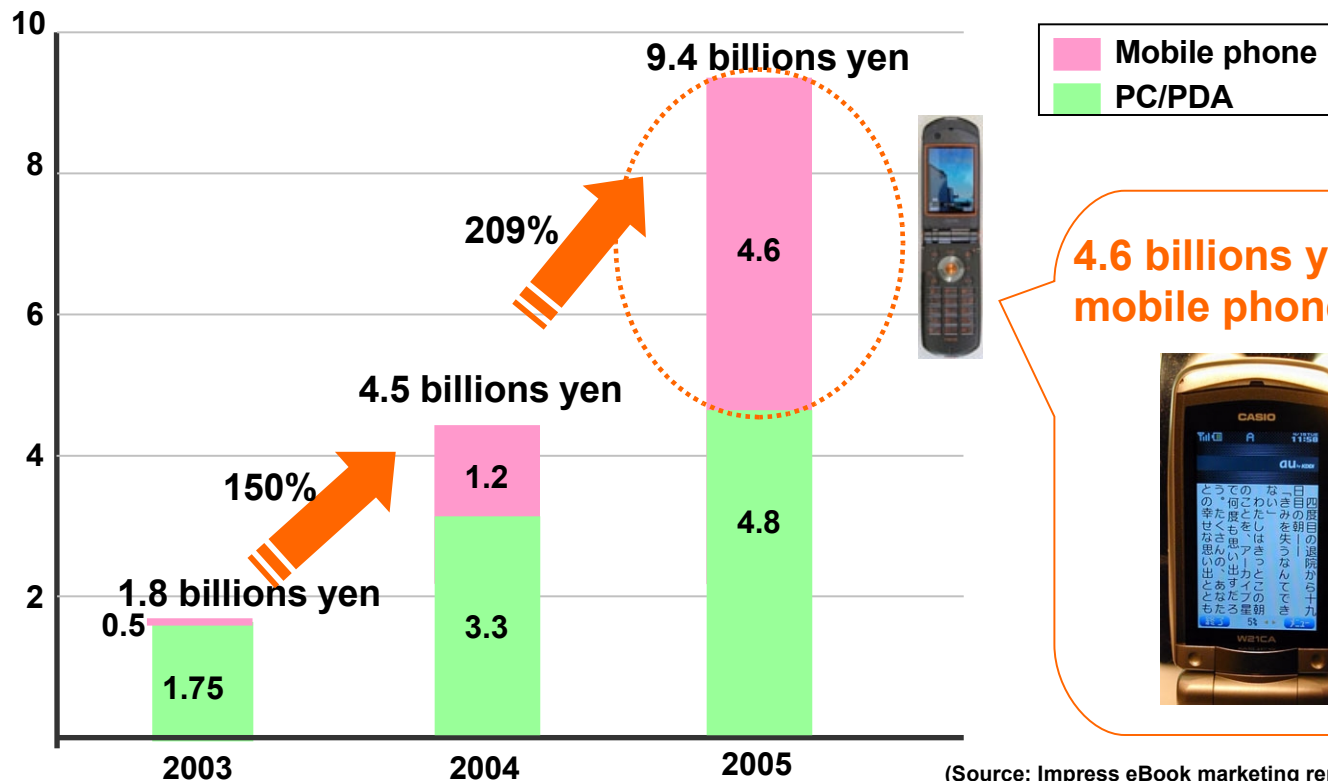
“WordsGear”

Display	TFT-LCD
Dimension / weight	105mm X 150.6mm X 28.4mm / 325g
Definition	5.6inch wide SVGA (600 x 1024 , 211 ppi) high resolution color display (65536 colors)
Format of contents	Book: .book format Music: SD-Audio AAC Image: JPEG Movie: MPEG4 SD-Video
Battery life	6 hours (continuous use)
Contents site	www.saidoku.com www.sigmabook.jp

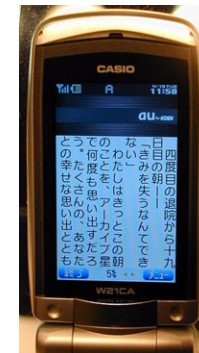
E-book market

E-book market expands with 209% of growth rates from 4,5 billion yen in 2004 to 9.4 billion yen in 2005.

(Billions yen)



4.6 billions yen for mobile phone use



(Source: Impress eBook marketing report 2006)

E-paper as a viewer

Transfer datas by bluetooth / infra red/ memory card etc..



Email / view max 2Mbits of document data

2.8inch wide screen



Ex: D931i



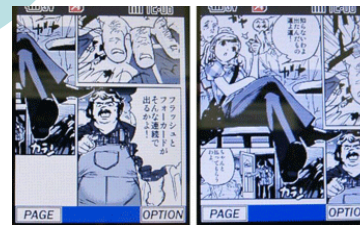
E-paper/ E-doc reader



GPS with voice guidance / long e-mail



Mini SD memory card (max2GB)



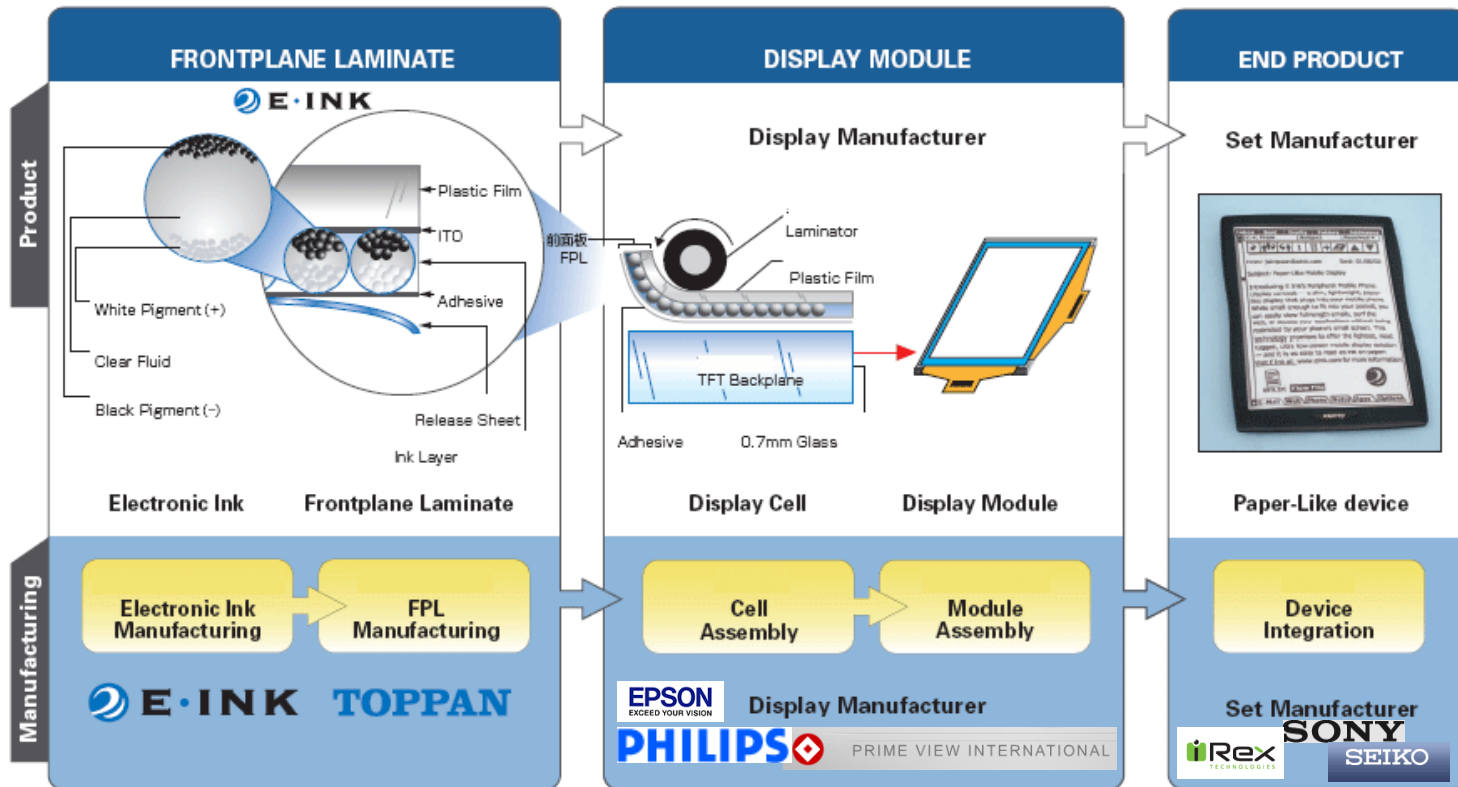
Manga (Celsys e-comic viewer "ComicSurfing")



E-book card (Sharp e-book viewer "Bungo Viewer")

Manufacturing Supply Chain

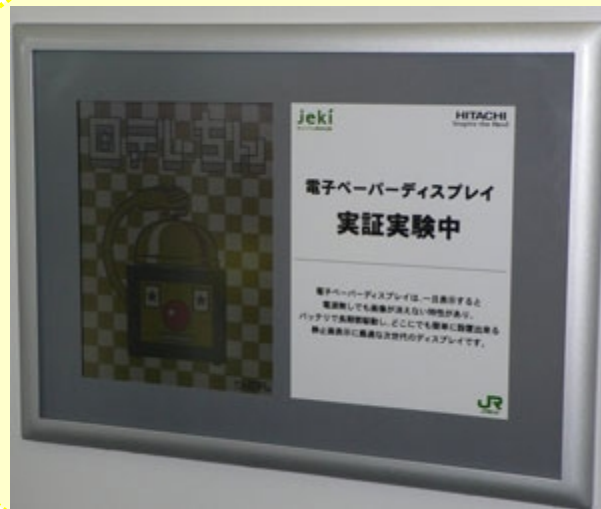
EX: Toppan Printing Co.,Ltd. / E Ink Corporation



(Source: Toppan Printing Co.,Ltd.)

Hitachi « Albirey »

Experimentation of color e-paper display in train.



4096colors e-paper

Objective of the experimentation:

1: Does e-paper display can resist in the train with vibration, different temperature etc..?

2: How much effective as an advertising tool? (they verify through the evaluation from passenger and advertiser, to develop contents which suited the e-paper.)

Fujitsu Frontech

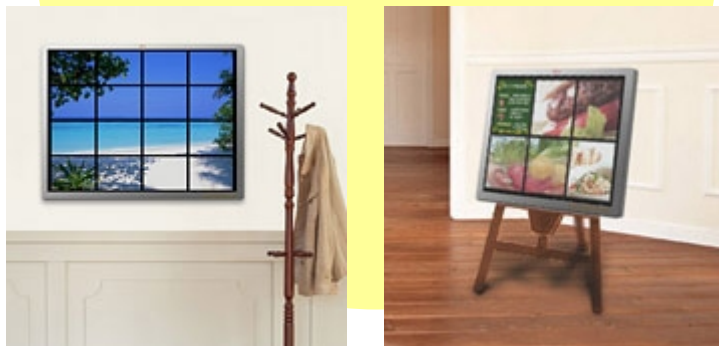
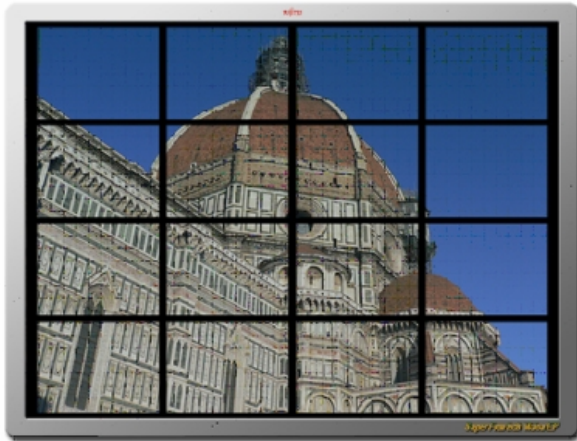
Portable information terminal with color e-paper « FLEPia »



	A4	A5
Dimensions (W x D x H)	210 x 304 x 12	158 x 240 x 12
Weight	480g	320g
Size of a display	12inch	8inch
Color display	8 colors or 4096 colors	
Resolution	768 x 1024 (XGA)	
Operational button	Touch panel	
Wireless LAN	IEEE802.11b/g	
SD card	1/ 2 / 4GB	
USB connecteur	USB2.0	
Audio	Stereo speaker	
Battery	50 hours	
Software	Microsoft Windows CE5.0	

Fujitsu Frontech

Electronic display board with color e-paper
<Super Frontech Vision EP series >



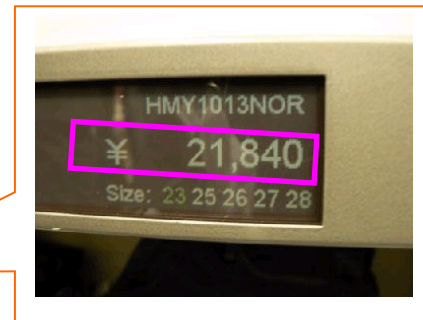
Model exemple	EP11(12 inch)
Dimensions (W x D x H)	234 x 320 x 25
Weight	1.5kg
Power consumption	15W / AC 100V
Color display	8 colors or 4096 colors
Resolution	768 x 1024 (XGA)
LAN	Wireless / wired LAN
SD card	1GB
USB connector	USB2.0
Audio	Stereo speaker
Battery	3 hours

Fujitsu

Contactless IC card / experimentation in store



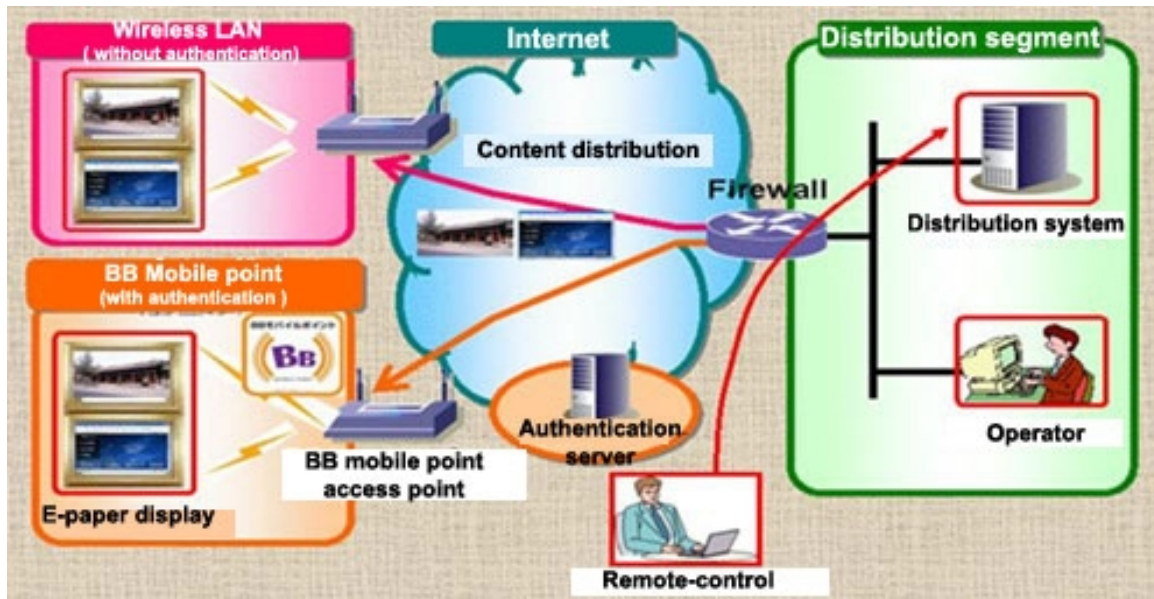
E-Tag (Inventory tag) experiment
with Mitsukoshi department store



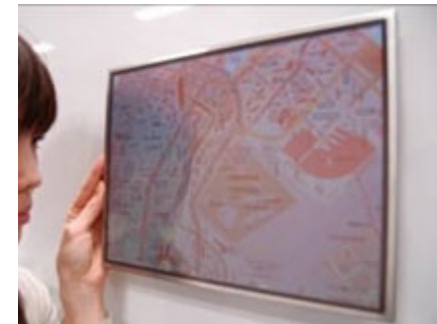
Images from « IT Media »

SoftBank telecom

E-paper display connected to HotSpot



E-paper display by Hitachi



E-paper display by Fujitsu

Seiko EPSON



High-definition e-paper



Size: A6 (7.1 inches)
Thickness: 0.47mm
Weight: 8.4g
Quad-XGA (1536x2048 pixel)
Flexible

(Images from techon.nikkeibp.co.jp)



Size: 2.1 inches
Thickness: 0.096 mm
Weight: 0.44g
192dpi Flexible

(Images from nikkeibp.IT plus)



“ Seiko spectrum ” “ 2007 summer model ”

NEC / Toppan



E-paper information board



«Yomiuri e-new » at EXPO2005 AICHI



TNCSI (Toppan NEC circuit solutions, INC)

Board size: 4.8m x 0.8m Thickness: 1.6mm

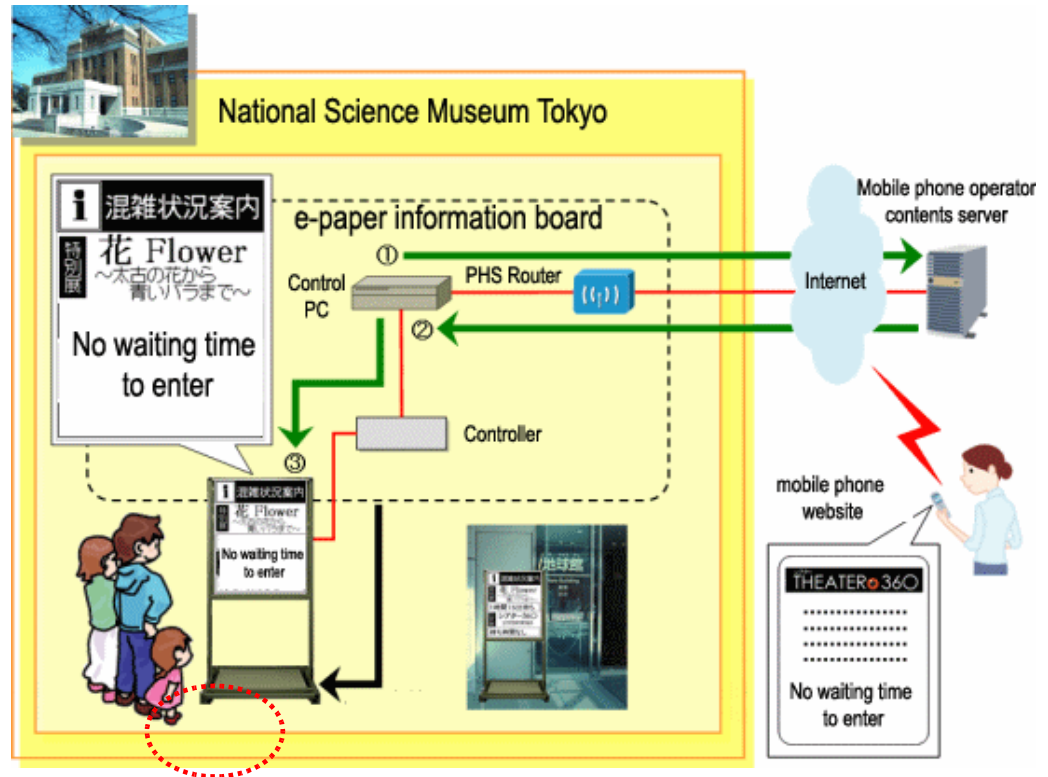
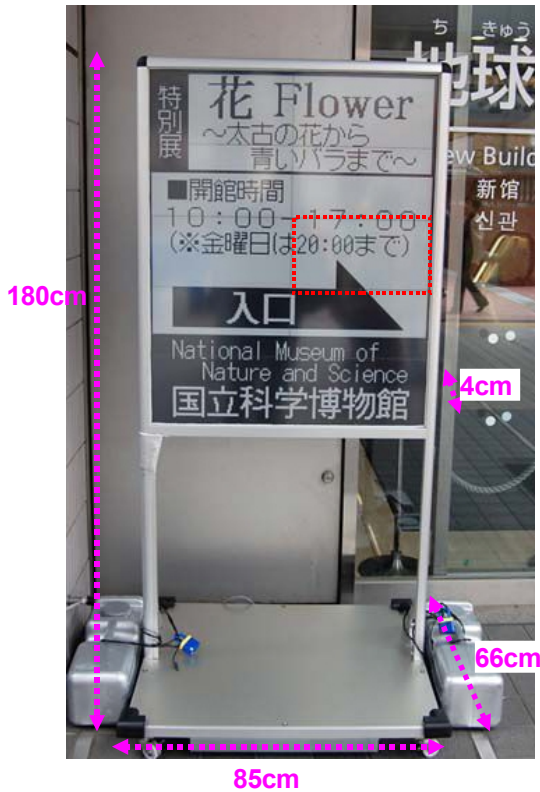
Realised with 48 e-papers (193mm x 385mm)

(Images from techon.nikkeibp.co.jp)

NEC / Toppan



E-paper information board



ASTREC

Guide system in public place



E-paper and IC tag guide system experiment with ASTREC (Advanced airport Systems Technology Research Consortium) and Saitama University.

They will test this system in the airport, hospital, amusement park etc.. to commercialise in 2007.

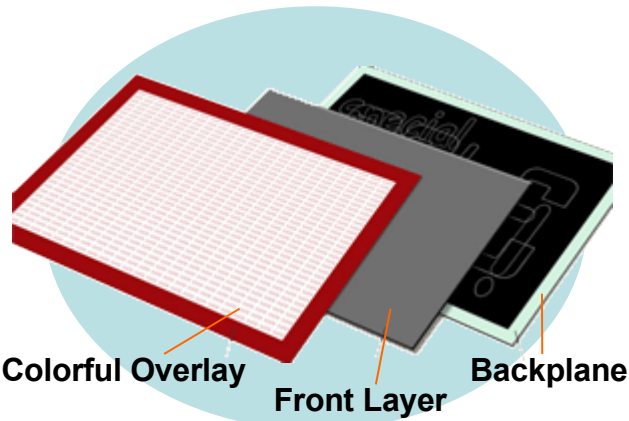
Toppan

Animation Pop (point-of-purchase) advertising



Animation POP

Animation Pop (point-of-purchase) advertising



Restaurant Menu

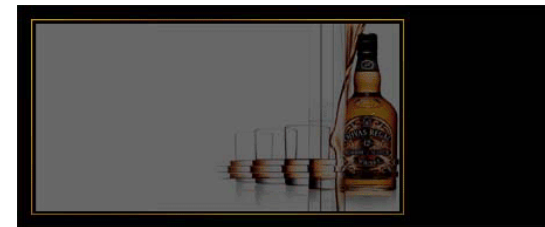


Ads for a cart

- Colorful Overlay: Showing static color image
- Front Layer : E-paper showing black and white background
- Backplane : circuit board



3 types batteries

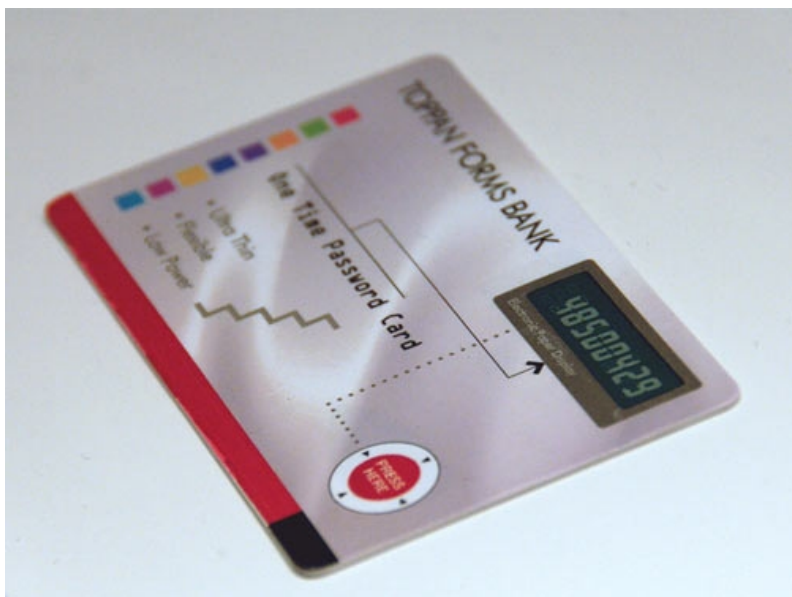


Ads poster

Images from Terapla seolp

Toppan forms

OneTime Password Card with e-paper



Toppan forms will do trial in this summer, and will commercialize from the end of this year.

Ishida / Midori

E-price tag



Ishida Co.,Ltd
(Bridgestone)



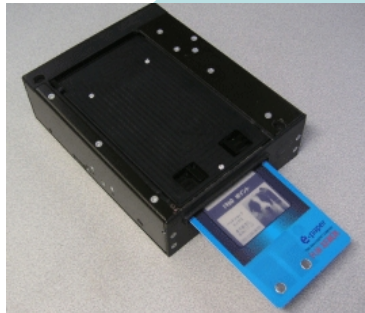
NEC
(SiPix Imaging,Inc)



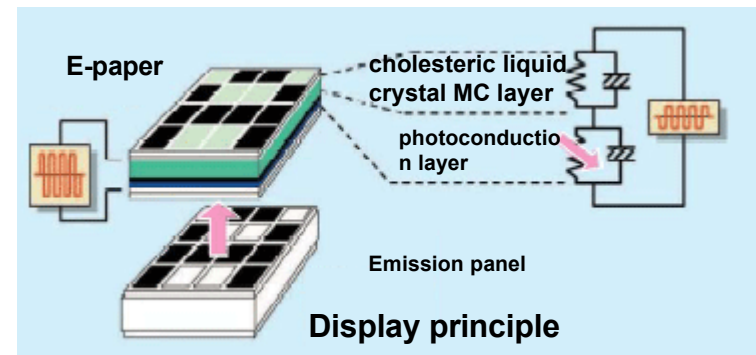
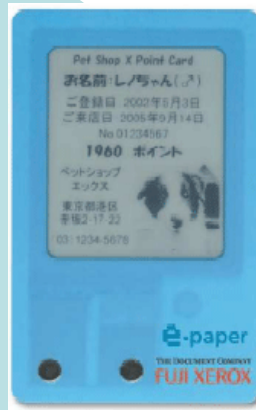
Images from « Tech-on »

Xerox

Photo-addressable E-Papers “ Visual Index card ” and printing system



Recording device model



Display principle

Spec of Visual Index Card

Size : 54 x 85.7mm

Thickness: 0.93mm

Weight : 5.2g

E-paper part size : 37 x 44mm

Memory : 128byte



Images from « Xerox »

Citizen

e-paper watch



Citizen



Images from « IT Media »