Do readers want to read their newspaper as a digital edition? It is difficult to base a strategy on the happy few who, by necessity, read the newspaper on the PC screen or who have opted for an e-reader. This puts the ball firmly in the publishers’ court: they determine the offer.

The time is ripe for e-reading

Does a demand exist for a reproduction in an e-paper version that mirrors reading on paper as closely as possible? This could mean reading a daily newspaper on a computer screen, the new e-reader devices or electronic paper with liquid crystal display such as that under development by the Japanese Fujitsu company or the French Nemoptic company. There are some who will say that this fixation on reproducing the traditional paper in the web, mobile internet and citizen journalism era is insane.

Many good reasons

Naturally, it takes the conviction of a publisher to pursue this special path. For example, there must be an inner certainty that in 2008, despite the dramatic increase in the numbers of information sources, a daily newspaper is much more than the sum of the information it offers. What attracts readers is its added value, its journalistic style and visual presentation.

There must also be clarity regarding the future. A future in 10 or 20 years in which, caught between the vice of production and distribution costs as well as environmental concerns, a part of the print distribution can be expected to shift to e-paper versions.

Finally, what is also needed is a dash of opportunism, as future digital editions will allow the integration of new functionalities. Robert Z. Samuels, responsible for all of The New York Times’ mobile products, emphasises what makes the Times Reader popular: “The ability to easily resize the font has generated a lot of positive feedback... Then there’s The News and Pictures application which creates a slideshow of high-res images synched to the Times Reader. Users can click on any picture as it comes up to read the article which means it acts both as a visual synopsis of the news and another point of entry into it. Plus there’s our ‘most e-mailed’ section – a lot of users like that because of the strong social element to it.”

Of course, considering the outdated layouts in black and white and this devotion to the text that they offer, it’s easy to ask whether the electronic readers that are available on the market represent a step backwards or forwards?

Like the web in 1996, e-readers are heralded as a major technological revolution. However, as Gunnar Springfield, development director of Stampen AB in Sweden, points out, it is possible to imagine that someday, when these devices will be offered for less than 100 euros, publishers will find it more profitable to give devices to some of their readers free of charge instead of delivering a printed newspaper copy to them.

On the scale of strategic decisions taken by newspapers, this time is not so far away. During a recent presentation for publishers participating in the IFRA eNews project, Alex Henzen, the man behind the developments of iRex Technologies, explained “that a realistic target for his iLiad e-reader in 5 years will be to produce an unbreakable A4 tablet, capable of showing text and complex colour animations.”

The following suppliers are involved in the development of e-reader tools: Sony, Fujitsu, Bridgestone, Philips, Hitachi, Samsung, Motorola... not to forget the growing number of specialists entering this market from all over the world, such as Liquavista, Nemoptic, Prime View International, Sipix, Booken, Ganaxa, Jinke Electronics... the coming years promises to produce a large-scale technological battle in this area.

The single tool: an illusion?

With the new mobile phone generations, their superb design and bigger displays, some people, like Peter Resele, director of Comyan, wonder about the future of e-readers: “The next revolution will not be driven by new devices such as E Ink or e-readers, but by existing, multi-functional devices – with Apple iPhone and iPod Touch (obtainable also without a mobile phone contract) leading the field. This best satisfies the criteria or mobility, the ‘take it everywhere with you’ aspect of a newspaper. And the investment is covered several times over for the user – he not only gets a device for reading the newspaper, but also a multi-functional computer for his pocket. For this reason, Comyan considers the development of a digital edition with such a layout for the iPhone as the most important step into the future.”

Top tips courtesy of eNews

IFRA’s Executive Programmes eNews 2008 and eNews 2010 are groups of publishers from Europe, Asia and North America exploring the opportunities in the mobile e-reading market. This is done through expert-led workshops, visits to top technology developers. The eNews 2008 programme is also currently running a ground-breaking global consumer focus group test on e-reading in Stockholm, Tokyo, Zurich and London. The following tips were given by eNews.

> Consumer testing is needed, by individual publishers as well as in the network of a group such as eNews. Let your audience fine-tune your e-reading offer.
> Learn from others and network with publishers with similar ideas.
> Create sustainable business for the future by being early and bold, but at the same time be very sensitive to customer behaviour.
> Standardisation is a key issue. Work with IFRA to put weight behind the demand and development of open standards across platforms and devices.
> Develop a bespoke content package and design suitable for the e-reader format, as a positive reading and navigation experience is a vital success factor.
> Join other publishers to strengthen negotiations with device manufacturers and other stakeholders in the value chain, so as content providers we achieve a good position in the value chain and are not at the mercy of other players.

Stig Nordqvist, executive programmes director and director of digital media research, IFRA
Stig Nordqvist, IFRA’s director of digital media research and director of Executive Programmes, has been following and testing mobiles and electronic readers for several years and says: “Mobile phones and e-readers are totally different breeds, even more today than they were two years ago. When we talk about converging technologies, the trend is towards the mobile and PC Internet usage to merge, while e-readers exist in a different market segment, one where private, off-line consumption of books, newspapers and magazines is the primary objective for the user.”

**Designed for reading**

The real upheaval in e-paper came at the end of the 1990s with the development of displays based on E Ink display technology. In 2008, the vast majority of e-readers available on the market use this process.

Without going back over the working method of E Ink electronic ink, remember that its major attraction was reading in a way identical to the print newspaper, under normal lighting conditions (no backlighting as with a mobile or PC), therefore less tiring for the eyes. Another advantage is that power consumption is quite low (when loading a page on to the e-reader display). The microcapsules that comprise this ink are sufficiently small (several tenths of microns in diameter) for use on thin displays. The process continues to progress, E Ink introduced a new generation in 2007 (Vizplex Imaging Film) that improves the luminosity of the image and reduces the time for loading a new page to the display when the reader leafs through his book or newspaper. The E Ink displays are black and white, but the company has been testing colour processes since 2005. Several big names in the industry, such as Fujitsu or Bridgestone, to name just a couple, are working on other colour display technologies. A Canadian company, Opalux, has also developed a new type of colour electronic ink called p-ink, based on the use of photonic crystals.

Colour is the future, but in the next years it is not the top priority of those working on the development of e-reader offerings. The priority is to lower the price of e-readers, which is realised by ensuring a wider distribution of these tools.

The argument of comfortable reading cannot be the only reason for adopting e-reading. The group of publishers who joined the IFRA eNews 2010 project are looking into this question. During its first seminar held at the beginning of last February in Endhoven, the participants of this group heard an interesting lecture by Russell Baker, director of publications for Amazon’s Kindle. Asked to talk about the criteria defined when developing this tool, he said: “The devices should be wireless: that’s our smartest decision. It would be inconvenient to always have to update the device via a PC. In the U.S., we negotiated a deal with mobile operator Sprint. The consumer does not need to think about the connectivity; he or she is always connected via cellular network. Then, content is key. With Amazon, books and other content (170 publications, for example) can be downloaded from the Amazon bookstore.”

Connectivity and wealth of offer are at the heart of the discussion, also according to Philippe Jannet of the newspaper Les Echos in France (see interview on page 36).

**What happens to e-paper on PCs?**

The original idea behind e-paper, as imagined for reading on the computer by companies such as Olive Software in Israel, NewspaperDirect in Canada or even Pressmart in India, was to reach readers located far from the newspaper’s area of distribution, e.g. offer a ready-to-print format for printing on demand on cruise ships or on the occasion of the Olympic Games. This e-paper is practically part of the furniture if you consider the hundreds of publishers worldwide who offer - often rather discreetly – this presentation on their websites.

The original suppliers who accompanied the newspaper industry in the development of this e-paper application have fully integrated the developments: “The readers get access to a state-of-art e-Edition interface that lets them browse, search, share and print newspapers, magazines and journals as if in print,” explains Sanjiv Gupta, CEO of e-paper supplier Pressmart. “It works on a standard web browser and is quick to download. Readers can access publication content on mobile devices or hear it as an audiocast or download as a podcast simultaneously. We see mobile as a very important piece in our delivery spectrum and e-readers are being just introduced in a big way...”

Says Gopal Krishnan, CEO of Ninestars Information Technologies: “We get demands from publishers for features to integrate advertisement distribution, to create abridged versions of e-paper content ready for distribution on mobile devices and for specialised XML extracting tools which enable content distribution over RSS feeds.”

Production of e-paper is largely automated. Many publishing systems offer, among their publishing tools, the possibility to publish quite sophisticated electronic versions. “You can create multimedia PDFs with hyperlinks to video/audio files or to other web pages,” says Michela Bertagnolli,
e-readers examination

iRex iLiad, launched mid 2006

iRex Technologies is at the forefront of e-reader development and certainly has been working more closely with the publishing industry than other companies in recent years. Newspapers, books, and documents are and will remain the primary usage areas for the iLiad. Reading comfort takes top priority here. The iRex electronic paper display is an early adoption of E Ink micro-capsules. The result: high contrast, high resolution, viewable in direct sunlight and at a nearly 180-degree angle, with no power required to maintain the image. Compared to CRT and LCD displays, the iLiad display projects a stable image, meaning less strain on the eyes. On the downside, this means a slower refresh rate, and it is not suited for video applications. Still, the competitive advantages of the display include 16 levels of grey where the industry standard is 4, and it is writable, enabling annotations. Primary supported file formats are: PDF, HTML, TXT, JPG, BMP, PNG, PRC (Mobipocket), and there’s a built-in Wi-Fi for connectivity. Price is 649 euros (public price).

Les Echos in France launched an e-reader version on the iLiad in September 2007. More recently the NRC Handelsblad in Holland chose the iLiad to start its e-reader offer, and more publishers are joining in 2008.

Amazon Kindle, launched in November 2007

Still in its infancy, the Kindle is interesting to keep an eye on, from a device standpoint and as a marketing model. The first batch of units were sold out in a few hours and Amazon is struggling to meet customer demand, even at a US$ 399 price tag (just for the device). Amazon remains mum on exact sales figures, but according to Stig Nordqvist, IFRA director of digital media research and Executive Programmes, “reliable rumours” say that Amazon sold more than 50,000 units in the first month. If not perfect, the Kindle as a device has many interesting features. It also uses E Ink technology. For the time being, the Kindle is limited to the U.S. market, so Amazon chooses the best mobile connection available and uses the same high-speed data network (EVDO) as advanced cell phones in the U.S. Indeed, the simplicity and power of mobile connectivity is one of the Kindle’s most prominent and important features. Drawbacks, from a publisher viewpoint, include: the proprietary format that limits product purchases to the Amazon library; the “book approach” that doesn’t offer good newspaper presentation or design as well as regular content updates throughout the day. Last but not least, Amazon determines the price for the titles listed on its digital kiosk and it therefore becomes the clients’ contact, not the publisher. “Content, ease of use, device and open platform are the four cornerstones Amazon, or anyone else going into the business of e-reading, need to get right,” says Nordqvist. “So far the Kindle is the best attempt I have seen.”


After launching its first Sony Reader version in 2006, Sony brought out a new device just a year later. The quality of the reader, low price (US$ 300), and its availability worldwide combined with Sony’s marketing strength and creative reputation are among the reasons why we selected the Sony PRS-505 Portable Reader System. The latest version has improved its layout and navigation with aid of buttons; the display uses E Ink technologies and it offers 8 scales of grey instead of the standard 4-grey scale, increasing contrast ratio and making it slightly easier to read. Sony has managed to shorten the refresh time from 500, which tended to frustrate users with the short delay in 2006. You can import a variety of content via USB from your Windows device’s 128 MB internal memory storage. Another way to do it is to move it to a Memory Stick and slip it into the Reader’s slot. The Reader is capable of displaying Text, RTF, Word (turned to RTF files as they are imported to the Reader), and BBQs as well as PDFs. On the image side, you can view JPEG, GIF, etc. There are caveats, however: it lacks mobile connectivity to fresh content and would require opening its platform to acquire libraries.
A future with colours

Colour is of course the next big thing for e-reader displays, and there are a couple of Japanese frontrunners in this area. From a purely technological point of view (time of release onto the market and pricing remain big question marks), Stig Nordqvist, IFRA’s director of digital media research, advises to follow the development of the Bridgestone (pictured lower left, 9”): “Bridgestone’s colour e-reading displays are built on a promising technology, Electronic Liquid Powder, an alternative to the widely used E Ink screen technology. Bridgestone’s QR-LPD displays have a response rate of 0.2 milliseconds, about 100 times faster than that of liquid crystals. Bridgestone has prototype screens in formats up to A3, but we are still waiting for these QR-LPDs to be incorporated into a device. Hopefully this will happen reasonably soon.”

Also here, “Fujitsu (10”) has developed the world’s first flexible electronic paper in colour,” Nordqvist says. “The company uses cholesteric LCDs, which are different from E Ink technology. While the current prototype is an actual e-reader using Windows CE, it is too slow a device to be viable in the market. However, I expect great things to come. ... Then we have a few very interesting, promising dark horses that we have not been able to write about, like Plastic Logic from the U.K., which is due for some interesting launches during the winter of 2008/2009 as well as initiatives from Hearst First Paper in the U.S. and some other companies that have expressed wishes to not be officially commented on as yet. So I look forward to the coming years as the ‘Wild West’ of e-reading. A lot of interesting things will happen.”

Hanlin readers from Jinke Electronics

Tianjin Jinke Electronics Co. is a high-tech joint-owned enterprise that cooperates with Nankai University and the Hong Kong Proud Growth Group. Jinke Company is located in Tianjin New Technology Park and focuses on the development and manufacture of e-readers. The company released the Hanlin V8 in 2006. The latest version, announced in late 2007, is the Hanlin V3. The mobile device requires very little power. The 6-inch E Ink electronic paper display contains 800 x 600 pixels and supports 4 levels of grey scale. It features an SD (secure digital) card slot on top of the device and memory expansion up to 4 GB. Connection to PC/laptop is via USB cable (also used for charging the device). File types supported are: PDF, TXT, RTF, WOLF, DOC, CHM, FB2, HTML, DJVU, MP3, TIFF, JPG, GIF, BMP, PNG, RAR, ZIP. At a price of US$ 299, we like its “openness” in terms of formats, Jinke’s dedication to e-reader development and expect they will soon come up with an option for Wi-Fi connection for their devices.

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New York Times exploring every format

The New York Times Reader has caused quite a stir with its slick and sophisticated delivery of content and adverts and is one of the more convincing arguments to be the face of the newspaper when it comes to electronic delivery. You can sign up for a 30-day trial at http://firstlook.nytimes.com. Robert Z. Samuels is responsible for all of the Times’ mobile products (Mobile Web, Times Reader, client applications, and e-readers).

IFRA: The NYT has the resources to deliver on many if not all of the new platforms competing for content – is there a simple way to do that or have you been forced to reinvent the wheel with every new e-reader or mobile phone?

Samuels: Even though we do have a lot of resources available to us, we look to leverage existing technologies and tools as much as possible, working with those companies and platforms that demonstrate a solid road map and a large user base so we can try to reach multiple platforms without having to create multiple versions. We developed on a Microsoft platform for that reason.

IFRA: The NYT appears on a variety of platforms including Amazon’s Kindle, but isn’t the mobile a more pressing priority for newspapers?

Samuels: Certainly I would say the mobile phone is growing up quickly. Our mobile website went from 500,000 page views in January 2007 to 9.8 million by December of that year; something I would attribute to a number of things including our relationships with device manufacturers and carriers which drives traffic, plus the viral growth of the mobile web itself.

IFRA: Has the iPhone been part of that?

Samuels: There was a lot of advertising early on about viewing the NYT website on the iPhone and people would use it to see the standard site, but many then chose to go to the mobile NYT which provides all the articles, the full text, the images and applications like “most e-mailed” lists and movie show times. The mobile version loads much more quickly than the regular site and can be tailored more for the iPhone.

IFRA: So does that mean newspapers will be obliged to develop multiple versions of their electronic products?

Samuels: Not really. You might need a regular site and a mobile version that could display a different format for Blackberries, Trios and iPhones, without necessarily taking advantage of features like flipping landscape/portrait view, but it would still be better than the experience of the regular site. You don’t have to create a different site for every category or class of device. There are many ways a publisher can manifest mobile sites – the development team can generate an XML site and provide different interfaces based on platform detection or they can choose to outsource because it’s not a skillset they have in-house.

Steve Shipside (reader@ifra.com)

Adobe and Microsoft, fervent supporters of e-reading

Nothing like a software standards battle, between Adobe’s Flex/Digital Editions software and Microsoft’s Silverlight solution, to twist the e-reading plot.

To understand what the fuss is about you first need to go back to the growing importance of RIAs (Rich Internet Applications). Basically RIAs, be they Java, Silverlight, or Flex, work by adding an intermediary level of code between user and server. That intermediary layer (sometimes called a “client engine”) makes it possible to handle events locally in the browser. It’s the concept at the heart of embedded video in pages, of “widgets,” of in-browser animations, and of pre-loading graphics or multimedia ready for the user to “turn the page.”

For newspapers looking to create digital versions, it’s the RIAs that are likely to deliver these bells and whistles. A lot of that can be handled by technologies such as Flash, but for several reasons publishers might prefer Flex and Digital Editions (both Adobe) or Silverlight (MS). Right now Adobe is ahead thanks to the long history of Flash. Behind new developments such as Adobe Digital Editions (recently announced for the Sony e-reader) is an entirely Flash-based tool for managing and reading eBooks, and digital newspapers. The name may be new but it’s based on good-old Flash, PDFs, and XHTML. Digital Editions notably adds digital right management to the list of offerings, but then Microsoft would counter that Silverlight has DRM built in. Silverlight may be new but it is making great strides (see Quark’s announcement that it is integrating Silverlight) thanks in part to Microsoft’s muscle. But Microsoft’s might is not the whole story as it has also been careful to ensure that Silverlight uses XAML, which means that the large developer base currently using .NET Framework 3.0 and XAML will find it familiar and easy to use.

Steve Shipside (reader@ifra.com)

For more behind this battle: 5750
One of the early providers of e-paper solutions, NewspaperDirect is also pushing sales of digital editions through its online newspaper and magazine kiosk on PressDisplay.com: “Readers have instant access to hundreds of full content newspaper replicas,” says Igor Smirnoff, director of strategic development. “They can read the news on PC, TabletPC, smart mobile devices. PressDisplay.com can be customised to show favourite papers. Articles can be translated into 12 languages on-the-fly. There’s also an ‘article ranking’ technology. With the PressDisplay Referral Program, subscribers can earn money if they share an article with someone and if the person becomes a paid subscriber to PressDisplay.com. With the reading map (left), Smirnoff continues, “publishers can monitor how their readers read the newspaper. This is an example for the digital edition of Le Figaro on 29 March 2008. The stats for this issue were: 1130 users, 1966 sessions and average reading time for that edition was 34 minutes, 44 seconds. The red colour shows that all users read that specific article, the percentage decreases with the lighter colours.”

Now the company also tackles the advertising potential: “Last October, we launched Adget, a new version of a microsite/advertising widget for newspaper advertisers. Adget is an environment where customers can transact while they are reading their local online e-paper. When a reader opens a page of a newspaper he will see an advertisement for a service (for example, a furniture store), with an embedded video, audio file or graphic, that promotes new products or special offers. Within the ad there are buttons or links which the reader can click to transact – for example, order a printed catalogue (right). Because the reader is already registered with the newspaper, with just one click a form will be displayed that already includes their personal information, which they can edit if they choose.”

Continued from page 31

head of marketing at EidosMedia. “This can be interesting for instance when a print ad is published online: a video clip could be linked to the ad image itself offering a great plus to the advertiser.” Protec Marketing Director Andrés Checa adds: “The readers can see videos or Flash instead of images or static infographics; search words or terms more easily; surf comfortably; access more contents than in the printed version.”

Martin Zielonka of MSH Medien (200 publications use the Web:digiPaper tool), also emphasises the micropayment or customer relations management tools that can be integrated into this e-paper.

Tailored content

Generally speaking, and considering the many fronts they have to cover today, suppliers prefer to respond to specific demands where future developments are concerned. Davide Garavaglia, business development & marketing manager at Atex, says: “Recently we have been asked to integrate with e-reader devices, mostly by financial newspapers. Polymer Vision (editor’s note: Readius e-reader will be on the market in Q3 this year) is the first company we’ve been working with in this area.”

A growing number of suppliers have specialised in the preparation of e-paper formats (nxtbook, Zmags, Ceros d’Applecart, Yudu Media, Zinio, etc.), some such as Zinio are involved in the selling of titles. There is an increasing demand, mainly from the magazine sector, as well as the corporate and advertising areas. The “first generation” e-paper undeniably fills a niche and all its facets have not yet been explored.

“We plan to utilise the electronic edition in conjunction with our Newspaper in Education programmes,” explains Bert Ortiz, vice president circulation manager of the Orlando Sentinel (Florida, U.S.A.). “We realise that schoolchildren are more apt to utilise the computer versus the newspaper. In the next few months we will also begin to sell subscriptions to individuals outside of our market.”

While awaiting future electronic readers, why not dust off the use of your other e-paper formats?

Valérie Arnould (arnould@ifra.com) coordinated this report and Michael Kaczmarek (kaczmarek@ifra.com) contributed. 