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E-publishing: appalling or appealing?

On March 17 this year, Arthur Sulzberger Jr., publisher of *The New York Times* (NYT) and chairman of the board of the NYT company, wrote in “A Letter to Our Readers About Digital Subscriptions” on the website www.nytimes.com:

“Today marks a significant transition for The New York Times as we introduce digital subscriptions. ... On March 28, we will begin offering digital subscriptions in the U.S. and the rest of the world.”

The NYT was founded in New York City in 1851 and continuously published as the largest local metropolitan newspaper in the U.S. It has been considered a model and flagship newspaper worldwide, with the motto “All the News That’s Fit to Print” appearing in the upper left-hand corner of its front page everyday. As the meaning of “printing” has evolved from traditional paper-ink press to electronic layout however, the market of the NYT has drastically fallen since the 1980s, with less than a million hard copies printed daily. So have most, if not all, traditional newspapers everywhere.

If all these are considered failures, blame it on e-publishing.

Arthur Sulzberger is willing to take risks in his quest to find a new business model that can adequately sustain the NYT. His plan is to work with *Google* to implement *First Click Free*, so as “to ensure that NYTimes.com continues to be part of the open web ecosystem.” As a matter of fact, the NYT has already been made available on the iPhone and iPod Touch since 2008 and on iPad mobile devices since 2010. On top of that, the NYT website is now the most popular American online newspaper, reportedly receiving more than 30 million unique visitors per month.

If all these are considered successes, thank e-publishing.

Like it or not, e-publishing is a strongly growing medium and has become, *de facto*, a threat to the tradi-

tional newspaper publishing business. The 146-year-old well-established *Seattle Post* published its last print version on March 17, 2009 and was then converted entirely to an e-newspaper, followed by another popular century-old newspaper, the *Christian Science Monitor*. Two other longstanding U.S. newspapers, the *Tucson Newspaper People* and the *Ann Arbor News*, also stopped their mechanical printers in 2009, prior to the now-declining print version of the NYT. More recently in February this year, the second-largest U.S. bookstore chain *Borders* filed for bankruptcy protection, while the largest U.S. bookstore chain *Barnes & Noble* stays intact mainly due to the success of its Nook e-book reader sales and online services.

On the bright side, e-publishing brings to the whole of society (not just to academia) many advantages and benefits as well as resources and opportunities. It provides humanity with tremendous conveniences such as digital publication of e-books and e-articles, as well as the establishment of digital libraries and web-catalogues alike. If e-publishing is able to survive, sustain itself, and even rapidly develop, it will no doubt be providing many benefits to society. Its user-friendly convenience, rapid transmission, exclusive retrieval processes, wide coverage, broad accessibility, low cost and small-sized storage, ease of text modification, copying and reproduction are just a few of its obvious advantages. In addition, attractive features such as sound and motion effects, dynamic and interactive graphic abilities, and web-link browsing functions that were impossible with paper-printed books and articles will become ubiquitous.

All kinds of e-publishing materials may be conveniently downloaded, viewed and saved in e-readers (i.e., e-book readers), by way of small hand-held devices commonly equipped with wireless connections (e.g., Wi-Fi, 3G or Bluetooth) with e-mail and web-browsing capabilities. Typical models include the Amazon Kindle, Apple iPad, Bookeen Cybook Orizon, eGriver and IDEO from Condor Technology, Entourage eDGe, Hanvon WISereader, iLiad and Digital Reader from iRex Technologies, Notionink Adam, PocketBook Pro, Sony Reader Editions, and so on. E-publishing and its associated products are indeed exploding today.

Now is not the time to predict whether traditional paper-print publications will stay or go. The fact is that more and more governmental and educational organizations, even commercial publishing companies, are taking advantage of the e-publishing to promote knowledge exchange and business, by means of offering online open access to available e-books, e-journals, e-newspapers, e-archives, etc. The *Directory of Open Access Journals*, for example, has over 6,000 collections with more than 300 in IEEE fields, in which more than 2,600 are searchable at the article level.

PLoS ONE is probably the best-known open access scientific journal published since 2006 by the Public Library of Science, a non-profit organization of scientists with a mission of making the world's scientific and medical literature freely accessible to the public. It is a typical model of open access supported by publication fees of \$1,350 per article paid by the authors, which are used to cover the cost of peer review, editing, dissemination, and perpetual maintenance of an ever-growing volume of online archives.

As another example, last year the University of Hong Kong established an *HKU Scholars Hub*, which is an institutional repository of the university, with free and open access to the public, where archives already collected include some treatises published in as early as 1941. Their mission is to make this Hub available to the widest possible audiences worldwide.

Even commercial companies have or will provide some sort of free open access services. One example in point is the Nature Publishing Group, a division of MacMillan Publishing Limited. They have announced the launch of a new e-journal, *Scientific Reports*, to appear this summer. It will be a new primary research journal published by *Nature* magazine, aiming to cover all areas of the natural sciences, including biology, chemistry, physics and earth sciences. It costs publication fees of \$1,350 per article, yet free of charge for internet readers.

It is encouraging to see that open access offers unfettered research and knowledge exchange to anyone who has access to the internet. The 2002 *Budapest Open Access Initiative* referred to open access as "world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds." This certainly is welcome by scientific researchers as well as the public.

The IEEE Publication Services and Products Board (PSPB) and the IEEE Technical Activities Board (TAB), in the eleventh edition of the IEEE PSPB Quarterly Newsletter published online 21 July 2010 recommended the following five statements to the IEEE Board of Directors (BoD) with respect to open access:

- 1) The IEEE will engage in the public dialogue to ensure that the publication of high-quality, peer-reviewed, financially-sustainable journals remains an essential part of IEEE's mission as a learned society.
- 2) Open access can coexist with traditional publishing.
- 3) Public access is best done on existing platforms of publishers.
- 4) Any public access approach must respect the intellectual property rights of authors and publishers.
- 5) The IEEE will continue experimentation with open access and monitor its impact on the organization.

On August 16, the IEEE BoD approved the principle of providing open access as one effective way to enhance dissemination of publicly-funded research results, so as to mobilize and strengthen science and engineering, to encourage innovation, and to serve for the growing interests of the society and beyond.

The IEEE is a non-profit professional organization with many volunteers in different roles such as editors and reviewers. To support and sustain open access services, the IEEE recommended a "hybrid model" of open access: the traditional subscription-based policy would be maintained while offering authors the option to pay \$3,000 per publication to make their article freely available. Sooner or later, the open access option will be mandatory for every IEEE journal in order to provide consistency to all stakeholders in the scholarly publishing community.

While open access to e-publishing is foreseeable, semi-open access to e-publishing materials is already in place. This refers to e-publishing databases mainly in the form of Digital Libraries, mostly accessible by membership today and could be free to the public in the future. The *IEEE Xplore Digital Library*, for example, now provides access to over two million documents including books, research articles, standards, transactions and conference publications, as well as educational courses and the like, to all subscribing IEEE members. Following it immediately, the IEEE Computer Society, the Communications Society and the Power and Energy Society all established their own smaller-scale digital libraries. Perhaps it is now time for our Circuits and Systems Society to do the same.

Looking back and looking forward, one can see that e-publishing has its share of pros and cons. Its ultimate future is still somewhat uncertain now; yet one thing for sure is that it will continue to grow quickly and spread far and wide.

E-publishing: both appalling and appealing.

