



# From the Editor's Desk

## Archiving Technical Literature

■ Madhu S. Gupta

A guest staying at my house wandered into my library looking for something to read. Finding rows upon rows of shelves filled with journals and conference proceedings, she asked me if I ever read any of that stuff. I explained to her that most of the literature there was not for reading but for consulting as and when the need arose. Skeptical of such hair splitting, she asked about the frequency with which I had a need to consult the collected literature, the fraction of pages stored in the collection that I had ever actually looked up, the availability of the same literature in my employers' library, and other such assorted questions. With her enthusiasm for interrogation emboldened by my increasingly shaky answers, she finally inquired if my collection of professional literature at home was worthwhile. Desperate to defend my collection, I rattled off every justification I could think of, including the claim that the books and journals constituted an appropriate décor for the library of an editor-in-chief of an engineering magazine. She remained unconvinced about the utility of storing such material at home, and I

frantically tried to change the subject lest my wife would contract the germ of that infectious idea from her. But it got me to thinking—are those rows of journals and books only décor? Do I need to own and store material that I use only for occasional consultation? Is my enterprise efficient or archaic?

These questions raised their head again, when I attended the Panel of Editors meeting of the IEEE, the world's largest publisher of professional electrical engineering literature. From the trends of journal subscription in electronic and printed formats, the online usage statistics of journal articles, and future publication plans that I learned there, one would extrapolate that the print format is rapidly headed towards oblivion. But more interestingly, I ran into the editor-in-chief of *IEEE Transactions on Microwave Theory and Techniques* and learned that, while I continue to purchase and store the printed copies of that journal, he does not—he relies only electronic access to his own journal via the Internet! This seemed unthinkable and blasphemous, or perhaps I had fallen far behind the times. Truth be told, lately I have been accessing journal articles online, even when I own the printed journal, so as to avoid having to get up from my chair and walk up to a bookshelf a few meters

away where that journal is shelved.

Even more doubts blossomed as I engaged in the common seasonal ritual of spring cleaning. I discovered a box in my garage that contained a journal that I had subscribed to in the early 1970s. Having read in my formative and impressionable years the futuristic scenarios forecasted by the visionaries of 1960s, like J.C.R. Licklider, for the libraries and information retrieval in the 21st century, I committed the youthful indiscretion of choosing to receive that journal in the form of microfiche. Not only had I not consulted my collection of this journal on microfiche in the past quarter of a century, and was unaware of its whereabouts until the present, but I also had no idea how I would read it now if I wanted to. A few telephone calls revealed that the microfiche readers were harder to find than the proverbial hen's tooth, cast aside by the libraries in their rush to embrace the computer and the Internet.

I was forced to further adjust my worldview when I received the inaugural issue of a new journal, launched by the European Microwave Association, called *Proceedings of the European Microwave Association*. Printed on a heavy, glossy, expensive paper, and clearly meant to be preserved in a bookshelf for decades to come, the journal

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projects the image of permanence and grandeur, its appearance reassuring the authors that, content notwithstanding, their articles will long continue to command attention and respect. It seems there is a lack of unanimity about the destiny of printed journals on the two sides of the Atlantic: IEEE journals published in America are apparently heading towards cyberspace, while the EuMA publication from Europe is aiming to be enshrined forever in a respectable archive—complete with Gothic façade and Corinthian pillars.

How can one draw any conclusions from such seemingly discordant observations? Discord is frequently a consequence of not having made careful distinctions.


First, we must recognize the distinct needs of the two principal stakeholders in the publishing enterprise, the readers and authors (as I pointed out in my March 2005 editorial). While many readers are looking for quick, easy access to literature, many authors may place a higher premium on respectability and permanence. Depending on the relative weights placed on the different needs of authors and

readers, and the tradeoff made between them, journals and their publication strategies will differ from each other.

Second, the distinction between reading, browsing, and consulting is significant. Most of primary literature (consisting of research reports and journals, patents, and the like), due to its narrow scope, purpose, and intended audience, is not meant to be read but consulted when the need arises. For such literature, ease of storage, search, retrieval, and access is very important, and it is prime candidate for electronic publication and use. By contrast, secondary literature (reviews, tutorial articles, and reports on technological advances), because it satisfies the broader needs of current awareness and professional development, is meant to be read without a pressing, explicit, a priori, and specific requirement. Indeed, one of the roles of secondary literature is exactly that: to bring attention to, and develop some modicum of familiarity with, areas that are outside the realm of our immediate needs and concerns.

Finally, given that economics will ulti-

mately drive all decisions concerning information dissemination systems, including the obsolescence of publication formats, we must distinguish between the acquisition cost and the lifetime cost of a system of information retrieval. For publications in nonprint format, estimates of the lifetime cost should include the cost of acquisition, maintenance, and power requirements of the machines needed for reading them. The ability to use a general-purpose machine, like a personal computer, instead of a specialized machine like the microfiche reader, greatly decreases the incremental (or the pro rata) cost of the reading machine.

An editorial is like a pencil: it is no good without a point. My conclusion is that publications, like *IEEE Microwave Magazine*, that are meant for browsing and reading, are more likely to remain in printed format longer. At present, only individual items from the magazine are electronically accessible online via *IEEE Xplore*, and there is no way to browse an issue of the magazine from cover to cover except in printed format. Hope you enjoy it. 



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