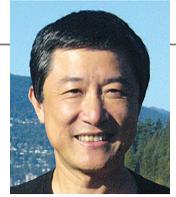


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## Democratizing Signal Processing

It will be March when you receive this issue of *IEEE Signal Processing Magazine (SPM)*, and it has been almost four years since the IEEE Signal Processing Society (SPS)'s *Inside Signal Processing eNewsletter* (eNews) was first launched in April 2007, as the latest addition to *SPM*. When spring begins, flowers blossom and a new start brings new hopes. As the old Chinese saying goes, "A year's plan starts with spring." This is precisely what we are doing for the bimonthly *SPM* and the monthly eNews that complements the magazine.

While planning, we are guided by the motto of "democratizing signal processing." In a recent presentation in Shanghai

that President Mos Kaveh gave on the history of signal processing and SPS, he used Matlab as an example of democratization of signal processing during the 1980s. Today, this trend is ever more prevalent than any time in the history. Signal processing techniques are no longer confined within the province of the privileged group of elite professionals. Rather, scientists, engineers, mathematicians, and even financial analysts have been using signal processing as a fundamental tool in problem solving, as evidenced by a series of recent and upcoming special issues in *SPM*. Riding on the tidal wave of the ubiquity of signal processing, our eNews has special roles to play, and we aim to fulfill these roles and maximize the societal impact of signal processing as well as the benefits of our *SPM* readers.

The IEEE has developed a global strategy to encourage active participation among all electrical engineers worldwide. Embracing this strategy, our SPS vision statement reads as follows: "The Signal Processing Society is a dynamic organization that is the preeminent source of signal processing information and resources for a *global* community. We do this by: being a one-stop source of signal processing resources; providing a variety of high quality resources to a variety of users in formats customized to their interests; adapting to a rapidly changing technical community; and being intimately involved in the education of signal processing professionals at all levels." Recently, a long-range strategic retreat was held by the SPS during IEEE ICIP 2010 in Hong Kong, where better

Digital Object Identifier 10.1109/MSP.2011.940297  
Date of publication: 17 February 2011

### IEEE SIGNAL PROCESSING MAGAZINE

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Digital Object Identifier 10.1109/MSP.2011.940298



FIG1

servicing our SPS members was the central theme of the retreat discussion. Using the eNews as the light-speed vehicle

to inform our worldwide SPS members of how signal processing is democratized in all walks of life, *SPM* is equipped with a special tool to support IEEE's global strategy and to effectively serve our members.

The contents of the eNews are available at the Web site: <http://enews.ieee-spm.org>, and highlights of each issue are e-mailed monthly to SPS members. There were many reasons for the launch of eNews, with a critical one being its role of global reach. In her November 2007 *SPM* article "Signal Processing Magazine E-Newsletter: Inside Out," then Area Editor Min Wu stated that "As suggested by its name, *Inside Signal Processing*, the overall goal is to make the e-newsletter a gateway for different units of the SPS organizations to reach out, a cyber stop where students and professionals who are interested in signal processing can find out the latest happenings in this vibrant field." Since then, a number of new features have been introduced, and redesign efforts have been undertaken. Since its inception, it has been the eNews team's belief that eNews must include content that is timely, member-centric, relevant, targeted, and compelling. In the initial design of eNews, there were nine sections of news and updates: "Society News," "Conference News," "Publication News," "TC News," "Chapter/DL News," "Initiatives and Trends," "Ph.D. Theses," "New Books," and "Research Opportunities." Last year, as part of the vision and efforts of SPS Publications Board to fully

leverage electronic medium in SPS, our eNews team redesigned and upgraded the newsletter by introducing a modern layout

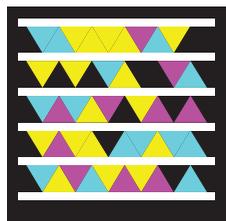


FIG2

with enhanced features and improved navigations, the design you are seeing today.

The cultural and geographical diversity of SPS members is widespread. As the first step to enhance the team functionality and to strengthen the geographic and technical coverage of eNews content, two associate editors (AE) at-large were added in late 2009 to the eNews team to complement the original section AEs, each of whom is responsible for editing particular sections. Marcelo Bruno is AE at-large representing the Latin America region, and Gwenael Doerr is AE at-large representing the Europe region. Also, to strengthen its content coverage and improve its ability as the SPS gateway, many new content links have been integrated into eNews from different SPS sections. For instance, "Recent Patents in Signal Processing Areas" was introduced to the "Initiatives & Trends" section in February 2010; links to individual TC newsletters (e.g., the SLTC newsletter) was added to "TC News"; the "Conference Organizer Newsletter" link was added to "Conference News"; the "Top Ten Viewed Articles" was added to "Publication News"; and the newsletter "IEEE Chapter Briefs" and featured *SPM* articles became valuable new resources for the eNews contents.

The December 2010 eNews featured the article "Think Long-Range for Signal Processing Society" by President-Elect Ray Liu. The 2010 SPS long-range strategic retreat identified several action items as key new initiatives that SPS can consider taking on to offer greater benefit and value to SPS members, including bringing the visibility of signal processing to the general public, meeting the needs of continuing SP education and SP industry, attracting more student members, and so on. Recently there have been discussions between the SPS leadership team and the eNews team on how to incorporate the ideas from the 2010 Long-Range Planning Meeting into eNews to better serve the needs of SPS members, especially our student members and industry members. This will be a new focus of eNews. For instance, the eNews team, with the help from other *SPM* teams and SPS technical committees, will focus on enhancing or expending "Industry News" and "Job Opportunity News." We

invite you, our readers, to share your insights with the eNews team and write to us. We need your feedbacks on how better design eNews and use this tool to serve your information needs. We seek your help to further democratize signal processing and to increase its societal impact in the most effective manner.

Aiming to democratize signal processing on the global scale, our *SPM* recently pioneered the innovation of translating our articles to Chinese, receiving highly positive feedback. More related details can be found in the article "Introducing a Translated Reprint Edition of *IEEE Signal Processing Magazine*" in the October 2010 issue of eNews. Following the success of the Chinese translation experiment, more recently our SPS Publication Board and ExCom unanimously approved the extension of our translation efforts to Portuguese as well as the continuation of Chinese translation. Another innovation we are planning to experiment with is to use the tag technology (via the two-dimensional bar codes) to enable *SPM* readers to conveniently connect from the printed material to the most relevant online content. Tags allow readers to quickly scan them with the cell phone camera, immediately launching a Web site with supplementary video/audio or text information such as video lectures, slide presentations, detailed technical reports, or animation of figures. Two examples of the tags (for the QR reader in Figure 1 and the MS reader in Figure 2) that link to an IEEE-TV video and a data file are provided here, ready for your scan after free downloading the respective readers to your smartphones (e.g., iPhones).

We hope you enjoy reading *SPM* and in particular the eNews as *SPM*'s key section. We are eager to receive your valuable feedback on any topic discussed above and sincerely invite you to contribute news and articles to *SPM* and the eNews.

