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EDITORIAL

Creating a new link

Some physicists ponder the big questions, such as super symmetry or string theory. Others make major technological breakthroughs or create significant new products, such as the transistor, the computer, or fiber optics. Some physicists in industry, however, working often without even the recognition as physicists, feel underappreciated. Clearly, the deluge of responses to John Rigden's article on hidden physicists (September, 1997) has tapped into a strong sentiment. This March issue of the magazine again carries a separate department of testimonials from readers (p.47). If they continue, the department may become a permanent feature.

The level of appreciation for physicists in industry may be changing. For much of this century, certainly during the Cold War, big science got the public's attention—albeit sometimes a nervous, suspicious attention. Bo Hammer submits in his piece "Take Physics Local" (p.30) that as we reach the end of this century the paradigm that connects physics to society has shifted because of the changes in geopolitics, geo-economic competition, and the emergence of the life sciences. He argues that not only are industrial physicists gaining increased recognition for the creation of our highly competitive, technology-based economy, but they are the new paradigm that defines the connection between physics and society. Tall order.

But so is the creation of new companies and new products—something physicists in

industry do very well. Tim Lucas invented resonant macrosonic synthesis (RMS) back in 1988 and formed MacroSonix Corp. in 1990. RMS is capable of harnessing acoustic energy 2,000 times more powerful than ever before achieved, which opens the way for a host of new applications ("An industrial booster," p. 44). In 1992, two weeks after being accepted as a Ph.D. candidate, Darryl Barlett suggested to his advisor that the two of them form a company, which is now producing laser-based, thin-film growth monitors (p. 25). Speech recognition systems have been dreamed about for decades, but are now coming to market (p. 20). CD technology has seen enormous strides in optical data storage, but now we are looking at new media that are raising the storage limits (p. 11). Each of the new products we announce (p. 55) has its own story.

The Industrial Physicist (itself a new product) exists to chronicle this fascinating interface where companies are created, new products are born, where scientific ideas are turned into products for profit, and physicists are getting jobs to produce them. Any commercial success or monetary reward that comes from this work is sweet and validates the significance of the effort (and you stay in operation), but the big bang is the creative process itself. And the opportunity to play a significant and recognized role in society.

Ken McNaughton

Editor/Associate Publisher

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