An analysis of public policy issues and how they affect MRS members and the materials community...

MRS Delivers Materials Science Stories to the Public via TV

Though the *New York Times, Discover Magazine*, and many websites offer science news to the public, very little science news appears on television. Since most Americans get their news from local TV newscasts, most never hear about science news. Why is there so little science broadcast on the news? The infrastructure to deliver it is missing. Sports, weather, business, and entertainment stories are usually delivered to local newscasters as news inserts that can be adapted to the individual station. Early in 1997, members of the Materials Research Society Public Affairs Committee began discussions with ScienCentral, a news production company dedicated to creating the infrastructure needed to supply more science and technology news to the public. ScienCentral's president is Ira Flatow, one of the United States's premier broadcast science personalities, known to millions as the host, creator, and executive producer of public radio's *Science Friday* .

MRS is supporting ScienCentral's first efforts to build that infrastructure for science stories. The 50th anniversary of the invention of the transistor in December 1997 makes this invention the natural anchor for the first story to be told, looking in a brief few minutes at its history, the industries it has spawned, and the societal impact. This spot was shown at the Fall 1997 MRS Meeting in Boston and will air on local TV newscasts in December.

MRS is collaborating with ScienCentral on another equally ambitious project, a PBS documentary tracing the conception, the invention, and the impact of the transistor, recounting how it utterly transformed American life, and how, with new materials and the advent of the microchip, the basic principles of the transistor have blossomed into technologies that will dominate the next century. The documentary, with major funding by the Sloan Foundation, will build on the foundation of the recently published telling of the discovery of the transistor, *Crystal Fire*, by Michael Riordan and Lillian Hoddeson. The documentary will air in the Fall of 1998 and reach over 5 million people on 250 PBS-affiliated stations.

The transistor is perhaps the most important invention of the 20th century. Yet its very success keeps it well hidden. While countless billions of transistors work in our homes, offices, and cars, most Americans never see these microscopic wonders. Even fewer know the story of how scientific research, personal commitment, and intense rivalry led John Bardeen, Walter Brattain, and William Schockley to build a working device.

The documentary has three goals. First, to help people understand how a serious business problem can be solved by basic science. The program will take viewers through key moments in transistor history: the production of the first solid state consumer products, the development of silicon transistors and later integrated circuits, and the birth of Silicon Valley. Second, it will explore the human side of the story, exploring the personalities, dreams, and ambitions of the key players. Third, the documentary hopes to excite the viewers' imaginations by exploring where transistors are going next and where they will take us in the 21st century.

To enrich the educational possibilities of this program for millions of younger Americans, MRS and ScienCentral are now seeking support to enable the publication and free distribution of a teacher's guide and a CD ROM to accompany the use of the television program in science classrooms nationwide. The guide would contain a set of inquiry-based hands-on lessons that would explore the fundamental ideas underlying solid state electronics for middle-school and high-school classes. A website with opportunities for students to interact with scientists and with each other would further enhance student involvement in the subject. A third component, a comic book version of the documentary, would provide an entertaining way to engage not only students but other interested people in an otherwise little-appreciated technological revolution.

Support for projects to inform the public via news and documentaries is a significant new direction for MRS. Creating the infrastructure to deliver news, especially news about materials advances, is critical to the future of our field. Materials research at its present level *requires* public expenditures for its support. Public support for science and technology in general and materials research in particular demands education of the general public, who elect our lawmakers. The most stable support for materials research will come if and when the public realizes its value and uses this judgment as a factor in electing and communicating with its elected officials. Education of the public is a long-term process that will need to continue for many years to have impact. This project is an important first step toward conveying the value of materials research to the people and institutions that support it.

JULIA M. PHILLIPS AND ELIENE AUGENBRAUN

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