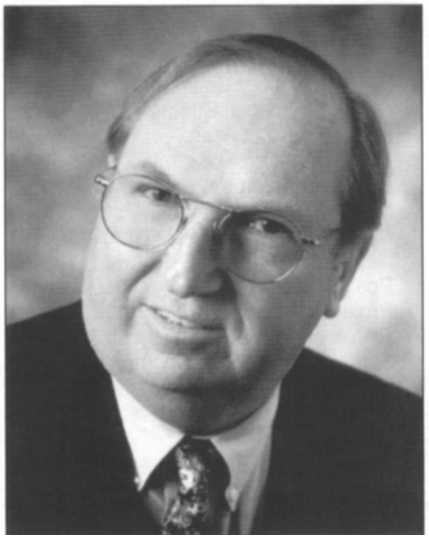
The 1996 Progress Report

Foreword

This Progress Report, like the many that have preceded it, describes certain of the recent advances in the arts and sciences of motion imaging that have contributed to the growing innovation and persuasiveness of and access to this form of communication. Recognizing the power of the moving image, more people are developing more messages in more ways and disseminating them by more media than ever before. Continuing improvements in the capability and accessibility of technology, enhanced ease of use, and declining costs are making it possible to place the persuasiveness of the moving images squarely into the hands of more and more persons with ideas to communicate and stories to tell.

The continuing increase in the power of small computers has made it possible to undertake 2-D and even 3-D animation on desktops — tasks that once were in the exclusive domain of the workstations — thus encouraging new artists and new creators to develop their subjects in this medium. The increasing competence and acceptance of compressed video, coupled with wider access to improved distribution networks, has fueled the growth of networked post-production among these people, sharing the work and creative input among many practitioners at many interconnected sites. Indeed, the concept of a distributed studio is evolving, one which is defined more by its network interfaces than by the confines of any physical space or a particular location. This "virtual" space can be used to create, at the output end, a virtual environment that in turn provides a virtual experience for the user.

Some of this thinking was evident in the production design of the Olympic Games, in which the U.S. domestic broadcaster, NBC, used production facilities both in New York and Atlanta, tied together over optical fiber, to produce a composite program of whose diverse origins the viewers were largely unaware. This year also saw what will likely be the last summer Olympic Games produced as an analog television event. Four years from now the expectation is that the 2000 Olympic Games in Australia will be fully digital, reflecting the continuing growth in the availability and application of digital technology in mainstream television applications.



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Television is undergoing a continuing and inevitable metamorphosis from the analog to the digital domain. However, in spite of this momentum, the introduction of an advanced digital television (ADTV) service in North America has been slowed somewhat, first through an expression of interest by the U.S. government in generating immediate income through the sale of the spectrum needed for transition to ADTV to broadcasters rather than waiting to auction the spectrum released for general communication when the transition was complete; and secondly, by recent concerns raised mainly by the computer industry with regard to the capabilities of the proposed standard or the adoption of, essentially, any fixed standard. North American broadcasters, too, have expressed concern over the cost of transition, which appears to offer little opportunity for financial recovery in the short term, and have also raised questions with regard to the proposed allocation plan. They tend to view the introduction of ADTV largely as a defensive posture to protect the terrestrial broadcaster from potential DBS and/or cable ADTV competition. All these concerns have derailed, at least for the moment, what had appeared to be a relatively short and fixed schedule for the introduction of an ADTV service in North America.

Nevertheless, digital terrestrial and satellite transmission services are being introduced in the U.S. and worldwide. North American networks, led by CBS, have already established operating test and experimental over-the-air HDTV transmitting stations, as detailed elsewhere in this report, and several service providers have adopted MPEG-2 schemes to transport program material between studio locations and some even direct-to-home via DBS. MPEG-2 has found wide and growing acceptance in Europe in applications like that of ZDF, which has been transmitting an MPEG-2, DVB-compliant program stream on the ASTRA system since January, and has firmly established itself as the transport standard of choice for many other European distribution applications.

You may recall that the early surveys of consumer interest in HDTV indicated that the most evident individual attribute of HDTV was the wider aspect ratio. This finding has been reflected in the interest in and rapid growth sales of widescreen SDTV sets in Japan. Interest in widescreen in Europe is considered by many to lag Japan only by a few years. Developments in Japan, where HDTV is now being broadcast 93 hours per week, are making a wide range of new HDTV equipment possible and also suggest the availability of a practical wall-hung color plasma display (CPD) for HDTV as early as 1998. DVD would appear to lead the pack among the new delivery media rapidly gaining acceptance. Robert Kisor, your Editorial Director, Television, has more to offer on these developments, and many others, in his report.

When it comes to storytelling, film has been and continues to be the medium of choice for standard and future-proofing artistic achievement. It has proven its worth over and over again as a truly universal medium on which to capture and hold information for future dissemination by virtually any means. And, notwithstanding over a century of development, improvements in the medium continue. As Linda Young, Editorial Director, Motion Pictures, points out in her report, new films with improved characteristics continue to be introduced on a regular basis, as do better and more complex methods of developing a more compelling finished product. And these are also being displayed in new theaters, like the state-of-the-art Kodak-Kinomir cinema in Moscow, introduced to revitalize the theater-going experience in Russia and to show modern films. The continuing and growing vitality of film as a medium is reflected in the addition of a focused SMPTE Spring Film Conference to the conference calendar, with the initial event taking place in Los Angeles in March.

SMPTE Engineering Vice-President Bill Miller will be reporting on standardization and development activities in his report. He and his roughly 700 volunteers are the unsung heroes of SMPTE as they work quietly and diligently to make new technologies more accessible and affordable to all of us through the standardization process. Your Society is involved in many standardization activities in several areas of motion imaging, and you may be surprised at both the broad extent of the work taking place and the progress being made.

Several other organizations are looking to SMPTE for standards leadership. In his report, Bill will offer certain insights into the process and advise you of the results. As you will see, your Society is also breaking new ground in this area. SMPTE is assuming new responsibilities too, through its appointment as the registrar for the Universal Labels for Unique Identification of Digital Data Standard (SMPTE 298M). And over the past year, we have expanded our Internet service to members and will continue to make further improvements and additions to be able to serve you better on the Web.

Similarly, Fung Lam, Sections Vice-President, will report on another vital service provided by the Society, that of education. Fung will bring us up to date on what we are doing, will do, and have done in 1996. A major component of the educational opportunities offered by your Society is the regular conference activities aimed at addressing technological advances and challenges in our industry; in this arena, SMPTE continues to guide the industry with its leading-edge offerings. As you are aware, 1996 marked the passing of the World Media Expo as a combined fall event, and so, starting this year, the Society will once again be mounting its own, more focused fall conference to better address contemporary and regional needs.

In summarizing the advances of the recent past we are also to some extent projecting a future that continues to build on past solutions in addressing new challenges. The technologies of today are the building blocks of tomorrow, and to gain any meaningful appreciation of what the future may hold, we must come to understand and appreciate the essential character of the present-day developments on which the future will be built. Your Society provides opportunities to gain that appreciation through its many conferences, publications, seminars, tutorials, meetings, and events. How much you can benefit relates in part to your level of participation in these SMPTE activities.

The Progress Report is designed to provide a snapshot of the industry at a fixed point in time, highlighting some of the advances and changes that have taken place over the previous year.

This report introduces a new schedule for its publication, now in January, and the period of information gathering, as well as that being reported on, has been considerably foreshortened. As such, those that have assembled and compiled the information it contains have had to work harder to gather current information. To *Journal* staff members Aileen Moroney, MaryAnn Frusciante, and Mathew Kuriakose; the Vice-Presidents; Editorial Directors; contributors mentioned earlier; and all who supplied information on recent regional and technological developments in the short time available, I extend my sincere gratitude for their contributions to this report.

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