

built into new cameras. However, Angenieux<sup>1</sup> announced a new 15:1 f/1.2 zoom lens for super-8 cameras covering a range of focal lengths from 6 to 90mm. The same company has a new T/1.3 zoom lens for 16mm cameras<sup>2</sup> ranging in focal length from 16 to 44mm; this can be changed by the use of front attachments to 12–34mm or 52–74mm. Cinema Products Corp.<sup>3</sup> announced a series of four fixed high-aperture lenses for 16mm cameras ranging from 9mm to 25mm in focal length. E. Glatzel<sup>4</sup> of Zeiss has written an excellent article on the principles underlying the design of reversed telephoto lenses.

The need for long-focus slide projector lenses is being met by DO Industries with a series of fixed lenses<sup>5</sup> and a 6–9 in zoom lens.<sup>6</sup> Century Precision<sup>7</sup> developed a series of very long focus lenses for 35mm SLR cameras, ranging from 230–1200mm. Some projection lenses of exceptionally large aperture for television projection were announced by Tele-Vue Optics Inc.<sup>8</sup> and the design of such lenses has been described by Howe.<sup>9</sup> The American Optical Company<sup>10</sup> is making television projection lenses for a screen as large as 15 × 20 ft. A large lens for infrared thermovision systems was announced by AGA Corp.<sup>11</sup>

The Schneider Company<sup>12</sup> announced two lenses with variable anamorphic and variable distortion capabilities. Zeiss<sup>13</sup> is making an "N-Mirotar" lens with a built-in intensifier tube, the equivalent speed of

which works out to be T/0.028. Continental Camera Systems Inc.<sup>14</sup> is making a so-called Pitching Lens, which is really a 1:1 relay between a camera lens and the film, to form a vertical tube long enough to include 45° mirrors at top and bottom for the camera and lens. Two new viewfinders have been announced.<sup>15,16</sup> Zeiss<sup>17</sup> is offering a Nomarski DIC microscope objective capable of yielding 3-D information about the object on the stage.

Of course, optical systems can be used merely to direct light with no thought of image formation. A new book by Welford and Winston<sup>18</sup> describes the design of such systems, and Labrum<sup>19</sup> has described a compound reflector spotlight for this purpose.

Single lenses both large and small, with spherical or aspheric surfaces, continue to be announced.<sup>20,21</sup> Acrylic plastic lenses in very large sizes up to 78-in diagonal and 12-in thick were announced by Applied Products Corp.<sup>22</sup> The manufacture and quality control of diamond-turned metal mirrors continues to be a subject of great interest, particularly in the infrared, leading to a number of recent papers.<sup>23–25</sup> — *Daan Zwick*, Vice-President for Photoscience Affairs.

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## EDUCATION

**Introduction:** *The use of audiovisual media in education, business, industry, and government, the manufacture of hardware, and the production of software for this field all showed good growth in 1978. The first year of protection for communication products under the new Copyright Act came to a close. New concerns and proposals for the archival preservation of film were advanced, while, during the same year, two nitrate fires destroyed millions of feet of historically unique motion-picture footage.*

### Audiovisual Media in Education, Business and Government

Expenditures for audiovisual hardware, software, production, administration, and services, plus exports increased by approximately 7% over 1977, according to a preliminary report provided by *Hope Reports*, for an estimated grand total of \$5.62 billion, as compared with \$5.26 billion in 1977.

*Hope Reports* state that contract production showed special strength with an estimated 4000 independent producers working

across the country in both large and small cities, with their sales increasing 15% over the previous year, exceeding \$600 million. More than 60% of the total dollars went for slides and slide shows.

In-house production in all media was also strong, rising 13% over the previous year for an impressive annual outlay of \$977 million for these services.

Product sales of AV display equipment were up 10%, and of production equipment up a slight 1.5%. Prepared material sales for the AV market were off about 4%, however. Slide and filmstrip production showed continued growth, exceeding film and video production in outlay, and up 20% over 1977.

Hope reported that during 1978, budget cuts fell upon the more expensive media systems, whereas outlays for less expensive systems held firm or even increased. Finally, when AV buying for the entire audiovisual industry was examined for 1978, Hope estimated that education accounted for 30% and business and industry for 52% of the total, with government, health science, religious and community agency use accounting for the remainder.

### Scholarships and Awards

The Society seeks to encourage and enlarge support for scholarships and fellowships in the field of film and television education. During 1978, the Society administered graduate scholarships for the Academy of Motion Picture Arts and Sciences which awarded \$2500 to Maria Jansen of Hampshire College and \$2500 jointly to Ann Tegnell and Susan Warner of Temple University.

### Copyright Law

During the first year of the newly enacted Copyright Act, the recently appointed Copyright Tribunal of five members began its work. Proposed rules were announced, and hearings held, regarding performance rights in copyrighted sound recordings, noncommercial performance of nondramatic literary and musical works, deposit and registration requirements, applications of the Privacy Act of 1974, the filing of contracts by cable systems, and methods of affixation and position of copyright notices.

Regulation changes were announced regarding procedures of copyright deposit and

registration, the classification system for copyright registration, copyright fees, termination of transfers and licenses covering extended renewal terms, compulsory licenses for the making and distribution of phonorecords, compulsory licenses for cable systems, and recordation and certification of coin-operated phonorecord players.

Several administrative appointments were made within the Copyright Office, including the appointment of Waldo H. Moore as Assistant Register of Copyrights for Registration; Michael R. Pew as Assistant Register of Copyrights for Automation and Records; Marybeth Peters as Chief of the Information and Reference Division; and Susan B. Aramayo as first Chief of the new Licensing Division.

Legal groundwork for an important test case concerning home video recording of copyrighted broadcast program material was set in motion in 1978 when MCA and Walt Disney Corporations filed suit against Sony Corporation, seeking to restrain sale of home videotape machines and charging infringement of their copyrights. Court confrontation and argument is set for early 1979.

Both producers and users of mass media products are encouraged to familiarize themselves with the provisions of the new act and with day-to-day changes in its administration by the Copyright Office, its amendment by Congress, and its interpretation by the courts.

### Standardization

The year of 1978 was a very busy and productive year in the area of standardization for educational and training media. American National Standards Committee PH7 on Audio-Visual Systems Standards and its eight subcommittees held meetings in Houston, Kansas City and St. Paul. In October the SMPTE Committee on Education, Industrial and Consumer Film Technology under PH22 met in New York City.

In April the International Electro Technical Commission, Technical Committee 60 and its Subcommittee SC60C with six

delegates from the United States met in Budapest, Hungary.

A number of standards were completed during the year and many existing standards were reviewed and either reconfirmed or withdrawn. Work has continued on many more proposed standards in the effort to keep pace with changes and developments in technology. The process of standardization by consensus is, by its nature, slow and methodical. It does provide, however, that the interests of both equipment users and suppliers are coordinated, hopefully to the benefit of both. When national standards and international standards are the same or at least compatible, it is much easier to compete in international trade, opening a much broader market to manufacturers and a greater selection to the user.

### Archival Preservation

Work continued in engineering circles to achieve practical, low cost methods for the archival preservation of historically valuable motion-picture film. Over the past 80 years, millions of feet of film have been permanently lost due to deterioration of nitrate film stocks, the principal current solution of this problem being found in costly salvage printing of such materials onto contemporary nonnitrate film stocks.

An even more serious and recalcitrant problem has arisen in preserving color films, the images of which are composed of transient dyes. Theoretical and experimental progress in recording such materials using a holographic process was reported by Charles Ih (*SMPTE Journal*, Dec. 1978) employing a system for which permanence, convenience and low cost were claimed.

During the same year, two major archival collections were damaged by fires which destroyed millions of feet of historically valuable footage.

On 29 May a fire of unknown origin destroyed a group of 516 nitrate-based film features and shorts at the International Museum of Photography at George Eastman House in Rochester. Most of this group of films had been donated to IMP by Metro-Goldwyn-Mayer Studios and were awaiting

transfer to acetate-based stocks. Fortunately, copies of the films are held by MGM Corporation and the remainder of IMP's 22.5 million feet of historically valuable films was not touched.

On 7 December a disastrous nitrate fire at the U.S. National Archives vaults in Suitland, Maryland destroyed about half of the Universal Newsreel Collection, one of the five surviving American newsreel libraries and the only one in public domain. Preliminary estimates placed the total footage destroyed at 12.6 million feet. A small percentage of the Universal newsreel footage had already been copied off onto acetate stocks. Unfortunately, the destroyed material was unique and is not duplicated elsewhere.

### Educational Film Conferences

The Society for Cinema Studies met at Temple University in Philadelphia, 5-8 March, and the University Film Association conference at USC in Los Angeles, 20-25 August. The UFA meeting was preceded at USC by an invitational conference and workshop on film and video as an artistic, professional and academic discipline, 16-19 August. Later in the year, the University Film Association hosted the 19th meeting of the International Congress and General Assembly of the Congress of Schools of Cinema and Television, at Airlie House, Washington, D.C., 11-19 September. The CILECT meeting featured the first UNESCO International Rostrum of films made by cinema students throughout the world.

### Thesis/Dissertation Bibliography

A massive bibliography of all known theses and dissertations on the subject of broadcasting filed at American universities between 1920 and 1973 was published by the Broadcast Education Association. Compiled by John M. Kittross, the study contains 4300 titles and features a computer-generated indexing by author, topic and key words of titles. —*Raymond Fielding*, Vice-President for Educational Affairs.

## European Broadcasting Union

The Progress Report from the European Broadcasting Union did not arrive at SMPTE Headquarters in time to be included in this issue of the *Journal*. It will be published as an Addendum in the June issue.