

A year of progress in photoinstrumentation was highlighted by the 12th International Congress on High Speed Photography held in Toronto, Canada, from 1-6 August 1976, at the Inn-on-the-Park. The Congress was sponsored by the Canadian Science Films Association and supported by the National Research Council of Canada, the Ontario Science Center, Society of Motion Picture and Television Engineers, Society of Photo-Optical Instrumentation Engineers, the Canadian Secretary of State, the government of Ontario and numerous individual firms. Attendance consisted of 18 national delegates with a total registration of approximately 160 people and 20 exhibitors from the United States, Canada, United Kingdom, France, and Switzerland. National Delegates were present from Australia, Argentina, Canada, France, Hungary, Israel, Japan, Korea, Netherlands, Spain, Sweden, Switzerland, Taiwan, United Kingdom, USA, USSR, and Venezuela. The Congress was the first to use the term "Photonics" in its title and, in general, papers described electrooptical cameras operating in the ultra-high-speed range with image-converter streak cameras dominating the field. Subnanosecond, picosecond, subpicosecond, and even femtosecond intervals were referred to by many authors.

New x-ray techniques were presented by several authors describing characteristics of flash x-ray sources, subpicosecond x-ray streak camera development for laser fusion, x-ray spectral picosecond studies and laser plasma diagnostic techniques.

Approximately 100 papers were presented throughout the week and a banquet was held Friday night with entertainment provided by several different dance groups including Spanish, Croatian, Ukrainian, and Slavic.

The Shardin Gold Medal was presented by Dr. R. Shall to Dr. Martin Richardson of the National Research Council of Canada for his contributions to the field of

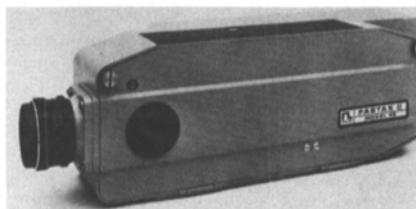


Fig. PI-1. Fastax II high-speed camera.

high-speed photography. The first Coleman Memorial Award in High-Speed Photography was presented by K. Cooper to John Hadland of John Hadland, Ltd. for his many contributions to the development of equipment and techniques in high-speed photography.

The winner of the SMPTE Photosonics Achievement Award was announced as Prof. A. S. Dubovik of Moscow, USSR, and the Congress was advised that since Dr. Dubovik was not present, the award would be presented to him in person by SMPTE President, Ken Mason when he visited Moscow early in October 1976.

Professor Tsuneyoski Uyomura, the Japanese national delegate, invited the 13th International Congress to be held in Tokyo, Japan in 1978.

High-Speed Cameras

Redlake Corp. announced a new compact 16mm 30-m Model 46 Fastax II high-speed camera with frame rates of 100 to 6000 pictures/s (Fig. PI-1). The Fastax II is the newest addition to the Redlake line and is particularly suited to outdoor instrumentation and high G environments. Convenience and economy are enhanced by the availability of several lens adapters affording the use of Pentax, Fastax, or Ilex lenses.

Robert D. Shoberg, manager of camera products for Infrared Industries, Santa Barbara, Calif., announced a new 120-m, 16mm high-speed motion picture camera, identified as Photec IV capable of 100-10,000 frames/s. The Photec IV system is

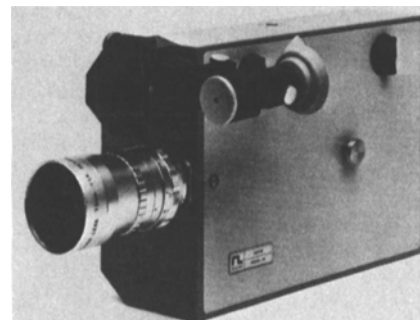


Fig. PI-2. Pal/Locam reflex viewfinder (Photographic Analysis, Ltd.)

said to produce rock-steady pictures over a flat field and features a fully color corrected optical system capable of producing outstanding color pictures. A 50-mm Bronica Zenzanon $f/2.8$ lens with long back focus enables the use of a $1/1.5$ disc shutter which, according to the designer, affords an exposure gain of three to four times that of previous rotating prism systems. The new Photec IV system includes LED timing lights and electronic flash synchronization. Auxiliary lenses have focal lengths of 40mm, 100mm, and 150mm.

Other Equipment

Photographic Analysis, Ltd., Don Mills, Ontario, announced a new Model 50-0158 Pal/Locam reflex viewfinder for continuous through-the-lens viewing and focusing (Fig. PI-2). This system can be retrofitted to the Redlake Locam cameras having an internal reflex optical system. The system has proven invaluable for sports, photomicroscopy, tracking applications, and can be used with most C-mount lenses.

The Pallite VIII lighting unit, manufactured by Photographic Analysis, Ltd. for use with high-speed photography has been gaining popularity therefore a new fan cooled model was developed to permit continuous burning.—A. Earl Quinn, Vice-President for Photoinstrumentation Affairs

EDUCATION

The events of 1776 were recorded in the printed word and paintings. Reenactment is needed if one is to see what happened. By 1876 the photograph was available to make an additional factual record. In our Bicentennial year, 1976, both motion pictures and television were recording the events in sound and color. Those recordings will provide tomorrow's history and, increasingly, the scholar of tomorrow will turn to these tapes and films.

This is but one more bit of evidence that the motion picture and television are fast

becoming, not only an adjunct, but an integral part of education.

However, this development has been underway for a number of years while this Progress Report addresses itself to the specific year of 1976. It was a banner year in terms of sales or volume of production, but education will share in the improved technologies discussed in other sections of this report.

There is one event worthy of special mention in an overview of the year — on 19 October 1976 a new copyright bill was

signed and became law. It is the first major revision of copyright law since 1909. Its full impact will not be known until usage and court decisions clarify many points, but it seems probable that education will be better served under the new law.

Copyright Law

The new copyright law of 1976 will become effective on 1 January 1978.

It was long overdue. One has only to remember the state of the art of motion pictures in 1909, the date of the last major