

Multimedia

The term "multimedia" has been around for decades, long before the personal computer became commonplace. In the early days it referred to several teaching media in a package to be used by an instructor. It was often a series of filmstrips, together with some audio tapes and possibly a workbook. Today it is the use of several media recorded in a CD-ROM so that motion, sound, and still pictures plus text can be used. It can be seen on a computer monitor and even projected on a large screen before an audience. The CD-ROM is in frequent use in libraries and regular

computer applications, and CD-I is increasingly utilized for instruction in schools and training functions.

Multimedia is so new that an accurate reading has not been possible. What appears to be the best estimate of the total spent for multimedia as a medium came to \$2.5 billion in 1994. This is the medium anticipated to have the greatest growth during the rest of this decade.

Video Conferencing

Video conferencing, business television, and distance learning essentially are very similar. In recent years technology has improved to the point where

the medium can perform a service in education, business, government, religious use, and elsewhere. The best estimates for total expenditure in the U.S. in 1994 are about \$2 billion.

Other Media

Audio, chiefly using the compact disc, has not yet been measured by Hope Reports. The tape format expenditure for 1994 is estimated at \$250 million.

Total spending on other media, such as filmstrips, opaque projection systems, maps, globes, models, and picture posters, came to approximately \$2.05 billion in 1994.

— Thomas W. Hope



AMPAS Presents Scientific and Technical Academy Awards for 1994

Arthur Hiller, president of the Academy of Motion Picture Arts and Sciences, has announced the recipients of the 1994 Awards for Scientific and Technical Achievements. The presentations were made on March 4, 1995, at the Regent Beverly Wilshire Hotel as part of the 67th Academy Awards.

The Scientific and Technical Awards were voted on by the Academy's Board of Governors, based upon recommendations from the Scientific and Technical Awards Committee, chaired by John A. Bonner. They are given for devices, methods, formulas, discoveries, or inventions of special and outstanding value to the arts and sciences of motion pictures and which also have a proven history of use in the motion-picture industry.

The awards may be bestowed in any of three classifications: the Academy Award of Merit, presented as an Oscar statuette, is given for basic achievements that have a definite influence upon the advancement of the industry; the Scientific and Engineering Award, an Academy plaque, is granted for those achievements exhibiting a high level of engineering as well as an importance to the progress of the industry; and the Technical Achievement Award, an

Academy certificate, is offered for those accomplishments that contribute to the progress of the industry.

Awards of Merit were given to:

- The Eastman Kodak Co. for the development of the Eastman EXR color intermediate film 5244. The improved color reproduction, tone reproduction, and image structure of this film allow seamless transition among titles, special effects, and original photography. With this product, release prints made from duplicate negatives are virtually indistinguishable from prints made from original negatives.

- Petro Vlahos and Peter Vlahos for the conception and development of the Ultimatte electronic blue-screen compositing process for motion pictures. This process is not just an improvement over the optical approach, it is also a replacement approach with major advances. In particular, it is able to provide solutions for black gloss, impure and uneven back lighting, and noise, as well as difficult object characterizations such as hair, motion blur, arbitrary colors, and shadows.

The recipients of the Scientific and Engineering Awards are:

- George Sauve, Bill Bishop, Arpag Dadourian, Ray Feeney, and Richard Patterson for the Cinefusion

software implementation of the Ultimatte blue-screen compositing technology. This computer-based implementation of the Ultimatte Cinefusion process uses intelligent matte-decision algorithms and a powerful graphical interface to create an intuitive blue-screen matte extraction tool.

- Lincoln Hu and Michael MacKenzie, Industrial Light & Magic, and Glenn Kennel and Mike Davis, Eastman Kodak, for their joint development work on a linear array charge-coupled device (CCD) film input scanning system. Film input scanning systems are utilized to convert motion-picture sequences into digital data used for post-production manipulation, enhancement, compositing, and visual effects with a quality level previously unmatched by conventional opticals.

- Ray Feeney, Will McCown, and Bill Bishop, RFX, Inc., and Les Dittert, Pacific Data Images, for their development work with area array CCD film input scanning systems.

- Gary Demos and Dan Cameron, Information International; David DiFrancesco and Gary Starkweather, Pixar; and Scott Squires, Industrial Light & Magic, for their pioneering work in the field of film input scanning.

• Iain Neil for the optical design and Al Saiki for the mechanical design of the Panavision 11:1 Primo Zoom Lens for motion-picture photography. This lens incorporates both optical performance and mechanical design of unprecedented sophistication. It has met the original design parameters requiring that footage exposed with this zoom lens be intercuttable with film exposed with any of the Primo prime lens series.

• William A. Warner for the concept and the technical staff of Avid Technology for the development of the Avid Film Composer for motion-picture editing. The Avid Film Composer is a digital, nonlinear, 24 frame/sec editing machine using compression algorithms that has revolutionized the art of film editing. Shots can be stored, recalled, manipulated, and played back instantaneously, allowing the film editor unprecedented creative freedom.

• Paul Bamborough for the concept, Nick Pollack and Arthur Wright for the hardware development, and Neil Harris and Duncan MacLean for the software development of the Lightworks Editor for motion-picture editing.

• James Ketcham, JSK Engineering, for the concept and design of the MC211 microprocessor-based motion controller for synchronizing sprocketed film with time-code-based machines. The MC211 is a smart controller that can drive different makes of film machines at several common frame rates, synchronize them to a variety of references, and interface with time-code machines and other microprocessors. It has appropriate controls for dialogue replacement, sound effects recording, and rerecording.

The following were honored with Technical Achievement Awards:

• Audio Tracks, Inc., for the design and development of the Advanced Data Encoding (ADE) System, which creates an encoded time code track and data base during the initial transfer of the production sound dailies. The ADE System provides a method to bridge the gap between conventional film picture editorial and digital sound post-production in order to facilitate

subsequent editing.

• Colin Broad, CB Electronics, for the design and development of the Edit Decision List (EDL) Lister, which creates an encoded time code track and data base during the initial transfer of the production sound dailies.

• B. Russell Hessey, Special Effects Spectacular, Inc., and Vincent T. Kelton, De La Mare Engineering, Inc., for the hardware design, and George Jackman, De La Mare Engineering, Inc., for the pyrotechnic development that together comprise the nongun safety blank firing system. These "nonweapon" guns produce the effect of a gunshot in motion pictures, yet are extremely safe even when fired at performers at very close range. These devices also have significant functional advantages over conventional weapons by synchronizing gunshots to bullet impacts.

• Emanuel Previnaire, Flying-Cam, for his pioneering concept and for the development of mounting a motion-picture camera on a remote-controlled miniature helicopter.

• To Jacques Sax, Sonosax, for the design and development of the Sonosax SX-S portable audio mixer, a lightweight, battery-powered, audio mix panel that has achieved worldwide acceptance in motion-picture production.

• To Dieter Sturm, Sturm's Special Effects International, for the creation and development of the Bio-Snow 2 Flake, a biodegradable and environmentally safe product made for use in motion-picture special effects to simulate dress and falling snow.

• David A. Addleman and Lloyd A. Addleman for the development of the Cyberware 3030 3-D Digitizer. This product uses laser and video technology to capture the shape and color of an object in three dimensions — the computer equivalent of a 3-D camera. This results in a computer data base that can be manipulated and animated for use in motion pictures.

• Mark R. Schneider, Herbert R. Jones, Christopher D. Conover, and John R. B. Brown for the development of the Polhemus 3 Space Digitizing System. This system can take 3-D measurements from a static object in

order to construct a computer data base from a complex real-world object.

• Jack Smith, Michael Crichton, and Emil Safier for pioneering computerized motion-picture budgeting and scheduling. The early work of these men demonstrated the practicality of motion-picture budgeting and scheduling software on small computers.

• Stephen Greenfield and Chris Huntley, Screenplay Systems, for the development of the "Scriptor" software, which assists writers by automatically formatting their work into the industry-standard screenplay page layouts.

• Frieder Hochheim, Gary Swink, Dr. Joe Zhou, and Don Northrop for the development of the Kino Flo Lighting System for motion-picture set illumination. This portable system provides high-output, flicker-free, color-corrected fluorescent light to match 3200° K or daylight; it also incorporates remote ballasting and makes very flexible, compact, portable set lighting fixtures available.

• Clay Davis and John Carter, Todd/AO, for the pioneering effort of computer-controlled list management-style automated dialogue replacement (ADR). This development allows cue lists to be laid out in advance, entered quickly, and modified if necessary, saving time on the dialogue recording stage.

• Stephen W. Potter, John B. Asman, Charles Pell, and Richard Larson, LarTec Systems, for the advancement and refinement of the computer-controlled list management-style ADR system via the LarTec ADR System, which has established itself as an industry standard.

• Art Fritzen, California Fritzen Propeller Co., as the designer and sole manufacturer of the Eight-Blade Ritter Fan Propellers.

• Mike Boudry, Computer Film Corp., for his pioneering work in the field of film input scanning.

An Academy Medal of Commendation was presented to John A. Bonner in appreciation for outstanding service and dedication in upholding the high standards of the Academy of Motion Picture Arts and Sciences.

— Aileen Moroney

