

ABSTRACTS OF PAPERS FROM OTHER JOURNALS

Abstracts of papers appearing in other journals chosen for their importance and possible value to researchers as well as those of timely interest, are published in the *Journal* from time to time. Many translations of abstracts from foreign journals, chiefly those of the USSR, are made available to the *Journal* by the Research Laboratories of the Eastman Kodak Com-

pany. As a rule, translations are made of the abstracts and not of the papers. The journals in which the papers appear can be consulted at some libraries. Current issues of *Tekhnika kino i Televidinya* can be consulted at, or borrowed from the Society's Headquarters Office.

Those requiring definitive and thorough searches of current literature and patents

are referred to *Abstracts of Photographic Science & Engineering Literature (APSE)*, produced by the Engineering Index, Inc., 345 E. 47 St., New York, N.Y. 10017, with the editorial cooperation of the Society of Photographic Scientists & Engineers. The subject areas are grouped below:

Animation
Film and Its Properties
General
Holography

ANIMATION

A computer-controlled animation stand — the off-line approach, Stephen A. Kallis, Jr., *Am. Cinemat.*, 50: 870-875, Sept. 1969.

True computer control, one of the most innovative changes in the production of animated films, could conceivably revolutionize that industry within the next few years.

Unusual animation techniques, Roy P. Madsen, *Filmmakers Newsletter*, 2: 4, 6, 42, 44, Sept. 1969.

The overwhelming majority of animated films are made with cels, models, and puppets. But a whole world of techniques remains unknown to many who might make use of them. Some of them are far less costly in time and materials than conventional techniques, and many of them offer entirely new avenues of expression.

FILM AND ITS PROPERTIES

A pot pourri of film widths and sprocket holes, *Am. Cinemat.*, 50: 98-103, Jan. 1969.

Constituting a mixed bag of motion picture formats, ranging from earliest experiments to the age of the astronauts, in which practically everyone tries his hand at redesigning the film frame.

Evaluation of color combinations in reconnaissance displays, S. Maclean, G. Alexander and W. Meyer, *Phot. Sci. and Eng.*, 13: 246-251, Sept./Oct. 1969.

Image interpretation performance tests were run to evaluate a method of viewing two-color combinations of images by stereoscopic fusion. These images were developed on Panchromatic, Ektachrome, and Infrared Ektachrome film. The fusion method was evaluated against comparable side-by-side combinations, as well as single-film presentation modes. Analyses were carried out using film drawn from the files of an experimental aerial camera collection program against measures of location and identification of small tactical targets in the open, in vegetative cover, and in shadow. The data showed no particular advantages for either the stereo-fusion viewing technique or the types of film combinations studied.

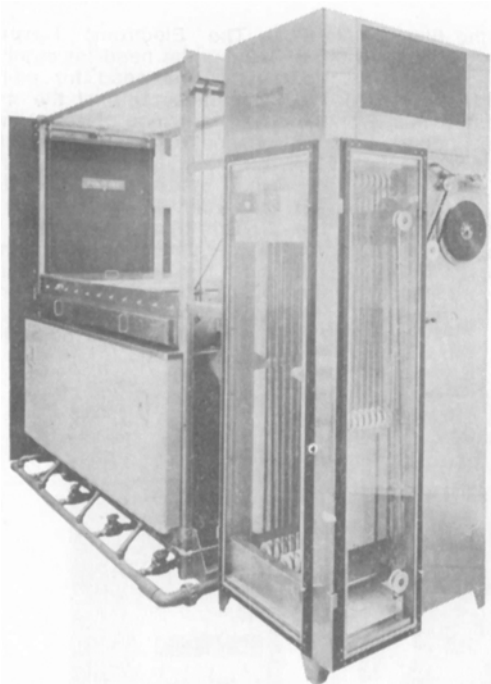
GENERAL

The Soviet motion-picture industry, Vasily Zabello, *Brit. Kinemat. Sound and Telev.*, 51: 294-295, Aug. 1969.

In August 1969 the Soviet Motion Picture Industry will celebrate its 50th Anniversary. In 50 years a new large independent branch of culture — cinematography with its own scientific, design and pro-

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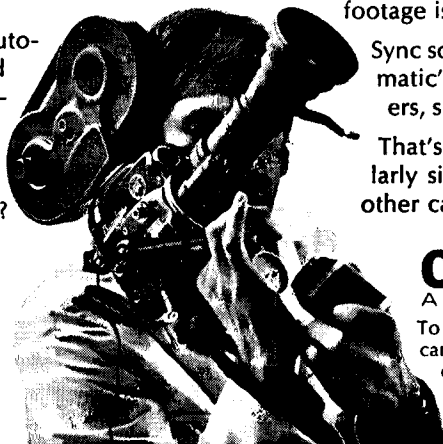
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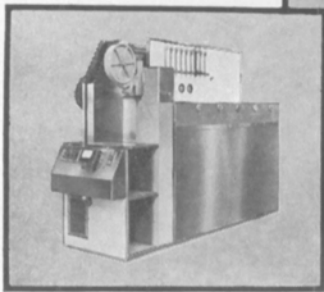
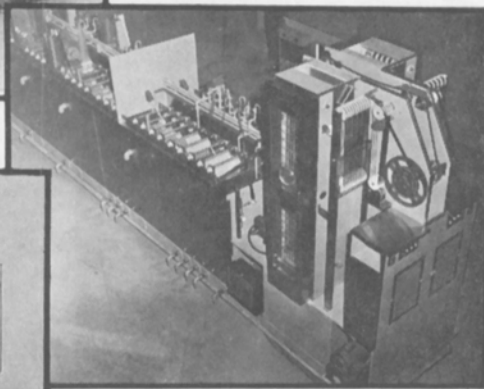
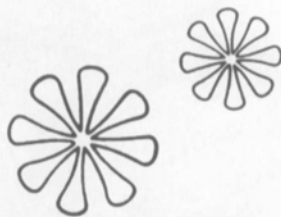
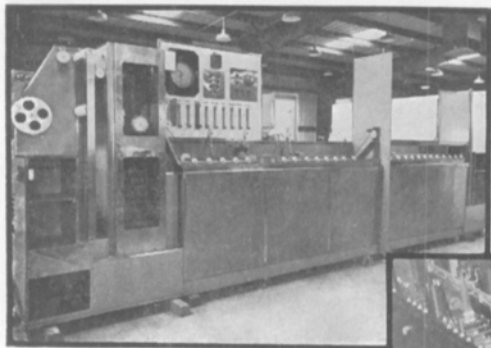
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duction centers has been created in the USSR. More than 300,000 specialists and workers are engaged in this branch.

Picture presentation systems, Vittore Nicelli, *Brit. Kinemat. Sound and Telev.*, 51: 348-349, Oct. 1969.

An examination of the history of the professional motion-picture film frame over the years in order to see just how we have arrived at the standards we know today.

Promoting nationhood through television in Africa, Abraham Z. Bass, *Jour. of Broadcasting*, 23: 163-166, Spring 1969.

This paper presents the opinions of leading officials of a number of African nations, each of whom maintains that television will be of tremendous use to his emerging country. It will take some time to determine whether their wishes have become reality.

Mintech, RRE and a broadcast revolution, Kenneth Ullyett, *Internat. Broadcast Eng.*, 59: 270-276, Aug. 1969.

First of a series reporting important research work at the Royal Radar Establishment as it affects broadcast engineers.

Microscopic spots in processed microfilm: inspection of collections to evaluate the effect of iodide, R. W. Henn, Bernadette D. Mack and D. G. Wiest, *Phot. Sci. and Tech.*, 13: 276-277, Sept./Oct. 1969.

The addition of potassium iodide to the fixing bath was found to be nearly 100% effective in preventing blemish formation during four years of storage of processed microfilm. Of 80 films in four collections which had been processed in the unmodified fixer, 77 contained spots in the fogged leader. Only two isolated spots were found in 57 films processed after the addition of iodide to the fixer.

HOLOGRAPHY

Holography of liquid droplets, Robert Hickling, *Jour. Opt. Soc. Am.*, 59: 1334-1339, Oct. 1969.

Holograms were made of the light scattered by small clouds of water droplets. The far-field radiation patterns of individual droplets can be determined from the reconstructed image of the droplet cloud, and intensity plots of such patterns were recorded with a TV camera system and a chart recorder with a photomultiplier attachment. Particular attention was paid to radiation patterns in the angular range from 10° - 40° from the direction of propagation of the laser pulse illuminating the droplet cloud. According to the Mie theory of scattering by liquid spheres, a significant relation exists between the form of the scattered radiation pattern and the diameter of a droplet. Therefore, given sufficient agreement between Mie theory and the recorded radiation patterns, it is possible to use the recorded patterns to determine the sizes of droplets in a cloud. The feasibility of the idea is demonstrated in the present experiments. Good agreement was obtained with Mie theory and it was possible thereby to determine droplet sizes with an accuracy that appeared better than ±1%.