velopment time—are similar to the analogous rules for resolving power.

The linear dimensions of detail at the limit of recognition are 2.5 to 3 times greater than the dimensions of a linear grid at the limit of resolvability. The relation between the absolute values of the discriminating and resolving powers differs to some extent for different materials.

The optimal density and exposure for discriminating power are somewhat higher than for resolving power, because of the difference between the optical tasks of the *recognition of shape* and of the *differentiation of lines* in a regular grid. (S. C. G.)—[Translation of Authors' Abstract] Yu. K. Vifanskiĭ and Yu. N. Gorokhovskiĭ. *Zhur. Nauch. i Priklad. Fotografiĭ i Kinematografiĭ*, 4:276–284, No. 4, July-Aug. 1959.

TELEVISION

Electron-Beam Tubes for the Televising of Motion-Picture Films by the Flying-Spot Method

The 18LK8ZL projection tube for the transmission of color and black-and-white films by the flying-spot method is considered. The characteristics of this tube are set out, together with the results of tests of such tubes in a flying-spot system.

Similar information is provided regarding the 18LK13L tube for the transmission of black-and-white films over a black-and-white television system. [Abstractor's Note: The designations refer to Russian tubes.] (S. C. G.)—[Translated from Tekh. Kino i Televideniya] E. V. Vorb'ev and E. I. Zhukovskaya. *Televiz. Elektronika (Trudy OKB)*, pp. 40–53, No. 1, 1959.

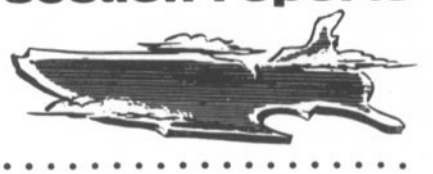
A Gating Circuit for Single-Gun Colour Television Tubes

The requirements of an ideal gating circuit for use with single-gun colour television tubes and the limitations of some existing circuits are discussed. A new type of gating circuit which employs low-level gating of the red, green and blue video signals in conjunction with a wideband amplifier is described. Such a circuit is believed to have a performance superior to that of most existing circuits and by fairly simple modification is applicable to either reversing colour sequence, continuous colour sequence or to colour difference operation.—K. G. Freeman, *Jour. Brit I.R.E.*, pp. 667–677, Nov. 1959.

Some Aspects of the Design of a Small Television Station

Some of the factors governing the choice of equipment for use in small commercial television stations in isolated areas are discussed. Specific reference is made to two different types of installation at station ZBM-TV, Bermuda, using the same basic equipment. The two systems described relate to (a) a combined television center containing both studio and transmitter in the same building, and (b) separate studio and transmitter sites. The equipment used included vidicon telecine and studio cameras and a 500w vision transmitter. Details are given of these items and also of vision, sound and control facilities.—Aubrey Harris, *Jour. Brit I.R.E.*, pp. 705–721, Nov. 1959.

section reports



The Chicago Section met on December 16 with an attendance of 45 for a tour of Chicago's Armour Research Foundation. Nelson Rodelius, a photographic engineer with the Armour Research Foundation, was guest speaker at the meeting.

Following the film opener, *The Armour Research Reactor*, produced by Atomics International, the SMPTE group was welcomed by Dr. Christopher Barthel, Assistant Director of Armour Research Foundation. His introduction urged greater SMPTE leadership in developing young people for work in basic research areas.

Mr. Rodelius, who is a member of the SMPTE Chicago Section, presented a paper on "Photography in Research at Armour Research Foundation," which covered the applications and special problems of motion-picture documentation in acoustical, electrical, fluid, heat and mechanical research.

The meeting concluded with a guided tour of Armour's research reactor, Univac 1105 installation, and acoustical laboratory reverberation and anechoic chambers.—William H. Smith, *Secretary-Treasurer*, Lakeside Lab., Box 2408, Gary, Ind.

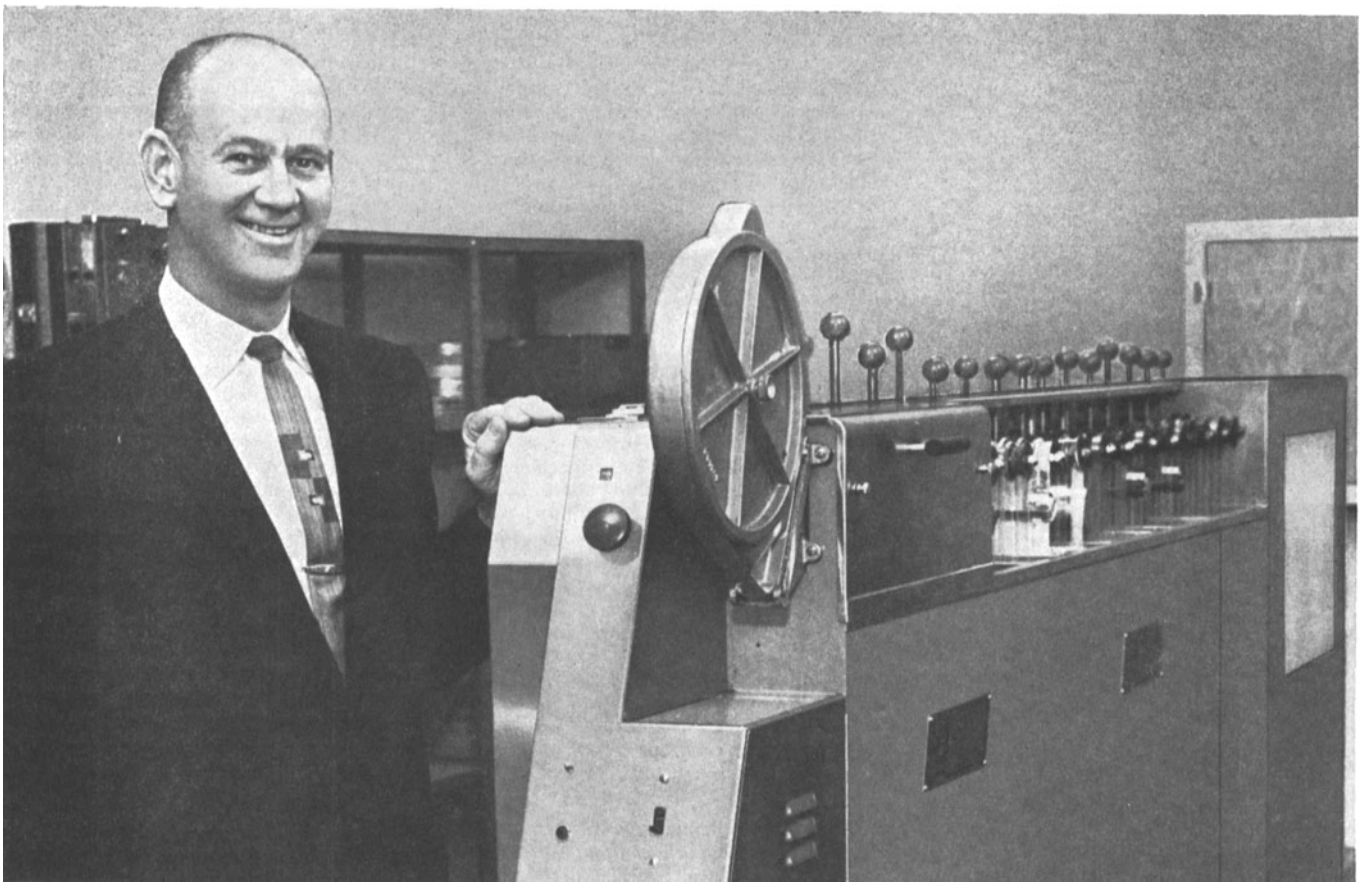
The Chicago Section met on January 20 at the Bell & Howell Co. with an attendance of 72. After a brief welcome by Malcolm G. Townsley, Engineering Vice-President of Bell & Howell, two papers were presented by H. C. Wohlrab of the Bell & Howell technical staff.

In his first paper, Dr. Wohlrab gave a brief history of the development of automation in commercial film printing and a detailed account of the most recent automation in additive color printing. His talk was illustrated with a number of excellent slides, motion-picture shorts and actual equipment demonstration. The height of audio-visual presentation was achieved in demonstrating the actual operation of the automatic printer fully synchronized with a motion-picture short which illustrated in greater detail the functioning of the essential parts of the printer.

Dr. Wohlrab's second paper included a description of the operation of the new Bell & Howell 16mm Continuous Film Printer, Type JM, and an actual illustration of the equipment. Following the meeting, the equipment was available for inspection by the audience.

An intermission followed the first paper during which time coffee and doughnuts were served through the courtesy of the Bell & Howell Co.

Prior to the meeting, a short meeting of the Board of Managers of the Chicago Section was held at the W. J. German offices, 6040 North Pulaski, Chicago.—Philip E. Smith, *Secretary-Treasurer*, Eastman Kodak Co., 1712 South Prairie Ave., Chicago 16, Ill.



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The Hollywood Section met on January 19 with an attendance of 102. Speakers were Norwood L. Simmons, SMPTE President, who delivered a report on the status of the Society; Edward P. Ancona, Jr., Motion Picture Research Council, who discussed "The Motion Picture Research Council Closed-Circuit Television Film Facilities"; and Arthur Mendola, X-Ray Dept., General Electric Co., who talked about "The General Electric TVX System."

Dr. Simmons briefly described some of the accomplishments of the Society in recent years and outlined the role of the SMPTE in sponsoring the Fifth International Congress on High-Speed Photography, to be held in Washington, D. C., October 16–22, 1960.

Mr. Ancona described the installation and use of a 3-vidicon, color-television closed-circuit film chain which has been installed at the Motion Picture Research Council in Hollywood. This equipment is used to review television films produced by the Research Council member companies, as an instrument of quality control in checking television films, as an instructional device in demonstrating the limitations of television film reproduction, and as a basis for experimental work in electronic techniques. 16mm, 35mm, and slides can be projected and a standard television signal is delivered to home-type receivers. A high quality studio monitor is also available for comparison with the home-receiver image.

Mr. Mendola described the General Electric TVX system which permits the making of X-ray motion pictures through the combining of a television camera sensitive to X-rays and a 16mm kinescope recording camera. The use of this system for heart catheterization and angiocardiography was described and typical kinescope recordings produced on this equipment were shown. The two primary advantages of this system are (1) that the patients exposure to X-rays can be reduced to a fraction of that required for conventional fluoroscopy, and (2) that the resulting film can be carefully and repeatedly examined to obtain information not readily observed by other means.—Ralph E. Lovell, *Secretary-Treasurer*, 2554 Prosser Ave., Los Angeles 64, Calif.

The New York Section met on January 13 at the World Affairs Center Auditorium with an attendance of 38. Guest speaker J. R. Popkin-Clurman, President and Director of Research, Telechrome Manufacturing Corp., discussed the "Status of Television Overseas."

Mr. Popkin-Clurman, recently returned from Geneva, where he was one of the CCIR United States delegates on television and color television, has visited practically all of the countries using television. In his address to the New York Section, he gave a first-hand account of television in the Soviet Union, Europe, England, Australia, Thailand and Japan. His remarks about the political considerations associated with TV engineering problems in Russia were to the point. He stated that they were very interested in our video-tape systems, which they are not using presently. Japan, he pointed out, is vigorously building up her television industry. He added that, while there is a government network, there are many independent stations that are very competitive.

Finally, the speaker showed a collection of color slides of the various countries he had visited. Included in the slides were several shots of Japanese television equipment that showed a high degree of development.—James W. Kaylor, *Secretary-Treasurer*, Movielab Film Labs., Inc., 619 W. 54 St., New York 19, N.Y.

Despite foul weather, a record audience of 71 attended the first 1960 meeting of the **Rochester Section** on January 21 at the Dryden Theatre. Herbert Lavin, General Electric Co., was the guest speaker.

At the beginning of the meeting, two short films—*The Griffith Report* and *The History of the Cinema*—were shown. Following these films, Mr. Lavin presented his paper entitled "Large Screen Television and Electronic Data Projection," which included a description of a General Electric development wherein a light valve is produced by interposing the deformation of a transparent fluid within a schlieren optical system. Deformation is controlled by impingement of an electron beam on a specially designed fluid. The light source of the schlieren system is a xenon lamp.

In order to encourage and stimulate attendance at future meetings, those present were advised of the complete agenda for the year. The officers of the Section met prior to the announced evening meeting to discuss plans and programs for the 1960 season.—Wilbur G. Hill, *Secretary-Treasurer*, 10 Hillcrest Ave., Binghamton, N.Y.

The San Francisco Section met on January 12 at Palmer Films Inc., with an attendance of 37. Bill High, Director of Photography, Oakland Junior College, guest speaker, discussed "Basic Optical Terms."

In his talk, Mr. High explained the basic optical terms now in common use and illustrated their applications. Various lens types, their historical backgrounds and optical data, were discussed. A collection of old lenses and shutters were on display for both viewing and discussion. The speaker was associated with the Camera Department of Metro-Goldwyn-Mayer in Hollywood prior to joining the Oakland College Staff.

Coffee and doughnuts were served at the conclusion of the meeting through the courtesy of Palmer Films Inc.—Frank Mansfield, *Secretary-Treasurer*, 57 Stoneyford Ave., San Francisco 24, Calif