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**TRAINING FILMS
IN THE
SECOND WORLD WAR
HISTORICAL SECTION**



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WAR DEPARTMENT
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REVIEW SECTION

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26 April 1946

TITLE: Training Films in the Second World War

PREPARED BY: Historical Section Field Office, Special
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REVIEW:

This is a study of the production and distribution of training films by the Signal Corps. A chronological account of the wartime expansion of the training film program, it includes the assistance given by the motion picture industry and the establishment of the Signal Corps Photographic Center at Long Island City. Much of this report is taken up by a detailed exposition of the production of a training film or film strip. Some attention is given to the problems of how best to distribute and use training films.

The most valuable part of this report is its clear, documented and detailed treatment of the making of a training film, and there are numerous photographs which add materially to the text. The writer goes astray by careless generalizations about the use and value of training films; in doing so he opens up a field of discussion in which assertions made in the text are not supported by proof strong enough to be convincing; furthermore, statements are sometimes made as if they were facts, when there is no evidence to support them.

W.R. STEINHOFF

161

7 May 1946

SUBJECT: Review of Historical Monographs

TO: Office of Chief Signal Officer
Washington 25, D. C.

THRU: Commanding General
Army Service Forces
Washington 25, D. C.
Attn: Control Division, Major Dewey

1. The monograph entitled, "Training Films in the Second World War" has been reviewed according to the provisions of Section II, WD Circular 287, dated 20 September 1945, and is approved for file.
2. Should publication be considered at a future date, the study should be resubmitted for publication review.
3. Your attention is invited to the attached copy of review.

FOR THE DIRECTOR, HISTORICAL DIVISION:

(Sgd) JOHN M. KEMPER

JOHN M. KEMPER
Colonel, GSC
Chief, Planning Branch

Incl:
1 Review

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CONTROL APPROVAL SYMBOL
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TRAINING FILMS IN THE SECOND WORLD WAR

FORMERLY
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File # 4-11, TR
Volume #

REVIEWED
By *Steinberg*
Date *24 Apr 74*

OFFICE CHIEF OF MILITARY HISTORY
Rm. 714, 119 "D" Street, N.E.
Washington 25, D.C.

Historical Section Field Office
Special Activities Branch
Office Service Division
Office of the Chief Signal Officer
Army Service Forces

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I N T R O D U C T I O N

The history of the Army Pictorial Service falls conveniently into three parts: the overall study of peacetime photographic activities, the ~~present~~ study of visual aids training in Army NOT CLEAR activities, and the study of combat photography. The first and last of these parts will be covered in subsequent monographs.

The main concern of the Signal Corps in Army training films is producing and distributing them. But a mere description of production and policies would not be the complete recital of visual aids and their role in training. The story of early stages before production and of utilization after production is told here along with the narrative of photography. Moreover, the role of the Signal Corps training film personnel has not been limited to photography. Personnel engaged in the production of training films are largely responsible for the improvement and advancement of this medium of instruction. Since the responsibility for control of training films now rests with the Army Service Forces and Army Ground Forces, the role of these agencies in coordinating the training film program of the Army has been covered.

Most of the important documents relating to training films also cover film production for orientation and morale purposes.

It was thought best to append them with others to the complete history. In the present study, the most important documents are quoted.

Certain materials on visual aids are not available at the present time. But many persons in the field who contributed to the development of these training devices, are still performing their duties. The value of their evidence and the opportunity for checking documents against eyewitness testimony is clear.

A B S T R A C T

Films have been used for military instruction in the Army because they have proved their worth in saving precious training time. However, before the large-scale demand for training films could be fulfilled, certain difficulties had to be surmounted. Adequate space for photographic activity was lacking. To meet this need the Signal Corps Photographic Center was activated in March 1942. The immediate demand for training films in the early expansion of the Army was filled with the help of the commercial motion picture industry. Experienced motion picture technicians had to be obtained to use efficiently the space provided, and equipment had to be supplied them. Finally, administrative liaison with other Army agencies had to be developed, to enable the Signal Corps to meet its responsibility of supplying training films for the Army.

The effectiveness of photographic instruction has produced further development. Cheaper to make and easier to use than training films, film strips serve where motion is not essential to proper teaching. Film bulletins bring knowledge of new equipment and new methods to men who need to know these facts, wherever they may be. Also, allied nations have received the benefit of American training films, as we have gratefully used British pictures.

Greater realization of the effective aid films can bring to a training schedule followed the increased production of films. The Signal Corps, through the Army Pictorial Service, has produced training films at a rate consistent with the increasing size and complexity of the Army.

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CHAPTER I

THE ADOPTION OF TRAINING FILMS

In the years between the wars of the twentieth century the American Army was a small, skeleton organization, capable of rapid enlargement in case of threat to the security of the United States. Plans for mobilization were prepared by all the branches of the Army. The Signal Corps, like all others, drew up plans for operation in case of war. While most of these dealt with communications, photography as a signal operation was included.

World War I experience taught the United States Army that photography had three specific uses in war. First, photographs of enemy positions, weapons, and the like, helped explain to men what to look for. Aerial photographs, for instance, (made by the infant air units, then a Signal Corps responsibility), were of great value in showing enemy strength in men and materials.

Secondly, photography was of major importance in keeping the people at home up to date on what was happening on the war fronts of the world. Belief was more easily assured when a picture accompanied the story of a raid or a feat of heroism. The whole countryside of France turned up in photographs printed throughout the United States. The new value of photography in wartime was established.

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Thirdly, photography provided an historical record. Pictures supplied material for a complete narrative, more accurate and more detailed than any other for future historians. Motion pictures show obstacles and methods of surmounting them; the uses here were obviously limited only by the combat situation.

The mobilization plans for wartime use of photography emphasized a fourth use, derived from the peacetime experience of the years 1920-1940 and the small beginnings of Signal Corps training film production in the 1917-1918 period.¹ Motion photography was to be employed for purposes of instruction. The entire citizen army was the audience anticipated. Louis Johnson, then Assistant Secretary of War, said in July 1940, "It is expected that a mobilization would see an important part of the training of our citizen army conducted by motion pictures." (Undated lecture, Office of the Chief Signal Officer, War Plans and Training Division files, page 11.)

The story of how the film medium came to be adopted by the Army for training will be included in another monograph to be written on photographic activities during the twenty-odd peacetime years. However, a summary of the main factors leading to the decisions of the General Staff to include training films as an intrinsic part of the training program is requisite for an understanding of the present chapters on the training film program of the Army in the second World War.

1

Over 60 reels of training films were produced by the Signal Corps in World War I. Annual Report, Chief Signal Officer, 1919, p. 343.

CHIEFS OF ARMY PICTORIAL SERVICE.
1937 TO DATE

Figure 1a.

COLONEL RICHARD T. SCHLOSBERG

Chief, Photographic Division, 29 July 1937 - 17 June 1942.



Figure 1b.

COLONEL JAMES T. HATSON, JR.

Chief, Photographic Division, 17 June 1942 - 29 July 1942.



Figure 1c.

COLONEL KIRKE B. LANTON

Chief, Army Pictorial Service, 29 July 1942 - 1 April 1943
and 9 July 1943 - 9 May 1944.



Figure 1d.

MAJOR GENERAL WILLIAM H. HARRISON

Chief, Army Pictorial Service, 1 April 1943 -

9 July 1943.



Figure 1e.

COLONEL EDWARD L. MUNSON, JR.

Acting Chief, Army Pictorial Service, 9 May 1944
to 21 July 1944. On latter date Col. Munson was
designated Chief, Army Pictorial Service, in which
capacity he is serving at this writing.



STATEMENT

Motion pictures are America's most common entertainment. The distribution centers for commercial movies cover the country. The medium is established as a recreational necessity, and in many places it is the only organized recreation. The deep impressions and ready comprehension secured by motion pictures, the impact on each member of the audience of the "story" on the screen, create a demand for more and more pictures. Films are known the world over as peculiarly American products.

Educators had been impressed with the concentration which the viewing of a motion picture afforded. They compared the explicit message of a film with the usual schoolroom media of instruction, the lecture and the textbook. Not only were the graphic scenes in a film able to "bring home the point" more clearly, but distraction was at a minimum in a room darkened for motion picture projection. It was impossible not to assume that the voice in the room was talking to each member of the audience; in such a situation, self-projection into the action on the screen was so easy as to be almost automatic. The question arising from the comparison was obvious to the inquiring teachers and principals: If an episode in a motion picture is easily remembered, why couldn't the same medium be used to make indelible the salient facts and procedures in a course of instruction.

The Army has answered this question by adopting training films in all units as an aid to military training. Its training film

program is the most extensive adaptation to education ever made of motion pictures.² Even if the period for making gunners from bakers and paratroopers from bank clerks had not been shortened by the use of films, even if the duration itself were not thus shortened, there would still be significance for teaching to come in the Army training film program.

It really began in 1928. Before that, in the first World War, there had been some experimentation. The Medical Corps contracted for the production of a film on hygiene, which was produced commercially and the Signal Corps did engage in making motion pictures at that time. But not until 1928 was the operating procedure for the production of training films set forth by The Adjutant General. All Arms and Services of the Army could now try out the new method for teaching both standard and newly developed techniques in military training. Tentatively, training films had won a place alongside training manuals.

The Arms and Services of the Army have schools, courses for which are determined by appropriate Service Boards. Any Board which decided to use a film for presenting a portion of its curriculum requested through The Adjutant General's Office that such a film be made. The request proceeded thence to the Office of the Chief Signal

2

Every man and woman in the Army, regardless of grade, has seen the generally applicable primary War Department Training Films such as "The Articles of War" and "Personal Hygiene". Not members of the Army have seen a great many more, depending upon the date of their basic training, or the particular specialty they perform. In general the policy has been to produce films for those instructional situations difficult to handle by other means. Field Manual 21-7, p. 22.

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Officer to be dispatched to the Photographic Division. Production was then started, and when finished the film was approved by the Board initiating the request, as well as the Assistant Chief of Staff for Plans and Training, G-3.

The actual production of films was carried on by enlisted men and officers who had general photographic experience and were supervised by a few officers who had been given the opportunity of examining closely the production methods of the Hollywood motion picture studios.³ These few men took an intimate part in completing the actual picture, often doing a large part of the necessary production work.

Then the initiating Arm or Service viewed the completed film and either recommended changes or accepted it. When acceptable to the Board, copies or prints of the film were made for distribution to installations under the jurisdiction of the Arm or Service and to National Guard units.

The production of motion pictures requires personnel who have

3

The Research Council of the Academy of Motion Picture Arts and Sciences in Hollywood, Calif., began in 1931 a program of cooperation with the Chief Signal Officer, permitting one Army officer a year to study the production methods of the major West Coast motion picture studios, all of which were members of the Academy. See p. 12 below.

Figure 2.

COLONEL MELVIN E. GILLETTE

Pioneer in the campaign for acceptance of the training film by the United States Army. He headed the first Training Film Field Unit, established at Fort Monmouth, N.J., and later the Training Film Production Laboratory there. He was the first commanding officer of the Signal Corps Photographic Center.



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years of experience. In the commercial studios a man is not considered a competent cutter unless he has had ten or fifteen years of cutting experience. And twenty years is better; his judgment will have been tempered by seeing over and over again the result of his work on the screen, how the audience reacted to it. Competence in the other skills and techniques of making motion pictures is established similarly.

These operations were all performed by a few men, and they were experimenting. Convinced that training films could be useful to the Army, they were given a real opportunity, after 1928, to prove it.

The actual production of training films was always a result of a request from some Arm or Service. No films were made on the initiative of the Signal Corps, except in the case of films for Signal Corps instruction. The actual situation, however, was not exactly that of producing agency and contracting agency. As stated above, the training film makers were zealous for their use. Requests from the Army schools were invited, and more and more came in as the first users of films reported favorably. If an Engineer film proved successful, and the Engineer Board was satisfied that this method of teaching was sound, the word would get around.

Training films were continually on trial during the thirties. The War Department General Staff, by 1936, had decided that about 20 reels a year was a reasonable output for the training film

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producers.⁴ The films gained wider acceptance as they gained circulation. The faith that the early experimenters showed in their efforts seemed increasingly justified by the growing number of requests from Service Boards for training film treatment of technical topics. The assumption in the mobilization plans that motion picture instruction would be used for training a draft army was final evidence of this success.

⁴ Letter from Col. (now Maj. Gen.) Dawson Olmstead, Executive Officer, Signal Corps, to Commanding Officer, Fort Monmouth, N.J., 8 May 1937.

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CHAPTER II

THE ELEMENTS OF TRAINING FILM PRODUCTION

The use of training films by the Army is a milestone not only from the viewpoint of education, but ^{also from} that of effective mobilization.

The use of motion pictures as a visual aid to education is not a new idea. Training films are not a new idea to the Army either. The only new idea about the Army's training film program is its size. Like most of the other activities of the Army during peacetime, training film production for 10 years prior to the emergency had been operating with a skeleton staff. It was the Signal Corps' job to experiment, to develop and to prepare in miniature a complete plan for visual education that could be expanded over-night into a working program for the training of millions of men.¹

In the year between the outbreak of the European war in September 1939 and the adoption of the Selective Training and Service Act, the possibility of such expansion was never absent from the minds of the policy-makers. After the fall of France to the Nazi armies in June 1940, which stimulated the passage of the draft bill and the Lend-Lease program, the likelihood that America's M-day plans might have to be used increased perceptibly. For the first time, many people began to realize what was involved in readying a nation for defense. The conclusion was obvious: we had to train many soldiers in the shortest possible time.

The Selective Service system poured into the Army camps a growing stream of men. General military education and the lessons of the Polish

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Fr the Press Book, published 22 Sept. 1942 at Long Island City, N.Y. on the occasion of the dedication of the Signal Corps Photographic Center, p. 11.

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and French campaigns had to be presented to them. The attack on Russia in June 1941 provided still another military lesson.

The test of military "education" was not the passing of examinations. What men learned had to be so much a part of them that the necessary acts and movements became automatic, leaving them free to think no matter what they might have to face. After the attack on Pearl Harbor, the test of the training program was final: American lives were saved or lost depending upon the performance of American men.

Scrutiny of the training methods of the armies of the world for clues to efficient and rapid training disclosed that the British and French believed in the soundness of the film method. The training film program then undertaken by the Signal Corps to shorten training time was evaluated thus in the Chief of Staff's report for fiscal years 1940-41:

Supplemented by the facilities of the motion picture industry the Signal Corps is engaged in a comprehensive training film production program...training films and.... film strip subjects have already been completed and distributed throughout the service. These visual aids are proving of great value in the training of the new Army.²

Note the first sentence of the General's statement, "Supplemented by the facilities of the motion picture industry..." The need for films was such that the production facilities of the Fort Monmouth and Wright Field Training Film Production Laboratories were completely submerged. The value of films had been established,

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Mr Biennial report of the Chief of Staff, 1939-1941, p. 22.

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the various Arms and Services were eager to utilize the method, and the requests therefore came in at a high rate. Moreover, basic films were needed for general Army orientation. These would be shown at the induction centers, to take some of the completely alien atmosphere out of the first few days of a trainee's Army experience, and to prepare him for the adaptation to Army living he would have to make.

Yet the Army producing agency could not have met these demands had it worked twenty-four hours a day for years. The size of the need was matched by its urgency.

The bases for film production, whether commercial or military, are the same. After all, the Army has merely adopted a proven technique for military purposes. Army blankets differ from non-Army blankets in their eventual use, their uniformity of color, or their high standards of manufacture. Training films differ from other films ^{NOT}TRUE only in the first instance. Thus, the scenario for a training film is completely different from anything ever produced solely for public enjoyment. But once the scenario is written, the process is the same -- lighting, sets, photography, direction, sound recording, -- all the procedures follow in exactly the same sequence.

These are the essentials of film production:

1. Adequate space for indoor photography, for editing, animation, screening, recording, and general production.

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2. Enough men who know how to use the space for production: cameramen, writers, directors, soundmen, editors, projectionists, property men, etc.

3. Equipment, cameras, microphones, splicers (for editing purposes), movieolas (also for editing), rerecording machines, sound mixers, transportation for outdoor photography, etc.

4. Unexposed film, or raw stock on which to shoot the original scenes and print copies of the approved finished films.

5. The administrative channel, the production procedure for a training film from request to approval.

Whether in Hollywood or Calcutta, the first four are essential for motion picture production. In the case of carefully planned instructional films, the fifth is also needed. At the time of Pearl Harbor only a small administrative group (the Photographic Division) had been established in the Office of the Chief Signal Officer for the handling of training film production for the Army. This group was expanded to handle the large scale film production required by the Army. Before such production could get under way, the resources of the commercial studios -- far greater than the Army's -- had to be drawn on.

The basis for cooperation between the studios in California and the War Department had already been laid, through the Signal Corps and the Research Council of the Academy of Motion Picture Arts and Sciences. The Academy is well known as the organization awarding annually to a motion picture actress, actor, director, or cameraman,

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the coveted "Oscar" for outstanding performance. But its Research Council operates primarily for the purpose of assuring cooperation among the large studios in matters of technical advance. Since the Academy is composed of representatives of all the leading motion picture companies, the Council has at its disposal the largest collection anywhere of motion picture production equipment and technicians. This was the logical organization to act for the industry.

Since 1930, eight officers of the Photographic Division of the Signal Corps have spent time in motion picture studios on the West coast learning the latest developments of motion picture production. In November 1940 the Hollywood Defense Activities Committee offered its cooperation for non-profit production of motion pictures for the Army. Since then, training films have been made for the Army on the lots of the commercial producers.

It was the skill and devotion of the Army officers who had gone to the commercial studios and studied motion picture technique which had convinced the War Department that there was a genuine place for films in a training program. But the production facilities of Army Pictorial Service, even now in the large studio which was purchased for Army film production, are not equal to the production load imposed by the needs of the American Army. Without commercial production the training film program of the Army would have been impossible. Films would have been made, but never enough to fill the great need.

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A. THE MOTION PICTURE INDUSTRY AND THE TRAINING FILM PROGRAM

The story of commercial production of Army training films involves the whole development of cooperation between the members of the motion picture industry and the officers of the Signal Corps whose responsibility included the production of adequate training films. To expedite the Army production program, and to insure the prompt adoption of new methods for improving producing procedures, the Signal Corps went to the Research Council of the Academy of Motion Picture Arts and Sciences.

The Research Council was staffed by men elected from the membership of the Council, and headed by a Chairman appointed by the Board of Governors of the Academy upon recommendation of the Council. Important to the cause of cooperation with the War Department was the fact that key members of the Council held commissions as Reserve Officers.

An informal offer had been made to the Signal Corps in the fall of 1940 by the motion picture industry, represented by the Research Council, for cooperation with the War Department Training Film Program or work on any other project vital to national defense.³

At this time there were already signs that, unsupervised, the individual Arms and Services would contract for the production of their own training aids, thus confusing the visual aids production

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Summary Report of Motion Picture and Visual Aid activities in the Signal Corps from 4 August 1941 to 26 February 1943. (Hereafter to be referred to as "Summary Report",) p. 375.

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situation by using up critical equipment, and in no way assuring consistency with War Department doctrine. Only a month after the passage of the Selective Service and Training bill The Adjutant General found it necessary to inform the Chiefs of all War Department Arms and Services, the Commanding Generals of all Exempted Stations, and the Commanding Generals of all Corps Areas that:⁴

No agency of the War Department will assist any commercial or private organization in the preparation of film slides, motion picture films, or other visual training aids without prior authority from the [sic] Adjutant General.⁵

Major (later Colonel) Richard Schlosberg, Chief of the Photographic Division of the Signal Corps arranged for Mr. Gordon Mitchell, manager of the Research Council, to come to Washington to work out details for a comprehensive plan to be presented to the motion picture industry.

Two days after the above letter concerning the contracting for commercial production of training films, Mr. Mitchell was on his way back to California carrying with him a tentative plan for cooperation between the members of the motion picture industry and the Signal Corps, acting for the War Department. That the whole operation was tentative can be seen from the letter of Major Schlosberg to the Research Council Manager, 17 October 1940, the day Mr. Mitchell left Washington. This said in part:

⁴ Later designated Service Commands.

⁵ 15 October 1940.

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...We are anxious to get more training films made with the least possible delay and it seems we will have to go to industry to effect this increase in production. Whether or not we will do it through the West Coast, the East Coast, or independent producers has not yet been determined. The important thing, from our point of view, is to learn all the facts from which we can make our decision as to the proper procedure which we should follow.

A similar letter was sent, on the same day to the Vice-Chairman of the Research Council.

Although it was proposed to work through the Research Council, the formal arrangements were made with the Motion Picture Production Defense Committee,⁶ which represented all members of the industry plus the professional guilds.⁷ This Committee, later known as the Hollywood War Activities Committee, designated the Research Council as coordinating agency for the entire motion picture industry in all its relations with the War Department, so far as training films were concerned.

Ten days after Mr. Mitchell left Washington, the Chairman of the Research Council sent a memorandum to all the major studios requesting a reaction to the program proposed for producing War Department

Training Films.⁸ Between 5 November and 26 November affirmative

⁶ Mr. Y. Frank Freeman, Vice-President in Charge of Production at Paramount Pictures, Inc. was Chairman of the Committee. He was not a member of the Research Council.

⁷ The Screen Actors Guild, the Screen Directors Guild, and the Screen Writers Guild.

⁸ The studios were: Columbia Pictures, Corp.; Hal Roach Studios, Inc.; Metro-Goldwyn-Mayer Pictures; Paramount Pictures, Inc.; Republic Productions, Inc.; R.K.O. Radio Pictures, Inc.; Samuel Goldwyn; Twentieth Century-Fox Film Corp.; Universal Pictures Co., Inc.; Walt Disney; Walter Panger Productions, Inc.; Warner Bros. Pictures, Inc. See Appendix A for a copy of the memorandum.

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answers came from all the organizations.⁹

To a person with knowledge of the motion picture industry, it must have been fairly obvious that the large West Coast studios would be most able to produce the needed training films. There were located the professional men, the equipment, the collective experience, the sets from other productions, the stage space, and the transportation facilities, should "location" shooting be necessary. The fact that it was with the Research Council, the agency representing the largest companies, that the Signal Corps dealt, is evidence of the fact that the men in the Signal Corps who were entrusted with the training film production program had a grasp of the essentials of the situation.

There was no bias in favor of the large companies. The ruling consideration was the immediate need for effective training films in large numbers. The mission of the Signal Corps was clear; films had to be provided.

The War Department worked with the Committee and the Council, as it would have with any group offering cooperation. There were numerous offers, for instance, of moving picture material for the recreation of soldiers. These were handled in the authorized way by the Motion Picture Service of the Army. On 21 October 1940 in a memorandum for the use of the Photographic Division, the following policy was noted:

⁹ U.S. Senate Special Committee Investigating the National Defense Program Hearings, Part 17. (Jan. - Apr. 1943), pp. 7103-7107.
Hereafter referred to as Senate Hearings, Pt. 17.

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All propositions submitted by any group of civilians engaged in the production of motion pictures are welcomed and are being studied carefully in order that the maximum benefit may be derived at the least expense in securing for the War Department the training films which it needs.¹⁰

Nevertheless, the Signal Corps was not entirely convinced of the adaptability of the motion picture industry to the training film program as proposed by the Research Council. In a letter to The Adjutant General, written 11 days after the October conference had ended in Washington, the Chief Signal Officer declared the utilization of the motion picture industry to be "initially for experimental purposes in the production of a limited number of reels. It is expected that these pictures, experimental projects by the commercial industry, will determine whether the industry can produce training films satisfactorily on a large scale."

At a meeting of the Production Committee of the motion picture industry, held 30 October 1940, the final decision was made to cooperate with the War Department Training Film program. At the end of the meeting, Chairman Zanuck and Vice-Chairman Levinson wired Washington:

At a meeting of Production Committee of Motion Picture Industry, Defense Cooperation Committee presided over by Freeman, President Producers Association and Schaefer, a sub-committee, consisting of Research Council was authorized with full support of entire industry to deal directly with Signal Corps for cooperation in producing of training films for the Army and negotiate contracts. This is definite and prohibits any chiseling and will give Army fullest help in getting most for money. Actors, directors and writers, Guilds, all producing companies and American Society Cinematographers were represented and unanimous in decision....¹¹

10

Memo fr the production files of the Chief, Army Victorial Service.

11

Telegram sent 30 October 1940. Evidently Mr. Mitchell was back in Washington since the telegram was addressed through him.

The Motion Picture Production Defense Committee represented all the production and technical studio departments as well as Guilds and public relations agencies. When this Committee designated the Research Council of the industry's Academy to speak for it, to negotiate with the Signal Corps, the War Department could be assured that the entire industry would cooperate 100 per cent.

By the 26th of November, all studios had replied enthusiastically to the memorandum sent by the Research Council.¹² Thereupon, the head of the Committee sent to the Secretary of War a letter acquainting him with the final plans for training film production by commercial studios.¹³ In answering this letter on 12 December, the Secretary of War alluded with pleasure to the decade of cooperation among the Research Council, representing its individual members, and the Signal Corps.

With the approval of the Chief Signal Officer there was appointed on 29 November, 1940 a Signal Corps Liaison Officer, Major (later Colonel) Charles S. Stodter, to report for duty 1 December at the Research Council.¹⁴ The plans for the operation of the Signal Corps Liaison Office included the provision by the Research Council of certain overhead items, such as office space, telephone service, and clerical help. The cost was to be pro-rated against the production cost of training films. This agreement was in effect during the existence of the Signal Corps Liaison Office.

¹² See above, p. 15.

¹³ See appendix B.

¹⁴ Summary Report, p. 380.

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From the ~~prevailing~~ point of view, ~~that~~ of speeding production on the critically needed films, the outstanding feature of the proposed plan was the opportunity it gave the Signal Corps to deal with just one agency, instead of with each of the producing companies. Not only had the Council in the normal performance of its activities during the preceding years established its contacts with all departments of the various studios, but in supervising the instruction of Signal officers in motion picture production, the Council had set up channels of contact with the Chief Signal Officer.

Briefly, the following were the steps in commercial production of training films in the early days before the War and during the first year of hostilities:

1. The individual Arm or Service requested the production of a film and prepared a picture plan.

2. A scenario was written "either by Army personnel or by personnel in the pay of the Army or...the Research Council...would hire a scenario writer."¹⁵

3. The Council would assign training films for production to studios in rotation, depending upon facilities available or likely to become available. The considerations here were economy of time and saving of money to the Signal Corps.

If certain sets were available at one studio, and would mean initial construction at the others, the studio best equipped to

¹⁵

U. S. Senate Hearings, Pt. 17, p. 6887.

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perform the production of the film was chosen. In practice this resulted, reasonably enough, in the greater use of the more diversified facilities of the larger studios.

4. Military advisors were provided from the Arm or Service most concerned with the film.

5. Provision of military equipment and personnel was made if necessary to convey the message of the film.

6. After a studio had accepted the assignment of a scenario by the Research Council, a production meeting of all the departments involved would be called. Each scene was analyzed, the equipment and personnel needed were set up, and suggestions for handling the timing and pictorial aspects of the films were thoroughly explored by the men who would perform the actual producing. Through this cooperative discussion, each person working on the film to any extent or in any way knew all there was to know about the scenario, and the entire purpose of the training to be presented.

7. The cost of the films as estimated by the producing studio was sent to the Research Council, the latter's expenses were added, and the total submitted to the Signal Corps as the purchase price.¹⁶

8. The purchase was transacted by the Purchase Officer, in

¹⁶ Council costs were of two kinds. First those arising from the individual picture, for animation, transportation, scripts, etc. Other costs were the continuing overhead of the Council necessitated by the constant contact which had to be maintained with all the studios. Personnel and office expenses, etc., were involved. Summary Report Section on Relations with the Research Council, p. 383.

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this case the Signal Corps Liaison Officer. In December 1940, at the time of the activation of the Signal Corps Liaison Office, the usual Government procurement contract was assumed as the basis for training film production. This contract, however, was not acceptable to the attorneys representing the Research Council.¹⁷ The Signal Corps, Legal Division thereupon submitted in January a new contract, but it was finally decided between the Research Council attorneys and those of the Signal Corps that a purchase order allowing for the "off-the-shelf" procurement described below, would be the best basis.

The finished film with the purchase price on it was made available to the War Department. The option of purchase rested with the Army. If a film or a price were unacceptable, there would be "no sale." However, there were none which could not be reworked into an acceptable film and every film made then was accepted. This was not surprising in view of the following: (1) the scenario was written under Army supervision; (2) a military technical advisor was present throughout every phase of a film's production; and (3) when completed, one copy of the finished film was sent to Washington for approval screening before it was put "on-the-shelf" for purchase, and if bought, thereafter released for the printing of as many copies as were needed at that time. Future requests were filled before the actual use but not at the time of the original printing.

During the calendar year 1941, 98 reels were produced through the Research Council, utilizing commercial facilities. During the

17

It was felt that a motion picture could not be specifically enough described before production to justify the use of the 15 September 1940 War Department contract, drawn for the production of articles such as guns, airplanes, clothing, which either meet or fail to meet specifications. Interview with Col. Chas. Stodter, APS, 13 Apr. 1944.

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calendar year 1942, 225 reels were so produced. Production was distributed among 15 different producing companies. Production was performed for the government on a non-profit basis. The average cost was approximately \$4,500. per reel. Overhead costs were deleted completely for the purchase price placed on the film and other costs were scaled down appreciably with a great deal of talent donated by directors, actors, etc.¹⁸

In fiscal year 1942, 439 reels were completed, or ten times as many as in the preceding twelve months.¹⁹ The costs did not rise in the same proportion; they came to \$281,535. But these figures, it must be remembered, apply only to commercially produced training films. The ratio of commercial film costs to total training film production costs in fiscal year 1941 was 42 per cent. The next year it was 28 per cent.

The percentage of reels produced is a little more revealing of the role actually played by commercial production in the first years of the war emergency. In fiscal year 1941 almost 84 per cent of training reels were commercially produced; in the following year, 64 per cent. The difference is due to the increase in the facilities of the Signal Corps, the growth of personnel, and the additional funds that were made available in the second half of the fiscal year which followed the declaration of war.

Thus, the combined efforts of the Signal Corps Photographic Division and the motion picture industry, working through the Research Council, provided a significant contribution to the necessary instruc-

¹⁸ To compare usual studio costs and those charged the Signal Corps, see Senate Hearings, Part 17, pp. 7109-7113.

¹⁹ Summary Report, section on Relations with the Research Council source for all cost figures in this paragraph, also production figures.

tion of the American Army during the first twenty-four months of conscription, and the first year of war.

B. THE TRAINING OF MOTION PICTURE TECHNICIANS

Professional men, the technicians who know the field of motion pictures, are as necessary to training film production in the Army as the commercial contracts and contacts discussed in the previous section were necessary additions to the Army program. The requirements of space and equipment, and the necessary liaison to process and complete films might be available. The utilization of the films might be planned to the smallest detail. But the film has to be made, and by men who know their trade. Writing, photography, sound recording, animation, directing, editing -- all the production techniques require men who can be depended upon to know the correct method, to choose the most effective presentation.

At the time of the passage of the Selective Training and Service bill, there were few men in the country eligible for the draft who were skilled in motion picture production operations. The men who had had years of experience and could be depended upon to take hold of things if asked were long-time professionals. They had started, most of them, with the youthful industry in the period 1915-1925, or even earlier. Over half of the directors, editors, cameramen, and producers were beyond the draft limit of 38 years. Of the remainder, few were without dependents.²⁰

²⁰

Roosten, Leo "Hollywood" Appendices.

And yet the need for motion picture professionals for Army production was great. Charged with the "formation of operational plans and procedures; the research, design, procurement, storage and issue of photographic supplies and equipment; the procurement, storage, release and distribution of still and motion pictures; the operation of photographic facilities and the provision of individually trained personnel for photography,"²¹ Army Pictorial Service had many places it could use photographically experienced personnel.²¹ The Army had not only to make training films: it had to procure the makers of training films.

Next to the West Coast professionals, the men of the newsreel staffs were best fitted to produce moving pictures. Moreover, they were used to working under strain and haste, less than ideal circumstances. After the newsreel men, the still photographer was the most promising material to develop into a training film specialist. It was of course training film specialists that were most needed.

Further complication was the complete absence of suitable instructors for photographic training of any kind, let alone motion picture specialties. In 1937 the photographic specialist courses in still photography were reinstated in the Army, not at their original location the Signal Corps Photographic Laboratory at the Army War College, but at Fort Monmouth, New Jersey, at the time that Training Film Field Unit No. 1 was activated there. The decision to train men by use of pictures was paralleled by the decision to train men to make pictures.

²¹

Adm. Memo 21, ASF, 21 March 1943, setting up the Army Pictorial Division, Sig. Operating Service, as Army Pictorial Service. The mission of the Photographic Division in 1941 was similar.

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Early in 1941 the two Reserve Officers of the Signal Corps who had a background in photography (one a Life photographer and the other a cameraman, and later director for a newsreel company) were called to report at Fort Monmouth. In February of that year there began a program of drawing from the reception centers those men who could be trained as photographic specialists for the many Army tasks. It was not only training film technicians that were needed. The mobile photographic laboratories needed technicians; the call for combat photography would arise if the nation became a belligerent; and besides training films, there were other kinds of films that the Army anticipated making.²²

In the early days of 1941 the goals for photographic training were as high as they are now. The material at hand, though, was not the same. The specialist school was set up to make better still photographic technicians out of men who had a fair grounding in the field. No one expected to have to make photographers out of bricklayers. But in the first months of the draft, just such transformations had to be tried. A fortuitous assignment enabled the Photographic School to benefit tangibly from the motley assortment of men being sent. A carpenter who was supposed to learn camera repair (and finally did) spent his first days in the school constructing the school building. Since then, the role of the school has been to train photographic technicians to be Army photographic technicians.

In theory the classification process at the reception centers should have sent all men with photographic background to Fort Monmouth, or later as they were activated, to Camp Crowder or Camp Kohler.

22

The overall photographic program of the Army Pictorial Service will be discussed in a subsequent monograph. The interest here is training films solely.

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However, in the vicissitudes of a reception center's operation, approximately 35 per cent of these men were lost to the replacement requirements of other Arms and Services. Still, to save 65 per cent was an achievement, viewed against the rapid expansion of all parts of the Army taking place at the same time.

The photographic specialists who were so classified and sent to Signal Corps Replacement Training Centers²³ (Fort Monmouth was the only one in 1941),²⁴ were trained in specialist schools for eventual assignment to either a photographic company, a reporting group using a camera (or later to special types of units formed by the Signal Corps for combat assignment teams or Special Coverage Production) or a laboratory at one of the Corps Areas or installations.²⁴ Not all the men sent through the classification procedure to the Signal School at Fort Monmouth entered the specialist schools automatically. Interviews were conducted to determine whether there was sufficient background in fundamentals. There was no time for turning an amateur photographer into a motion picture cameraman; but there was some chance that a newspaper photographer, quick on the trigger and well acquainted with still cameras and photographic techniques, might be remade into such a cameraman.

The interviews were conducted first at Fort Monmouth. Later, when the Central and Western Signal Corps Replacement Training Centers were opened, the officers from the Photographic School spent at

23

The first selectees arrived at Fort Monmouth 28 February 1941. Cf. Outline of Ft. Mon. activities, PRO release Ft. Mon. summer of 1941.

24

The classifications of the Army allowed for the final utilization of a man as a film cutter, for instance, which is a specialist category, but there was no specialist school to feed that category.

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least one session every two weeks talking to selectees at Camp Kohler and Camp Crowder.

The men singled out fell mainly into three groups:

1. Those with sufficient professional ability to enter immediately upon duties as cameramen, cutters of motion picture film, animators, and directors.
2. Those who could do the same after some weeks of training.
3. Those who, despite their experience in the photographic occupations, did not have enough knowledge to warrant specialist instruction.

The men in the first group were entered upon the rolls of the schools, but their job after basic training was to continue performing in the Army the operations they had performed in civilian life.

Those in the second group entered the photographic specialist school, emerging as darkroom men, motion picture cameramen, cutters, frontline combat news photographers, and newaphotographers for behind-the-lines reporting (parades, awards, launchings, diplomatic conferences), and as production men, from writers to sound recorders for all Army motion and still pictures, whether for training or morale purposes.²⁵

The third group was transferred to other Signal specialist schools.

Although photographic technicians and potentially skilled motion picture technicians might be selected correctly, the training of these men was hampered by inadequacy of facilities. Early in 1941 at Fort Monmouth, motion picture specialists could be assigned at best to

²⁵

The schools added motion picture technique in 1942.

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the Training Film Production laboratory, under an informal arrangement with the Commandant of the Signal Corps School. There was no school for them comparable to those attended by other specialists.²⁶ By July it was suggested that civilian instructors be employed. But since commissioned officers were teaching the other courses it was felt that the psychological effect would be wrong.

Finally, through the arrangement mentioned above, professional men at the Training Film Production laboratory were allowed to instruct students at the Photographic Specialist School.²⁷ This was common sense. Materials for teaching were close at hand, experienced men could be observed doing a finished job, the various stages in motion picture production were available for careful study, special classes could be conducted when necessary, and most important of all — the value of various methods of procedure could be compared.

The students might have been still photographers learning how to repair and maintain a camera, a task unnecessary for them in civilian life; artists being taught the methods of film retouching, particularly useful for film strip production, or professional cameramen learning fundamentals of directing, of which they might have a fair grasp since they had taken orders from a director for years. But all of the men were, in theory at least, already initiated into the field of photography. It was never necessary, except in the first few months of the draft, to start a class with, "This is a camera."

26

Ltr fr Lt. Col. (later Col.) M. S. Gillette to Lt. Col. (later Col.) Richard Schlosberg, 2 October 1941.

27

Ibid.

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More likely was, "This, as you know is the Mitchell camera, which in the Army is used for...." Thus a great deal could be taught in a relatively short time.

As early as July 1941 the new school reported so heavy a demand for its graduates that Lieutenant Oscar Stroh wrote:

We are now forced to send men out as having 'finished' the school who have been in for only five or six weeks. As a result they do not have half the training they should have received, but we are taking care of the situation as well as possible by sending out those men who have been showing the greatest aptitude, and who have had the best civilian photographic background.²⁸

At the same time, the activation of a school for motion picture cameramen had been requested formally on 1 July 1941. (The school for still photographers and specialists had already been activated along with the Replacement Training Center). And on 12 August the Commanding Officer of the Training Film Production Laboratory noted the difficulties encountered in training conducted on a makeshift and "unofficial basis." He therefore recommended to the Chief Signal Officer the creation at Fort Monmouth of a photographic center to combine all photographic activities of the Signal Corps under one administrative head and one roof. The Commanding General of Fort Monmouth made a similar point:

The arrangement by which the training of selective service men in motion and still photography is divided between the Signal Corps Replacement Training Center and the Training Film Production Laboratory is illogical both from an administrative and a training viewpoint. Better results can be obtained by placing all this training under an established photographic activity of the signal Corps.²⁹

28

Ltr fr Lt. Stroh to Maj. Brown, 5th Sig. Tng. Bn. 7 July 1941

29

Ltr fr Brig. Gen. G. L. Van Deusen, CG, Ft. Monmouth, to CsigO 14 October 1941.

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On 2 February 1942, Lt. Colonel (later Colonel) R. Schlosberg noted that the request of 1 July had been approved (presumably by the Chief Signal Officer) but never forwarded to The Adjutant General. "The supply of cameramen", he added, was now "practically exhausted. A few cameramen of varying ability," he added, were "picked up in the draft. But this source is insufficient to meet the needs of the Signal Corps."

On 30 March, finally, the Signal Corps Photographic Center was activated, and the training battalion was moved to Long Island City soon afterward. As Colonel Schlosberg had foreseen, the teaching space and personnel allowed at Fort Monmouth had proven inadequate. Activation of photographic companies would still occur without the necessary men.³⁰

And these men from the school at the Signal Corps Photographic Center have produced an increasing number of training films, correctly, rapidly, and efficiently. The school has reason to be proud of its accomplishment.

C. EQUIPMENT

Of the essentials for training film production, the need for the physical articles of photography -- the cameras, film, projectors -- was

³⁰

See Footnote 26.

most readily filled. This was not true of all aspects of Army photographic activity; but as far as training films were concerned, there were very few times when shortages delayed production or distribution.³¹

Equipment needs were nearly identical with those of commercial production. In this respect the entire supply and procurement program of Army Pictorial Service has been unique. There have been few unusual specifications.

Because, however, Army Pictorial Service faced a scarcity of products, and because of War Production Board restrictions, there did arise the need for appealing to the general public. Small items of photographic equipment were obtained in this way from the public at large. These were problems faced in common with the rest of the Signal Corps. But the basic standards for photographic items in military use were the same as those established by constant utilization in the commercial studios from 1920 to 1940. Whether Metro-Goldwyn-Mayer or Army Pictorial Service bought a sound recorder, the manufacturer's operations remained the same. The only difference was the destination of the equipment. Besides, a number of the improvements developed by training film production men in the Army were early adopted by the manufacturers.

³¹

Material in this section comes mainly from interviews with Officers at the Signal Corps Photographic Center and in the Equipment Section, Army Pictorial Service, OCSigO, Washington, D. C.

The photographic supply story is unique also because of the long life of photographic equipment. There is little deterioration except with long, hard use.

In general, it can be said that the nearest approach to a problem was that equipment needed to produce an Army training film was not always available immediately upon request. As the Army entered the market more and more, the items it sought often had to be specifically ordered and contracted for. The 1938 supply of film, for example had gone mainly to commercial producers. The dilemma posed by Army demands was as follows:

1. Some of the materials used to make film were needed for essential war production of ordnance and like material, for actual combat weapons.

2. The large studios, with their well-organized recreation industry were considered necessary organizations, contributing to morale at home and abroad.

3. The Army, through the Signal Corps, was producing training and other films which were comparatively few in number of subjects but would have a large distribution through the training camps of the nation. The production of the Army Pictorial Service, moreover, was likely to increase, not decrease.

What happened was this: The need for celluloid, butanol, and other component parts of film in the war program cut down the total output of film. The War Production Board set these limits: (1) For professional motion picture film, 76 per cent of the 1941 output; *This is not clear.*

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(2) For commercial and professional sheet film, 76 per cent; and (3) For amateur film and amateur motion picture film, 50 per cent.

Since all motion picture film is allocated by the War Production Board, this procedure meant that no shortage would occur in the Army's and Navy's armament production programs because the film industry was using the raw materials. To the commercial companies, it meant that since they could use less film, fewer commercial pictures could be produced, than in the base year chosen by the War Production Board. This has been the reason for the number of revivals in the motion picture theaters of late; this would have happened were there no Army training film program. To the Army Pictorial Service, faced with a growing list of requested training films, the limitation meant that there would be an opportunity to fill the requests.³²

D. SPACE FOR MOTION PICTURE PRODUCTION

The provision of space for motion picture production indoors is one of the major problems in any production program. The dependence upon good weather which rules outdoor shooting is resolved with a good shooting stage, and many more hours of photography can be completed indoors. Such activities as editing, screening, and animation obviously require housing.

Even in peacetime, there had been many requests by Army Pictorial Divisions (later Army Pictorial Service) for a large photographic

³²

There have been few real shortages of film, which postponed the release of a training film on the scheduled date. See Footnote 31.

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laboratory, adequate for all the Army's activities in this field. By 1940 the General Staff, Plans and Training Section, had sent officers to Fort Monmouth to study the needs and location of the Training Film Unit there. For the production capacity of this Unit, activated in 1937, and of the additional Field Unit activated at Wright Field, Dayton, Ohio (for the production of Air Force training films), was still inadequate.

In October 1941 the head of Training Film Production Laboratory requested the activation of a large photographic center. This request was based on the knowledge that increased training film requests were already taxing that Laboratory beyond endurance.³³ There was not enough space for either training purposes or the editing of training and other films. The constant possibility of war underlined the insufficiency of photographic facilities. Once the United States should enter the conflict, combat photography for editing, release, and incorporation into films for information and training would require even greater space and equipment. The need was obvious to the Signal Corps personnel, even those not in intimate touch with photographic activities.

The need was expressed thus by Lt. Colonel (later Colonel) Schlosberg:

The present Signal Corps program involved production of about 370 reels of Training Film during fiscal year 1942. This is about the same production as that of a large commercial Hollywood motion picture company, which to produce the

33

The Training Film Production Laboratory was built to fill the photographic needs of the Army in late 1940, as a successor to the Training Film Field Units. Fort Monmouth Today, PRO release fall of 1941, p. 21.

Figure 3.

TRAINING FILM PRODUCTION LABORATORY

FORT MONMOUTH, NEW JERSEY

The temporary building used prior to the activation of the
Signal Corps Photographic Center.



same quantity of work, in reels, would have a studio comprising from 20 to 30 stages, and very extensive and elaborate buildings, with a staff of 3000 to 4000 personnel. The Signal Corps, on the other hand, has no facilities at present to set up and photograph equipment and personnel indoors. Adequate stages must be provided to make this possible, as now most photography must be done outdoors with complete dependence on weather conditions. By employing simple methods of operation the Signal Corps has been able to produce about 2/3 of the same quantity of (training) films, simpler in some respects of course than Hollywood features, but with only about 500 personnel, and with only a small fraction of the production facilities. The cost of Signal Corps training film production varies at present from about 1/10 to 1/5 of the cost of training films produced in Hollywood.³⁴

The time and money involved in building the projected photographic center at Fort Monmouth gave pause to the photographic men and executives alike. More logical, if feasible, was the taking over of an existing structure built with motion picture production in mind, even if the Fort Monmouth location had to be abandoned.

Just as the increased work requested from the Training Film Production Laboratory at Fort Monmouth had far exceeded the facilities the new building afforded, it was likely that future developments might increase many times the motion picture activity needed for the Army. The Balkan campaign of the spring of 1941 certainly did not push us away from possible involvement in the war; the number of men being called for their year of selective service was by no means decreasing. The unpleasant fact that there was not enough room in the new building even on the first day of occupancy was a spur to further requests for a substantial increase in photographic facilities.

The first consideration was of course the physical needs of full-scale motion picture production: a sound stage of sufficient

³⁴

Memo fr Lt. Col. (later Colonel) Schlosberg to Col. O. K. Sadtler, 3 December 1941.

height to allow for flexibility in photography, cutting rooms, projection rooms, offices, space for animation preparation and photography, living quarters for the men assigned to the laboratory, and proximity to Washington and to developing laboratories.

As Lt. Colonel Gillette put it in October 1941:

The existing motion picture production and distribution facilities of the Signal Corps consists ~~of~~ ^[sic] of three widely separated activities, each inadequately housed. Individually and collectively they are incapable of immediate expansion because of the lack of housing, and they are thus incapable of meeting the demands made upon the Signal Corps for training film and film bulletin production and distribution. The problem presented is to find a means of centralizing, without delay, as much of this production organization as practicable and to expand it to meet ever-increasing demands. Only by this means will it be possible to forestall further criticism by various arms and services and eliminate the excuses and reasons offered by several arms which are attempting to set up separate and duplicating production organizations.³⁵

Colonel Gillette's memorandum therefore suggested that the Long Island studios of the Paramount Pictures, Inc. known as the Eastern Service studios, be acquired. At least \$150,000 would be saved, since the outright purchase price of the Long Island studios was \$500,000 and the improvements needed at Fort Monmouth in initial construction were estimated to cost at least \$650,000.³⁶ The Chief of Staff received a memorandum from the Office of the Chief Signal Officer requesting the necessary half million dollars three days before Pearl Harbor.

Although the need for funds was great, this was no doubt true

35

Memorandum fr Lt. Col. Gillette to OIC Photographic Division, OCSigO, 2 Oct. 1941.

36

ibid.

of almost all units and activities of the Army in late 1941. The repeated attempts to have more money allocated for photographic and particularly motion picture purposes from general signal or other reserves, had so far met with no success. But on the morning of 8 December 1941 everything that was being done anywhere in the country suddenly had to undergo a sharp investigation in the light of the fires set the day before at Hawaii. Money became available to the Army for war purposes where there had been none for emergency measures.

On 4 December 1941, Colonel Colton, then Acting Chief Signal Officer had written to the Assistant Chief of Staff, G-3, that the request for \$500,000 had been processed too slowly for inclusion in the Second Supplemental Estimate. But there was

...an immediate military requirement for the acquisition of this property and a delay in obtaining funds from the next Supplemental Estimate, Fiscal Year 1942, will materially delay the motion picture program.

Two alternatives were suggested, (1) that the Secretary of War authorize the transfer of a half million dollars to the Chief of Engineers from the War Department Reserve Fund, or (2) that the Director of the Bureau of the Budget transfer that sum to the Engineers from Signal Service of the Army.

On 17 December, Lt. Colonel Schlosberg informed the Assistant Chief of Staff, G-3, that the national emergency had made Parascout consider the advisability of retaining the studios. The West Coast was considered highly vulnerable in those days. He reported to him,

also, in a memorandum of the same date, that a Special Assistant to the Secretary of War had discussed the immediate need of purchasing the studios, and "advised that when the papers in this connection were forwarded by G-3 that notation be made to the effect that the Office of the Secretary of War was very much interested in having the purchase of the Paramount Studios, Astoria, New York, culminated as soon as it is possible to do so."

On 28 December, The Adjutant General requested the Budget Officer for the War Department to ask that the Director, Bureau of the Budget, transfer the needed sum to the Chief Signal Officer, and that upon approval of the transfer, the amount be made available to the Chief of Engineers."³⁷ The next day a thirty-day option was taken upon the Paramount Studio by the Corps of Engineers.

The option was exercised 27 January 1942. Twenty-two days later, anticipating that possession would be obtained for 1 March, The Adjutant General directed that the Signal Corps Photographic Center "be activated by the Chief Signal Officer at the earliest practicable date and classified as an exempted station under his control."³⁸

The terms under which the studio was purchased included "the transfer of equipment owned outright by Paramount which consisted of

37

Ltr fr TAG to CGIG 26 Dec. 1941 "You are authorized to provide essential equipment and FY 1942 operating personnel for the Paramount Studio building at a cost not to exceed \$314,000 from funds in an appropriated status. You are also authorized to include the amount expended for this purpose and the \$500,000 for the purchase of the building in the next available supplemental estimates FY 1942. This authority is granted with the understanding that if funds for the purpose are not appropriated by the Congress, the cost will be absorbed by the appropriation, 'Signal Service, Army.'"

38

Ltr fr TAG to CG, Fort Monmouth, N.J. 18 Feb. 1942.

Figure 4.

MAIN BUILDING OF THE SIGNAL CORPS PHOTOGRAPHIC CENTER

Building No. 1, at 35-11 35th Avenue in what is officially Long Island City, but is usually known as "Astoria". This was the Paramount Pictures, Inc. studio built in 1920 for silent picture production at a cost of \$10,000,000. It was the main Paramount studio at that time, and was later adapted for talking pictures.



a large number of flats³⁹ and various items of furniture and equipment in undetermined state of repair.⁴⁰ When Lt. Colonel Gillette saw these items, and those which the small producers who had been leasing part of the studio wished to sell to the Signal Corps, he concluded that the condition and age of the latter would not justify purchase. The Signal Corps, he pointed out, was not "in a position of starting from scratch." For

The Training Film Production Laboratory already has numerous items of camera, editing, animation, sound recording and other items of motion picture production equipment which will be transferred to the studios.⁴¹

The transfer of the photographic schools to the Long Island City installation was authorized by a letter of 26 January 1942 from the Commanding General, Signal Corps Replacement Training Center, to the Commandant of the Signal Corps School. Construction of barracks at the new Signal Corps Photographic Center to house the students and the assignment pool, approximately 250 men, was authorized by the Chief of Engineers 13 May 1942 after a long correspondence involving the clarification of the authority for the construction. The Training Film Production Laboratory moved between 5 May and 9 May. New barracks for the additionally authorized students were completed 26 July.⁴²

The 14 buildings in the present Long Island City installation

³⁹ Flats are movable stage settings, usually used for indoor scenes.

⁴⁰ Memo fr Lt. Col. Gillette to OIC Photographic Division, CCSigO, 2 March 1942.

⁴¹ Ibid.

⁴² History of the Signal Corps Photographic Center, prepared by Control Division, SCPC, p. 8.

FIGURE 5.

MANHATTAN BUILDING OF THE SIGNAL CORPS PHOTOGRAPHIC CENTER

Building No. 10, at 145 East 32nd Street where the animation, film strip, and training film scenario activities are housed.



**ARMY PICTORIAL SERVICE
CHIEF**

APPROVED: [Signature]
M. C. BARBER
Colonel, Signal Corps
Communications
1954

**SIGNAL CORPS PHOTOGRAPHIC CENTER
COMMANDING OFFICER**
EXECUTIVE OFFICER

EXECUTIVE PRODUCER

LEGAL DIVISION

FISCAL DIVISION

CONTROL DIVISION
ADMIN MANAGEMENT BR
PROGRESS & STAT BR

COMDR OF TROOPS

PRODUCTION DIVISION

- TRAINING FILM BRANCH
 - Production Section
 - Post-Production Section
 - Post-Production Section
 - Special Production Sec
 - Production Services Sec
- MOBILE FILM BRANCH
 - Screening Section
 - Production Services Sec
 - Production Services Sec
 - Production Services Sec
 - Production Services Sec
- COMBAT FILM BRANCH
 - Production Section
 - Production Services Section
 - Production Services Section
 - Production Services Section
 - Production Services Section

SERVICE DIVISION

- ANIMATION BRANCH
 - Story Section
 - Production Section
 - Production Section
- CAMERA BRANCH
 - Photography Section
 - Camera Effects Section
 - Equipment Section
- SOUND PRODUCTION BRANCH
 - Recording Section
 - Sound Editing Section
- SOUND ENGINEERING BRANCH
 - Production Section
 - Production Section
- ASSIGNMENT BRANCH
 - Production Section
 - Production Section
- STUDIO BRANCH
 - Art Section
 - Construction Section
 - Electrical Section
 - Prop Section
 - Scenic Section
 - Studio Police Section
- FILM BRANCH
 - Camera Mt. & Lin. Sec
 - Darkroom Section
 - Production Lab Section
 - Electrical Section
 - Film Processing Section
- CENTRAL MACHINE SHOP BRANCH
 - Maintenance Section
 - General Maintenance Sec

WESTERN DIVISION

- PRODUCTION BRANCH
 - Production Section
 - Production Section
- SPECIAL COVERAGE BRANCH
 - Coverage & Production Section
 - Screening Section
 - Production Services Section

WESTERN DIVISION

- LEGAL OFFICER
- FISCAL OFFICER
- ADMINISTRATION BRANCH
 - Civilian Personnel Section
 - Military Personnel Section
 - Supply Section
- OPERATIONS BRANCH
 - Production Coordination Sec
 - Procurement Section

PERSONNEL DIVISION

- ORDERS SECTION
- REPORTS SECTION
- TRANSPORTATION SECTION
 - Officers Section
 - Engineers Section
 - Training Section
 - Classification Section
- CIVILIAN PERSONNEL BRANCH
 - Personnel Section
 - Engineers Section
 - Training Section
 - Classification Section

SUPPLY DIVISION

- PROCUREMENT BRANCH
 - Production Section
 - Production Section
 - Production Section
- POST SIGNAL BRANCH
 - Production Section
 - Production Section
- POST PROPERTY BRANCH
 - Production Section
 - Production Section
 - Production Section

PHOTO SCHOOL DIVISION

- SCHOOL EQUIPMENT BRANCH
- PERSONNEL RECORDS BRANCH
- TRAINING BRANCH
 - Basic School Section
 - Photo Activity Sec
 - Training School Sec
 - Senior Picture School Sec
 - Laboratory School Section
 - Senior School Section
 - Health School Section
 - Film Editing School Sec

DISTRIBUTION DIVISION

- INDUSTRY LIAISON OFFICER
- FIELD SERVICE OFFICER
- APR LIAISON SECTION
- UTILIZATION, STAT & REPORTS SEC
- EQUIPMENT SECTION
- LIBRARY BRANCH
 - Service Liaison Section
 - Public of Embarkation Section
- CONQUEST BRANCH
 - DMIS Section
 - DMIS Section
- RELEASE PRINT BRANCH
 - Order Section
 - Stock & Shipping Section
 - Production Section

OPERATIONS DIVISION

- TECHNICAL INFORMATION BRANCH
- POST ENGINEER BRANCH
 - Production Section
 - Production Section
- MEDICAL BRANCH
 - Production Section
 - Production Section
- FINANCE BRANCH
 - Production Section
 - Production Section
- POST EXCHANGE BRANCH
- SECURITY & INTELLIGENCE BR
- MAIL & RECORDS BRANCH
 - Order Section
 - Production Section
 - Production Section

PICT ENG & RES LAB DIV

- ENGINEERING & RESEARCH BRANCH
- STANDARDS & SPECIFICATIONS BR
- EQUIPMENT MAINTENANCE BRANCH
- MATERIAL TESTING BRANCH
- FIELD LIAISON BRANCH
- PHOTOGRAPHY BRANCH

located within ten blocks of each other, are used for garages, storage, distribution, film bulletins, special coverage films, and the War Department Central Film Library. The animation branch and the film strip activities are housed in an additional building in Manhattan.

As the months of operation proved the worth of a centralized photographic installation the scope of the Center's work increased. Activities other than the production of training films will be discussed in another monograph.

The Signal Corps Liaison Office in Hollywood was dissolved on 1 December 1942 as a result of a directive from the Chief Signal Officer dated 9 November, its duties passing to the new Western Branch of the Signal Corps Photographic Center. Furthermore, the use of the Research Council has been abandoned: contracts for motion picture production are made directly with the studios.⁴³

E. THE COOPERATION NEEDED AMONG THE ARMY AGENCIES

After the need for training films was acknowledged, it remained for the production line to be set up.

The acceptance in principle of the training film as a method for instructing selectees put an immediate and heavy strain on the arm and service schools. They had to initiate a request before

⁴³

The events which led up to and the essential facts surrounding the dissolution of the Liaison Office include non-training film as well as training film material, and will therefore be covered in a later monograph.

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a film could be put into production. Slowly, and with many mistakes and missteps, the Arms and Services evolved the procedure for producing training films. The mistakes and missteps were the result of lack of experience. Hardly anyone in the Army had had to do exactly that kind of job before. And so few of the Army personnel had been in the service before 1940! The men who came in from the commercial field were new to Army usage and procedure, both in the production of the films, and in their use as training aids. The educators called in to advise knew the effectiveness of visual aids, but not the techniques which might be needed to create that effectiveness. The regular Army personnel knew what they wanted the men in the field to do, but not how that result could best be achieved.

With more and more requests coming in, however, the photographic production men began to be able to see what would make a good film and what would not. Also, the Arms and Services, as their experience with the medium and the use of the finished films grew, came to know better what was wanted of a film scenario.

Moreover, the combat experience of our allies, plus what we learned from and about the enemy, and -- later, the record of our own troops, helped establish standards of field performance. The Arms and Services thus knew what to expect of their men, and what new men must learn to become effective parts of an operation. The longer the conflict has gone on, the more clearly have military training boards seen what they must teach, how long it should take, and by what medium

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a particular portion of the program will be best presented and most effectively taught.

In the old days before the reorganization of the War Department in March 1942, the Plans and Training officers of the General Staff had had the final word on training films. Now Military Training Division of Army Service Forces and Training Literature and Visual Aids Division of Army Ground Forces share that responsibility. Their personnel have had to learn the hard way, by experience, what training films can handle and what they cannot.⁴⁴

Nevertheless, problems remain. Schools sometimes request a training film when a vague curriculum or an ill-defined objective do not justify this medium. Military training divisions of the highest echelons sometimes pass this request along, instead of looking carefully into what kind of a picture it would make, or considering other factors, such as what related subjects had been filmed for other Arms and Services.

The method of going through the training divisions of the higher echelon means that the schools of the Arms and Services have little contact with the pictorial technicians.⁴⁵ The sole exception is the technical advisor who is sent in most cases to the Signal Corps Photographic Center for supervising the technical accuracy of the

⁴⁴

The present production procedure for training films is shown in Figure 6, following p. 47.

⁴⁵

This was true of the previous method, as well, but the volume of production was such, before 1941, that no great problem was created since both the Signal Corps personnel making the film and the training personnel requesting the film for their Service had had experience with each other before.

lessons to be filmed. Yet the producing agency, Army Pictorial Service, considered the relations between the film makers and the men who were going to use the film in teaching to be the most important liaison to establish.

In practice, the technical advisors, although they usually have the responsibility of just one film at a time, have arranged to get across to the photographic men what the Arm or Service they represented was thinking and doing about the training films which had already been produced for it.⁴⁶

Since inexperience was the cause of most of the problems, experience has gradually brought most of them near solution. The Military Training and Training Literature and Visual Aids divisions now have a basis for judgment when a request for a training film is received. Training film production has become standardized, the films more effective, their preparation more expeditious, and the film lessons more widely used.

This improvement, between December 1941 and December 1943, is the result of study at each point in training film production. Every opportunity has been utilized for measuring one film against another for effectiveness, photography, and actual "performance" in classroom situations.

The dependence upon the photographic craftsmen of Army Pictorial

⁴⁶ The camera crews who go down to the main post of an Arm or Service manage to glean from the atmosphere something of the actual record of the films in action - how much they are used etc. These insights are neither complete nor entirely accurate. But under the circumstances, they are better than nothing.

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Service, who together are truly a storehouse of experience, is well justified. The progress of a film, from the talking stage on the basic idea, argued about in a meeting of the Engineer Board, for instance, to the changing of a man from an untutored private to a competent specialist, has been worked out in detail. It was one of the essentials for training film production. Before the camera could be used intelligently, there had to be liaison with all the organizations in any way involved in what was put before the camera.

Now the careful year-long plan for each Service allows for adequate preparation before an idea is submitted as a picture plan. It allows for the orderly progression of that plan from scenario to individually photographed scene, to edited footage, to finished film. The day is past when Arms and Services other than the Signal Corps seek to produce their own training films. The efficiency of the production methods and the effectiveness of the products of that method, the constant shortening of production time (at least as far as Signal Corps time is concerned), the improved quality of the films -- all these things have resulted in the acceptance of training films as an integral and vital part of the Army's training program.

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CHAPTER III

THE STORY OF A FILM

The various components of training film production were assembled and the burden of production divided between the commercial studios on the West Coast and Signal Corps Photographic Center on Long Island. The tremendous growth in Army population in fiscal year 1942 sent requests for training films soaring, and the activation of the Signal Corps Photographic Center toward the end of that fiscal year made it possible for the first time to begin to keep nearly abreast of these requests. The production load included films for all three commands of the Army: The Army Ground Forces, the Army Service Forces, and the Army Air Forces, (until October 1942).¹

The general pattern for Army Service Forces films can be traced from request to distribution on the accompanying chart.² The procedure for the Army Ground Forces differs so slightly from this that the chart will serve as an explanation for both.³

The production of a training film involves the following 11 steps:

- (1) Request
- (2) Approval of request
- (3) Scenario
- (4) Photography
- (5) Laboratory processing
- (6) Sound

1

The Air Force films are now produced under the sole supervision of Air Force personnel. The training film production laboratory located at Wright Field, Dayton, Ohio, was turned over to the Air Forces for their use in accordance with Memo No. W105-5-42 fr Acting TAG 30 October 1942.

2

See Figure 6.

3

See p. 57 for discussion of the differences in the two production procedures.

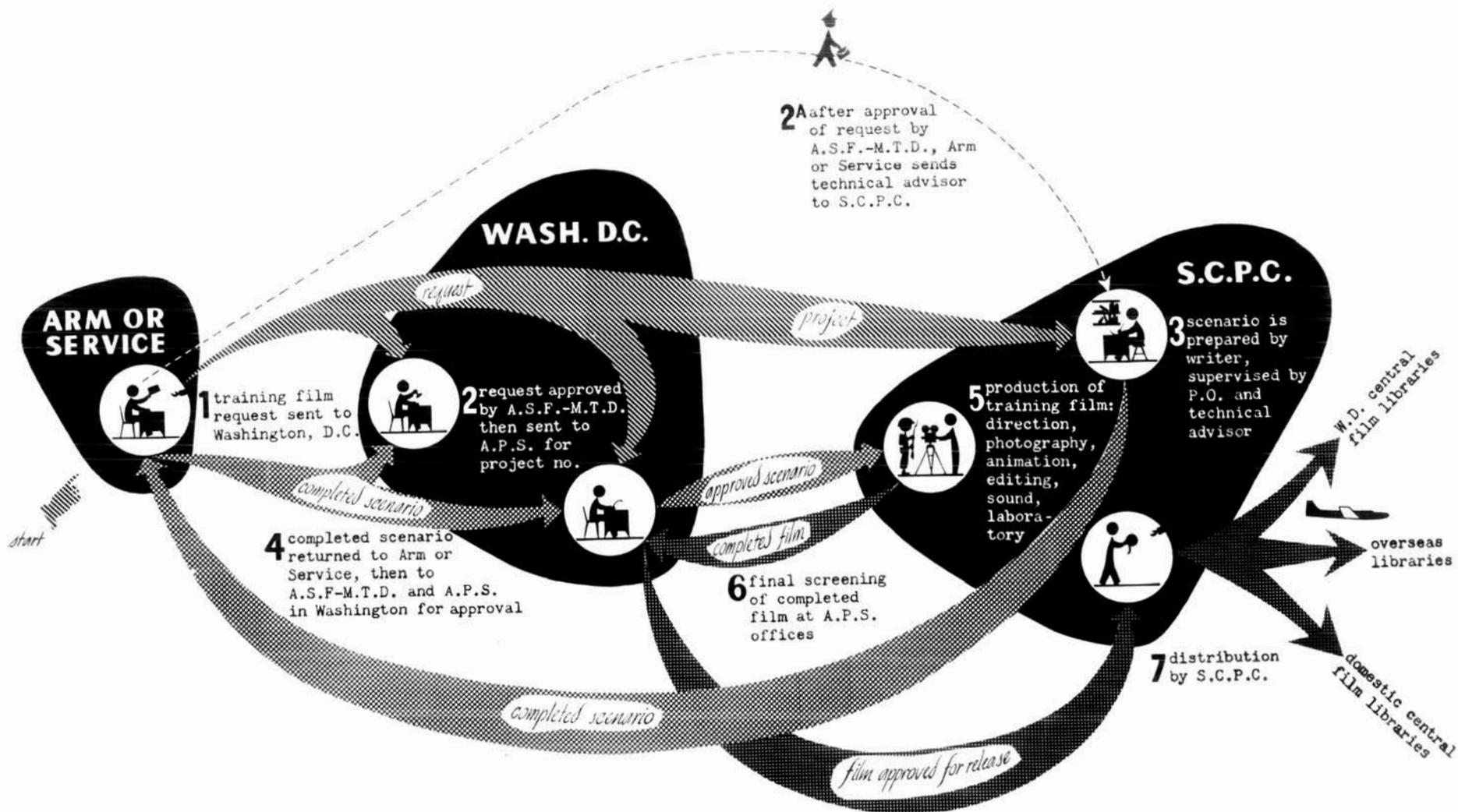
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Figure 6.

TRAINING FILM PRODUCTION SEQUENCE

FOR THE ARMY SERVICE FORCES

- (1) Request for a film originating with the Service School is sent to the Military Training Division, Army Service Forces in Washington, D.C.
- (2) When approved the request is forwarded by the Military Training Division to the Army Pictorial Service, also in Washington. The request at this point becomes a project, and is given a project number by the Army Pictorial Service.
- (2A) The initiating Service is informed and an officer is sent to the Signal Corps Photographic Center to advise upon and supervise the writing and the production of the project for technical accuracy and adherence to War Department doctrine.
- (3) A writer is assigned and his scenario is submitted to the Technical Advisor, the Project Officer and the Scenario Review Board.
- (4) The requesting Service School approves the scenario and returns it to the Signal Corps Photographic Center for production, by way of the Military Training Division, which must also approve the script, and the Army Pictorial Service, which makes any necessary suggestions regarding the photographic aspects.
- (5) Production is started either at the Signal Corps Photographic Center, at the Service School, or at another location.
- (6) The answer print is shipped to Washington for the approval screening.
- (7) Final prints are sent to the War Department Central Film Library, at the Signal Corps Photographic Center, to domestic, and overseas film libraries.



2A after approval of request by A.S.F.-M.T.D., Arm or Service sends technical advisor to S.C.P.C.

ARM OR SERVICE

WASH. D.C.

S.C.P.C.

1 training film request sent to Washington, D.C.

2 request approved by A.S.F.-M.T.D., then sent to A.P.S. for project no.

3 scenario is prepared by writer, supervised by P.O. and technical advisor

4 completed scenario returned to Arm or Service, then to A.S.F.-M.T.D. and A.P.S. in Washington for approval

5 production of training film: direction, photography, animation, editing, sound, laboratory

6 final screening of completed film at A.P.S. offices

7 distribution by S.C.P.C.

W.D. central film libraries

overseas libraries

domestic central film libraries

start



film approved for release

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- (7) Animation (not in all films)
- (8) Editing
- (9) Synchronization
- (10) Screening and Approval of Film
- (11) Distribution

In the first step, the Arm or Service School requiring pictorial presentation for a portion of its curriculum initiates production by requesting in the form of a picture plan, that Military Training Division, Army Service Forces, approve such treatment.

The Visual Aids Section, Military Training Division reviews the request in terms of the overall year-long schedule for military instruction. "The picture plan as now used, is essentially the instructor's lecture on the subject to be photographed. It should contain the doctrine and military procedure. It need not contain photographic technique which is a function of the Signal Corps."⁴

The request, if approved, is sent by Military Training Division to the Army Pictorial Service where the request becomes a project and is given a project number. From here it is forwarded to the Signal Corps Photographic Center, notice meanwhile having been given to the requesting Arm or Service that the picture plan has been approved for production. The Service School thereupon sends to the Signal Corps Photographic Center an officer whose responsibility is the supervision of technical accuracy throughout the production of the film.

At the Signal Corps Photographic Center the project is assigned to a "producer", the "Project Officer". At the same time a scenario

⁴ from self,
Memo for Colonel S. G. Carswell, prepared for use at a conference on visual aids activities in the SOS, 28 September 1942. Conference was held 30 September.

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writer is appointed. The writer and the technical advisor may collaborate on the script, or the role of the latter may be limited actually to advising. In any event, the writer has the full benefit of the technical knowledge of an officer skilled in the most recent techniques of the standard operations in the Arm or Service which will use the film.

The scenario, when finished, is sent to the requesting Arm or Service, and when approved there, to Military Training Division, Army Service Forces and the Army Victorial Service.

The actual production of the film can now begin. Each film produced requires an entirely individual method of treatment. Some scenes must be shot at the Service School because of the number of troops involved, or the need for photographing complicated equipment which may only be available there.⁵

Whether the photography is done on location, at the Signal Corps Photographic Center, or at a number of places, a standard camera crew operates throughout the shooting schedule. When the day's shooting is over, the exposed film is rushed to the laboratory for processing. As in the commercial studios, the viewing of all scenes can be done within 24 hours after shooting.

The sound recording in the case of narration is always done at the Signal Corps Photographic Center. If there is "live sound", the

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At a meeting held 27 February 1941 Brig. General Harry Twaddle, AG/S, G-3, requested that all technical manuals, training films, and film strips be available at the time of the release of equipment explained by them.

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Figure 7.

ADMINISTRATIVE ORGANIZATION OF THE
SIGNAL CORPS PHOTOGRAPHIC CENTER

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recording is done simultaneously with the motion picture photography.⁶ Either at this point or, if there is a great load, somewhat earlier in the production sequence, the animated scenes called for by the script are drawn and photographed.

The developed photography, the sound track (which is also printed on film), and the animation scenes are sent in full to the film editor. From this welter of instructional sequence, the editor contrives to cut out the unnecessary, the redundant, and the confusing, leaving a simply presented and easily numbered 20 minutes of instruction. This composite film is known as the "answer print", and it is the answer print which is sent to Washington for viewing by the Chief of the requesting Arm or Service, the training officers of the Army Service Forces and the Army Ground Forces, and the production executives of Army Pictorial Service.⁷

A. THE STORY OF A FILM; REQUEST PROCEDURE

To expedite the rapid production of the most important films, The Adjutant General requested on 23 April 1940 that a list be drawn up by each Arm and Service specifying which were most needed. From these lists, 200 were selected as basic and essential, since their emphasis was general Army orientation. After the passage of the Selective Training and Service Act, a further priority system was

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"Live sound" is sound recorded at the time of operation: the squeal of a plane diving or the sound of an aircraft warning siren.

⁷

A composite film is one on which both sound and visual images are recorded. It is such film we see at a commercial motion picture theater.

set up, for the greatest need was for films to orient the ex-civilian. The paramount consideration was for subjects with "basic usefulness to the army as a whole."⁸

The 200 subjects set up as first priority for 1940 production were to become precedent for further priority classifications in the approved list of training film subjects.

Subjects that are basic within one or more specific Arms or Services, but not for the entire Army, will receive second priority. Other subjects will be deferred until the requirements of the first two priorities have been met.⁹ This restriction is not to be interpreted as prohibiting within each Arm and Service the concurrent development of picture plans for subjects listed in the different priorities, or the preparation of additional picture plans simultaneously with the photography of a completed scenario. While such work is essential to obviate prolonged delay in the release of visual training aids to the Service, it must not be permitted to interfere with or delay the production of training films with higher priorities.¹⁰

With the March 1942 reorganization of the War Department the channels for training film requests were changed, but the prevailing considerations for approval, and the constant pressure to organize training film requests in twelve-month groups, with priority indicated, continued as before. By the middle of 1942, there was a change in the emphasis for production priority. Where before there had been great need for the Army-wide subjects on general military orientation, such as "The Articles of War," "Military Courtesy and Customs of the Service," "Safeguarding Military Information," etc.,

⁸ Ltr fr TAG 28 October 1941 to Chiefs of all Arms and Services.

⁹ See above, p. 48, for policy on first priority.

¹⁰ Ltr fr TAG 28 October 1941 to Chief of Staff, GMA, Chiefs of all War Dept. Arms and Services.

the call for such films had been answered, for the most part.¹¹

By July 1942, the approach of large-scale overseas operations was reflected in a change of stress in the subjects for training film presentation.

The mission of training films is to assist in training the soldier for combat, or to assist the Arms and Services to support and supply him in combat. The service and supply of the combat soldier are essential combat operations. In assigning priorities for the preparation and production of training films, highest priorities will be given to those pictures which present instruction directly concerned with combat operations. All other priorities will be determined by the closeness of the relationship of the proposed film to the needs of the combat and service units in combat zones.¹²

It is easy to be intelligent about the production of training films after the storm and strife of experimentation has gone by. It is not hard to pick out the places where there could have been more care given to the consideration of the timeliness of a request, or to the manner in which a film was related to other phases of the training program. But during the critical period when trained men were desperately needed the opportunity for such calm judgment was subordinated to the urgency of the entire program.

The early picture plans called for astronomical requirements of men and equipment. Unrealistic requests, which put too much dependence on photography, or overlooked the amazing effects possible with animation, or required a large number of men where few would suffice, were early missteps in request procedure.

¹¹

It was the urgent need for just such pictures that made the contribution of the motion picture industry so timely. The first commercially-produced film was accepted for War Department use in March 1941.

¹²

Ltr fr Col. Walter L. Sieble, Deputy Director of Training, Services of Supply, to all Chiefs, 309, 25 July 1942.

At the other extreme there were dull, text-bookish, third-person picture plans, calling for little in the way of sensory stimulation that a training manual would not offer. They too had to be sifted out; they too were faults that only time and reports of performance in the field could remedy. These difficulties arose of course from the frenzied expansion of the Army.

There has been a certain amount of confusion arising from the geographical separation of the Offices of the Chiefs of Arms and Services and the Service schools. Demands have been made for the routing of the request to the office of a Chief of a Service before it was sent to its higher echelon for approval for production by the Signal Corps. The same point has been raised in the case of scenarios awaiting approval. The Chief of an Arm or Service is part of the final approval audience, and some of the preparing agencies have felt that it was unfair for this viewing to be the first contact that any member of the Office of the Chief has with the film. However, the solution of this problem has been individually achieved within the Arms and Services.¹³ Such problems have been for the most part peripheral to the main task of producing accurate and effective training aids as quickly as possible.

The experience of reviewing training film requests and scripts during the five months following the organization of the Services of

13

Attempts were first made through the Signal Corps Photographic Center to have an extra copy mailed to the Chief of the Arm when a scenario was completed. The problem obviously is not that of the Army Pictorial Service, however.

supply, gave its Training Division approving officers enough data to organize a rigid list of questions for all preparing agencies. Answers to these had to be submitted either before the request was made or in an accompanying letter sent with the application for film treatment of a particular course or subject.¹⁴

The required steps needed to establish the necessity for a request were: (a) title, (b) military application and scope, (c) audience, (d) relationship to troops in the field, (e) troops and equipment needed for the production. "Branches should study training film needs in relation to their entire training schedule," runs the refrain through all the directives and memoranda of the military training divisions of Ground and Service Commands.¹⁵

A directive which was the result of the meeting of Services of Supply visual aids officers held 30 September 1942, presented the basis of approved requirements and provided that each preparing service furnish "a schedule of preparation" showing the date by which....the material for any project [could] be turned over to the Signal Corps for production."¹⁶

Again it was necessary in the same directive to exclude all services except the Signal Corps from entering upon negotiations with any commercial motion picture producer. The essentials for

14

These are directives for the Services of Supply (now Army Service Forces); the Army Ground Forces procedure has followed similar lines of development.

15

Memo for Colonel Carswell, 28 September 1942. See Footnote 4.

16

Ltr fr Brig. Gen. C. R. Huebner, Director of Training, to Chiefs of Technical Services, SOS, 24 October 1942.

determining the validity of a training film request were listed as follows:

- a. Is the visual aid for the instruction of the individual soldier and the small unit (squad and platoon or the equivalent) in combat operations rather than for instruction of officers, particularly officers of field grade?
- b. Is the visual aid essential to successful training in the subject involved? (In general it is not considered that training films featuring such subjects as drill or organization are essential.)
- c. Can the visual aid be made without immobilizing large numbers of men or important equipment for protracted periods?
- d. Is the audience group large enough to justify the production?
- e. Does the visual aid meet a need not met by instruction aids already released, in production or planned by other services?
- f. Only first and second priority groups will be indicated.¹⁷

An amending directive of 24 December 1942 required the requesting service to estimate the amount of time that each production would take, and to set a date upon which the finished film would be reviewed for final approval. In accordance with this policy, the Project Officer was requested to report to the Commanding Officer, Signal Corps Photographic Center "any delay that might result in a scenario exceeding the period assigned for its preparation."¹⁸

On the whole, it has been impossible to abide by the arbitrary time limits set up by instructors who knew little of motion picture photographic problems. There have been numerous cases of films being finished, as far as photographic production is concerned,

¹⁷

Memo for Chiefs, Services of Supply fr Brig. Gen. C. R. Huebner, 24 October 1942.

¹⁸

Memo fr Brig. Gen. C. R. Huebner to all Chiefs SOS, 24 December 1942.

considerably before the date anticipated, only to have the approval procedure take an inordinate amount of time. In other cases, such unpredictables as weather, which can ruin an outdoor shooting schedule, or the unforeseen reallocation of troops, needed for certain scenes in a film, have caused unexpected delays in photographic production time.

Since June 1943, the Status Reports prepared by the Control Division of the Signal Corps Photographic Center have charted in detail the factors involved in delayed production. These reports have analyzed for time accounting purposes the consecutive stages of production, showing how often each stage figured in delay.

Arising directly out of unhappy experience was the requirement that all necessary research be completed "and all data essential to preparation of the scenario [to] assembled prior to submission of a proposed training film project."¹⁹ The changing of doctrine in mid-production would clearly be fatal to all scenes already photographed.

At the same time that clarification was being made of mistakes in cooperative work between the initiating and the producing agency, certain "errors of the past" were being eradicated within the Signal Corps Photographic Center, the producing agency.²⁰ Non-military personnel were necessary in the first rush of large-scale training film production, but by December 1942, Colonel Kirke B. Lawton had

¹⁹

Ibid.

²⁰

Col. K. B. Lawton to CG, SCPC, 14 December 1942.

ordered, "that all new civilian project officers....be given adequate military training at the Signal Corps Photographic Center." Colonel Lawton made the point that the "lack of highly competent officers" was the "known weakness" of the producing organization. The situation in the early months of increased Army production was marked by inexperience on the part of the requesting Services and their technical advisors with regard to photographic technique, and inexperience on the part of Signal Corps personnel with the individual problems facing each Service. Colonel Lawton's letter recognized this deficiency, and sought to remedy the situation. At the present time, there is for each Service at least one Project Officer at the Signal Corps Photographic Center who can speak authoritatively with the members of the Service school and who is familiar with instructional pitfalls peculiar to the Service which is his particular responsibility.

A joint conference attended by Services of Supply and Army Ground Forces training personnel was held on 26 November 1942.²¹ Agreement was reached to "make no further changes in Training Film production procedures at present."²²

Eight months after the activation of the Signal Corps Photographic Center, enough facilities were available at Long Island City, so that with the cooperation of the motion picture industry, one could say

²¹ Colonel R. B. Lawton, Chief, Army Pictorial Service had requested that such a meeting be called.

²² Memo to CSigO, signed by Major R. R. Walker, Admin. Ass't., Office of Dir. of Ing., SOS.

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that, together, these production units were "capable of handling the entire training film program of the armed forces."²³

The Army Ground Forces directive which corresponded to the 24 October Services of Supply memorandum was issued 6 November 1942 and stated:

it is planned to formulate a complete program of training films and film strips which will represent the minimum visual training requirements of the Army Ground Forces and which, in order to accomplish their purpose, must be completed prior to a date to be determined jointly by the Commanding General, Army Ground Forces and the Commanding General, Services of Supply....the resulting over-all program for the Army Ground Forces will be subject to amendment in both priorities and projects in accordance with experience gained in combat and the development of new equipment.²⁴

The general tightening up of requirements for training films hammers at the point that the exact audience must be considered at all times; that the explicit limits of what is to be taught must be defined at all times; that the definite place of the film lesson must be clearly understood; the training cycle and the exact description of what kind of training will precede and follow the film, must be remembered always.

B. THE STORY OF A FILM: WRITING THE SCENARIO

The production of training films becomes the Signal Corps' responsibility only after the plan for a picture has been approved.

²³ Ltr fr Army Ground Forces, Training Lit. and Vis Aids Division, to all preparing agencies, 6 Nov. 1942.

²⁴ Ltr to all preparing agencies from Colonel C. H. Day, Ass't. Ground Adj. Gen. 6 November 1942.

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The Army Ground Forces do not send the picture plan to the Signal Corps, as do the Army Service Forces, but send the finished scenario, which is written by Ground Force personnel.²⁵ Yet even in the Signal Corps the need for writers who could make screen scripts out of technical material was so great in the early days of the Training Film Production Laboratory as the need for any other type of personnel trained in the technical operations of producing motion pictures.

The Army Pictorial Service, if it receives a picture plan that seems unfit for production or poor for instruction purposes, will so advise the requesting agency. This in no way constitutes a veto of the project, since the Army Pictorial Service is merely the production agency, working "on contract" for another Service. But such opinions from the photographically-trained men are usually heeded. They are consulted when they register differences of opinion from those who approve the project, but they do not make policy; if the requesting Service insists upon production, the picture is made.

Sometimes it is necessary for the writer to go to the Service School where men may be observed operating equipment which cannot be brought to Long Island. Whether the writer travels to the School or not, he has always available the latest doctrine and operating

²⁵

The directive of 13 April 1943 from the Tng. Lit. and Vis. Aids Div. of the Army Ground Forces: "Each scenario must conform to War Department doctrine, correctly interpret the approved methods of teaching, and be capable of pictorial presentation. There are many officers and enlisted men qualified to write acceptable scenarios. It is imperative that only qualified personnel be assigned this important task. When capable writers are not available locally, this headquarters, upon timely request of the preparing agency will request the Army Pictorial Service to furnish qualified writers."

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procedure, provided by the technical advisor either at the Signal Corps Photographic Center or at the Service School.

In the beginning there were few writers, civilian or military, who knew anything about the Arms or Services. Writing personnel had been indoctrinated; that is, they knew of the existence of mortars and tanks and anti-aircraft guns, but they didn't know how to work them or how to tell other people how to work them. Therefore, for each writer, it became a matter of learning enough to be able to insure that the finished film would teach. Of course, officers at the Service School or the specific officer assigned as technical advisor, would help the writer to understand just what was involved: just why the man on the right had to be careful not to move too quickly; why the adjustment rod had to be watched for error on a certain gun; what the sergeant should not say when instructing the platoon, etc.

By 1943, however, the peak year of training film production, when a script came in to be made into a screen presentation, there was usually a writer available who had had past experience with a film from the same Arm or Service. That is the present situation. The writers as a group have become familiar with and informed upon a great many phases of the operation of a nation's Army. They are now equipped to handle a film for the Armored Force let us say, knowing approximately what must be remembered, emphasized, etc. On the skill of writing a good scenario depends the usefulness of

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the picture as instruction material to the Army.

As the production of training films has increased, experience has shown that certain techniques are particularly effective. For instance, the "judicious use of negative teaching is regarded as an excellent method of instruction" says the Army Service Forces Memorandum of 26 December 1942. Negative teaching is always carefully followed by the correct procedure, and the negative approach is never given as much time as the positive. But the emphasis has been to make the subjects interesting in themselves. This can be done, as the Memorandum acknowledges, "by stressing the combat or supply application of the subject to winning the war."

The writer, when through with his scenario, submits it to the proper Project Officer, who sends it to the Scenario Review Board of the Signal Corps Photographic Center. This process involves the careful reading of the scenario for obvious cliches (which will never go unnoticed in an audience of enlisted men), for inconsistencies, for clarity, for the usual virtues of good writing, plus the special ones demanded by the sharp requisites of the motion picture camera and screen.

When the script has been passed by the Scenario Review Board as a cogent, unified piece of screen writing, it must still undergo the critical inspection of the requesting agency and the higher echelon's training supervisor. The approval of the technical advisor is usually prompt in forthcoming since he has previously worked with

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the writer.

In every case the entire script must conform to the accepted doctrine of the Arm or Service for whose curriculum it is intended. It must also conform to the current doctrine of all other units of the Army and to general Army Regulations. This means that in a film made for the Corps of Engineers, any shots of Field Artillery or Chemical Warfare equipment, for instance, must be shown correctly. "Correctly" includes both the required disposition of equipment and its proper use. The final check for these points is made by the training film executives at the Signal Corps Photographic Center. Early experience with films where such a check was not made, and which consequently put before soldiers-in-training incorrect procedures (even though incidental to the main lesson of the film), has sharpened the approach to this problem. At the present time any film produced under the auspices of the Signal Corps can be counted upon to exhibit only correct procedure and usage. | FACT?

A number of basic and universally-accepted principles guide the writers in preparing training films' scenarios. The elimination of the unessential is a constant process. Although there have never been enough writers to assign one to each requesting Arm or Service, in the manner Project Officers are designated (and this is not necessary because there is not always a film for each Arm and Service in the writing stage), the generalized experience of all writers now serves to keep the scenarios on the approved paths and to prevent error.

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Early training films were written to be as nearly as possible action-versions of field manuals. An off-screen voice said the words of the manual, and a soldier (usually described in the third person) deftly performed on the screen the action described by the narrator. Before the adoption of training films, Army instruction had been conducted by a combination of oral presentation of the manual, or thinly-paraphrased lectures based on the manual, and the reading of the text by each man in the class. It was in no way remarkable that the first films should have had the same aloof, lifeless quality of a manual. "The occupant of the driver's seat makes a careful check with instruments to ascertain the accurate...."

As more and more soldiers saw the films, however, and as more and more films were made, the evidence grew that there was a large gap between the good instruction which was sought through the use of the films and the actual reception the films were receiving as training aids. From instructors, Service schools, the training film production men -- from everyone connected with the enterprise came the plea for more human, more vivid teaching via film.

On 10 September 1942 a new training film series was ordered by the Army Ground Forces:

This Headquarters has decided to produce a series of short training films under the general title, 'Fighting Men'. These pictures are to be directed squarely at the combat soldier of all Arms. They are to be short, highly dramatized, and hard hitting. Presentation will in general be by a soldier speaking typical soldier language. Each subject is designed to drive home with the maximum

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memorability one or two essential combat lessons. Most of these will deal with the physical aspects of combat; a few will deal with psychological considerations.²⁶

A personalized approach, a certain familiarity, a more life-like speech in the narration were gradually introduced into training films. The "Fighting Men" series, which has as its theme basic a wailing satire on "You're in the Army Now!", is a number of stories about ordinary men who find themselves in uniform. "Kill or be Killed", "Curiosity Killed a Cat", "Baptism of Fire", -- such titles give an idea of the films' contents. The enlisted personnel portrayed in these films look credible and American; the reactions they exhibit on the screen are neither more heroic nor more cowardly than the average.²⁷

The chummy language of the man who sleeps next to a soldier, said the devotees of non-manual-like training films, would probably do more to impress a lesson than the scientific exactitude of carefully chosen, but technical, language. Language had to be technical in some parts; it had to use the vocabulary appropriate to dealing with the equipment and methods of a mechanized army, and accurately.

But

where there are instructors shown on the screen and the picture is done in live sound, we shall show the instructor only as long as he can add emphasis or memorability. At times, of course, the use of an instructor instead of an off-screen voice permits

²⁶

Directive fr CG, AGP, to CGIG, attn. AFM, 10 September 1942.

²⁷

The Army Pictorial Service Distribution Division's Report shows that the number of showings of the Fighting Men series is extraordinarily high. At some posts many of the films have been placed on the required list because their messages are meaningful and telling.

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the narration to be racier, since the feeling is inescapable that the off-screen voice is that of the Army itself, speaking ex cathedra.²⁸

The writers have come from Hollywood studios and small motion picture firms as well as from the radio field. They have in almost every case experience in writing dramatic material, if not screen scenarios. Theirs was the experience of appealing to people; the suggestions for humanizing scenarios were not lost upon them. They have turned out scenarios with dialogue and realism that is the United States Army in 1944. The approach is as accurate as it ever was; the nuts and bolts fly, via the animator's art, into place with the same celerity and certainty. But there is a glimmer of humanity in the instructor's screen approach. The off-screen voice does not speak down, it merely articulates a genuine interest in seeing that the men will know what to do when the time comes, or else. The voice, in fact the whole film, says: "This is what you will have to do when you get to a bridge situated as this bridge is." Or "a mountain like this," or "when you see a plane in the condition you see one here."²⁹

The approach of the present training films can be summarized by the following instructions to writers; and they are instructions

28

Writers' Orientation Course, p. 22. Used at the SCPC prepared under the direction of Colonel M. E. Gillette, CO and used with other instruction to bring before the motion picture writer the essential difference between writing entertainment and writing instruction.

29

These are not actual quotes, but samples of the kind of speech now being used for training films.

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which every one in any way connected with making films remembers:

Make it clear; make it logical, make it human, and drive home the necessity of learning now, not when you get into battle. Time is of the essence. All the training is leading right to the job of killing the Japs and Germans. Be careful, no talking down, no boy scout stuff, nothing cute or smart-aleck. Just cold-blooded, practical down-to-earth; get this through your head because you're going to need it. When you're shooting at targets, you're learning to kill our enemy before he kills you. Not to learn is a fatal mistake.³⁰

C. THE STORY OF A FILM: PHOTOGRAPHY

In the chart of the stages of training film production, page 45, it will be seen that the approved scenario is sent through the Military Training Division of the Army Service Forces, through the Chief, Army Pictorial Service, to the Signal Corps Photographic Center. When it arrives there production begins.³¹

At the time the scenario is passed for filming, a Project Officer arranges for the use of a camera crew and for the assignment of a director and unit manager to the project. The unit manager's most important job is to arrange either for the transportation of the crew to a Service school or to another location, or for the utilization of a sound stage at the Signal Corps Photographic Center. The determining factor is the requirement of the scenario. Indoor scenes photographed at the Signal Corps Photographic Center may require

³⁰ Writers' Orientation Course, p. 23. See Footnote 28.

³¹ The term "production" refers here not to all the stages shown on the chart, but only to sound recording, photography, animation, set-building, miniature shots, developing, and editing. All data on production presented in this chapter based upon interviews with production personnel at SCPC.

Figure 8.

SIMULATED OUTDOOR SET

The director sits at the left; the long metal arm carries the microphone for sound recording. Lights have been checked to correspond with daylight, and the camera, on the mobile platform, can be moved at will.



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specially constructed sets. Miniatures of equipment or of background may have to be made, and the lighting for scenes has to be arranged. Actors, costumes, makeup, while not as elaborate as Hollywood's, still must be provided for each film. On the availability of the art staff, the property men, the wardrobe personnel, electricians, microphone operators, and their assistants, depends the swift completion of photography and sound sequences.

The director is responsible for the transfer of the words and directions of the scenario into lengths of properly-exposed film. To insure that the editor will have enough feet of film to create a finished lesson, more than one shot of an action must be made. It is the director's decision which supplies the editor with close-ups and long shots. For instance, the view of an Army unit crossing a river is shot as visible from the crest of a nearby hill, from the bank of the river to be crossed, from midstream, from the opposite side, from every logical point.

In teaching teamwork -- and most Army instruction attempts just such teaching -- the motions of each member of the team must be accounted for, explained, made simple, and related to the operation as a whole. Therefore, the role of each man in the team must be made clear throughout the entire process. Different shots of the same action taken from various points of vantage will achieve this detail, of example, and yet will at the same time emphasize the pattern of the total operation. The need for remembering how the river was crossed, is told the audience by the narrator. After viewing the

Figure 9.

TAKING MOTION PICTURES OUTDOORS



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film, the enlisted men who are the audience are going to have to go out and try to cross the nearest river according to the rules explained in the film. They will participate in the crossing from different locations. The memory of the action as seen -- in the film -- from different observation points reminds the men of the correct procedure.

But too much film must not be used:

Under the present emergency it is of utmost importance that negative film be conserved wherever practical. The manufacturing restrictions on film have made this an acute consideration. Therefore, needless over-shooting and excessive scene lengths must be avoided.³²

At the time a director is appointed, an assistant director is also assigned. His main task is the breakdown of the scenario into scenes, and the compilation of a shooting schedule. He makes a list of all the scenes laid in each setting, of all personnel and equipment requirements for each scene. This schedule is scrutinized at a conference of the heads of all the production services (property, art, sets, sound, miniature, and the director, military advisor, and Project Officer.) An estimate of the total shooting time is submitted to the Control Division.³³

Not only is the estimated time supplied to the administrative authorities, but production sheets reporting the total work for each day are turned in, whether a camera crew is on the main stage at the

³²

Training Film Production Field Manual for Camera Units, issued by the Signal Corps Photographic Center, 1 July 1943, p. 17.

³³

The various stages of production have been analyzed by the Control Division. Careful check is kept to compare estimated times with actual time spent. These analyses are part of the semi-monthly Status Report of Training Film and Film Strip Production published at the S. C. Photo. Center on the 15th and last day of each month.

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Figure 10.

PREPARING A BUILDING FOR A SET



Figure 11.

CLOSE VIEWS OF MACHINERY

ARE OFTEN NECESSARY



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Signal Corps Photographic Center or 500 miles away. And the production report presents a record not only of what was done, but of the reasons why more was not done; the length and explanation of all delays, be they weather, the diversion of camera subject troops to general training duties on a post, or the breakdown of a piece of equipment. As a further check for the field units, a daily revision of the estimated shooting time is also sent, so that fairly realistic planning and reporting can be made by the Signal Corps Photographic Center for future and parallel production.

From six to twelve men usually make up a camera crew. An average crew contains a director, his assistant, a script clerk, the chief cameraman, his assistant and one or two utility men. The recording of live sound may make the addition of a sound recording man necessary.

The Training Film Production Field Manual for Camera Units, (page 15) provides that "whenever a shortage of personnel exists, the Officer in Charge will delegate duties to the various members of the crew in such a manner as to secure the most efficient functioning possible." During the actual days of shooting, a complete record of all the details of dress, posture, personnel, placement and similar points are checked by a script clerk. But in many cases, the assistant director performs this task.

The instructional quality of the training films is determined, as is the entertainment value of a commercial film, by the way in which the director transfers the scenario requirements to the screen. Train-

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Figure 12.

EVERYTHING THAT COMES INTO THE VIEW
OF THE CAMERA MUST BE AUTHENTIC

The uniforms, equipment, procedure of these men must conform to accepted Army usage.



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ing films need to be smooth and even in tempo. "Close shooting... as well as speeding up of action to a breathless pace...are expressly prohibited" by the field manual.³⁴

All ~~X~~ the personnel involved in the actual shooting of any scenes are expected to understand what the scene is to portray. The director is in charge of the scene's production, but even the untrained soldiers who may be used as actors (untrained, that is, in motion picture techniques), are assured that questions about what they are doing are welcome.

The director's responsibilities include liaison with the post where the film is being made, the acquisition and maintenance, as well as the provision at the proper time, of all equipment necessary for each scene, the quartering and messing of all men under his direction, and other administrative duties. The Signal Corps Photographic Center in the fall of 1943 set up the position of Unit Manager to relieve the director of all but photographic production duties. The assistant director is responsible for providing the equipment and men necessary for each day's shooting and for mailing exposed film to the processing laboratory.

D. THE STORY OF A FILM: SOUND

As has been mentioned, there are two kinds of sound recording used in Army training films. One is the pre-recorded narration, a

³⁴ Training Film Production Manual, p. 16. See Footnote 32.

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Figure 13.

PREPARING A MINIATURE SET

A great deal of time can be saved by the use of ingenious miniature sets. See Figure 14 for a complete view.

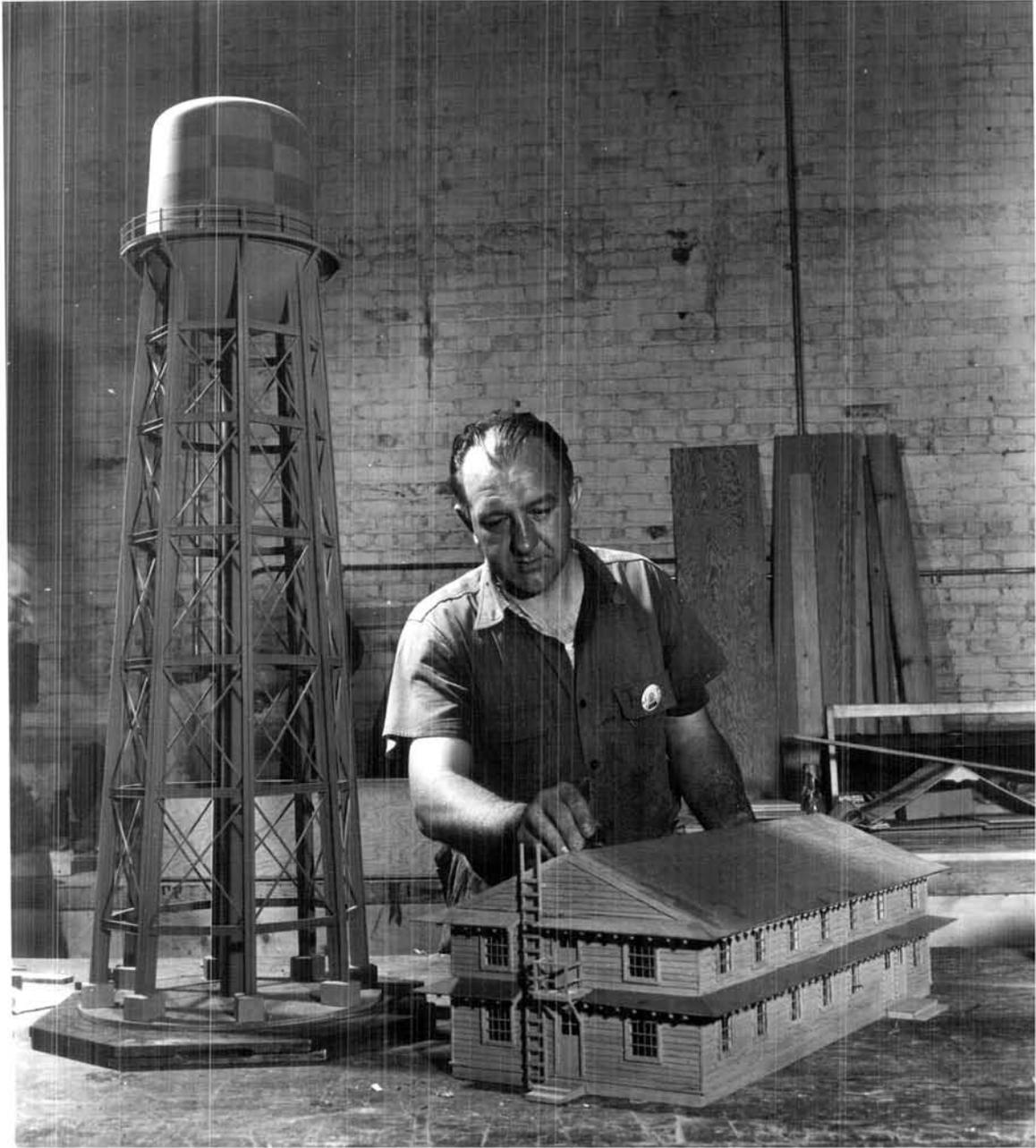
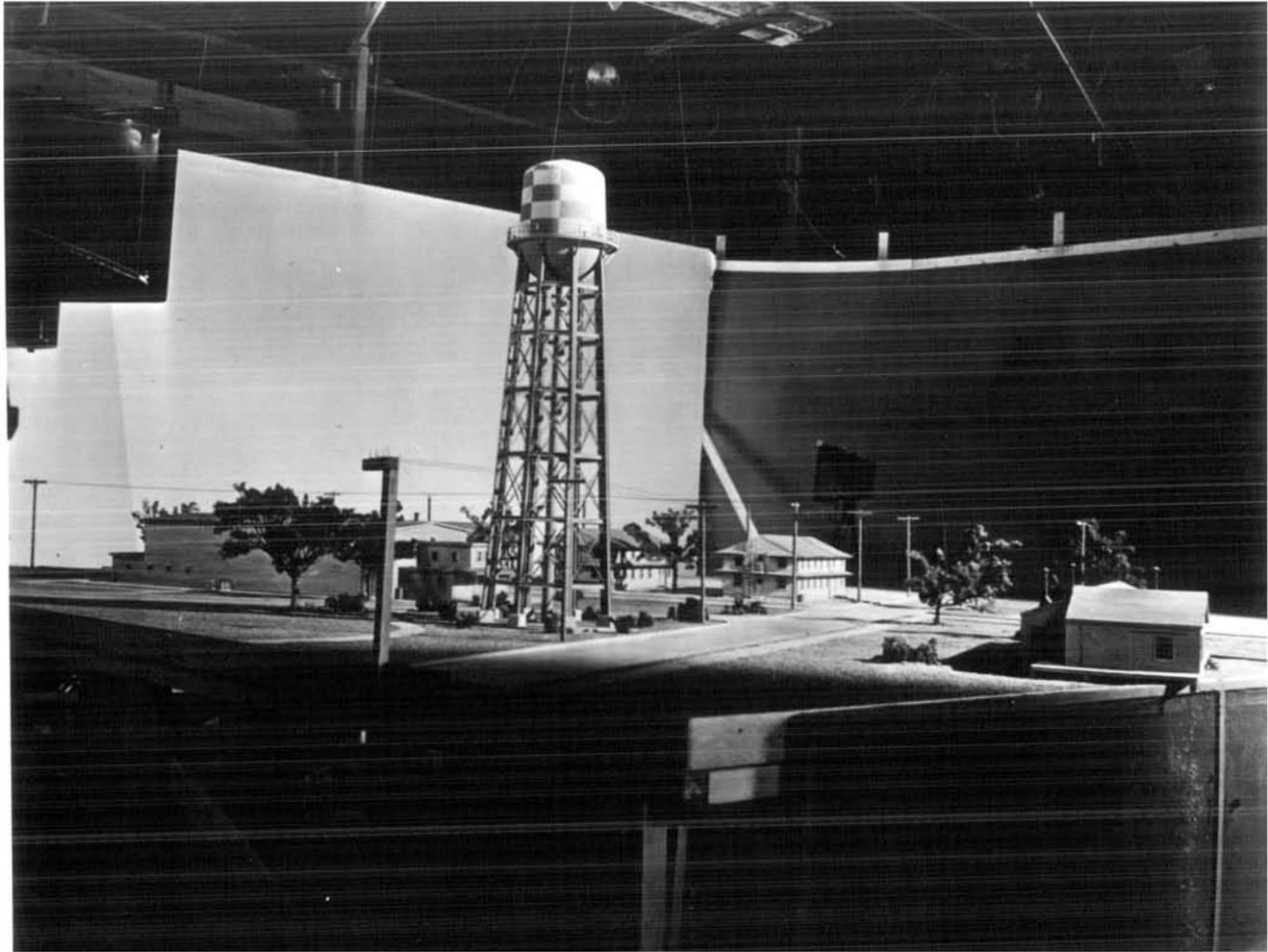


Figure 14.

A SET USED FOR A SCENE SHOWING AIR ATTACK

The tiny planes were strung on wires invisible to the camera, and all operations were explained in terms of this miniature set, which naturally photographs as if it were full size.



monologue explaining and commenting on the action as it is projected on the screen. The other is sound: voices, mechanical noises, gurglings of brooks, twitterings of birds, and so forth.

In case of narration, the narrator is usually chosen from the Narration and Casting personnel at the Signal Corps Photographic Center. He records the script at the time that the film goes into production, just after the approved scenario is returned to the Center. Furthermore, it is his job to appear at the daily viewings of film exposed the day before, and to read the script as the scenes are shown. The synchronization at these "rushes" is never exact, since the editing has not been done, but the film's instructional quality can be judged in general.

At the time the film is edited, it is the task of the cutter to insure that the right words will be heard at the right moment. The hand which is shown arranging the folds of a parachute must be described at the moment it is in motion.

Experience has taught motion picture sound men exactly how far in back of the visual shot the sound referring to it must be put on the finished, or composite film. Whether the sound is live or pre-recorded, there is a lag of about 20 frames between visual image and auditory record, insuring absolute synchronization when the film is projected.

The written scenario includes all photographic and sound instructions. The movements of the camera are prescribed as well as the

Figure 15.

MINIATURE TANK

DICTION!

One of the nearly miraculous reproductions used for training film production at the Signal Corps Photographic Center. See Figure 16 for the actual size, compared to a man's hand. This model is wooden, but an accurate replica, built to scale in every detail.



Figure 16.

MORE DETAILED VIEW OF MINIATURE TANK

The small models can be blown up, or wrecked. They are subject to all the mishaps of tank warfare. Equally careful replicas have been constructed by the craftsmen in the miniature department of field artillery pieces, automobile trucks, bridges, etc. Nothing is immune from perfect reproduction for the sake of tricking the camera. The time saved in transportation, waiting for equipment to be delivered to the Center, and setting up a full size set is very great. Miniatures produced by skill and patience are basic to efficient training film production.



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nearness of the action to the camera. It is the purpose of the training film to so far project the soldier-in-training into the situation which he will face -- its sounds, shadows, crowding, surprises, and other troubles -- that he will react immediately and correctly when the actuality is before him. Natural ingenuity and resiliency are assets, but they can never be assumed as the native endowment of all men. Practice in quick thinking can only be gained through personal participation, but a good training film can contribute materially to such a grounding.

On the set a sound mixer monitors the sounds and allows only the clearest versions to be recorded. Of course the range of control here is small. If a bird decides to sing in the middle of an outdoor scene being recorded and photographed, the bird's song will be found upon the sound track. But the quality of all the sound can be regulated by the mixer. If this quality is not good enough, the mixer can request a retake of the scene.

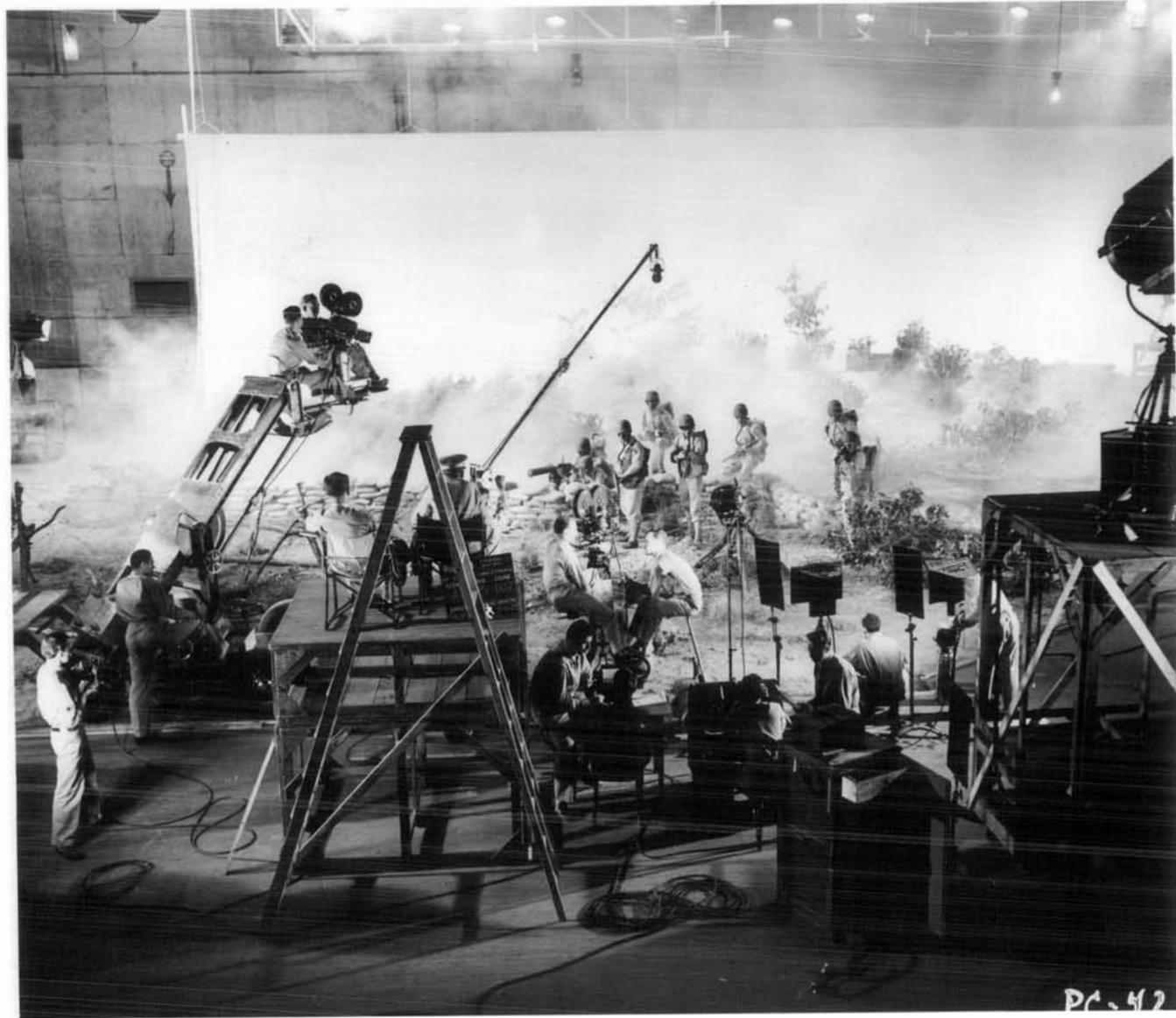
In some cases a specific sound has to be learned as the symptom of, for example, the improper operation of a machine or the approach of the enemy. A motor running down from lack of proper cleaning or over-long use without inspection may make a characteristic sound, or fail to hum as usual. Potential danger may be recognized only by this break in the ordinary pattern of sound. In such cases the camera and the microphone would record the repairing of the motor in question. This is the procedure used when shooting live sound. It

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Figure 17.

ANOTHER INDOOR STAGE SET FOR
PHOTOGRAPHY AND SOUND

This picture gives some idea of the height of the main stage at the Signal Corps Photographic Center. Notice that more than one camera is recording views of this scene. This variety will later provide the film editor with a wider range of shots to combine for story clarity and punch.



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is done only when necessary, since the expense, equipment, and personnel involved are considerable.

E. THE STORY OF A FILM: ANIMATION

Army training films use all the techniques of motion picture presentation which have so far been developed. Not a trick of the commercial studios has been overlooked. All the ways of handling a camera, of placing the scene and camera, the miniature sets, -- all such effects are employed by the Army film-makers. The requisite for a technical short-cut is: Does this make for a more lasting impression; does this make the point more clearly? If a technique gets the message through with more facility, it will be used.

As early as the 1880's when the first attempts at photographing movement were made, the theory of such photography was known: If a series of still pictures in careful sequence is presented to the eye in rapid succession, the illusion of motion is created. All motion photography is based on this discovery.

There are a number of technical procedures which add to the effectiveness of a motion picture scene, whether in training or entertainment films. The outstanding technique for teaching purposes, however, is the art of animation. This is the "animated cartoon," such as the familiar Walt Disney product. It is exactly this technique which the Army has taken and used for assuring better instruction of American fighters. Only in the subject of the drawings is there a difference between the commercial and the mili

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tary procedures. Otherwise the processes are identical.³⁵

Animated drawings are drawn by hand. They may or may not portray movement. For this reason, the term "animation" is misleading. Any drawings which are photographed and projected on the screen are called animated. They differ from motion picture photography. The detailed cross-section of a mechanism for range-finding may be thrown on the screen for many seconds while infinitely exact statements are made to the audience via the sound track. In another case, the impact of a burst of fire or the invisible action of electricity may be shown by animation based on hundreds of drawings consecutively showing the objects on the screen in slightly different relationship.

The artists at the Signal Corps Photographic Center's Animation Branch are experienced in drawing for the screen. They have come from studios where perhaps a clever animal with a human voice is the stock character, and where situations are built up around such a focus, to a military post, where accurate technical knowledge is the content, and daily 100 per cent correspondence with scientific facts is standard operating procedure.

Animation, then, is a series of drawings of which photographs are taken. The photographs are developed on a roll of film which may run to hundreds of feet. For each foot of film, 16 photographs or frames must be taken. But twenty-four of these photographs are seen in a second. To fill only a minute of screen presentation, 90 feet or

35

The information on the process and use of animation was secured through interviews at the Animation Branch, Service Division, Signal Corps Photographic Center.

Figure 13.

ANIMATION ARTISTS AT WORK



U40 drawings must be accounted for. The screen must never go blank. There must always be an image visible to the audience. In the case of ordinary motion picture photography, the camera takes care of the sequence and works so rapidly that it can be said that motion is being filmed. In the case of animation, however, each frame of film is a still photograph of a celluloid rectangular strip to which a drawing has been transferred. The original drawing must be made, the transfer has to be done, the photographing of the transferred drawing follows, and then the developing of the individual photographs of a sequence on the length of film finishes the process.

Experience with the optical phenomena involved in the illusion of motion photography has shown just how large the spatial interval need be in a series of pictures, so that "normal" movement will appear to the audience. The eye sees speed, jerkiness, depth, and delineation, according to the pattern of individual pictures which are flashed in front of it. In the art of animation, research into what can be foisted on the eye has reached an advanced stage.

Clarity is automatic when good animation is used. The Army training film program has called for an expenditure of men, materials, money, and time. If there were no other reason to consider the program a success, the utility of animation in teaching would more than justify any outlays made.

The director of a training film, the project officer, the technical advisor, the scenario writer and an animation writer all come

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together to approve the insertion of animation into the film script. Most films have some animated sections, and scenario-writers have to know when to write animation into a script. Its use is expensive, and it cannot be mere window-dressing. But in the cases where animation is essential to the mission of the film, as decided by the men in charge of its production, its use has proved to be justified and demonstrably effective. P. R. 11. F. 11.

After the use of animation is approved, a conference with the film "producer" (the Project Officer), the director, the technical advisor and an animation director is held. Thus the men who are chiefly concerned with good instruction, via the best medium, and the artists who create the medium of animation share the discussion of the problem each film presents. At this time the photography immediately preceding and following the animation is also checked. In some pictures, a cross-section, invisible to the eye or the camera, needs to be drawn. The students who see the finished picture will be able to visualize the effects of their own operations with the machines after they have seen the picturization of the animated film. For example, the training film "Oma's Law", for Signal Corps trainees, shows the path of ground waves, radio waves and what happens inside a vacuum tube.

Layouts of the major positions, the crucial drawings, are submitted to the technical advisor and the project officer to see if the basic needs of the film are being met. Approval by these men consti-

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tutes the go-ahead signal for the ideas presented, or for changes. The animation director (it is always an animation director who attends the animation conference) then allocates to various animators the work which must be done. Some of the original work is highly technical; there must be no misproportion in the drawings -- they are the model for important operations. Other sections require that a skilled artist draw the serial phases of a movement or an action.

Animators possess the skill of artists plus the skill of draftsmen. Their work is a constant combination of these abilities. The message of the film sequence is explained to the artists, and then their own ideas take over. The way they choose to tell the story, explain the operation, draw the instrument is their own choice. Accuracy, fidelity to the script and simplicity are the guide signs.

To take an example, if the gradual encircling movement by the Russian Army at Stalingrad should be portrayed on the screen by animation, the following would take place:

1. The most accurate and detailed maps based, in some cases, on aerial photographs would be found and carefully studied. Faint-taking exactness would mark the copies made in the correct size for the camera.
2. A map using all the facts of the originals would be drawn and shaded. A good photograph is sometimes used. This would become the background for all lay-outs. It would be the bottom of all the set-ups for the camera.

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3. Two series of changed positions would be drawn, one for each army. Then each drawing would be carefully copied and shaded on a celluloid, or "cel".

4. From directions, the animation cameraman would make one photograph for each frame, placing cels over the background until the correct effect was achieved.

Each camera operation is not identical, but the above pattern is kept to more or less. The job of the artist who does the original drawings is over when his final sketches are approved. From there they go to the inking department, where they are traced on celluloids, and all outlines are inked in.

The cels are always "colored". The colors, however, range from white to black with five clear grays in between. The background has to be colored first to insure that the cels' colorings consist only of contrasting shadings. After the inking and coloring are done, any lettering needed is applied to the cels by the hot press used for all animation block lettering. The hot press method is similar to ordinary printing except that the type is heated. This insures even color tone. The cels are then sent to the camera section.

The animator, besides making the necessary individual drawings, provides for the cameraman a careful exposure sheet. The component drawings for each frame are listed. Moreover, at the left of the sheet, running in large letters, very far apart, is the narration. Thus, the still photographs made by the cameraman will synchronize

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Contrast!

with the narration. Where lengthy or even moderate explanations are necessary by voice, the same image must be kept on the screen. This is achieved by repeated photographing of the same set-up. There may be seconds or more of an explanation. The cameraman has to follow the exposure sheet so that there will be complete interaction of the visual and auditory images. Sometimes, only a small change will be made every few half-seconds, for instance to explain the flow of current or oil, or to allow an arrow to mark out the path which will be followed by a man or troop unit.

The cels are transparent, except where they are colored, but they are not completely so. Therefore, in planning the set-ups for the animation camera, no more than four cels can be used. More photograph too dark.

The cameraman constructs each set-up from the instructions on the exposure sheet, which is a timetable of what to photograph when and for how many times. The base map, or background, is the foundation for all frames. Next would come the cel of the German army, let us say in the first position. On the base map only, the position of the terrain covered by the German army would be blocked out. Everything else would be visible through the transparent celluloids. Thirdly, the celluloid with the first position of the Russian armies is fitted over the map and the first cel. In this case, that might be all the cels necessary. Or, there might be a fourth operation, the superimposition of the third cel on the top. This might show

Figure 19.

PREPARING A SET-UP FOR THE ANIMATION CAMERA



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arrows indicating the direction of the pressure exerted by the armies. Animation cameras, as can be seen from figure 19, have pegs on which to fit the cels. Thus, absolute correlation is insured; no tiny shufflings by wind or cameraman can distort the final screen image. Relationships will be in correct alignment.

When the entire sequence has been photographed, with the same background, but with slightly different cels for each of the positions, the film is developed. When projected on the screen, there will be seen a gradual movement of the armies over the region of Stalingrad.

The synchronization of sound and movement in animation is done as in ordinary motion picture film. There is never any live sound. The actual sound track is behind the visual image on the composite film, in the usual way so that the effect on the audience is perfect paralleling of sound and motion. Before sound is added, the animation viewing takes place so that any revisions can be made on the single film only.

As has been mentioned in the discussion of motion picture production as a whole, there is flexibility at every point in this process. Changes need not wait until irreplaceable man-hours have been spent on merely provisional work. The effect of yesterday's efforts can be seen as soon as the film is back from the laboratory (usually within twenty-four hours.)

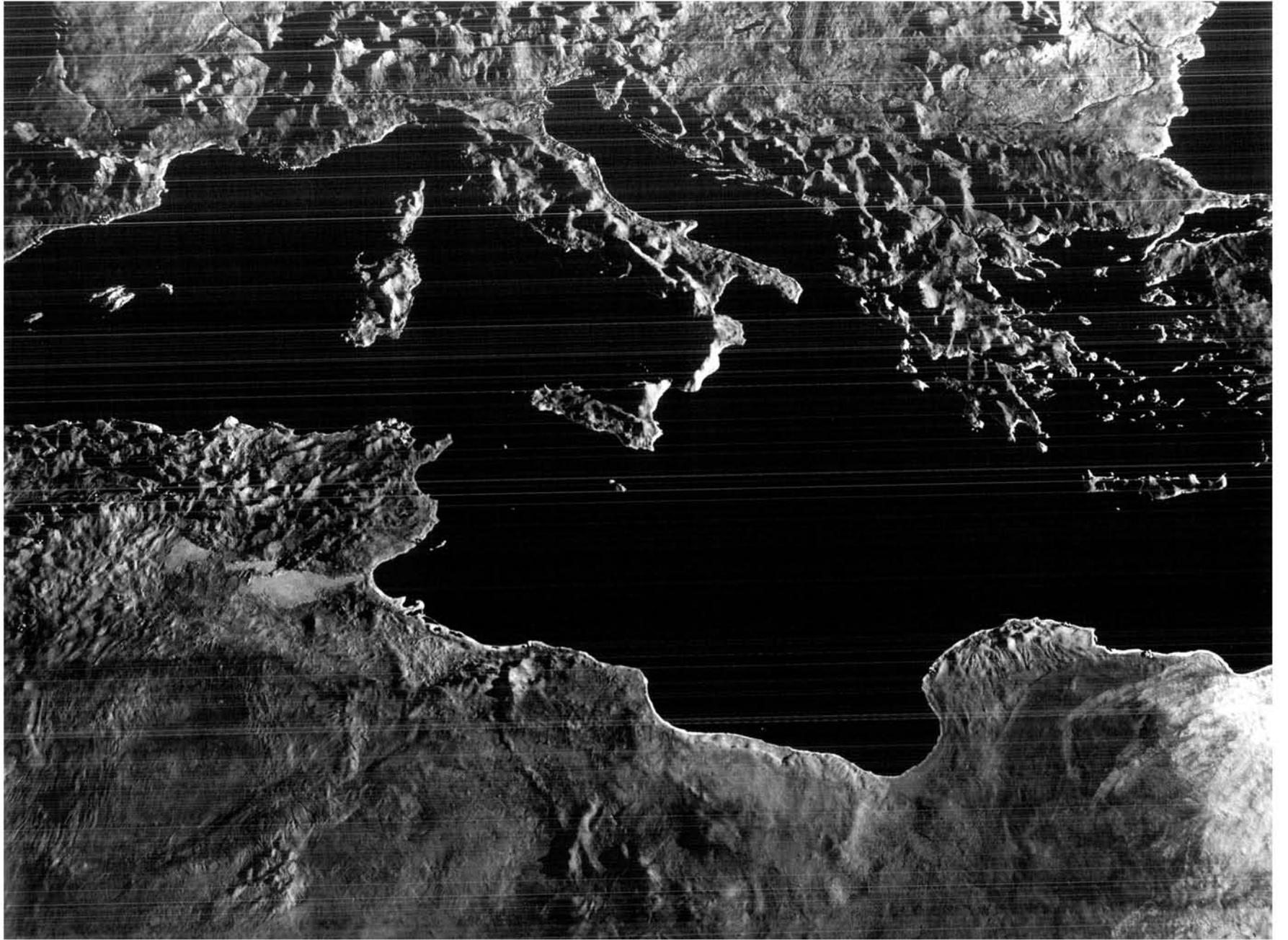
The Army, in using the technique of animation, has made a definite procedure out of what, in commercial studios, is usually a fluid sequence. The production rate at the Animation Branch (about 5,000

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Figure 20.

BASE MAP USED FOR "TUNISIAN VICTORY"

Built of plaster, this is the type of map used as a base for cells in showing action in a large area. The topographical clarity is helpful in creating the illusion of reality.



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feet a week) is so far above the rate of any commercial organization, regardless of size (although there are some larger), that there must be some explanations for it.

In the first place, the animators and animation specialists are working under a clearly-designed system. They know approximately what they are going to have to do, and when; they see how long a job is going to take, how nearly that time corresponds to the scheduled time for it; the standards are based on reasonable performance and are raised when the efficiency of a unit or an artist improves. Moreover, each man is clear about the requirements of a job, but is free to work it out in his own way. Drawing is creative work, taxing and demanding the highest skills. Once the assignment is made, the responsibility is the artist's; his own interpretive techniques are called into play. The resulting picture sequence must be clear, accurate, as terse as possible and easy to remember. If it meets these requirements, the rest is up to the creative imagination and ingenuity of the animation artist.

Guess-work is eliminated and production is controlled. These administrative considerations are all relevant, and yet Army morale may very well constitute the most important factor in this performance.

P. THE STORY OF A FILM: DEVELOPING

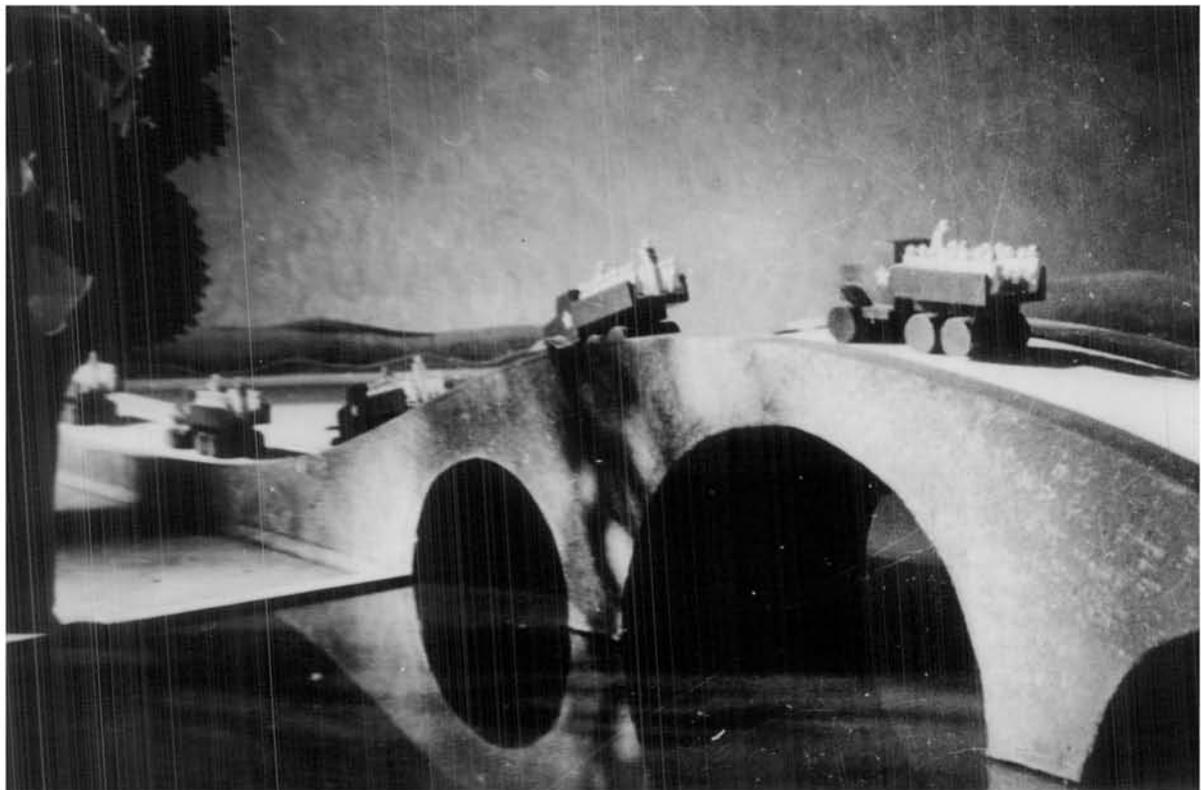
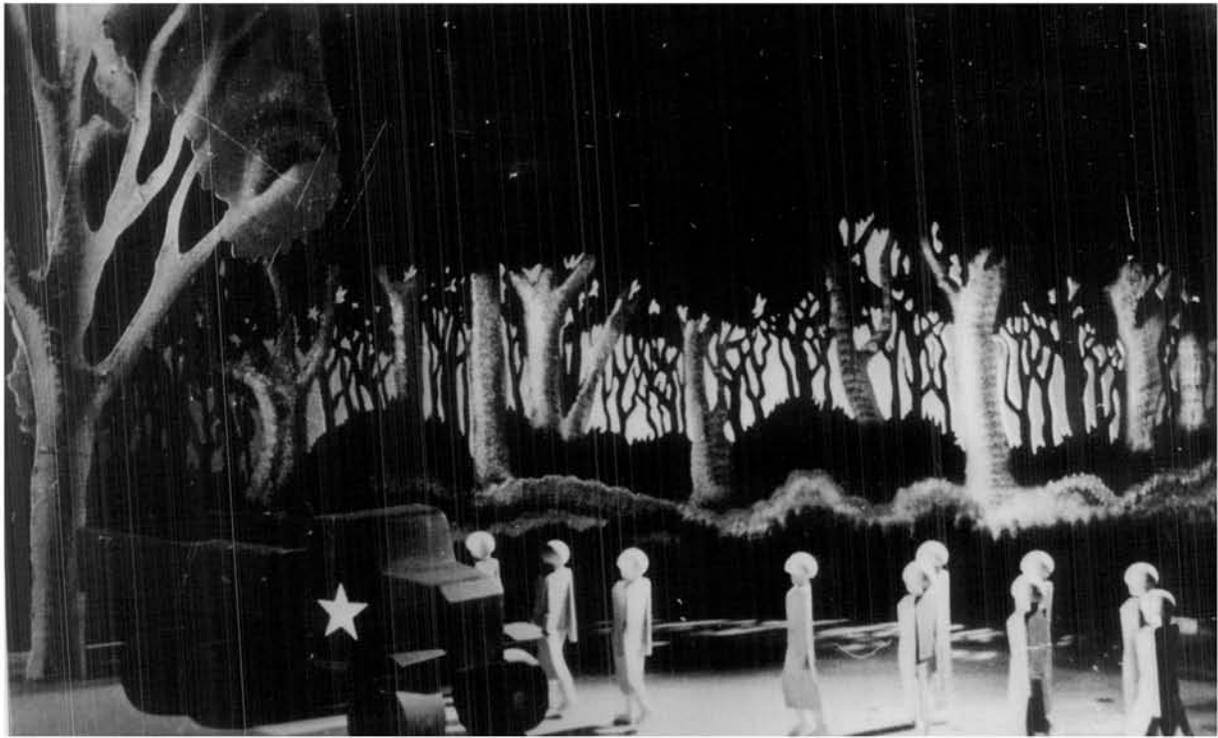
Each camera crew sends to the laboratory the entire footage exposed during a day's work. Sound film is sent also. The morning

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Figure 21a and Figure 21b.

MINIATURE SETS AND FIGURES

These small stylized miniatures are placed in the miniature set and photographed at consecutive stages of an operation. The principles of animation photography and miniature art are combined, most effectively.



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following, a showing of all scenes made the day before is held.

These shots are called "dailies."

Between the camera and the projection room the film is in its most fragile state. Carelessness or haste in the laboratory can make all the efforts of cameraman, director, and scenario writer useless. It is even easier to ruin hundreds of feet of film by improper developing than it is to waste footage through inept or hasty filming.³⁶

The Signal Corps Photographic Center has a contract for film processing (which is the term used to describe all the procedures done in a film laboratory) with the Deluxe Laboratories in Manhattan. All training films are developed there.³⁷ Since 1940 when the first contract was signed with Deluxe, at least some of the training film footage had been developed there, but before the activation of the Long Island City post, the requests for increasing the motion picture production facilities of the Signal Corps included a request for a laboratory:

The following...construction is required....One motion picture laboratory building approximately 70 x 143 feet consisting of an 8 foot basement, a first floor not less than 14 feet in height, and a second floor 12 feet high. This building should be of fireproof construction throughout, be air-conditioned, and designed to house the accessory machinery to develop motion picture negative, prints and conduct all related operations necessary to produce completed motion pictures. The basement to be utilized for heating and air-

³⁶

In training classes in film developing at the SCPC, the strictest supervision is exercised. The chemicals needed for developing are prepared at the post and students are taught the entire process, so that in mobile field laboratories they can speed the usefulness of photographs taken in battle, or for intelligence purposes.

³⁷

Combat photography is developed at the Signal Corps Photographic Laboratory, Army War College, Washington, D.C.

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conditioning equipment, for chemical storerooms, temperature control, tanks for developing solution and solution circulating equipment. The first floor to be used for developing machines, printing rooms, negative handling and related activities....Lack of motion picture developing and printing facilities at Fort Monmouth seriously delays training film production...The estimated cost of this building is \$396,000 without overhead.³⁸

The delay in training film production mentioned by Lt. Colonel Gillette was occasioned, of course, by the fact that the Training Film Production Laboratory was at Fort Monmouth while the developing laboratory was in New York City. Two months later, when the purchase of the Paramount studios just outside Manhattan was requested, the location of Deluxe Laboratories appeared as an advantage, rather than a cause for delay.

The proximity to numerous motion picture laboratories in the New York City area would make it advantageous to have all motion picture developing and printing work performed commercially until such time as it would be desirable and possible to convert a portion of the plant to film processing activities.³⁹

The activation of the Signal Corps Photographic Center (the "plant" referred to above) was followed by a tremendous increase in the amount of work performed by Signal Corps motion picture personnel. This record has justified the purchase. There is not now any room at the Center for film processing on a scale consistent with training film production. Deluxe absorbs the main burden of motion picture developing, although other laboratories in New York are used, as the production load demands.

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Ltr fr Lt. Colonel M. E. Gillette to CSigO 12 August 1941.

³⁹

Ltr fr Lt. Colonel Gillette to O.I.C., Photographic Division, CCSigO, 2 Oct. 1941.

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Before each scene is photographed the assistant director or script clerk holds before the camera a slate upon which is written the number of the project, the name of the director, the date, the number of the scene, and the take number. Each scene is thus identified. At the laboratory after the negative film has dried, it is inspected. The film is notched a few frames before each new scene to allow a number to be entered on the light record kept for each film processed at the laboratory. By testing a frame or two, the laboratory technicians can ascertain how much exposure the negative of a scene needs.

This procedure guarantees that when the finished film is projected, there will be a relatively uniform effect of daylight or indoor light throughout a scene, regardless of the varying light conditions at the different times the shots making up the scene were taken. Cameramen and electricians attempt to recreate the same light conditions for scenes which will take place in sequence on the screen; the laboratory seeks to compensate for what cannot be controlled on the set. Both before and after the negative is developed, there is rigid inspection of all film for flaws.

Actual photography is done on 35 mm. film. The dailies are developed on this size. It is not until the final print of the picture has been approved in Washington that the reduction to the 16 mm. size of Army projectors is made.

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G. THE STORY OF A FILM: CUTTING

The cutter of a motion picture film is the film's editor. He sits in a small room surrounded by every foot of film taken for the project. His job is to arrange the various versions of scenes, the long shots, close views, the quick fade-outs, all the camera approaches made at the order of the director, into a sequence, which will be clear, pithy, articulated and memorable. He must make the film teach its lesson by eliciting from its footage all the unnecessary shots, the "verbiage" which an orator often keeps, but which an editor will blue-pencil. Film is usually rolled on a 1000-foot reel and retains the tendency to curl up even when unwound. A cutting room therefore looks like the last place in which organization and clarity rule. But in this setting the cutter peers at mere lengths of film; then cuts, trims, inserts, revises, and rearranges them until he is satisfied that the picture is a series of effective scenes which tell a story, teach a lesson or illustrate the consequences of a mistake.

The film is run through a small machine which the cutter operates at the desired speed. The usual projection rate is 90 feet a minute. "The face on the cutting room floor" is often the fate and always the fear of minor motion picture players. As a matter of fact, the film is carefully aimed at a protecting box, since no footage is thrown away and all film is kept as clean as possible.⁴⁰ The "trims" those

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Cutters and their apprentices work with white gloves, and the film is cleaned before and after all handling. Specks of dust on a portion of film are fatal to visual clarity on the screen. The cutter thus has to worry about the physical state of the film as well as the organization of its content.

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lengths of footage cut out, are labeled and kept against the needs of the future. Today's trim may prove to be the clinching insert of tomorrow. The director may decide that certain excisions are better retained; the feet cut from the film must be available in such cases.

Cutting is in some ways the most important process in the history of a film, since the editor holds power over sequence, effects, and coherence. A scenario is a much more detailed lesson than a field manual. Every single motion of the soldier performing the operation being photographed must be accounted for. At no time can he simply stand in front of the camera and wait for the next step. If it is his job at that point to wait, the focus must be shifted to a more detailed view of the action. The cutter must leave no gaps in the story. There must never be a question, "Where did this guy come from?" or "What happened to the man on the left, he seems to have disappeared!" This is originally the responsibility of the director, but it is as easy to cut a man out of part of a scene, as it is to forget to place him exactly where he was in the earlier section of the scene.

Army Pictorial Service cutters have been editing film for about an average of ten years. Two or three years as apprentice cutter usually precede appointment as a cutter; for this reason, project officers and directors confidently entrust a film to such men. Cutting is a highly skilled job, and it is not inaccurate to judge the competence of a cutter by the film he has edited. In the same way, an effective film is always the product of experienced and intelligent cutting.

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When the photographic sequence has been spliced together by the cutter, it is sent to the projection room for a preliminary viewing.⁴¹ Throughout the editing process the narration and live sound must be carefully matched to the photographic scenes as called for in the scenario. The complete sequence of photographic shots or sequence of sound is called the "work print".

In the meantime the sound track has been compiled for the entire film. Sound cutting follows the same principles described above. The live sound and dubbed sequences are re-recorded as a continuous track to accompany the photography at the usual interval on the composite film.⁴²

H. THE STORY OF A FILM: APPROVAL

The approved sound track is sent from the sound department to the laboratory and is accompanied usually by the finished work print. From these the laboratory makes a negative from which is produced the "answer print." It is the answer print, the first composite print, which is sent to the Army Pictorial Service in Washington for the approval screening. This is a showing attended by the

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Splicing is achieved by a machine which first shears the edges of the film at the places deleted from, and then glues the remaining edges together. Inserts are made in the same way.

⁴²

"Dubbing in" is a technical term to describe the procedure by which sound effects, drawn from the effects library maintained at the Signal Corps Photographic Center are recorded on film to correlate with the scenes of the action making the noise. Over 75,000 feet of sound effects are available for Army training films. These range from ack-ack noises to the sound a flashlight makes when dropped on the floor of a submerged submarine. In case a sound is needed which is not in the library, there are commercial collections in New York and throughout the country from which the Army Pictorial Service can purchase any sound effect.

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Chief of the Arm or Service requesting the film, the training personnel of Army Pictorial Service, or his representatives.⁴³ If it is a film for the Army Service Forces, the fifth floor projection room in the Pentagon is used. If for the Ground Forces, the film is shown at the Army War College. If a film which has been ordered produced for Ordnance, for instance, includes material of interest to the Chemical Warfare or Tank Destroyer schools, officers of the latter are invited to attend the screening.

Recommendations by the screening audience are complied with; if changes are to be made, they are done at the Signal Corps Photographic Center (or at the Service School, if it is necessary to make additional shots, and if the filming has been done there). A further screening is then held to secure final approval. No film can be released to the Army for training purposes without such approval.

A negative is cut to match the approved answer print and from this is made the master positive, fine grain. This positive is used to make duplicate negatives, and from these the many hundreds of prints necessary to supply the training film libraries in this country and overseas are made. The surface of the fine grain positive insures excellence of all prints, no matter how many are made.

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Representatives of the Army Service Forces and the Army Ground Forces attend showings of all training films for either branch. Memo fr Col. W. L. Weible, Dep Dir Tng SOS to Chiefs of Ordnance, QM, SigC, CWS and Med, 13 May 1942.

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CHAPTER IV

NEWSREELS, SLIDES, AND TRANSLATIONS

A. FILM BULLETINS

Even before the draft, the intensive drive within the Army to expand, to improve weapons, techniques, utilization of manpower, and supply, brought insistent demands by the individual Arms and Services for quicker and more widespread dissemination of new information.

Soon after the Army camps began filling up with the first selectees, training officers requested films on how the German, British and French armies looked in action. Commercial newsreels were showing flashes of tank, dive-bombing, highway-strafting, blitzkreig tactics; it was logical to assume that careful classroom study of such subjects would be valuable.

The film bulletin has proved the answer to both demands. On 2 May 1941, The Adjutant General wrote to the Chief Signal Officer that the production of a short educational film was desirable for training purposes, since "the various Service Boards are engaged in continuous tests and experiments designed to improve and develop new equipment, methods, and techniques. In the past this information had been disseminated through the medium of the Service Journals, reaching the field only after a time lag. With the increasing tempo of mobilization training, however, it has become increasingly apparent that the service must be kept currently and more expeditiously informed of new developments if the most efficient results are to be attained in the achieve-

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ment of training objectives."¹

The letter went on to suggest that Signal Corps photographic teams be stationed near the Boards most active in such experimentation, and engaged in those "activities...which are considered desirable for dissemination to the field." Such a solution was declared by The Adjutant General to be "entirely practicable."

The seven Boards allotted teams were:

Armored Force School, Fort Knox, Kentucky
Coast Artillery School, Fort Monroe, Virginia
Engineer School, Fort Belvoir, Virginia
Field Artillery Board, Fort Bragg, North Carolina
Infantry School, Fort Benning, Georgia.
Ordnance School, Aberdeen Proving Ground, Maryland
Quartermaster Motor Transport School, Holabird
Quartermaster Depot, Baltimore, Maryland.

The teams were to remain under the control of the Chief Signal Officer, but to be assigned indefinitely to the Schools and under local command. The probable subject matter was further defined as follows:

The purpose of these units is to expedite the production of short films of highly technical subjects which are difficult to describe in words, or for subjects that are very important and should be disseminated at once, such as the care and preservation of equipment.²

By July the letter of 2 May had been revoked. In the May letter it had been specifically provided that "depending upon the development of the subject they portray, these films will be replaced from time to time by revisions. They will be withdrawn from circulation, however,

¹ TAG to CSigO, 2 May 1941.

² Italics are the writer's.

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when their subject matter has been incorporated in permanent War Department manuals or training films." The films were to be called War Department Film Bulletins.

There evidently had arisen a certain amount of confusion at the stations where the camera teams had been allotted, since two months later it was necessary for The Adjutant General to state:

It must be clearly understood that these teams are not to be confused with or allowed to interfere with the production of training films as announced in War Department letter, December 14, 1940 /sic/ Subject, "Preparation and Production of Training Films"....which must be adhered to.³

Also, a much more detailed prospectus was included to make clear exactly what a War Department Film Bulletin would not contain.

In the photographing of a demonstration a full coverage of the essential points cannot be expected which will be adequate for the training of personnel and neither can the action be timed in a way to make these films satisfactory for use as training films. In many [sic] cases scenes which should be described in detail for training film purposes will be presented as a flash, when the film of the demonstration or test is being made.

Complete directions were given for preparation of the films from initial request to final approval. The Office of the Assistant Chief of Staff for Plans and Training was to approve the necessity for distribution throughout the service, after the Chief of the Arm or Service had advised that the subject was of service-wide interest.

The decision to place photographic teams at the disposal of the Boards solved the question of how to inform the members of the Army

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TAG to CSigO, 11 July 1941.

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on the newest development in our military growth and proficiency. But of course the desire to study the foreign troops in action required the purchase of the footage devoted to such subjects from newsreel companies.

In a survey made for the Chief of Staff in November 1941, it was found that:

Many officers requested War Department distribution of newsreel film, showing the methods, equipments, and techniques of other armies in actual warfare....It was intended that this material be distributed to the service as Army newsreels to keep officers visually informed of matters they now know about only through the columns of the Service Journals. Material for several such newsreels has been assembled but not distributed....it was also the intention to purchase and edit material pertaining to actual combat in Europe and release this in Army newsreel form to the Service as a means of stimulating combat morale....both G-1 and G-3 were most desirous of accomplishing this as a part of training, and the Chief Signal Officer requested funds for this purpose in both the 1943 and First Supplemental Estimate in the 1943 budgets but the amounts were not allowed by the War Department.⁴

The Advisory Committee on Photographic Activities to the Chief Signal Officer felt at the time of the survey that there was a "distinct need in the Service for the circulation of such material" and recommended "favorable consideration of this project by the War Department."⁵

It is clear from the above that the May and July letters notwithstanding, the camera teams had not been able, four months later, to accomplish anything. The advice of the Committee was evidently

⁴ Report of the meeting of the Advisory Committee on Photographic Activities, 4 November 1941.

⁵ Ibid.

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taken since the first bulletin was issued in November shortly after the meeting. By 15 February 1942, there were 15 of these short, timely films available through the usual film library channels.

The production of newsreel-type films was solely the responsibility of the Training Film Production Laboratory at Fort Monmouth at this time. Not until the sixteenth film bulletin, approved in March 1942, did foreign military action become available for study on film.⁶

After the activation of the Signal Corps Photographic Center in May 1942, all film bulletin activity, except that performed at the Service Board locations, was transferred to Long Island City. By the end of 1943, 110 film bulletins had been completed and approved.⁷

The most popular of these dealt with the major German campaigns: Poland, the Low Countries and France, and Russia; with our troops at Buna, and New Caledonia; with enemy and allied equipment and tactics. New material and methods of operation were circulated throughout camps and training posts by means of the film bulletins.

A newsreel is essentially entertainment; although it deals in facts, it tries to purvey information in an entertaining form. The film bulletin of the Army Pictorial Service, on the other hand, is informational, but it tries to teach a lesson at the same time.

⁶ This was the "Battle of Crete" produced from captured German film.

⁷ Status Report, SCFC, 31 December 1943, source for production data in this chapter.

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If an invasion scene is shown, there is no "pointing up" of special shots; the sequence is left strictly alone to tell its own story, although the lessons to be drawn from the action are noted in the narration. In the bulletin on the invasion of Crete, a wholly successful German campaign, German film is used with the sound track of music and commentary produced by the Army Pictorial Service.

In this film, to take an example, the Nazi invaders are shown taking cover under every available shrub, rock and cliff. The spectator cannot avoid noticing this. Moreover, the narrator takes time to mention it specifically. The impression is indelible. These are the German soldiers, the same men that will face the soldier audience when it goes into battle, and here in detail is what the Germans do in combat. Film bulletins make their point and stop. There is no text-book approach.

In March 1943, film bulletin procedure was standardized for the Army Service Forces. "Subject matter of general interest to troops dealing with new equipment, methods and techniques" is required.⁸ Each would bear the same initial approval as a training film from the higher echelon.

The introduction of the War Department Historical Films has relieved the film bulletin makers of some of their responsibility with regard to foreign military activities, since both German and Japanese

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Memo fr Major R.N. Walker to all technical services, ASF, 12 March 1943.

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tactics and equipment can be studied from combat photography taken by American Signal Corps photographers.

More and more film bulletins are being made from existing footage.⁹ The distribution reports compiled at the Signal Corps Photographic Center give evidence of the popularity of film bulletins. They are used for orientation and for providing knowledge in a new field, or in a field related to the specialty of the soldier-audience.

B. FILM STRIPS

Ever since the Army has been interested in visual training aids, it has used the film strip. This device is an improvement on the familiar lantern slides because the individual still pictures are developed on a continuous strip of film.

Film strips have been made at the Training Film Production Laboratory at Fort Monmouth; at the Signal Corps Photographic Laboratory at the Army War College; and they are prepared now either at the Signal Corps Photographic Center, or at the school needing them.

Teaching experience has shown that where a student can compare the way he performs an operation with the correct method, his ability to learn is notably increased. The Army instruction program provides for this with film strips. These series of pictures showing the sequence in an operation are the best example of this kind of instruc-

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Ltr fr Col. K. B. Lawton to Lt. Col. R. C. Barrett, 24 June 1943.

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tion. A student can study the picture on the screen, and see just where his actions have failed to create the proper situation or result. The photography is good, since clearness is required, and the prints must be well matched as to exposure and finish throughout the strip. Of particular value are the retouchings made by artists. In this way the most important part of a picture can be brought out. Glare can be smoothed out, and the part of the picture that needs to be noticed thrown into sharp relief. There remains for the student no eye-wandering. He focuses immediately on the relevant object in the frame.

Comparable to the lantern slide lectures of travelogue fame, a film strip may show in a series of pictures a whole sequence of operations or techniques. The film strip is used when photographic presentation is effective but motion is not essential to understanding. Film strips are cheaper and are made more quickly than training films. They can be shown under more varying conditions, and can be stopped at any desirable point.

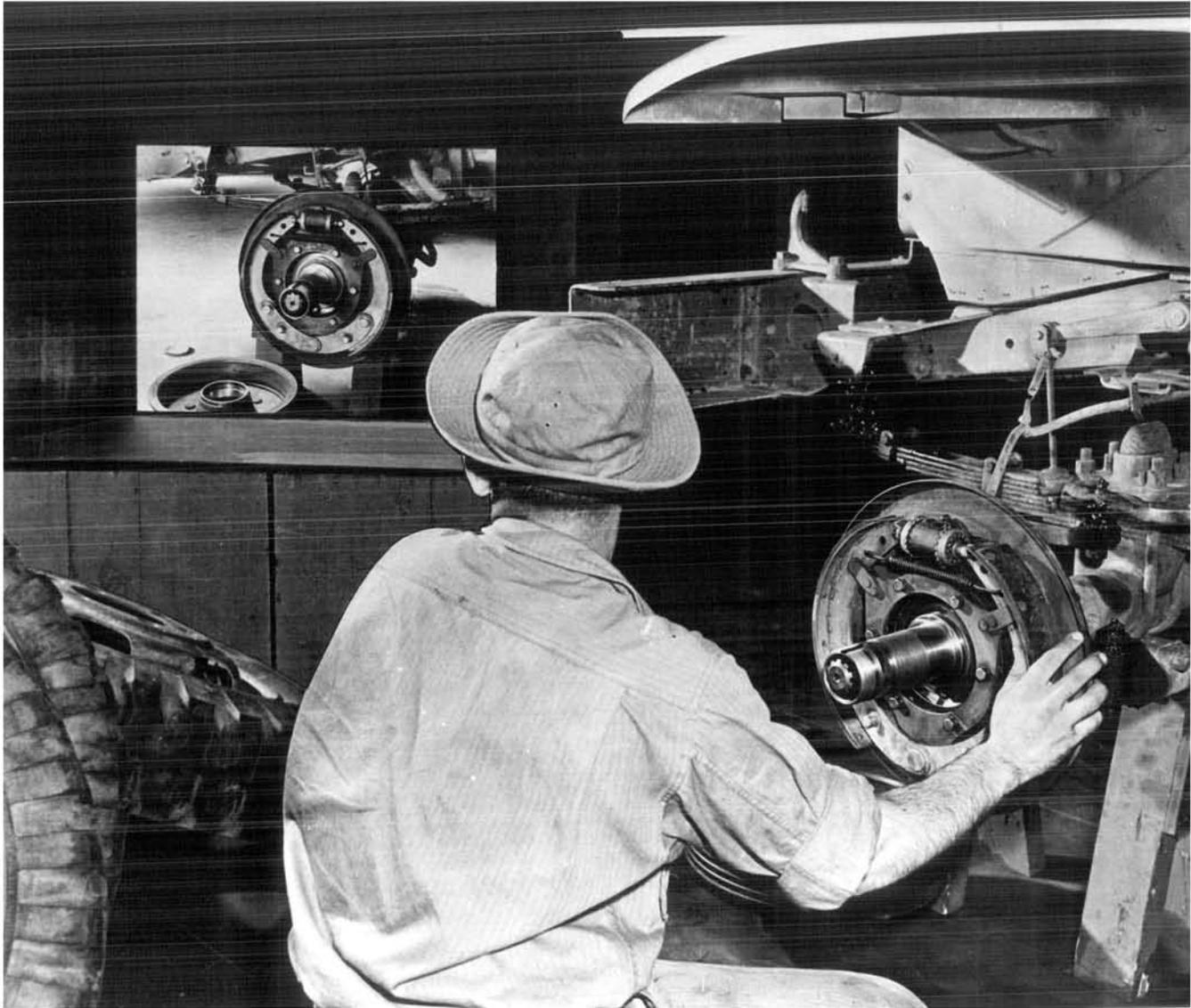
At the Signal Corps Photographic Center, the film strip activity does not correspond to training film activity. There are over 20 film strip preparation units at various service schools and training camps throughout the country, staffed by men trained at the Signal Corps Photographic Center and sent out to perform on-the-spot strip production.

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Figure 22.

STUDENT CHECKING HIS OWN MACHINE WITH FILM MODEL

The film strip has been stopped at this point and the trainees are comparing the state of the machine before them with that shown on the screen, thereby insuring 100 per cent accuracy in performance and result.



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Layouts are made for the photographers to follow and then production is begun. Photo-retouching may be necessary to bring out in better relief the part of the picture that should be focused on. After the retouching is done, a close-up of the important parts of the picture may be the next slide.

Some film strips have an accompanying record with narration. This requires added equipment and a more complicated job for the projectionist. The utility of the silent film strip lies in the fact that the individual frames may be kept on the screen until each student understands the point being made. Stopping a film strip is much easier than suddenly cutting off the projection of a motion picture at a given point. Also, the instructor has the advantage, in the silent film strip, of the flexibility he may need in supplying his own words.

The job of the Central Film Strip Branch at the Signal Corps Photographic Center has been to train personnel for the field film strip preparation units. These are located at Arm or Service schools and are fully equipped for their purpose. But all film strips are developed at the Signal Corps Photographic Laboratory in Washington.

The instructors at the Central Film Strip Branch are permanently assigned enlisted men, in some cases artists, in others, photographers or writers. Whatever their duties, they devote about 50 per cent of their time to their work and about 50 per cent to teaching students. Sixty-nine men have been trained at the Central Film Strip Branch.

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They have gone out to the field as artists, who will draw or retouch photographs, writers, who arrange the sequence of the pictures and write narration for sound strips, or photographers, who make the photographs which are the strip.

All supplies for field film strip preparation units are procured and distributed through the Signal Corps Photographic Center. Film strips required by the Military Training Division of the Army Service Forces are prepared in their entirety at the Center. A complete file of film strips is maintained there; sometimes an old picture can be used with a different caption to illustrate a new point, or part of a picture can be used in creating a montage.

Even though the film strip preparation units are located at service schools, requests for film strip treatment of segments of a school's curriculum must pass through the same channels established for training film request approval.

Film strips are particularly suitable in form for training overseas because a small cylinder $2\frac{1}{2}$ " x 2" contains a whole strip. A library full of strips would take up perhaps as much room as two typewriters.

At the beginning of fiscal year 1943 there were 359 film strips available for instruction use. A year later this number had arisen to 619. Six months later 271 subjects had been added to make a total of 890.¹⁰

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Status Report, SCPC, 31 December 1943.

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C. FOREIGN LANGUAGE TRANSLATION

By mid-1942 the United Nations were beginning to achieve real cooperation, at least in training subjects. The British Army training program had utilized motion pictures prior to the European war. At the time America declared war on Germany and Japan, a few British training films were available in this country. One of them in particular, "The Interrogation of Prisoners of War", had been given wide circulation in Britain and was considered excellent in all respects by motion picture production personnel in our Army.

The Russians also had used film to instruct their millions of men in military techniques. The training film program of the American Army was not based upon expectations of help from our allies but there have been a number of adaptations made from British films. In some cases, it has been merely the commentary which needed changing to adapt the film for American military audiences. In others, the main scenes were left unchanged, but the connecting shots were remade.

About 1 June 1942 the War Department, through the General Staff, requested that sound tracks for certain training films be rescored in Spanish and Portuguese for shipment to Latin-American countries, and in Chinese for use by the armies of Chiang Kai-shek.¹¹ In November 1942, a request was made for rescoring in Russian, as well

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The Inter-American Defense Board and the Chinese Embassy, respectively, made the requests. Annual Report, CSigO, 1942, p. 328.

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as for the translating of Russian sound tracks to English. After the landing in North Africa, French sound tracks were needed for training the newly reactivated French Army under General Giraud.

Actually, however, it is only the Spanish, Portuguese and Chinese rescorings which have been completed. An obstacle to further production is the scarcity of qualified personnel. Pronunciation must be colloquial and understandable; a pleasing sequence and shading are appreciated by other nationals as well as by Americans.

The United Nations Training Film Library, founded 1 July 1942, is located at the National Archives in Washington, D.C. Well-attended showings are held of all films received from all the United Nations, and training officials from all the armed services of all the United Nations represented in Washington are invited.

The arrangements for rescoring into Spanish and Portuguese were handled by the Office of the Assistant Chief of Staff, G-2.¹² The Office of the Coordinator for Inter-American Affairs has conducted through the Inter-American Defense Board and the War Department all negotiations for Latin-American use of Army training films. The first showing of a rescored Spanish film was held 10 July 1942 in Washington. Military attaches and some officers from the Latin-American countries were present. The films were considered of value and the plan for rescoring training films dates from this time.

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Ltr fr AG/S, G-2, to CSigO, 12 May 1942. This letter requested the "experimental" rescoring which was screened and found valuable in July.

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The films have been released through the United States Military Attaches in the various Latin-American countries.

In 1944 a confidential survey was made to ascertain the extent to which the rescored training films were being used in the various Latin-American countries to which they had been sent as part of general Lend-Lease materiel. The survey, unfortunately, indicated that in only five countries, Argentina, Bolivia, Chile, Guatemala, and Mexico, were the films being given any sort of constant and systematized use.¹³ Mexico particularly has depended upon these films for help in building a strong and well-informed army.

The total production of Portuguese films was 116, of which 344 prints were made. Of the Spanish films, 154 were made, of which 1,629 prints were distributed. The cost of these films was approximately \$400.00 each; nine prints per film was the average made. One thousand four hundred four prints were sent to Latin-American countries and 225 to the Inter-American Defense Board and the National Archives.¹⁴

As a result of the survey, Colonel Kirke B. Lawton wrote to the Coordinator of the Inter-American Defense Board suggesting that:

A utilization officer be sent to the countries in South America now receiving Spanish and Portuguese films in order to study the present use and to recommend and establish a system of utilization and to train personnel to operate that system.

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In view of the political developments in Argentina and Bolivia, the good use to which American military instruction is being put appears in an ominous rather than a comforting light.

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Annual Report, CSigO, FY 1943, p. 469.

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In view of the cost involved and the small number of prints distributed, it is suggested that if steps are not initiated to secure increased utilization, consideration be given¹⁵ to abandoning the present Latin-American rescoring program.

However, the diplomatic consequences of abandoning such shipments of films were considered grave enough to justify the relatively small amount of money spent upon the rescoring program.¹⁶ It was further suggested that a better approach to the problem would be to send here young Latin-American officers for training in film instruction. "The cost of such training of the attending officers would be paid by the countries concerned."¹⁷ The further request was made that such officers might be interested in securing the services of an American officer in their countries.

Signal Corps facilities for producing films are never idle. There is always work to be done, and a great many films are still produced under the auspices of the Signal Corps by the commercial studios in California and elsewhere. Those facilities now devoted to rescoring activities could well be utilized for the usual Army production program, or for the rescoring of films into the languages of other than Spanish co-belligerent countries.¹⁸

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Ltr dtd 25 September 1943.

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Ind. fr Col. Edward H. Porter, Secy. Gen. of the Inter-American Def. Bd., September 1943.

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Ibid.

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Chinese rescoring is all done at the Signal Corps Photographic Laboratory, Army War College, Washington, D. C.

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The 26 films adapted from the British in 1943 contrast with the 19 films prepared for French soldiers, and the 113 Chinese projects. The interest shown in the utilization of rescored training films in South America stemmed from the production figures of Spanish and Portuguese films. Two hundred eighteen Spanish rescorings and 151 Portuguese were completed in the calendar year 1943. In some cases not only the sound track had to be re-recorded after being translated, but new animation was needed. Titles of parts of machines have sometimes to jump out at the audiences next to the part itself in an animated sequence. In 1943 there were more films made available for Spanish-speaking armies than there were training films made at Astoria. (This includes only films produced in their entirety at the Signal Corps Photographic Center, excluding commercially produced, donated, and adapted films). The total training film production for 1943 was 318. Spanish rescored films totaled 218, and 199 films were produced at Astoria.¹⁹

The suggestion has been made, if somewhat late, that the films sent to Latin-American countries should be correlated with the equipment being supplied. This obvious integration would relieve the Latin-American army schools of pictures dealing with machines and weapons available solely at the fighting fronts and in the United States.

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Status Report, SCFC, 31 December 1943.

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CHAPTER V

THE DISTRIBUTION AND UTILIZATION OF TRAINING FILMS

The distribution of Army training films has one purpose: to ensure the availability of the proper film in proper size for use by training officers when and where needed in the training cycle.¹

The degree of effectiveness of training films is proportional to the thought and care expended in their production, their availability when needed, a knowledge of their proper use in the training program and a continuous check on the part of high authority to assure that instructions as to their proper use are being followed.²

These are the requirements for the realization of the objectives of the entire training film program in the Army. Excellent films, even flawlessly produced, still do not teach unless they are projected on a screen in front of a class ready to view the lessons before them and unless there is an instructor present to prepare the ground for the introduction of the filmed material. Moreover there must be an instructor present who can answer the questions the films raise. The "availability of the proper film in proper size" is a most important part of the training film program.

The realization of these objectives is the long development. To say that training films had been adopted by the Army as accredited

1 Training Film Distribution, issued by the CCSigO, undated, p. 1.

2 Italics are the writer's. From the minutes of the meeting of the Advisory Committee on Photographic Activities to the CSigO, 4 November 1941.

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instruction aids even before the European war (since their use was provided for in the mobilization plans) is only partially true.³ The General Staff was convinced of the usefulness of training films but their decisions would have little effect unless training officers were able and willing to use films in teaching military subjects. In 1940 and 1941 more and more of the key men in service schools and Boards came to believe that films could shorten and strengthen a military training program. But training methods and the use of training aids were not the same throughout the Army notwithstanding certain directives from Washington.

The test of the training film program best occurs in a small classroom where one instructor supervises the learning of material by a limited number of enlisted men. In 1941 there were not enough films; there were not enough projectors, projection rooms, projectionists; not enough instructors knew how to obtain films; newly arrived films were not brought to the attention of training officers; there was no way of checking on what happened to a film when it left the shipping room of the Chief Signal Officer approved for instruction throughout the Army. No one knew whether it was used throughout the Army, or, if it was used, whether it had proved valuable.

Logically, the first emphasis was on increasing film production, since the emergency expansion of the Army was drawing in more and

³ See Chapter I, pp. 3-6.

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more men all the time. But it has taken too long for the distribution and utilization improvements to be adopted. There were too many months when the inclusion of training films in a training cycle was dependent upon local conditions.

By 1943 this had changed. There was no longer a moment when a training film was not accounted for. If in transit, records were available reporting when it should arrive; if newly arrived at a camp film library (called sub-library), then a preview time was arranged when the training officers on the post might view it to decide its value for their troops. If being used, the booking sheet would declare at what time it was removed from the shelf, by what authority, where it was being shown, and the number of enlisted men in the audience. If it had just been used, it would probably be undergoing inspection and cleaning. In 1943 there was a complete and careful record kept of each film produced by the Signal Corps. After two years of work to perfect the system, the training film program of the Army has become a success.

Soon after the first registration under the Selective Training And Service Act, The Adjutant General directed that one 16 mm. projector be provided for each reception center and one to each 3,000 men at a replacement center.⁴ Each division was assigned two pro-

⁴ TAG to all CGs of all Corps Areas, Overseas Departments and Exempted stations, 19 November 1940.

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jectors and each unit training center one. "Dependent upon the availability of funds, the additional allocation of two projectors to each division, and one to each separate regiment or organization of similar strength" was contemplated.

Orders for film went to the Chief Signal Officer, since his was the agency responsible for training film production.⁵ In February 1941, Corps Areas were directed to supply all tactical organizations within their limits with training films.⁶ By April sub-libraries on large posts were justified, since camp population had grown substantially.⁷ The final step in the film library sub-system was inaugurated in May, with the opening of auxiliary libraries. An auxiliary library maintains "those films constantly needed by a training unit for the exclusive use of that unit, thus eliminating inevitable conflict in booking the same film for several large and independent units."⁸

By the above letter, Corps Area Commanders were directed to keep all organizations within their jurisdiction "informed as to the

⁵ According to AR 105-260, dated 22 March 1940, the CSigO was to distribute, without requisition, one 35 mm. and one 16 mm. print of the final version of all training films to the Headquarters of each Corps Area. Upon requisition, prints were to be sent to schools and other distribution points.

⁶ TAG to Chief of Staff and all CGs of Corps Areas, Overseas Departments and Exempted stations, 3 February 1941.

⁷ TAG to Chief of Staff and all CGs of Corps Areas, Overseas Departments and Exempted stations, 7 April 1941.

⁸ Training Film Distribution, p. 3.

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availability of training films and the manner in which they may be obtained."⁷ But there was confusion within the Corps Areas, both among the training personnel who could have profitably used training films, and the administrative heads of posts. This confusion arose from a doubt as to responsibility for the films, which were both supply and training items. Despite the April letter, it was difficult to discover what new films were available, how to obtain them, for how long they might be kept, and where they might be shown.

On 21 May 1941 a letter was sent to all field installations directing that an inventory of all film on hand as of 31 May be sent to the Chief Signal Officer before 15 June 1941. It also stipulated that a form receipt be sent back to the Office of the Chief Signal Officer for each training film received at a central film library, whether located in Corps Area or Department.⁹

In the summer, the patent waste which was reducing the much needed training film program to impotence caused the Chief of Staff to request that a comprehensive survey be made of all training film distribution and utilization activities. Lt. Colonel Darryl Zanuck was assigned the task of determining exactly what visual aids were in actual use, and what that use signified.¹⁰ The conflict mentioned

9

TAG to all CGs of Corps Areas, Overseas Departments, and exempted stations, 21 May 1941.

10

Minutes of the meeting of the Advisory Committee on Photographic Activities to the Chief Signal Officer, 4 November 1941. The report on the survey had been submitted to the Chief of Staff on 26 August.

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above was phrased by the report of the survey, in this way:

Much of the confusion attending the present operation of the training film program results from the fact that the procurement and distribution of equipment are supply functions while the exhibition of films is a training function.¹¹

Training films were sent to Corps Areas and to sub-libraries where they were unloaded with other Signal equipment into the warehouse under the local Signal Officer. Films were found lying in corners under huge stacks of electrical equipment and other material completely unrelated to training or training aids. Even if an occasional instructor learned that films were piled in the signal property stores, he did not know the procedure for obtaining films. There was no guarantee that a projector could be found, or a man to inspect the films, the machine and the screen. In many camps, films were available but the equipment for exhibition was not. The duties of the local Signal Officer had nothing to do with the training duties of instructors. These fundamentals were obviously in need of clarification before the large-scale utilization of training films could be carried out as envisaged by the plans and training officers of the General Staff.

To the Inspector General The Adjutant General wrote:

In order to acquaint all training agencies with the manner in which training films may be obtained, it is...

¹¹

Ibid.

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desired that you inquire into the manner in which training film libraries are operating. Information is also desired as to whether or not local personnel understand how training films may be secured and whether or not adequate projection equipment is available to units.¹²

It was found that motion picture projection equipment was on hand in many training camps for entertainment pictures. The use of such machines for training was not expected, placed an undue burden upon them, and necessitated a great deal of record keeping. The projectors which had been allotted earlier in 1941 had been paid for from training funds. With the immediate expansion of the Army upon them, however, officers found it necessary to request that all projection equipment be used interchangeably. The Signal Corps voiced no opposition to the use of training film projectors for entertainment film projection.¹³

The surveys of the summer of 1941 showed that there was lack of understanding about the use of training films even where the mechanics of obtaining and projecting them were simple. Instructors would neglect the usefulness of a film or a series of films on the subject being taught, and then on a rainy afternoon subject their classes to hour-after-hour of film instruction. Too long were films shown only as part of an inclement weather program. There was little appreciation

¹²

TAG to IG, 7 Aug. 1941.

¹³

Colonel G. K. Sadtler to TAG 15 August 1941.

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of how much instruction is concentrated into 20 minutes of motion picture presentation. Yet twenty minutes is the optimum length for a training film because after that point the amount of material which can be absorbed decreases noticeably.

Obsolete films, those produced and approved before 1940, were often on hand in large numbers. Some instructors assumed that all films were suspect, since old films were not withdrawn from circulation. At the time that Moscow was in danger, and the Afrika Korps was calling the turn in Tripolitania, instructors could be excused for preferring no films to outdated pictures. And yet, at the same library where obsolete instruction was available, new films based on 1941 doctrine were frequently also available, but few classes ever saw them.

Training films were considered either ready-to-use courses of instruction, demanding little if anything from the instructor, or they were held to be of little significance. There have been many months of trial and error before the theory as stated by the producing agency, the Signal Corps, was generally accepted and put into effect:

Our experience in Army training films has been that the simple, straightforward technique of presentation is the most effective. It is not anticipated that films will ever do away with textbooks and manuals. Films are to be used as an aid rather than as a complete self-contained educational medium.....This combination of actual instruction and motion pictures correlated by an instructor has proved to be the soundest training method yet devised.¹⁴

¹⁴

Press Book, issued at the Signal Corps Photographic Center on the occasion of its dedication, 22 September 1942, p. 14.

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In some cases as late as 1942, and almost generally throughout the country in 1941, the theory of training films expressed above was completely unknown. The very names, let alone the teaching content of new films arriving at a camp, were rarely known to training officers at some camps. Or if they were known, the possible utilization of them was ignored by instructors. What was needed was coordination from the top, a system of distribution that would inform the potential users of the films of what they might expect in each new release, where they could obtain the films, and how they might use it.

The initial distribution of prints was ordered in September 1941 to be made direct to each film library in the country, one to each. This was done since it was considered essential "that all units receive information concerning [training films and film strips] as soon as they are available." It was further stated specifically that all officers connected with training "at all stations be promptly and adequately informed of such films as they become available."¹⁵

Local Signal Officers were to pass on to training officers (and there was in theory to be one officer at each station responsible for visual training aids) necessary information on training films:

It [was] believed that the titles [were] sufficiently descriptive of the contents of the films to be a guide to their possible use.¹⁶

15

Col. G. A. Sadler to Corps Area and Department Signal Officers, and Signal Officers of Exempted Stations, 4 September 1941.

16

Ibid.

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The Training Film Library Officer was directed to:

specifically inform officers charged with unit training on his post of new Training Films as they are released. He should arrange special showings of the films as soon as practicable after their receipt, not to exceed one week, to permit Unit Commanders and Plans and Training Officers to know their contents in detail.¹⁷

But the Training Film Library Officer almost never was exclusively that. The officer assigned to carry out the Chief Signal Officer's instructions usually had other duties; the spirit may have been willing to follow the procedures outlined in the letter, but one man could do so much, and no more! In "that twilight zone between the supply of training films, which is a supply function, and the use of training films, which is a command function," the Chief Signal Officer had delegated the responsibility for bridging the gap to officers harassed by other duties.¹⁸

Inadequacy of funds, which hampered Army expansion in every phase until 7 December 1941, brought the problem of teaching the correct use of training aids to the attention of the Assistant Chief of Staff for Plans and Training. Lt. Colonel Kenneth Lambert of the Army Pictorial Service on 1 December informed that office:

The present average distribution in the field.... has cost approximately \$2,000 per reel....It is expected that the field forces will require and order additional prints to the extent of at least 30 per cent of the initial distribution, making the cost \$1,800 minimum per reel....Total funds already earmarked....is \$747,000.

17

ibid.

18

Get 'em Into Action! prepared for the Army Pictorial Service, p. 13.
See Footnote 31.

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The letter went on to state in detail where the funds had been expended, and what was still expected of the Signal Corps before the end of fiscal year 1942. The alternatives were presented as follows.

Either:

1. Requests for additional sub-libraries serving the field forces would have to be disapproved,...or
2. The number of films at the Replacement Training Centers would have to be reduced below the minimum considered to be practical,...or
3. The stock of training films at the Corps Area Central Distribution Libraries would have to be reduced, thereby eliminating this source of service to smaller posts of the Army which have no local libraries.

None of these could be done without impairing the training program of the Army as a whole. Pearl Harbor however, served to provide emergency funds. The sudden shock of being attacked opened the country's purse to its defenders. ●

By October a detailed plan had been set up by the Office of the Chief Signal Officer estimating the library costs for systems of distribution based on units as small as the company (declared the "ideal" library basis). Graduated costs were presented for larger organizations within the Army.¹⁹

The Chief Signal Officer, a few weeks after the declaration of war, was directed to set up a Visual Aids Unit to be manned by experts from the field of visual education. These were to consult with the photographic personnel of the Signal Corps on proper

¹⁹

See Appendix D.

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Figure 23.

MODEL FILM LIBRARY LAY-OUT

Prepared for the Army Pictorial Service exhibit at the Army War Show, "Back the Attack", held in Washington, D.C. in September 1943. The square footage is exactly arranged to simplify procedure for users of the library and for the library staff. Notice the repair and maintenance rooms for projectors, film, and other necessary equipment. In the boxes standing on tables in the right back room are projectors. The cabinet behind holds film strips. At the front right all records are kept. The other rooms are self-explanatory.

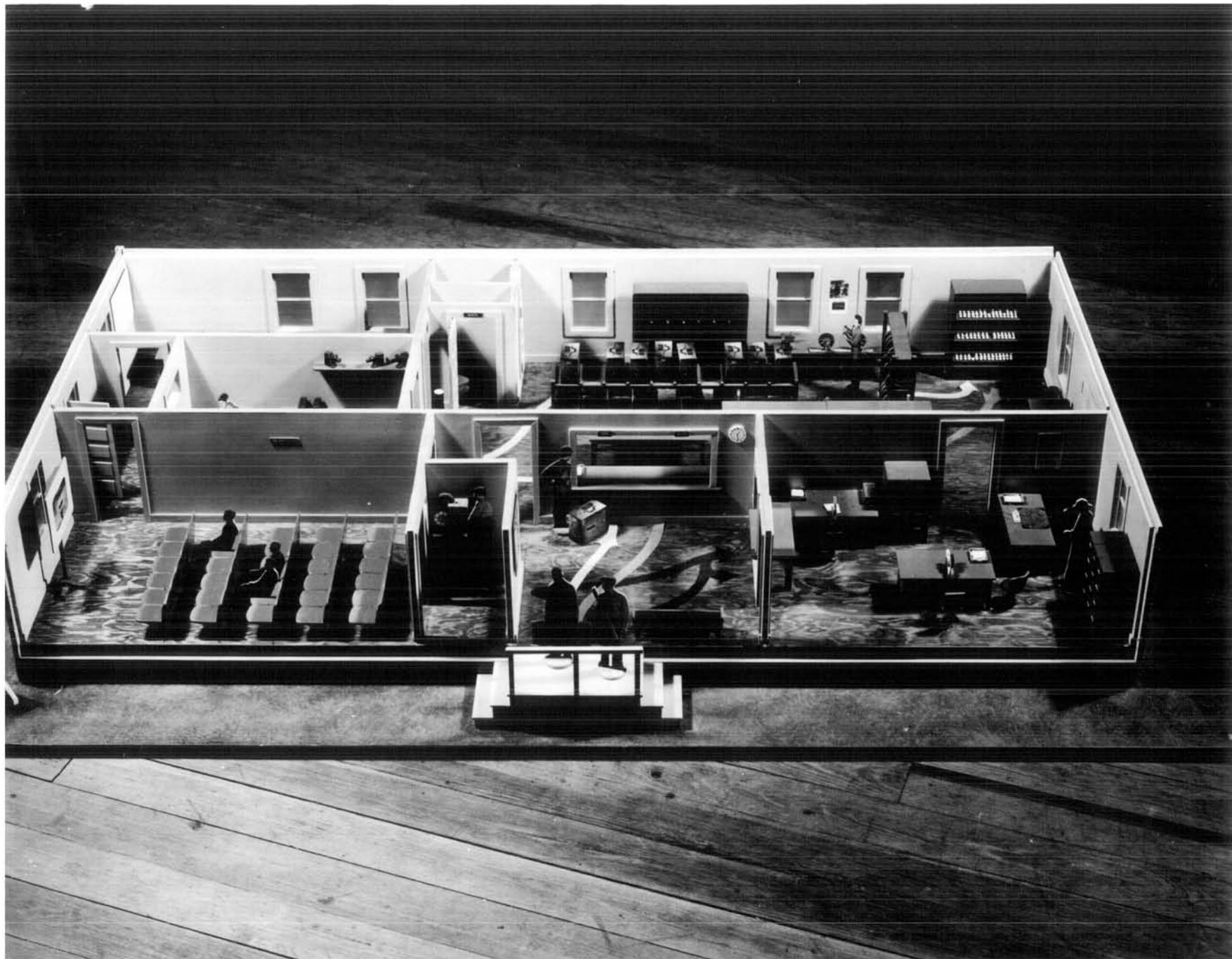


Figure 24.

TRAINING FILM LIBRARY

Showing the practical and efficient method of insuring darkness and ventilation in the projection room. The interior follows Figure 23, although the building served another purpose before being turned over to the Training Film Officer.



SIGNAL CORPS

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film distribution and utilization. The entire development of training films was now in the hands of the Signal Corps.

Full utilization of training films became the responsibility of Army Service Forces, Military Training Division and the procedures and methods were worked out in conjunction with the Chief Signal Officer and Army Pictorial Service. In the case of equipment at a post the presence of which was not known to those who originally requested, the responsible party was to be the Chief Signal Officer. When instructors misused or failed to use films, action to be taken to insure proper use was recommended by the local Signal Officer through Army Pictorial Service to Military Training, Army Service Forces.

During this period there was an opportunity for Army instruction methods to be tested on a larger and larger scale. The various films that had been made and were used, came in for comprehensive criticism from instructors and soldiers. The report on training film utilization submitted in the summer of 1941 had reminded the General Staff that "the selectee sees enough motion pictures to make him a critical judge, and training films must compare with the best motion picture studio product."²⁰ Instructors had no time to waste trying to explain what was supposed to make the entire lesson easier to understand. Training films were being used more and more: a constant rejustification of their usefulness. The "visual education idea" was being judged a sound one.²¹

20

Report of Survey, submitted to General George C. Marshall, 26 Aug. 1941.

21

Speech by Maj. General Dawson Olmstead at dedication of Signal Corps Photographic Center, 22 September 1942.

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In February 1942, the Navy Department and the War Department, not only anticipating joint operations but recognizing the similarity of parts of their respective training programs, arranged for the review of training films produced by both. Also at this time, the processing, review and distribution of foreign training films were assigned to one agency, to save time and money. All British training films came to be shipped through American military and naval attaches in London to the Office of the Assistant Chief of Staff for Military Intelligence, G-2, from which they were sent to the Chief Signal Officer.²² The interchange of training films has speeded the preparation of the American Army and Navy, as well as the Armed forces of our Allies.

As recruits and selectees swelled the ranks of the Army, more and more new film libraries were needed to supply newly activated or recently enlarged units. Transfer of the approval procedure on the establishment of new film libraries was made from the Office of the Assistant Chief of Staff for Plans and Training, G-3, to the Office of the Chief Signal Officer on 11 April 1942.²³

By the revision of AR 105-255, made 2 May 1942, the Chief Signal Officer was charged with the responsibility of distributing films to all agencies of the War Department. Air Force films were of course included.

²²

See p. 101.

²³

Summary Report, p. 467.

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Figure 25.

TRAINING FILM LIBRARY STACKS



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On 17 June 1942 the Visual Aid Section of the Office of the Chief Signal Officer was abolished. The new section activated immediately afterward was more appropriately called the Film Distribution and Utilization Branch. The twin responsibilities of distributing the films and advising training officers concerning available material were thus coordinated. These consisted in:

1. Providing adequate and centrally located housing of training film libraries and preview theaters.
2. Establishing systematic procedures for booking and inspecting films and film strips.
3. Developing a centralized control of projection equipment so that projectors might be adequately serviced and distributed to provide projection facilities to all units.
4. Training projectionists.
5. Advising training officers in available training films, film strips, and film bulletins, and effective methods and procedure of their use in the training program.²⁴

The necessary procedure of having all training officers preview newly arrived films to see for themselves of what benefit they might be to troops, was something difficult to establish. There were many places where the preview of films was opposed as unnecessary, since a short description was published first in the additions to Field Manual 21-6, and later in the exclusively-film Field Manual 21-7. Moreover, after June 1942 a brief synopsis was attached to each film

²⁴

Get em into Action! p. 30.

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as it was released. These facts made it seem, to the uninitiated, that a preview was superfluous. But it has not proved so. The officers who have taken the time to view personally all the films coming into a station have been able to coordinate film instruction with benefit to general training.

The obvious necessity for maintaining projection equipment has been almost as hard to establish. Projectors are machines, and the Army is well known for the respect and care it usually lavishes on machines, yet projectors have been assumed somehow to be able to continue operation without inspection, cleaning, or general maintenance. The lack of knowledge of the average training officer of the rudimentary facts and techniques connected with training film presentation has been hard to overcome.²⁵

The originators and producers of training films were sure theirs was a useful aid to Army instruction, because they were receiving much testimony to that effect. The training film makers were not simply enthusiasts. They had sound educational and military reasons for believing that their work was helping train the American soldier faster and more thoroughly. Yet there were many training officers who could not see the value of a training film, who considered that anything projected on a screen must be purely for entertainment.

Even many of the officers who recognized the worth of film instruction needed advice on how best to integrate motion pictures

²⁵

According to the Distribution Division, Army Pictorial Service.

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Figure 26.

CIRCULATION DESK IN A TRAINING FILM LIBRARY

(Cf. Figure 23)



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with the training schedule. The use of quiz sheets after the showing of a training film is one of the methods which has been found effective in teaching. It is not the only way to underscore the lessons of a film -- yet even this simple method has been challenged.

Controlled tests have been made under the auspices of Military Training Division, Army Service Forces, to determine exactly how much introductory and review exercises add to the value of training films. One such experiment involved three companies, all previously uninstructed in the subject of the film. One company saw the film along with other training films; the second group of men saw the film and were quizzed orally immediately afterward; as for the third company, the film was preceded by an introduction outlining the salient points of the film.²⁶

The same written test was given all three companies, and to a fourth that had never seen the film. It was possible, therefore, to compare the general increase in knowledge brought about by the three methods employed. From the answers of the uninstructed men, it was found that about 20 per cent of the information in the film was known to the average trainee, previous to all military instruction. (Since the subject was mapreading, this percentage was probably higher than it would be for other Army subjects). The results of the three instruction methods were:

Film instruction only added.....12 per cent of new material

Film plus review quiz added.....16 per cent of new material

26

These experiments were conducted at the Quartermaster Replacement Training Center, Camp Lee, Virginia, in October 1943, by the Research Branch, Military Training Division, ASF.

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Film preceded by introduction added..19 per cent of new material

By further tests it was established that "the influence of the supplementary exercise itself was about as great for the less intelligent men as it was for the more intelligent."²⁷ Moreover,

An introductory exercise preceding a film may increase the amount men learn about the film's subject matter in at least two ways:

- (a) By explaining and clarifying in advance some of the more difficult points to be presented in the film.
- (b) Simply by stimulating men's interest, motivating them to attend more closely to the showing and remember what they are shown.²⁸

In the case of this experiment, it was found further that combining the introduction with the post-film quiz did not add significantly to the amount the men learned. The results of introducing the film intelligently are nearly the same as when both an introduction and a review are used. But for other subjects, it has been found that both the introduction and the review are helpful.

The Chief of Engineers requested at the end of 1942 that a survey be made to determine how much use Engineer films had received during that year. And in December for the first time training film quiz cards were issued to be distributed with all films by the Chief Signal Officer.²⁹

²⁷ Value of Introductory and Review Exercises in Supplementing Training Films, p. 4. This is the ASF experiment referred to in Footnote 26.

²⁸ Ibid., p. 5.

²⁹ Issuance of these cards was preceded by months of experimentation with different types in the camps near Washington, D.C. These tests were carried out by the psychological advisors of the Chief Signal Officer, in cooperation with the Research Branch, MTD, ASF. See Footnote 26.

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Figure 27

INSTRUCTING A CLASS IN PROJECTOR OPERATION AND MAINTENANCE



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In May 1943, at the instance of Army Pictorial Service, (at that time directly under the Commanding General, Army Service Forces), a meeting of all the Plans and Training Officers in the nine Service Commands was called. The meeting was held in Toledo, Ohio, at the end of the month. There, recommendations were submitted by Film Distribution and Utilization personnel, Army Pictorial Service, for the standardization of all film library activities. As a basis for discussion, and as the embodiment of the proposals, a booklet, "Get 'em into Action!" was distributed. This consisted of pictorially attractive charts and plans for all steps in training film utilization.³⁰

The suggestions made at the conference were unanimously accepted by the training officers. They were realistic suggestions because they were based on the initial work carried on in the Eighth Service Command during the previous winter and spring. A Visual Aid Coordinator in the Eighth Service Command had toured every sub-library and had arranged for meetings where the benefits of realistic training film utilization were presented. It was largely a question of constructing buildings; providing adequate ventilation for screening rooms; minimizing the number of steps to be taken in the library; providing repair facilities and men for motion picture equipment; and standardizing reports on the use of films.

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At the Army War Show, "Back the Attack", held in September 1943 at Washington, D.C., a model library was part of the Army Pictorial Service exhibit. See figure 23.

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Until the May conference and the institution of complete reports to the Signal Corps Photographic Center, where the operating function of distribution has been located since 1 July 1943, it was not even generally known how many training film subjects, projectors, prints, or personnel a library serving 30,000 men should have in order to function efficiently to show perhaps 1,000 films a month!³¹

The first reports returned after the May conference were for the month of June 1943 and the first Film Distribution Report was published in September. Complete data is now available for the first time on which films are being used, how many men are viewing them, where the films are used. Intelligent decentralization has resulted in realistic requisitions for the training films at the time of their release. Shortly before official approval has been handed down, a 200-word summary of the new film is sent to all libraries. Through the nine Central Film Libraries all requests and reorders are channeled. An infinite amount of clerical time and of paper are thus saved.

All films received at a post are now previewed. When a training film is finished now, it is realistic to expect it to be seen by the

31

Get 'em into Action! p. 37. This was prepared under direction of the Illinois Can Company gratis for the Army Pictorial Service. The D'Arcy Advertising Agency prepared the format and information was checked by Army Pictorial Service personnel.

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Figure 26.

INSPECTING FILM



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men most ready for absorbing its lesson. Reserve stocks of prints are kept on hand at Central Libraries for emergency, and for supplying sub-libraries which may have varying numbers to serve.

The geographical aspects of film distribution and utilization have been mastered. This does not mean that in each library ~~inevitable~~ efficiency is guaranteed. It does mean that the framework for intelligent usage of proved instruction aids is now provided. The "availability of the proper films" began to be a reality late in 1943.

* * * * *

The training film is a tool of the various branches of the Army for turning civilians into soldiers who are competent, quick-thinking and ready to meet any situation. Yet the individual soldier whose Army job is producing films may not seem to be contributing materially to victory unless the importance of his role is recognized. The training film producers are shortening training time and making that time more effectively spent. The Army Pictorial Service of the Signal Corps is doing a job which must be done; a job which has earned for the film makers the gratitude of the whole Army.

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APPENDIX A

LETTER FROM CHAIRMAN OF RESEARCH COUNCIL TO VISION
PICTURE COMPANIES CONCERNING COOPERATION WITH TRAIN-
ING FILM PROGRAM OF THE ARMY, 25 OCTOBER 1940.

October 25, 1940.

The War Department has approached the Academy Research Council to assist in the production of a number of Training Films because of its past history of cooperation with the Signal Corps.

The attached memorandum explains the points involved, and includes an outline of the detailed plans for production.

I have today notified General J. O. Mauborgne, Chief Signal Officer of the Army, that the Research Council will be glad to handle this matter for the Army, and that the Army may count upon the complete cooperation of all individuals and companies in this program.

We plan to proceed immediately, and will undoubtedly call upon you and your company for specific cooperation as the program develops.

I am sending this memorandum to you and the production head of each of the other companies participating in the Research Council program, so that you will be entirely familiar with this matter. The immediate production of an increased number of Training Films for the Army is of vital importance, and this plan enables us to be of direct assistance in furthering the national defense program.

If after reading the plan, you wish any additional information, I will be glad to furnish it to you or your studio representative on the Research Council.

Very truly yours,

(signed) Darryl F. Zanuck, Chairman.

dfz:bt

* * * *

(MEMORANDUM ON PROPOSED ASSISTANCE BY THE INDUSTRY IN THE PRODUCTION
OF TRAINING FILMS FOR THE UNITED STATES ARMY)

RESEARCH COUNCIL OF THE ACADEMY OF MOTION PICTURE
ARTS AND SCIENCES

October 25, 1940

For the past 10 years the Academy Research Council has been co-operating with the War Department, in the training of 7 selected Signal Corps officers in motion picture production. Each of these officers has subsequently been assigned to the Signal Corps Photographic Division to produce Army Training Films.

Utilizing the services of these 7 officers, the Signal Corps last year produced 40 reels of Training Films on a variety of military subjects, and will this year (ending June 30, 1941) produce 100 reels of Training Films. These Training Films are used for instruction of troops, Officers, Reserve Officers, S. C. T. C., etc.

The Production of Training Films for army use is a highly specialized work, combining the principles of motion picture production with the particular requirements of visual education and specialized military training. These Films are made by Signal Corps personnel working under the direction of the 7 specially instructed officers.

With the advent of conscription, the Army's present primary responsibility is the training and instruction of troops. The small number of reels produced during the past years, and those to be produced during the coming year, are totally inadequate for training an army of a size now undergoing organization.

Army Training Films are all on specialized subjects, and consequently no individual soldier would ever be in a position to study all of the subjects included in the complete roster of training films. Upon the present basis the army has only sufficient training film material for less than 10 minutes per week of visual instruction for the year's period during which each man will be in the army.

Recognizing the possibilities for utilizing the resources of the motion picture industry to assist in the training of the army, War Department officials have had many conferences and considerable correspondence with the Chairman, Vice-Chairman, and the Manager of the Research Council, for the purpose of drawing up a specific plan whereby the industry's facilities can be used to increase the number of films available for training the expanded army.

While the Signal Corps has done an admirable job in producing training films with the limited facilities available during the past few years,

any greatly expanded production program is impossible without help from this industry.

The Signal Corps officers engaged in the production of these films are assisted by Civilian personnel secured through civil service channels, and by selected enlisted men. Production crews for making training films are sent to military centers and army equipment is photographed using soldier personnel for "cast."

Civil Service rules under which civilian employees are hired by the army, and rules governing the use of military personnel, have handicapped the Signal Corps production program, and have made it impossible for the army to secure the services of the best technical motion picture production personnel.

Technical help for the direction, photography, sound recording and editing of Training Films is not readily available, and great difficulty and long delay is encountered in obtaining competent personnel through Civil Service channels. Neither sufficient nor competent motion picture technical personnel can be obtained from military sources, and the army is consequently prevented from adequately expanding the motion picture production activities to meet current needs.

Adequate motion picture equipment is lacking and great delay is encountered in securing it under the slow and cumbersome procurement system now applicable to this type of equipment in the army.

The Signal Corps has had some experience in attempting to get training films made under contract by commercial producers. Inherent difficulties presented by the feature of "competitive bidding" have made it practically impossible to obtain satisfactory training films by this method. Under competitive bidding, small unqualified commercial producers cut their prices so drastically that legitimate organizations are unable to obtain the contracts. These small companies are not considered to be able to deliver training films suitable for the Army's purposes. Because of the difficulties of specifying a "satisfactory" training film, the army is very reluctant to attempt to use the "competitive bid" contracts for purchasing training films.

Army officials have suggested that arrangements might be worked out between the motion picture industry and the Signal Corps whereby the services and the facilities of the industry could be devoted to the production of training films in close cooperation. Inasmuch as the actual production of these training films is purely a technical production problem, the War Department has suggested that the Academy Research Council handle this matter for the industry, coordinating all branches of the industry for necessary assistance as needed, in accordance with the attached detailed plan of procedure.

Conferences with War Department officials indicate that the matter could be handled by a "negotiated contract" between the War Department, and the Research Council acting for the industry.

In general, the War Department is required to make purchases through competitive bids, but because of the long record of cooperation between the Research Council and the War Department, and because of universal recognition of the Research Council's standing and position as the technical spokesman for the industry, War Department legal and fiscal officials are unanimous in their opinion that a legal "negotiated contract" could be made between the Research Council and the War Department which would eliminate any necessity for competitive bidding.

War Department legal officials believe that if similar arrangements were negotiated with any individual producing company, or with any organization in the industry other than the Research Council, there might be some question as to the War Department's authority to negotiate these contracts without competitive bidding. War Department officials are unanimously of the opinion that the 10 years' past history of cooperation between the Research Council and the War Department justifies the elimination of competitive bidding.

The Signal Corps and the "Plans and Training Section" of the General Staff are anxious to proceed along these lines, in order to immediately enable them to utilize the industry's cooperation in the production of training films without the "competitive bid" feature of their usual procedure.

It is contemplated that the services of the officer personnel of the Signal Corps Photographic Reserve Unit, now being set up under the sponsorship of the Research Council, should be utilized wherever possible, in order to give these officers military experience.

A fund of \$200,000 is immediately available to make a limited number of films under the proposed plan, from which all costs will be borne by the War Department.

Because of the particular specialized military requirements of army training films, it has been decided by the War Department that as a matter of policy the army should prepare all scripts from which Training Films may be made through outside cooperation. Recognizing the need for greatly increased training films during the present emergency, the army is at the present time completing arrangements to assign about 30 officers from the various Branches, to prepare training film scripts.

It is also contemplated under this plan that the army would furnish one or more qualified officers to act as liaison between the industry and the army, to be assigned to assist in the production of each film. It has been suggested that Signal Corps officers who have had experience in training film production be assigned to this work, and if arrangements can be completed within the industry, the War Department is prepared to proceed at once along these lines.

(PROPOSED PLAN FOR PRODUCING UNITED STATES ARMY TRAINING FILMS WITH THE COOPERATION OF THE MOTION-PICTURE INDUSTRY)

1. All scripts will be written by army officers detailed to this work. Final approved shooting scripts will be furnished by the Signal Corps for production by the industry.
2. Each script will be analyzed and a production budget prepared by the Research Council.
3. The War Department will be informed of the production costs of each picture, in accordance with the script as written by the Signal Corps.
4. A "negotiated contract" will be drawn up by the War Department covering the production of each Training Film, and the necessary funds allotted by the War Department for its production in accordance with the budget prepared by the Research Council.
5. The necessary technical personnel will be engaged for the production of each Training Film by the Research Council, if possible from the officers commissioned in the Signal Corps Reserve and assigned to the Signal Corps Photographic Reserve Unit. (All personal services to be paid for from War Department funds allotted to the particular production.)
6. Necessary arrangements for the use of all military equipment and military personnel to appear in the training film will be made by the Signal Corps liaison officer assigned to Hollywood for this work. In addition to the Signal Corps motion-picture officer assigned to Hollywood as liaison between the army and the industry, the army will assign an officer from the Branch for which each production is being made, to act as technical director on that particular film. (For instance, for films on coast artillery subjects, a coast artillery officer will be assigned as technical director; for cavalry films, a cavalry officer, etc.)
7. The Training Film will be produced in accordance with the approved script.
8. Each Training Film will be cut by expert cutters engaged from the industry for this purpose, and paid for from War Department production funds. (The services of the liaison officer assigned to Hollywood will be available to assist in editing the picture in accordance with the approved script.)
9. A sample print will be furnished to the Signal Corps, which will obtain the necessary War Department approvals in advance of shipping the negative.

10. After the completed production has been approved, the negative will be transmitted to the Signal Corps, where the necessary release prints for distribution to Army training centers, etc., will be made.

APPENDIX B

LETTER FROM MOTION PICTURE PRODUCTION COMMITTEE
TO SECRETARY OF WAR.

ASSOCIATION OF MOTION PICTURE PRODUCERS, INC.

5504 Hollywood Boulevard
Hollywood, California
Gladstone 6111

November 26, 1940

Honorable Henry L. Stinson
Secretary of War,
Ammunition Building,
Washington, D. C.

My dear Mr. Secretary:

I know that you will be interested to hear that arrangements have been completed between Major General J. C. Mauborgne, Chief Signal Officer of the Army, and representatives of the motion picture industry whereby the facilities of the industry are being made available for the production of Army training films.

For the past nine years the Signal Corps has been assisted by the Research Council of the Academy of Motion Picture Arts and Sciences in their production of training films, under a cooperative program by which selected Army officers have been trained here in the studios in motion picture production.

The Research Council has been designated by the industry to work with the Signal Corps, and through the Research Council the facilities of the industry will be available to the War Department.

Detailed plans have been worked out with General Mauborgne under which the Signal Corps will prepare scripts for those training films the War Department desires the industry to make, and through the Research Council these pictures will be produced with motion picture industry facilities.

All of these pictures will be produced by the industry for the War Department on a nonprofit basis, and in this way the War Department will be given the maximum number of pictures at a minimum cost.

This work will be done under the supervision of the Motion Picture Defense Committee which is functioning under the direction of Mr. Will Hays, Mr. George Schaefer, and myself.

We are very happy to be of service to you in the National Defense program and trust that you will call upon us for any additional cooperation or assistance which we may be able to give you.

Respectfully,

cc Major General Andrews
Major General Mauborgne.

/s/ Y. Frank Freeman,
Y. Frank Freeman, Chairman,
Motion Picture Production Defense Committee.

REPLY OF SECRETARY OF WAR

ESK:EB

December 12, 1940

Mr. Y. Frank Freeman,
Chairman, Motion Picture Production
Defense Committee,
5504 Hollywood Boulevard,
Hollywood, Calif.

Dear Mr. Freeman:

Reference is made to your letter of November 26, 1940, in regard to the arrangements whereby the motion picture industry is making its facilities available for the production of Army training films.

The War Department is very much pleased by the continued cooperation which has been afforded, since 1930, by the motion picture industry through the Research Council of the Academy of Motion Picture Arts and Sciences in the training of officers who have been sent there from the Signal Corps to study motion picture production methods. Without this cooperation neither the present number of training films which are available nor films with quality and usefulness comparable to those now being produced could have been obtained.

Also, without this background of working with the motion picture industry, the War Department might not have had the background of knowledge with which to meet the present training film requirements.

The Research Council having been intimately acquainted with the work of the Signal Corps for the past few years appears to be the ideal group through which the resources of the industry may be utilized.

The patriotic interest which prompted the offer of the facilities of the industry in this cooperative program is evidenced by the offer to operate on a nonprofit basis. This concrete offer is very much appreciated.

Sincerely yours,
/s/ Henry L. Stimson
Secretary of War.

APPENDIX C.

WAR DEPARTMENT
The Adjutant General's Office
Washington

AG 601.1 (2-4-42)
MR-3-C

February 18, 1942

SUBJECT: Designation and Establishment of the
Signal Corps Photographic Center
Astoria, Long Island, New York

TO: Commanding General, Fort Monmouth, New Jersey
Chief Signal Officer

1. The Signal Corps Photographic Center, Astoria, Long Island, New York, will be activated by the Chief Signal Officer at the earliest practicable date and classified as an exempted station under his control.

2. Commissioned and enlisted personnel required will be furnished by the Signal Corps Training Film Production Laboratory and Company H, 15th Signal Service Regiment, Fort Monmouth, New Jersey, as directed by the Chief Signal Officer.

By order of the Secretary of War:

S/ Otto Johnson
Adjutant General

Copies furnished:

Commanding Generals,
Field Forces, Eastern Theater of Operations,
Second and Third Armies, Western Defense
Command, and all Corps Areas
Chiefs of Arms and Services
Divisions of the War Department General Staff
Publication Division, A.G.O.
Statistics Branch, G.S.

APPENDIX D.

ESTIMATED COSTS OF PLANS FOR TRAINING FILM DISTRIBUTION

1. The ideal plan for distribution of Training Films would give a copy of each pertinent film and a projector to the smallest organized training units of the Army, the company. This would permit the greatest possible flexibility in training and would require the least coordination with the training of other units. While it is believed that such a distribution is entirely unnecessary and unjustified, its cost is listed as a matter of information.

The average minimum cost of a library of 16mm Training films and film strips suitable for the needs of an average company unit of troops to be trained, with 16mm sound motion picture projector and film strip projector, is \$1,190.00. If it is assumed that each of the 2,909 battalions in the Army comprises four companies the cost of such a project would be \$13,850,000.00 (11,636 libraries).

2. If the battalion is assumed as the basis of issue, the cost will be \$3,470,000.00 (2,909 libraries).

3. If a library is furnished to each regiment where one exists, to each group of three battalions if more than one separate battalion of the same service is stationed at one point, and to each separate battalion, the cost will be \$1,980,000.00 (1,660 libraries).

4. If a library were furnished to each regiment and, in addition, one to each post for use of non-regimental troops at the post, cost will be \$1,560,000.00 (779 regimental units plus 531 stations, -- a total of 1,310 libraries).

5. If a library is established at each post with an additional one for each 3,000 troops above 3,000, the cost will be \$972,000.00 (828 libraries).

6. If a library is established at each post with an additional one for each 5,000 troops above 5,000, the cost will be \$800,000.00 (670 libraries).

7. If a library is established at each post with an additional one for each 10,000 troops above 10,000, the cost will be \$670,000.00 (564 libraries).

8. If a library is established at each post larger than 1,000 with an additional one for each 3,000 men, cost will be \$590,000.00 (495 libraries).

9. To establish a library at each post larger than 2,000 with an additional one for each 3,000 men, cost will be \$534,000.00 (448 libraries).

10. To give each regiment a 16mm library and each post larger than 1,000, a 35mm library for non-regimental troops, (replacement training centers would also be on the regimental basis, but one library for each two battalions plus one 35mm library for the post):

160 35mm libraries @ \$2,145.00	-----	343,000.00
897 16mm " @ \$1,190.00	-----	<u>1,070,000.00</u>
		\$1,413,000.00

APPENDIX E

PHOTOGRAPHIC PRODUCTION AND DISTRIBUTION

A. FILM LIBRARIES

1. Staff members of the Army Pictorial Service and Service Command Signal Officers in charge of film distribution participated in a conference, called by the Deputy Chief of Staff for Service Commands, on film distribution and library procedure at the Signal Corps Photographic Center, New York City, 4 - 6 November 1943. Attending the conference were representatives of the Marine Corps, Army Air Force, Office of the Deputy Chief of Staff, Service Command Division and the Training Division of Army Ground Forces and Army Service Forces. Special guests were present from the Canadian Army Staff and the Royal Canadian Air Force.

a. The fact was evident that the Toledo Conference, which had been held five months earlier, not only had stimulated an overall interest in the training film program, but had been directly responsible for striking improvements of the film libraries in the Fourth Service Command. This Command, besides establishing an efficient, uniform library procedure, procured eighteen Signal Corps officers on Temporary duty from the Officer's Replacement Pool at Fort Monmouth to implement the program. These officers have proven so valuable that they have been absorbed into the permanent allotment of the Command.

b. It was unanimously agreed that the program as perfected in the Fourth, and also in the Eighth and Ninth Service Commands, should be adopted by all Commands. A few of the standards defined for a film library on a post of divisional strength or greater include the following:

(1) An Army Pictorial Officer or qualified civilian in charge of the Library.

(2) Twenty-four hundred (2,400) square feet of floor space for storage, service area, and preview rooms in the library building.

(3) Systematic training of at least two (2) 16-millimeter projectionists per company by the library.

(4) Centralization of film strips as well as training films in the library.

(5) Continuous technical advisory service on film utilization to be rendered to all training personnel by the Army Pictorial Officer. This point was concurred in by the representatives from the Training Divisions of Army Ground Forces and Army Service Forces.

2. Following the New York Conference, requests were received from Service Commands for the assignment of thirty (30) Signal officers qualified in Army Pictorial functions to take charge of training film libraries. The new officers obtained practical experience by serving as understudies for ten days in film libraries in the Fourth Service Command. Informal reports from the Second, Third, Fifth, Seventh, and Ninth Service Commands, where these officers are assigned, show that they are rapidly improving the facilities and services of their libraries. New Training films are now shown for all training personnel. Film strips and projectors have been centralized in the libraries. A thorough course of projector operation has been put into effect. Catalogues are being prepared. These are a few of the important accomplishments reported by the officers during the first thirty days of their new assignment.

3. On 23 November, 872 sets of Training Film and Film Bulletin Digests, complete with subject index and catalogued according to Services, were distributed to the Central Libraries and Sub-libraries throughout the United States. These digests contain a complete summary of the subject matter of all Training Films and Film Bulletins made for the Army Ground Forces and Army Service Forces, together with a description of Army Air Forces subjects which have been approved for training purposes at Army Ground Forces and Army Service Forces installations. These looseleaf digests will serve as a permanent record and reference book on all subjects released by Army Pictorial Service.

B. FILM CIRCUITING

The Film Circuit Section each week selects three new feature-length pictures together with short subjects and arranges for the required number of prints to be made. These prints are then distributed to overseas theaters of operation where redistribution is handled by Special Services officers.

BIBLIOGRAPHICAL NOTE

The Summary Report on Visual Aids Activities in the Signal Corps from 4 August 1941 to 26 February 1943 is basic to any study of training film production. Also, since training films are produced at the Signal Corps Photographic Center, the central files and production files there as well as officers concerned in film production were consulted.

The location of the Historical Section Field Office of the Signal Corps is close enough to Long Island City so that it has been possible to go to the Signal Corps Photographic Center when occasion warranted.

The Washington, D. C. offices of Army Pictorial Service were visited only briefly, but the Chief Clerk of the Service has been most helpful in mailing documents. Also interviewed were officers at the Army Pictorial Service, and Visual Aids officers at Army Service Forces and Army Ground Forces headquarters.