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## Motion-Picture Production Accounts

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# Motion-Picture Production Accounts

BY H. S. BREWSTER

Producers of motion pictures may be divided into two general classes: those owning and operating studios and those renting studio facilities. Unless otherwise stated the following comments refer only to producers who operate their own studios.

## STUDIO ORGANIZATION

In order to appreciate the intricate departmentalization of a studio, the studio organization of one of the larger producers is shown below:

- Vice-president in charge of production (all studios)
- General manager of production (all studios)
- Managing director of production
  - Assistant to managing director
  - Associate producers (supervisors)
  - Scenario department
    - Writers
    - Reading department
    - Stenographers
- Executive manager
  - Comptroller
    - Accounting and auditing department
    - Timekeeping department
    - Medical department
    - Insurance department
  - Legal department
  - Casting office
  - Music department
  - Sound department
  - Projection department
- Laboratory
- Publicity department
  - Fan mail department
  - Still department
  - Retouching department
- Production manager
  - Directors and assistants
  - Actors
  - Art department
    - Glass shot department
  - Business managers
  - Estimating department

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Cutting department  
Camera department  
Studio manager  
Construction department  
    Carpenters  
    Plasterers  
    Plaster shop  
    Prop-making department  
    Scenic department (painters)  
    Laborers  
    Nurserymen and gardeners  
Mechanical department  
    Blacksmith shop  
    Foundry  
    Machine shop  
    Sheet-metal workshop  
Engineering department  
Electrical construction department (maintenance)  
Electrical operating department (set electricians)  
Set-dressing department  
    Prop department  
    Drapery department  
Special effects department  
    Miniature set department  
    Trick-shot department  
Location department  
Transportation department  
Research department (library)  
Prop-handling department  
Grip department  
Character-wardrobe department  
    Wig and make-up department  
Modern wardrobe department  
Title department  
Printing shop  
Purchasing department  
Refrigeration department  
Information and mail department  
Firemen  
Watchmen and special police  
Janitors  
Telephone and telegraph operators  
Restaurant

**PRODUCTION PROCEDURE**

Before considering the cost accounts of a studio it may be well to set forth in chronological order the various steps followed in the

actual production of a talking picture. There are, of course, certain minor variations in the production methods employed by the different producers, but in general the procedure is as follows:

The sources of material for a picture are original ideas and original stories developed in the scenario department or purchased outside, novels, short stories, and stage plays including operas, operettas, musical comedies and dramas. The reading department prepares synopses of all stories considered suitable for filming, which are then reviewed by the scenario department and studio executives at story conferences. After a story is selected silent and sound motion picture rights are acquired.

If a story is purchased it is submitted to a writer who adapts it to the screen by condensing or otherwise revising such action and dialogue as is necessary. This adaptation is known as a "treatment" and is usually reviewed at story conferences before being approved by the studio executives.

From the "treatment" is prepared a "continuity" commonly referred to as a "scenario." A continuity is a chronological arrangement of the action and dialogue into sequences, sets and scenes. A supervisor and a director are assigned to the picture and cooperate with the scenario and dialogue writers in the preparation and arrangement of the final continuity. Mimeograph copies are made from the continuity, each copy being referred to as a "script."

The supervisor, director and casting director cooperate with the production executives in the selection of the cast. An assistant director, cameramen and other members of the production unit are also assigned.

The assistant director prepares a "break-down" or "script analysis" of the continuity. A break-down sheet is prepared for each set showing the following information:

- Production title
- Page number
- Name and number of set
- Total number of scenes
- Scene number and short résumé of action of each scene
- Essential description for construction of set
- Essential props for dressing set
- Cast and wardrobe change
- Extra talent and bits
- Special effects required
- Music and miscellaneous requirements

The production department reviews the script, break-down sheets and cast selection and prepares a "cross chart," which lists the individual members of the cast down the left-hand side of the schedule with a column designating each set across the top. A cross is placed opposite each name in various columns to indicate the particular sets in which each member of the cast will appear. The purpose of the cross chart is to effect an economy in the engagement of outside actors not under contract, to provide a basis for arranging a "shooting schedule," and to determine when the outside talent should be placed under contract.

For example, the cross chart is first prepared with the sets in chronological order—however, a high salaried actor (who will be engaged on the basis of a weekly salary) may appear in the first few sets and one or two of the last with no appearances in between. The set columns are then cut into strips and rearranged so that all the scenes in which the outside actor appears will be grouped together in a consecutive order and thus shorten the period of time that the actor need be placed under contract. This procedure is followed for all outside talent as closely as possible until, in conjunction with other important factors, a satisfactory schedule is arranged for the photographing or "shooting" of each set. No particular consideration is given to the appearances throughout the production of stock actors under term contracts or of any actor who is guaranteed a specific amount for the picture.

The length of time required for shooting each set is estimated and a tentative shooting schedule is prepared from the cross chart.

After a study of the script, break-down sheets and shooting schedule, the heads of the various operating departments furnish the estimating department with individual estimates of the cost of sets, set dressing, wardrobe, extra talent, miniature sets and trick shots, location and electrical expenses, etc., which in turn are used in estimating total cost of the picture. A "budget" meeting is attended by the production executives and department heads, and the estimated cost is compared with the budget authorized by the home office. If the estimate appears too high the studio executives may decide to shorten the script or effect certain economies in the construction of sets, etc.

Interiors and exteriors built especially for a production are known as "sets." The art director designs the sets and plans are prepared by architects and draftsmen which, when approved by the supervisor and director, are submitted to the technical or

construction department. The sets are constructed in the order designated by the shooting schedule. Light platforms are built over each set to hold the electrical equipment. The amount of available stage space will determine the extent to which sets may be constructed in advance of the actual shooting of the picture.

The scientific research department constructs the miniature sets and produces the trick and process shots to be used in photographing the picture. General and special effects are developed by the use of explosives, fireworks, flares, smoke pots and wind machines.

Ceilings ordinarily are not built on interior sets but glass shots are used where the effect of a ceiling is required as in the case of a large ball room or café scene. Economies are frequently effected in the construction of exterior sets by painting roofs, etc., on glass placed in front of the camera.

The wardrobe designer designs the special costumes that are to be made in the studio and authorizes the purchase or rental of any other costumes, uniforms, etc., required by the cast for all changes of wardrobe. In the case of a picture depicting scenes in foreign countries or certain periods in history, the wardrobe designer may confer with the research department as to the modes and styles of dress. In the case of an ultra-modern picture it is necessary to anticipate the styles as far in advance as possible, as several months may elapse after the completion of a picture before it is released and the costumes must not appear out-of-date.

If theme songs are to be featured in the production, the musical composition and lyrics are composed and written by the music department or, if a musical comedy or operetta is reproduced, the music rights to all copyrighted songs must be purchased. The dance director rehearses all chorus numbers.

Usually the day before rehearsals start the set dresser will supervise the arrangement of the props on the set and the hanging of the "drapes." The following are considered props:

Rugs, carpets, etc.  
Furniture, pictures, statuary, etc.  
Electrical fixtures  
Shrubs, plants, trees, lawns, etc.

The prop department furnishes such articles as are in stock suitable for dressing the various sets and the remaining props are purchased or rented. Most of the larger studios maintain a department to build special furniture, statuary, etc., required.

The head electrician is responsible for the lighting of the sets. Rifle, spot and overhead lights are aligned in a row around the top of the set on the light platforms or are suspended overhead, while the larger incandescent lamps are placed on portable light platforms or are otherwise moved into position.

The chief sound technician or the "head mixer," who is responsible for the blending of all sound, supervises the placing of the microphones and the leads which connect them with the portable mixer's booth and the channels leading to the recording equipment. The most up-to-date sound studios have a "cross patch" panel board permitting the connecting of any one of the various sound stages with any one or more of a number of recording rooms.

Certain phases of the continuity may call for sequences to be taken "on location." All sites selected for scenes other than on sets built at the studio are considered locations. The location department selects the sites subject to the approval of the supervisor or director and secures licences or permits if public property is to be used, and agrees upon rentals with owners of private property. The transportation department furnishes trucks and automobiles to haul materials needed for dressing the location set, cameras, portable sound equipment, etc., as well as the staff and cast. Arrangements are made for hotel accommodations and meals where the location is too distant to permit the company to return to the studio at the end of each day.

All preliminary work having been completed just prior to the opening date on the shooting schedule, the assistant director prepares and issues call sheets indicating the members of the cast who are to report and designating the description and location of the set upon which photography will commence, i. e., "interior of nightclub"—"stage No. 6." In addition to the cast the following members of the operating unit or staff report for duty:

- Supervisor
- Director
- Assistant director
- Second assistant director
- Script clerk
- Head or first cameraman
- Second cameraman
- Assistant cameramen
- Head electrician
- Electricians
- Set dresser

Head prop man  
Prop men  
Nursery men  
Stand-by painter  
Stand-by carpenter  
Headgrip  
Grips  
Wardrobe matron  
Hairdresser  
Make-up men  
Head mixer  
Mixer  
Microphone men  
Sound-maintenance man  
Recorder

The action and dialogue are rehearsed by the actors under the supervision of the director. If the set is a large one it is customary to use four or five cameras placed at varying angles. The lighting is tested and the head cameraman decides whether or not the lights are properly balanced over the spot on the set where the action takes place; if not, certain lamps are dimmed through the use of diffusers or others are intensified from certain angles by the adjustment of reflectors. In the meantime the head mixer tests the voices of the actors on the set and perhaps orders a change in the location of some of the microphones and adjusts the volume of each from the mixer's booth so that all voices on the set blend together without the predominance of any one.

With these preparations complete, the director calls "Lights—A. C.—turn them over" and the electricians flood the set with lights, the head mixer presses a button, flashing a green light as a signal to the recorders to turn on the alternating current, which "lines up" and locks the camera motors with the motors for the recording equipment. After an interval of a few seconds the recorder turns on the "D. C." or direct current which flashes a red light on the set and this is a cue to the characters in the scene to proceed with the action and lines. The director may interrupt at any point for corrections in manner of action or tone and inflection in speech, by saying "Cut" or "N. G." and all action stops.

As the shooting progresses the script clerk prepares a report of the shots taken, indicating those which are considered "good takes" by the director. The assistant cameramen prepare reports for each camera indicating the number and footage of each



shot taken for each scene. All "good takes" are circled as a guide for the laboratory and are marked either for developing and printing or for developing and holding in reserve. Camera, take and scene numbers are punched in the film two or three feet after the end of the exposed negative on each shot. These numbers are used later to identify each section of film in the laboratory, so that "N. G." takes need not be developed. Some producers still use camera slates, showing name of director and production, scene and set number, which are photographed immediately following each sequence of action to identify it after the negative has been developed. This is the common practice where the work is to be done by independent laboratories.

The still cameraman takes one or two photographs of each scene. These are developed and used by the publicity department in the preparation of lobby displays, billboard advertisements, etc.

Concurrently with the photographing of the action, sound is recorded on waxes or sound track film, or both. Each recording room is in charge of a recorder and is usually equipped with at least two recording instruments. Where the sound is recorded on wax at least two are used for each shot in order that one wax may be used for an immediate reproduction, called a play-back, should the director deem it necessary. An advantage of this method is that if the recording of a scene is questioned, supervisor, director and principals can retire to a "play-back" room on the stage immediately after the scene is taken and listen to a reproduction of the sound as played from one of the untreated waxes, which enables the director to decide at once whether or not the scene should be retaken. The play-back is accomplished by having the recorder substitute a reproducing device for the recording mechanism.

The recording room is also equipped with a loud speaker which can be amplified as the sound is recorded. This enables the recorder to detect any high or harsh notes which may "break-down" the wax, and by looking in a microscope, stationed directly over the wax, the width of the sound track can be measured by a graduated scale. When the sides of the sound track are too jagged and abrupt, the needle can not follow the depressions after the record has been made.

As more than one take is usually recorded on a wax, the recorder prepares a recording report indicating the wax, production, scene and take numbers, which are also scratched on the wax.

The takes considered good by the director are so marked on the report for the identification of the sound department.

When the film in a magazine is entirely exposed (except for short ends) the camera is reloaded. All exposed magazines are delivered to the studio laboratory at the end of each day. The magazines together with the cameramen's daily reports are taken into the negative dark-room and the good takes are developed. Prints are then made of the takes marked for printing on the cameramen's reports.

Where sound is recorded on film the processing of the sound track is the same as in the developing and printing of the negative and positive film. The waxes on which sound has been recorded are delivered each day to a record plant of an independent manufacturer and the same process is followed as in the making of phonograph records. Briefly, the procedure is as follows:

The wax is painted with copper bronze dust and submerged in a solution of copper sulphate between copper anodes. By process of electrolysis a copper coating is formed on the wax. When of a proper thickness the coating is separated from the wax and is placed upon a copper plate which acts as a backing. This first coating is conversely convex to the depressions in the wax and is known as a master record. By reversing the process a concave mother or matrix record is prepared from the master record. The process is extended by developing a convex stamper from the concave matrix. The stamper after being backed and processed is placed in a hydraulic press and is used in stamping out records from a compound which has shellac as a base.

At the end of each day the studio executives, supervisor and director watch "the daily rushes," which are the projection of the prints made from the negative exposed the preceding day, simultaneously with the playing of the records stamped out. If the rushes are considered satisfactory, orders may be given "to strike" or tear down the sets on which all scenes have been completed. However, if unsatisfactory the director is instructed to retake the scenes where improvement in action, photography, etc., is deemed necessary.

The cutting and editing of the approved positive prints are completed before the negative film is cut. The cutter assembles the good takes into scenes and sequences by selecting the best camera shots. For example a medium shot of a particular take may be more suitable than a close-up or long shot. After the

shooting of the picture is complete, the cutter arranges the assembled sequences in a chronological order and this positive film is then referred to as the "first-cut" print.

When the cutter has selected the best camera shots making up a scene, the corresponding dialogue, music or sound effects must be placed on the sound track film or records. The sound track film is cut to synchronize with the positive print. In the case of recording on wax, the cutter prepares a report for the sound department indicating the beginning and end of each section of dialogue, etc., to be used in synchronizing with the first-cut print. This report is essential, as an individual record frequently has had three or four takes of the same scene, whereas only portions of certain good takes may have been used. Further, several records may have been used in recording the sound for a particular sequence.

The sections of dialogue, etc., selected by the cutter from the numerous records must be combined and recorded on a new wax to correspond with each reel of the first-cut print. This re-recording from the various records to a single wax is called "dubbing" and is accomplished by the use of a special machine. Records are prepared from the new waxes for further use in editing.

The first-cut print is then edited by the supervisor or studio executives and the original length of approximately 10,000 to 15,000 feet is reduced to a length suitable for release, by entirely eliminating or shortening the action of certain sequences. The release length of a programme picture naturally varies from that of a special feature production. Before the final editing is complete the picture may be previewed in certain local theatres for the purpose of obtaining the reaction of the audience to specific sequences. This enables the studio officers to retain in the final "cutting print," those portions of the picture which are most favorably received.

The negative is then cut to match the cutting print, and studio or sample, copyright and censorship prints are made. Final synchronized records or sound track prints are also made. This completes the work done by the production department in preparation of the domestic negative, although release prints may be made by the studio laboratory. The cost of the release prints is charged to the distribution department.

A foreign negative is then cut and synchronized with dialogue in English. Versions are now frequently made in foreign lan-

guages such as French, German and Spanish. The procedure followed is similar to that used in making the domestic negative.

#### PRODUCTION ACCOUNTS

The extent of the departmentalization of a studio determines to a large degree the classification of production accounts. All studios recognize the necessity of maintaining separate cost accounts for each production and, to facilitate this, a specific number is assigned to each picture. In general, the expenditures of the various studio departments which can be distributed directly are charged to specific productions and the indirect expenditures to studio overhead accounts. The charges accumulating in the overhead accounts are later apportioned to all productions on bases varying at the different studios. The methods used in making this apportionment will be referred to later.

The classification of picture costs maintained by producers is not uniform, the number of sub-accounts varying between studios from twenty to seventy-five. However, these sub-accounts may be classified under certain main headings as follows:

- Direct charges:
  - Scenario
  - Staff
  - Cast
- Sets:
  - Construction
  - Dressing
  - Lighting
  - Location
  - Effects
- Wardrobe
- Action and hand props
- Negative film and sample print
- Sound recording
- Music and sound effects
- Other charges
- Total direct cost
- Indirect charges:
  - General studio overhead
  - Total studio cost

Direct charges include certain expenditures incurred only for a specific picture. In addition to these specific charges there are salaries of writers, supervisors, directors, stars and stock talent engaged under long-term contracts, which must be apportioned

between several pictures. The various studios use different methods in allocating these salaries to productions. For example, each production in which the star appears may be charged:

- (1) With a proportionate amount of the yearly salary based upon the estimated number of pictures in which the star is to appear;
- or (2) With the weekly salary paid to the star during production together with the accumulated salary paid during waiting time;
- or (3) With the weekly salary paid to the star during production, plus a surcharge on a percentage basis estimated to offset idle or retaining time;
- or (4) With the weekly salary during production. (All salaries paid during idle or retaining time being charged to general overhead).

The first method outlined is the most equitable if there are no changes in the studio production schedule and the star actually appears in the number of pictures originally estimated. It frequently happens that a less number of productions than originally estimated is completed which necessitates a revision of the charges to the completed pictures or a redistribution of the charges to the productions not then released.

The second method is equitable when approximately the same length of time elapses between the star's pictures. Where a star remains idle for a considerable length of time and then appears in two productions with practically no interval of time between, the second picture should be charged with a fair proportion of the idle time which accumulated prior to the commencement of the first picture, so that each production will be charged with approximately an equal amount of retaining time or "suspense salaries."

The main advantage of both the first and second methods lies in the fact that all idle or retaining time of stars is allocated directly to the productions affected and is not absorbed in general overhead and distributed over pictures in which the particular star does not appear. In cases where a contract is terminated unexpectedly, the undistributed retaining time is usually transferred to general overhead. If the amount is large it would appear more equitable to adjust the cost of the unreleased pictures in which the star appears.

In actual practice numerous changes are made in the production schedule of a studio. For this reason the use of the third method

is impracticable, as too many revisions are required in finding an average surcharge rate which will satisfactorily offset all idle time.

The fourth method, although used by one of the larger producers, is the least equitable and is not recommended.

In verifying direct production costs, it should be determined that the treatment of all retaining time is consistent and that the method used is equitable. This question is of particular importance where the examination is restricted to the verification of the cost of a specific picture produced under the terms of a profit-sharing contract.

With reference to the charges included under the main headings of production cost the following comments will be of interest.

*Scenario:*

The scenario account is ordinarily charged with the cost of original stories acquired or the amounts paid for silent and sound motion picture rights to novels, short stories, stage plays, etc., and with the salaries of continuity and dialogue writers, production editors, technical advisors, translators, research workers, "gag men," stenographers, etc., actually engaged in the adaptation of the treatment and the preparation of the continuity or script. The salaries of readers are usually charged to scenario-department expense under general overhead unless they are assigned to research or other work on a specific production.

The verification of the charges to the scenario account should comprise an examination of vouchers, contracts and assignments covering the purchase of original stories or rights together with the clearances issued by the government copyright office. Contracts should be examined in support of all payments to writers and the distribution should be tested by reference to time sheets and the daily bulletins or assignment reports of the scenario department.

*Staff:*

Staff salaries are paid to the following:

- Supervisors
- Directors and assistants
- Script clerks
- Unit business managers
- Cameramen and assistants
- Company prop men, set dressers and grips
- Stand-by painters and carpenters
- Make-up men, hairdressers, and wig makers

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Special personnel:  
Technical advisors  
Dancing directors  
Fencing masters  
Company wardrobe matron

In addition to contracts, payrolls and cancelled cheques, the assistant directors' daily reports furnish information as to the principal members of cast and staff actually engaged on each production. "Start and stop" employment cards are prepared for all employees which are approved by studio officers and these should be referred to for weekly salary rates where formal contracts have not been signed or to determine date of termination of employment. Reference should also be made to any other statistical reports prepared by the studio departments.

### *Cast:*

The cast is usually subdivided as follows:

- Star
- Stock talent
- Outside talent
- Extra talent
- Musicians (when engaged to appear in scenes)

Actors, other than stars, under term contracts are referred to as stock talent as distinct from outside talent, engaged for only one picture. Extra talent and "bit" actors are sometimes engaged directly by the casting director, but the majority of the extra people are engaged through casting agencies.

In verifying the item of star's salary it should be ascertained through examination of the contract whether the artist is engaged for one or more pictures or for a period of time such as one year with options to extend.

If the artist is engaged for one or more pictures, the contract may provide a flat sum per picture as compensation, or a weekly salary during the shooting period with a minimum period specified of, say, from three to six weeks. Under the terms of certain contracts the star will receive, in addition to a flat sum, which should be charged to the cost of production on the studio's books, a royalty based upon a percentage of the producer's share of film rentals or profits from the release of the production. The latter item is not of course a picture cost and is one which is handled by the head office in the general accounts.

When the services of the star are obtained from another producer the compensation is usually fixed at a weekly salary during the production period, with a provision as to a minimum number of weeks. The lending studio may charge, in addition to the weekly salary, a flat bonus or an agreed amount to cover a proportion of the retaining time or undistributed salary of the artist (frequently for a period of three weeks).

Should the star be engaged by the studio for a period of one year, it will be necessary, as previously mentioned, to determine the basis used by the studio for apportioning the star's salary to the cost of production.

Payroll records, daily call sheets and production reports should be scrutinized in testing the distribution of the salaries of stars, stock talent, outside talent and actors playing small parts or "bits."

Daily extra-talent sheets designating the names of the persons employed for each production and the daily rate or wage are prepared by the casting agencies or the studio casting office. These sheets are used as a register and as a detail of extra-talent vouchers payable by stamping the date of payment opposite each paid item. Extra-talent sheets are supported by vouchers showing the name of the production, director and payee and the daily rate. A voucher is issued in two parts to each extra, one part being a cash voucher, which is retained by the casting office, and the other part being used by the extra for identification and as a studio pass. The assistant director signs the studio pass at the completion of shooting and it is exchanged for the cash voucher which is then approved for payment by the casting office. This cash voucher when properly receipted is honored by the cashier.

*Sets:*

The cost of constructing sets should include the salaries of art directors, architects and draftsmen designing and working on plans, in addition to all direct labor and material used in construction.

The labor of "striking" or tearing down sets should be charged to the production for which the set was constructed. In some cases sets are not struck immediately but are allowed to stand for possible future use. When an old standing set is used in a subsequent picture, the labor and material for set maintenance, such as re-vernishing floors, repainting walls and repairing damage by storm,



etc., should be charged to the set cost of the new production. If at some future date an old set is struck to make way for a new set, the cost of the new set should include the striking expense.

Elaborate and expensive sets are occasionally erected outdoors on the studio lot and, being of a semi-permanent nature, are allowed to remain standing indefinitely. When this type of set is such that it appears it may be used frequently or rented to other producers in the future, only a reasonable proportion of the cost should be absorbed by the first production and the balance should be capitalized under "standing sets" to be apportioned as used over subsequent productions.

Structures built on location, not used in or having direct relation to the action of the production but built more to complete the general effect or background of the location, such as trees, rail fences, cabins, etc., are usually classified as cost of dressing locations. Miniature sets and other construction for trick shots should be classified separately under the heading "effects."

Daily time-sheets and cards and foreman's and inspectors' reports should be examined in conjunction with weekly payrolls in verification of labor, while invoices and studio stores requisitions should be inspected in support of the material charged to set construction. Comparison of the actual costs should be made with the art directors' original estimates and with the budgets.

The cost of dressing sets should be charged with the salaries of set dressers and prop men while engaged in obtaining, placing and arranging the props on a set, and with the cost of all props and draperies purchased or rented especially for a set, other than action and hand props which are referred to later. When props are purchased primarily for a production but will have some subsequent value as prop equipment, the residual value may be estimated at the time of purchase, based on probable condition and usability at the completion of the picture, and the proper proportion of the cost charged to set dressing, the balance being capitalized as prop equipment. The costs of special props manufactured within the studio are ordinarily accumulated under certain jobs, and when completed are either charged out to productions or prop equipment. The cost of damages and replacements to owned or rented props is a proper charge to set dressing. Some studios maintain separate sub-accounts for prop labor (dressing), props purchased, props rented and props manufactured.

Most of the sets are constructed inside of sound stages, and are usually artificially lighted by incandescent lamps, although arc lights are still used on large sets where they can be placed at some distance from the microphones. The lighting costs ordinarily include the salaries of electricians, outside rentals of lamps, generators and other electrical equipment, etc. Some producers charge productions with a rental for studio electrical equipment, the corresponding credit being applied as a reduction of the indirect operating expenses of the electrical department.

With the exception of the salaries of staff and cast, all expenditures of a production unit while photographing sequences away from the studio are charged to location account, which may be segregated as follows:

- Rentals and cost of obtaining sites
- Labor and materials for dressing sets
- Transportation
- Hotel and meals
- Miscellaneous

As more than one site may be required, each location is identified by name and all charges pertaining to it are allocated specifically.

Cash is advanced to the unit business manager to defray the operating expenses of the company when it is out on location. When the cash advances are large it is customary for the unit business manager to open a bank account in the vicinity of the location and, wherever possible, disbursements are made by cheques, countersigned by a location auditor.

The verification of the location charges should include an examination of the expense reports and supporting data.

Effects include the cost of miniature sets, trick shots, and special processes obtained through the use of fireworks, flares, explosives, smoke pots, etc., in addition to the salaries and expenses of the scientific research department directly chargeable to negative costs.

*Wardrobe:*

All costumes for the actresses and all uniforms and special wearing apparel for the actors are purchased or made by the wardrobe department. The extra talent ordinarily furnishes its own modern, street and evening dress, while character wardrobe or other special costumes are supplied from the studio wardrobe stock or rented from outside costumers. The cost of cos-

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tumes made in the studio includes the direct salaries of the wardrobe designer and assistants. The wardrobe account is also charged with the cost of damages and replacements of owned or rented costumes, and with all amounts paid to actors in settlement of damages to their personal wardrobe.

### *Action and Hand Props:*

In addition to the props used to dress the sets, certain action and hand props may be purchased or rented. Props such as the following are considered action props:

- Airplanes
- Automobiles
- Animals
- Boats
- Motorcycles
- Food used in action
- Vehicles

Repairs, maintenance and operating expenses for these props should be charged to this account. However, the salaries of riders and drivers appearing in the scenes usually are included in the cost of extra talent.

Hand props include canes, suitcases, fishing rods, guns, etc., which are carried by an actor in certain sequences, but do not include sidearms, swords or other articles not used in the action of a scene but used more to complete a costume effect.

### *Negative Film and Sample Print:*

The cost of raw film and the laboratory charges may be subdivided as follows:

- Negative raw stock
- Cost of developing negative
- Positive raw stock
- Cost of printing positive
- Cutting and editing
- Special color processes
- Stock scenes
- Cutting silent version
- Special prints and duplicate negative

Loading cards or film requisitions and cameramen's reports indicate the footage of negative raw stock chargeable to a production.

If the producer operates his own laboratory, the cost of developing, polishing and examining the negative film exposed on each production is accumulated by individual job orders which, in addition to direct labor and material, include a proportion of laboratory overhead. Laboratory reports should be scrutinized to ascertain the basis of distributing overhead. Where the negative is developed and prints are made by an independent laboratory, invoices indicating the footage of negative and positive developed and printed should be compared with cameramen's and production reports.

The salaries of negative and positive cutters and projectionists when engaged on a production are charged to cutting and editing, with the exception of work relating to the cutting of the silent version on which a separate cost is maintained. Although the editing of the cutting print is supervised by the production executives, no proportion of their salaries is ordinarily allocated to this account.

The charges to the special-color-processes account include the salaries of special cameramen, the cost of technicolor or other color negative and positive raw stock and all developing and printing expenses incidental thereto.

The cost of any complete negatives purchased for certain sequences such as scenes of parades, fires, landscape and cloud effects, etc., are classified as stock scenes.

After the negative has been cut to match the final cutting print, a sample or studio copy print is made, as well as a duping or dubbing print, which may be used in printing a duplicate negative for foreign release. Some producers include the following prints in negative cost rather than as a part of the cost of distributing:

- Censorship prints
- Protection or copyright prints
- Feeler prints
- Preview prints

Feeler prints are used for the purpose of securing opinions of representative exhibitors.

*Sound Recording:*

Sound recording charges may be distributed to the following sub-accounts:

- Sound recording salaries
- Sound track film

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- Processing sound track film
- Waxes
- Processing waxes
- Repairs and supplies
- Re-recording from wax to film or vice versa

The sound-recording-salaries account is charged with the labor of mixers, recorders, technicians, etc., engaged in the recording of sound simultaneously with the photographing of a scene. The direct labor of the sound department assigned to the re-recording of parts from several records to a final wax synchronized with a cut reel of film is also chargeable to this account as well as the cost of editing and assembling a completed sound track reel.

The cost of the sound track film and its processing is compiled in the same manner as in the case of negative raw stock and sample print.

The waxes are processed in the record plants of outside companies and the charges include the cost of plating the master, matrix and stamper records and the cost of pressing the records required for the use of the studio sound department.

### *Music and Sound Effects:*

The segregation of charges for music and sound effects as maintained by one of the larger studios is as follows:

- Compilation of score
- Salaries of musicians working on score
- Salaries of musicians working on sets
- Mechanical sound effects
- Clearance and copyright of music
- Supervision salaries
- Operating expenses
- Distribution of idle time of permanent musicians

The cost of compilation of score includes the salaries of song writers, scorers, composers, arrangers or orchestrators, librarians and proofreaders.

The clearance and copyright account is charged with the amounts paid for music or song rights, licenses, library of congress and foreign copyright fees, legal fees, etc.

Supervision salaries and operating expenses are charged respectively with an apportionment of the indirect salaries and expenses of the music department. It is inconsistent to treat the overhead of the music department as a direct cost of productions—however, the matter is relatively unimportant.

All idle time of musicians, composers, song writers and orchestrators employed permanently is divided equally between productions actually being scored during each day.

*Other Charges:*

All other expenses directly chargeable to a production may be classified under the following sub-headings:

Transportation  
Titles and inserts  
Stills  
Camera expense  
Meals (other than on location)  
Insurance  
Miscellaneous

The item of transportation represents all such charges not relating to the cost of transporting a production unit and equipment to and from location. However, some producers distribute all transportation charges over various sub-accounts wherever a direct allocation is possible. For example, the cost of transporting studio and rented props is included under set dressing, the transportation of electrical equipment is charged to lighting of sets and the traveling expense (except to and from location) of the star are distributed to salaries and expenses of the cast.

The use of titles and inserts has been largely restricted to the titling of the silent version of a talking picture and these costs comprise the salaries of title-writers, the direct labor and material of the title department in preparing and photographing the title cards, and also the cost of any complete titles which are purchased.

The cost of stills is usually made up of the salary of the still cameraman, together with the cost of the negative and positive film and the charges for developing and printing.

Camera expense covers the cost of camera platforms and tracks when constructed for a specific production, camera slates, camera repairs, the rental of special lenses or additional cameras, etc.

Productions may be charged directly with the cost of negative floater, compensation or life insurance. Premiums on negative floater are usually charged to general studio overhead. In some cases, premiums on compensation insurance are included in the labor distribution, while the premiums on life-insurance policies covering stars or featured actors are usually charged to the salaries and expenses of the cast.

*Overhead:*

As previously mentioned all the indirect expenditures of the studio are accumulated in overhead accounts before being distributed to productions. There is even less uniformity in the classification of detail overhead accounts used by the producers than in the case of individual picture costs. However, all detailed accounts may be grouped under the following general headings:

1. Salaries and expenses of executives.
2. Indirect salaries and expenses of operating departments.
3. Salaries and expenses of other departments.
4. Retaining time of actors, directors, supervisors, etc.
5. Plant expense.
6. General expense.
7. Miscellaneous income.

The operating departments comprise all departments having a part in the actual production of a picture, such as the scenario, prop, wardrobe or cutting departments. Separate sub-accounts should be maintained for each of the various operating departments, which should be charged with the portion of salaries and expenses not directly chargeable to productions. Separate sub-accounts should also be maintained for the accounting, purchasing, legal and other "non-operating" departments.

As previously mentioned it is the practice of some studios to carry the undistributed retaining time or suspense salaries of actors, directors, supervisors, etc., (still under contract) as a deferred charge against future productions, while other producers charge all idle time to overhead. Irrespective of the method used in distributing retaining time there are always some charges which must be absorbed in overhead. Contracts are frequently terminated on short notice, or actors have not been employed for some time prior to date of termination of contract, so that the unabsorbed balances can not equitably be distributed to completed productions. There have been instances in which contracts have been terminated long before the expiration dates and settlements have been made upon the payment of relatively large sums of money. In these cases the amounts were transferred to the home office to be absorbed in the general accounts of the company.

Plant expense comprises:

- Power, light, heat, and water
- Repairs and maintenance
- Depreciation
- Salaries and wages of janitors, cleaners, watchmen, special police and firemen

The rates used by studios for depreciating buildings and equipment are in general very conservative. Since the advent of talking pictures, new sound stages have been constructed and the majority of the old stages either have been "sound proofed" or remodeled and used for other purposes. The following summary sets forth some of the rates in use at representative studios:

	Percentage per annum		
	A	B	C
<b>Buildings:</b>			
Stages . . . . .	10	8	8
<b>Other:</b>			
Stucco . . . . .	10	8	6-8
Concrete . . . . .	2½	8	4
<b>Equipment:</b>			
Automobiles and trucks . . . . .	25	25	20
Cameras . . . . .	20	25	10
Cutting room . . . . .	20	10	15
Electrical . . . . .	20	25	10-15
Fire apparatus . . . . .	20	10	15
Furniture and fixtures . . . . .	10	10	10
Laboratory . . . . .	20		
Library . . . . .		25	
Machinery and tools . . . . .	20	15-50	20
Projection . . . . .	20	20	10
Props . . . . .	33½	25	15
Restaurant . . . . .		10	
Sound . . . . .	33½	50	15
Still room . . . . .	25	25	15
Stock sets . . . . .	66⅔	50	
Wardrobe and draperies . . . . .	66⅔	50	15

General expense includes:

- Taxes, licences, etc.
- Insurance—compensation
- Insurance—fire
- Scenarios written off
- Charges to released productions
- Telephone and telegraph expense
- Legal and audit fees
- Stationery and office supplies



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Postage  
Inventory adjustments  
Miscellaneous expenses

The status of unused stories, books and scenarios should be reviewed periodically, and when the production executives decide that any material is unsuitable for use in future pictures, the cost of it should be charged to studio overhead.

Miscellaneous delayed small direct charges to released productions are usually charged to overhead and are not treated as an adjustment of the previously established studio cost.

All legal and audit fees incurred by the studio are properly chargeable to the cost of productions and should not be included in home-office expense.

Interest on studio obligations is not generally included in the cost of productions.

Any profit realized on the loan of employees to other producers, rentals of standing sets, electrical equipment, props, wardrobe, etc., are generally reflected in miscellaneous income which is treated as a reduction of the general expenses.

The distribution of general overhead is a moot question in studio cost accounting and is open to varying opinions and theories. The following are, however, the more commonly used methods of distributing overhead to pictures:

1. On basis of percentage of direct cost.
2. Actual overhead for each week distributed equally to the productions in process.
3. Total overhead for year distributed equally to pictures completed.

The first method, with numerous modifications, is the one most frequently used as it is generally recognized that there is a direct relation between the direct cost of a picture and the indirect expenses of operating a studio.

Special feature productions ordinarily use a greater proportion of the studio space and facilities and require considerably more of the attention of the studio executives than the ordinary programme pictures, which may be in process for almost the same length of time. For instance, a production with direct costs of \$150,000 may take four weeks to complete, while a superfeature with direct costs of \$600,000 may be completed in five or six weeks.

In determining a percentage to use, the overhead for a year is estimated by comparison with the actual indirect expenses of the

preceding period, and this amount is divided by the estimated total direct costs of pictures on the new production programme, based upon budgets approved by the head office. In making plans for a new programme, the head office usually decides that an approximate amount of say \$12,500,000 will be spent on a specified number of pictures, and budget figures are estimated roughly for each picture. If the total amount to be expended is estimated at \$12,500,000 and the estimated overhead is \$2,500,000, the overhead rate would be 25 per cent. of the remaining estimated direct costs of \$10,000,000.

The percentage adopted should provide a margin for safety and should be reviewed frequently. If it is ascertained that the ratio of the actual indirect expenses to direct charges is not in agreement with the estimate the rate should be revised accordingly. The estimates are also used by the studio officers in an endeavor to effect economies in the operation of the various departments.

The success of the percentage method of distributing overhead depends largely upon whether or not drastic changes are made in the original production schedule. The experience of one studio may be cited as an illustration of a drastic curtailment in the production schedule, where only fourteen feature pictures were produced as compared with thirty on the original programme, resulting in an arbitrary adjustment of a substantial amount to each of the completed productions. The necessity for such arbitrary adjustments emphasizes the fact that care should be exercised in determining the percentage to be used and that frequent revisions in the rate, based upon revised estimates of the studio expenses, should be made in order to prevent a large accumulation of undistributed overhead. The usual practice is to distribute any large accumulation of overhead charges equally to a number of pictures, but it would be more consistent to make such a distribution on the basis of a percentage of direct costs.

There are numerous modifications of the straight-percentage-of-direct-cost method. Some producers load the direct costs with the indirect expenses of certain operating departments, such as the sound or transportation department, while other producers load direct costs with the expenses of all operating departments, any under-absorbed or credit balances being carried forward against the next year's operation. The loading charges may vary, depending upon the specific department. For example, loadings for the electrical and prop departments may be made on the basis

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of rentals at outside rates, the construction department expenses may be allocated by a flat surcharge of 10 per cent., while the expenses of the still department may be distributed on a billing or sales basis. Mechanical supervision may be charged at a flat amount per picture. Further modifications are made by some producers, who charge a smaller percentage of overhead to productions made largely on location than to the pictures produced almost entirely within the studio. Other producers do not add overhead to the cost of stories or story rights on the theory that these costs were not incurred as a result of the operation of the studio. Where an original story has been developed within the studio it would appear proper to include overhead on such an item of cost.

One of the larger producers uses the second method, wherein all indirect expenses of the studio each week are distributed equally among the pictures then in process. The argument is advanced that this method precludes the accumulation of undistributed overhead, necessitating arbitrary adjustments, and also that the superfeature pictures are in production for a greater length and therefore absorb more overhead than the programme pictures. It so happens that this producer has not been operating a full twelve months each year and the overhead accumulation during the shut-down period is arbitrarily pro-rated between a number of pictures on the completed programme and certain productions on the succeeding year's programme. The relative length of shooting time required for programme, feature and superfeature productions at this studio together with the resultant percentage of overhead to direct charges may be compared in groups by the following summary of 35 completed pictures:

Group number	Number of productions	Total production cost	Camera days	Approximate percentage of indirect charges to direct charges
1	11	\$50,000 to \$145,000	11-24	48% to 130%
2	11	150,000 to 300,000	21-49	25% to 54%
3	3	300,000 to 400,000	25-32	17% to 24%
4	6	405,000 to 490,000	30-53	18% to 26%
5	1	500,000	42	20%
6	3	600,000 to 750,000	27-51	13% to 17%
	<u>35</u>			

If we compare groups 2 to 6 it will be seen that there is no apparent relation between the total production cost and the number of camera days or length of the shooting period. The resultant

average percentage of the total indirect charges to the total direct charges of the thirty-five productions was 27.197 per cent.

The foregoing table may be supplemented by the following information showing the fluctuations in percentages as between specific pictures:

Production	Total cost	Direct charges	Indirect charges	Percentage of indirect charges to		
				Direct cost	Total cost	Camera days
1	\$745,000	\$660,000	\$85,000	13.0	11.4	51
2	670,000	587,000	83,000	14.0	12.4	27
3	470,000	372,000	98,000	26.4	21.0	53
4	465,000	386,000	79,000	20.5	17.0	32
5	300,000	226,000	74,000	33.0	24.6	49
6	200,000	130,000	70,000	54.0	35.0	34
7	190,000	152,000	38,000	25.0	20.0	37
8	135,000	72,000	63,000	88.5	47.0	14
9	135,000	59,000	76,000	130.0	56.4	15

The fluctuations are due mainly to the difference in number of pictures in process at given periods. For example, production number 9 was produced at a time when no other pictures were in process, whereas only one or two other pictures were in process during the shooting of production number 8.

The method of distributing overhead equally to all productions completed during any one year is used by producers of short length pictures or where a series of pictures is produced at approximately the same cost. The basis appears equitable, as these types of pictures usually require about the same studio facilities and supervision and ordinarily are completed within the same length of time. The overhead is projected in the usual manner and the estimates are adjusted to the actual at the end of the production year.

Certain producers specialize entirely in the production of one superfeature at a time, which may require approximately a year to complete. All indirect charges during the production period are charged to the picture. Indirect charges subsequent to the completion of a picture customarily are distributed to the next production to be made, although in one company all indirect expenses during the year are charged direct to profit and loss.

In addition to the above methods now in use, some mention should be made of the camera-day basis, formerly in general use for distributing studio overhead. An estimate was made of the total number of camera days for the new programme, which was divided into the total estimated overhead for the year in computing an estimated rate per camera day. This rate was applied to each

picture on the basis of the actual shooting period. The main disadvantage of this method was that while overhead charges could be accurately estimated, the estimate of total camera days could not be revised with any degree of accuracy until near the end of the production year because there might have been variations in the shooting time of each picture or the production programme might have been shortened.

#### PRODUCERS RENTING STUDIO FACILITIES

The principal difference between the production costs of producers renting studio facilities and those who operate their own is that the renting producer has a relatively small percentage of overhead expenses. Charges for rentals covering use of stage space, facilities and equipment, sound stages and recording equipment are made against specific pictures as direct items of cost. Supervision of the studio operating departments is customarily provided for by charging the tenant a flat 10 per cent. on all labor and material furnished. Sets are either constructed specifically for the picture or a direct rental charge is made. The overhead of the renting producer consists mainly of administrative and office expenses.

Contracts frequently stipulate that the charges for the use of sound stages, recording and other equipment, etc., shall be based upon prevailing rental rates in Hollywood. Conditions in Hollywood are changing continually and in actual practice there are no rates which can be termed as prevailing. It is therefore desirable that definite contracts or arrangements be made to cover specific cases.

#### SCOPE AND GENERAL METHODS OF VERIFICATION OF PRODUCTION COSTS

The scope of the examination naturally depends upon the instructions received. They may call for:

1. Examination of production costs in balance-sheet audits.
2. Certification of cost of one or more pictures.
3. General examination of specific productions.

Most of the examinations of studio accounts are made in periodical balance-sheet audits, and consequently verification of production costs is necessarily limited to various tests. In addition to the verification of the other assets and liabilities of the studio

which tend to substantiate the general accuracy of the production accounts, the following specific tests should be made:

1. Production costs for specific weeks selected at random verified in detail.
2. The costs of specific productions verified in detail.
3. Certain subdivisions of costs verified in detail. The sub-accounts selected should vary from one examination to another.

In conjunction with these tests, which may be combined, all detail picture-cost statements should be scrutinized and all large and unusual charges should be verified in detail.

Some producers maintain daily picture costs as an integral part of the accounting system, while others maintain only memorandum daily costs. In the first case it is necessary to examine the detail daily cost records which greatly increases the necessary work of verification. As an example, one-sixth of all weekly salaries is posted each day. In the second case it is necessary to examine only detail production records, which are posted weekly. This practice permits more comprehensive tests to be made within a given period of time.

When verifying the cost of one or more pictures it is necessary to examine all charges in detail and, as previously mentioned, to ascertain the basis used in distributing retaining time of employees under term contracts, and all overhead charges. These productions are usually produced under the terms of contracts which may or may not be profit sharing. As a general rule these contracts are prepared by the home office and, while definite as to distribution charges, are indefinite as to the items and amounts to be included in production cost. The direct charges are not sufficiently defined. Rarely does a contract specify a maximum amount for overhead or even provide for a definite percentage to be applied on direct costs. In certifying picture costs in such circumstances, the certificate should be qualified with reference to all items of cost where any doubt as to the propriety exists.

General examinations are sometimes made of specific productions being released under distribution contracts, with actual or certain maximum cost figures stipulated as the turning point for percentages to be shared by producer and distributor. The instructions in such cases should be definite and the verification should comprise an analysis of all larger subdivisions of cost, the examination of all contracts and various comprehensive tests.