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Views on our Engineering Field

By John G. Frayne, *SMPTE President*

THE previous convention of the Society in Los Angeles was held just two years ago; and the one before that, in April 1953. We all recall the record attendance of more than 1300 at the 1953 meeting and the intense interest generated then in technological developments. At that time 3-D was going strong, stereophonic sound had just been introduced and anamorphic cinematography was being seriously proposed.

The October 1954 convention came after the demise of 3-D, but when there was great interest in the use of wide films and giant screens. It was also a time when stereophonic sound was apparently widely entrenched, anamorphic photography had been widely accepted, and the technological future looked bright.

But what is the technological situation in the industry as we meet here today? First of all, interest in experimenting with radically new motion-picture systems appears to be waning. Instead this seems to be a period of critical evaluation of the many innovations of the past three years. There is ample evidence of a tendency to reduce the number of different types of prints for the theater. We hear of black-and-white pictures with monaural sound replacing color pictures with 4-track magnetic sound. In addition, some of the new systems under discussion two years ago have not yet shown the progress anticipated. And the few new systems that are functioning provide product for only a minor fraction of the motion-picture screens of the world. The salvage value of many of these new proposals has been discovered *a posteriori* to be in the effectiveness of the larger negative area available in the camera with resulting higher picture definition on the 35mm print.

These conclusions have been reached, however, only after the expenditure of large sums of money to develop the necessary accessory equipments and to carry on the extensive testing programs associated with each system.

It appears, therefore, as we meet for the 80th convention of the SMPTE, that the industry is showing less interest in developing new wide-film and wide-screen systems. It is tending instead to re-emphasize the standard 35mm medium with whatever embellishments can be retained without adding materially to the ultimate print and projection costs.

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Now we may ask: what has brought about the apparent decline and fall of this brave new world of the motion picture industry. There are many contributory causes including several outside the engineering sphere. The first is probably more economical than technological. The increased costs of production and distribution of the many versions of prints demanded by the specialized processes have proved to be an almost insuperable burden to the producing studios. The resulting confusion and the increased cost to the theater owner to provide equipment to play any and all of the films offered to him have proved to be a powerful deterrent to their general adoption. One can imagine, for example, the reaction of a theater owner to playing 35mm, 55mm and 70mm in a single booth, with the added complexity of 4-track and 6-track magnetic stereo, optical and Perspecta sound, plus screen aspect ratios varying all the way from the old standard 1.33 up to a maximum of 2.55.

However, an equally important reason for the present need to pause and take stock lies in our hasty departure from a long adopted standard to a multiplicity of practices, set, in many cases, by arbitrary unilateral action. It seems, in retrospect, that the engineers and executives of the industry should have evaluated the long-range effects more carefully before introducing each of these new techniques. An effort should have been made to determine the value of each and every innovation with an eye toward eliminating those which could offer only a degree of current sensationalism, and which would serve only to inhibit and delay the orderly progress of the industry.

Technological progress is essential to the vigorous growth and healthy development of any industry. However, its effects can be weakened by failure to recognize the broad economic realities of the situation, and the far-reaching effects of technological developments on all phases of the industry. I have a few suggestions to offer which I believe to be of value.

First, it is my opinion that engineering should have a greater voice and influence in studio management circles. This might prevent the hasty adoption of new and untried ideas without first subjecting them to rigorous test and field trial.

Second, studios should encourage and extend the practice of having a competent and experienced motion-

picture engineer direct and coordinate all technical developments in each of the major motion-picture studios. Assisted by a capable staff, he should be responsible for the development and testing of all new, integrated motion-picture systems that cut across all lines of motion-picture technology regardless of rigid departmental boundaries.

The motion-picture industry has, with a few exceptions, been notably lacking in giving wholehearted support to this kind of activity, instead relying too heavily on the equipment suppliers to provide the necessary engineering know-how. The efforts of suppliers should be supplemented by the studios if a coordinated engineering program is to result. In these days of accelerated technological progress, the industry must take advantage of every development that will strengthen its competitive status in the world entertainment market.

Finally, engineering in the motion-picture studios should be divorced from the opportunism and expediency that govern the conduct of many of our studios in their continued search for new and novel means of entertaining the public.

In conclusion, let me say that the industry has reached an important stage in its advance where it must now carefully evaluate and fully digest the many innovations of the past few years. The motion-picture industry must and will resume the path of technological progress that has brought it from the flickers of the nickelodeon to the almost perfect reproduction accomplished in today's magnificent productions. This Society stands ready now, as it has always from its founding, to aid the industry with all the means at its command in its search for improved means of presenting its product to audiences throughout the world.