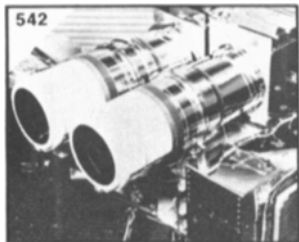
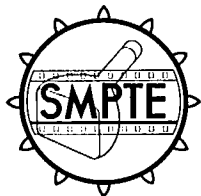


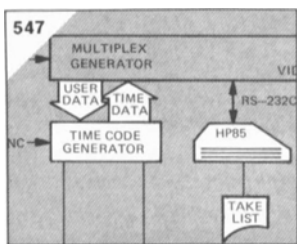


## HIGHLIGHTS



**Television Systems and Slow-Scan Vidicons on NASA Space Probes**  
*Michael M. Mirabito*

The television camera was and still remains one of NASA's scientific tools for the exploration of outer space. Unmanned probes have penetrated space to examine the moon, Mercury, Venus, Mars, Jupiter, and Saturn. As components of their scientific packages, the *Ranger*, *Surveyor*, *Mariner*, *Mars Orbiter*, and *Voyager* probes incorporated television subsystems with their slow-scan vidicons as their imaging sensors to photograph these bodies. This paper examines the use of slow-scan vidicons and their television cameras on NASA's unmanned space probes in the exploration of our solar system.



**Video-Assisted Film Editing System**  
*Michael Loran Kary*

The past few years have seen enormous progress in videotape editing. Computerized editing systems largely have eliminated the manual tasks and have made frame-accurate edits fast and easy. Film editing, on the other hand, has continued to be a manual process, involving a great deal of physical handling of the medium. There are substantial benefits to the producers of motion pictures if they take advantage of electronic editing techniques. Essentially, this means that while the original production medium and the final product are film, the editing medium itself should be videotape.



**A Videotape Editing System for Film Post-Production**  
*Arthur Schneider*  
*Donald Kravits*

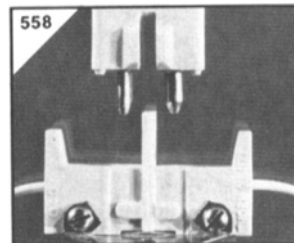
For more than 25 years, attempts have been made to make use of videotape in the editing of motion-picture film. One of the major obstacles has been the differences in frame rates between videotape and motion pictures. A new system has been developed that carries out the necessary frame-rate conversions with only a few minor changes to established laboratory procedures. Color positive or negative film material can be transferred to a videocassette work print. The software is designed to edit to 2-in or 1-in videotape for a television release, or to conform this film directly after the off-line editing is completed.

555 INDEX of REFRACTION	
SOLVENT	INDEX
PERCHLOROETHYLENE	1.504
TRICHLOROETHANE	1.438
TRICHLOROETHYLENE	1.478
TRICHLORO-TRIFLUOROETHANE	1.358

## Liquids for Use in the Full-Immersion Printing Process

*Ronald N. Haig*

Solvents that can be used in connection with the full-immersion wet-printing process are examined. A number of factors must be considered in the selection of a suitable liquid, and the following factors are discussed: index of refraction of liquid, effect of liquid on film base and emulsion, liquid mixtures, effect of liquid on print film in contact printing, effect of liquid on printing machine, removal of liquid from film after printing, liquid filtration and distillation, and toxicity and thermal decomposition.



**Use of Single-Ended Discharge Lamps in Modified Tungsten Halogen Luminaires**  
*Robert Hall*

Recent developments in single-ended discharge lamps have resulted in designs which exhibit improved stability and color uniformity, thus matching the convenience of tungsten halogen lamps. With rising energy costs, the film and television industries have shown an increased interest in the use of such metal-halide lamps because of their high luminous efficacy and resulting lower running costs than tungsten lighting. However, one of the major factors limiting the widespread usage of discharge lamps is the capital expenditure to cover the need for ancillary gear and custom-designed luminaires. To minimize these costs there has been a growing interest in converting existing studio halogen luminaires so that they can house these single-ended discharge lamps. A critical assessment is made of the possibilities and limitations of such conversions for lamps with ratings from 200 W to 2½ kW.



**Report on the SMPTE Montreal/Toronto/Rochester Mini-Conference April 23-25, 1982, Montreal**  
*Walter H. Winchell*  
*Version française par Richard Weil-Brenner*

In celebrating the twenty-fifth anniversary of the SMPTE in Canada, the Montreal/Quebec Section once again hosted the annual Mini-Conference for the Montreal/Toronto/Rochester sections. A total of sixteen technical papers were presented at the conference during the two-day sessions, complete with simultaneous French and English translation. All presentations were well attended, including the Saturday evening reception and buffet hosted by the Société Radio-Canada (CBC), the Sunday morning breakfast, papers session, and the historical museum at the CBC's International Broadcasting Centre (IBC).

*A l'occasion du vingt-cinquième anniversaire de la S.M.P.T.E. au Canada, la section Montréal/Québec a de nouveau été l'hôte de la Mini-conférence annuelle des sections Montréal/Toronto/Rochester. Au total, seize exposés ont été présentés au cours de la conférence de deux jours, avec traduction simultanée en français et en anglais. Les participants étaient toujours nombreux à toutes les activités, notamment à la réception et au buffet organisés le samedi soir par la Société Radio-Canada, et à l'ouverture de l'exposition historique au Centre International de Radiotélévision.*