

ABSTRACTS OF PAPERS FROM OTHER JOURNALS

Lasers Move In On Information Processing, M. H. Coden and F. W. Scholl, *Optical Spectra*, 15: 50-52, July 1981.

The laser, and the semiconductor laser in particular, is a unique energy source that can be used for a multitude of information

processing applications as well as for communications. Applications discussed in this article include: display systems, optical information storage, optical electrostatic printing, lithographic platemaking, and facsimile transceivers. Also dis-

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cussed is laser beam deflection, which is a key element in many laser applications.

Optics is now being used in formation systems applications for transmission, display, printing, and the intermediate storage of information. The laser has rapidly changed many areas of technology, and new applications continue to be developed.—AB

Digital Image Processing, B. R. Hunt, *Optical Eng.*, 20: 677-680, No. 5, Sept./Oct. 1981.

Digital image processing has been one of the more active fields at the interface between optics and computing. In particular, image displays have begun to assume many of the characteristics of general purpose computers, but with the full computational power of the system devoted to image manipulation. Where can the trends established in the past ten years be expected to take us in the coming years? The author tries to answer this question after first reviewing and summarizing the current state of digital image processing.

Digital VLSI Breeds Next-Generation TV Receivers, Thomas Fischer, *Electronics*, 54: 97-103, Aug. 11, 1981.

By early 1982, the first building blocks for a digital television receiver will enter the market, opening new possibilities for low-cost manufacturing and enhanced TV performance. Hundreds of discrete components now used to process the video, deflection and audio signals will be replaced by processor chips for each function and by an integrated control computer for orchestrating the transfer of data between them.

Bidirectional Optical Link, W. Koester and F. Mohr, *Electrical Communications*, 55: 342-349, No. 4, 1980.

Many communication systems require the simultaneous transfer of data in both directions. Examples are applications in the fields of cable television, subscriber lines, intercomputer links, remote control of television cameras, and military operations. Optical fibers are finding an increasing number of applications for the transmission of both digital and analog signals. Bidirectional transmission of information via a single fiber opens up new applications for optical systems. Problem areas with such optical transmission systems are the couplers, optimization of the link (especially with nonsymmetrical operation and crosstalk from the transmitter to the adjacent receiver).

Interactive Image and Graphics Display, D. Fraser, *Journal of Electrical and Electronics Engineering*, Australia, 1: 99-104, June 1981.

A review is made of graphics and image display devices, classifying them according to display method. Existing techniques and the reasons for their use are discussed, with reference to possible future developments.