THE LINK BETWEEN THE COMPUTER AND TELEVISION

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Abstract

Much discussion has been focused recently on "the home of the future. Making the home interactive is a goal of cable television operators to create new markets and increase cable revenues. Recent advances in computerized image processing components make such applications possible.

Teleshopping, Demand Electronic Knowledge, Municipal Image Data Bases, and other applications require the creation, storeage and distribution of a vast quantity of images. They need to be created inexpensively, recalled at random, and distributed easily over currently installed cable systems.

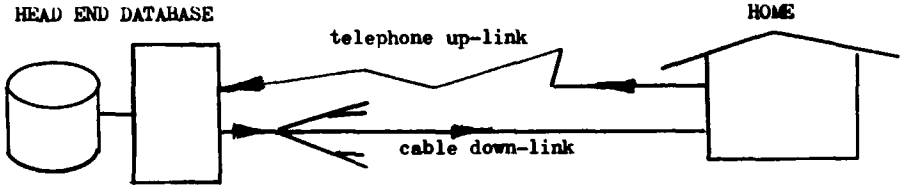
This paper describes new developments in inexpensive image processing components that use standard television and interface directly with inexpensive minicomputers. The author will present a video tape presentation showing the live creation of a Teleshopping catalog data base, and other applications along with a description of a home and municipal distribution system suitable for two-way interaction Demand Electronic Knowledge.

Three applications are demonstrated live:

1 SECURITY
2 IMAGE DATA BASE
3 TELESHOPPING

SECURITY on a real-time monitoring basis uses the future capability of full two-way video cable.

IMAGE DATA BASE and TELESHOPPING are here today with a telephone for inbound transmission and cable TV for outbound transmission. Although telephone lines are widely used for vidoetext services at present, cable TV offers an alternate delivery method. Its advantage is that it is broadband, which allows sophisticated graphics and photographs to be readily transmitted to a terminal screen.



Let's focus on TELESHOPPING.

Retailing is a $1 trillion market in the USA now, and direct marketing (catalog shopping and direct mail) is over a $100 billion market. Yet powerful social, economic and technical trends will significantly reshape the merchandising marketplace in the 1980's leading to shopping over home television...TELESHOPPING:

* over ½ of the women now work and have less time for shopping.
* the rising cost of gasoline will preclude shopping trips while preselling of name brands will make trips a luxury.
* cable operators are rapidly wiring the majority of American homes and doing so with excess channel capacity mandated by local franchise boards anticipating "two-way" services.
* Teletext and Viewdata are already accepted in England and Europe and are already generating significant retailing revenues. These services will explode shortly in America.
* the advent of home computers, television sets designed like friendly appliances, and declining prices of video components will create consumer demand for the home information network.

But two major problems remain...

1 FRAME CREATION
2 FRAME DISTRIBUTION

For TELESHOPPING to truly reach it's potential "information providers" must be able to easily create and edit literally many thousands of frames of information. European experience with Teletext and Viewdata supports the conclusion that plain text frames are not read. They have the problem... "How do you put the Sears Catalog in?"...and do so in the television media.

A second opportunity for TELESHOPPING is image distribution over cable TV. Industry experts agree that cable TV operations offer a significant market advantage to "information providers" with the capability to provide distribution of full images at high bandwidth. This will be 30 frames per second with addressable frame grabbers in the home.

The author shows how inexpensive image processing components and minicomputers are used in the VISIONtec system to address thest two major opportunities by providing frame creation and a frame distribution system.