

## WILL CABLE EVER BE READY TO DELIVER DATA?

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Although Huttonline was launched in 1983, formal planning began in 1981. It was at that time that E.F. Hutton made its decisions about transmission methods, primarily a choice between telephone lines or cable. In 1981, the two choices had their drawbacks:

### ABSTRACT

Cable has long held promise as a medium for two-way data services. E.F. Hutton & Company considered the use of cable for delivering Huttonline, its two-way electronic information service for clients. However, cable was not selected for a variety of reasons. First, there are few two-way cable systems available nationwide. Second, cable does not generally offer the ability to connect the user to a variety of information services beyond the headend host computer. And finally, cable has not taken steps to exploit the popularity of the personal computer as a home terminal.

- Cable was already showing that it could not afford the massive financial obligation of wiring new communities or upgrading existing systems.
- Telephone deregulation was coming, but the AT&T divestiture issue was far from clear, much less its impact on local phone service and rates.

### PHONE VS. CABLE

Of the two choices, E.F. Hutton judged telephone to be the better bet, since phone lines were already ubiquitous and were already providing an essential service, voice telephone. While cable had some clear technical advantages, the cable industry's inability to put together more than a handful of commercial two-way data transmission ventures, was judged to be a sign of the industry's unreliability.

THE CABLE PROMISE

There is little question that cable is technically an excellent medium for transmitting data. In either one-way or two-way transmission, cable systems can provide massive capacity, high speed, and high reliability. Somehow, however, the marketplace has let the promise of cable systems go unfulfilled. More than a decade after the FCC ordered two-way capability on all cable systems, few have ever put data services, one-way or two-way, into operation. The problem with cable as a medium for transmitting data is not technical; rather the problems are political and economic.

In retrospect, E.F. Hutton's decision to make Huttonline accessible by phone lines was a correct one. It is important to note that cable's few ventures in two-way data transmission have been primarily for business applications, not delivery to the home. Moreover, cable seems to be most feasible in point-to-point uses involving data transmission between two pre-determined sites, such as two computers. As a medium for connecting multiple individual terminals to host computers on a switched basis, cable has not been implemented in more than a handful of pilot systems.

### HUTTONLINE: E.F. HUTTON'S TWO-WAY INFORMATION SERVICE

In December 1983, E.F. Hutton & Company became the first major Wall Street firm to offer its retail clients an electronic information service -- Huttonline. It provides clients with access to a daily account status, research information, and electronic mail to and from their account executives. The planning and implementation of Huttonline provides a case study of how a leading service provider approached the problem of data transmission -- and decided against the use of cable.

### REACHING CLIENTS NATIONWIDE

E.F. Hutton has 500,000 retail clients across the U.S. These clients are the target market for Huttonline. Given the nationwide market for Huttonline, it is difficult to see a role for cable. Even in the few communities where two-way cable exists today (or might exist in the next five years) it would be difficult to justify developing a new business, such as

Hutonline, around such a fledgling medium.

Hutonline was specifically designed to be accessible by a variety of terminals from any location -- home, office, or "on the road." The ubiquitous nature of phone service matches well with this requirement.

Another requirement of Hutonline is the ability for a user to gain access to other information services without resorting to other terminal equipment. Cable has failed to crack the "credibility barrier" with the many information service providers necessary to make such connections possible.

#### THE NEED FOR GATEWAYS

Hutonline is a two-way service that allows clients not only to retrieve information, but also to send information, such as electronic mail to their account executives. To accomplish these tasks, Hutonline requires a two-way connection between the user's terminal and the Hutonline host computer in New York City. As a switched network, telephone meets this requirement. Cable systems however, generally are not ready today for such traffic. Even where two-way cable exists, its transmission is usually only within the local system itself; a user can communicate with a host computer at the cable headend. Generally, however, the host is not set up to have a "gateway" to external host computers. While this is not technically impossible, the notion of establishing gateways from every cable system in the U.S. is certainly economically questionable.

The issue of headend gateways directly affects the marketing of home data services. In the past, two-way cable, where it could be found, was pitched to consumers as "interactive cable," something to be purchased for its futuristic value. Increasingly, however, consumers are showing their interest in specific, identifiable services with known benefits, such as home banking and home brokerage services. Cable will be marketable as a data service only when it can also give consumers such services.

#### THE FAILURE OF THE TV SET AS A TERMINAL

Another related issue is that of cable as an entertainment technology. Consumers have come to associate cable with TV -- movies, sports, and, to a lesser degree, culture. With data services, the cable industry will have to re-shape consumer thinking and build confidence in a new image of cable as a medium for "serious" tasks, such as home banking and home brokerage.

The terminal itself plays a key role in consumer perception. Consumers have experienced the TV set only as an entertainment device. Even in cases where TV sets have been adapted, it has been for attaching entertainment devices,

such as videocassette recorders, videogame consoles, and low-end personal computers which are used primarily for playing games.

#### THE RISE OF THE PERSONAL COMPUTER AS A TERMINAL

By contrast, consumers have become aware of the personal computer as a device for "serious" tasks, such as work or education. Most personal computers are physically separate from a TV set that is used for TV viewing. Furthermore, many personal computers reside in the "work" part of the home (e.g. study, den, or even kitchen), whereas TV sets tend to be found in "play" areas (e.g. living room, rumpus room). Therefore, two-way cable terminals that seek to take advantage of existing TV sets will have to overcome the consumer's predisposition to regard the TV set as an entertainment box. At the same time, the cable industry would be missing an important opportunity if it does not try to exploit the ever-popular personal computer. Consumers are showing that it is their terminal of choice.

If the cable industry does try to hook up to personal computers, it will have to grapple with the different physical locations of most home cable outlets and personal computers. This local link may prove the most difficult to establish.

#### AN EMERGING OPPORTUNITY FOR CABLE?

Many factors militate against the use of cable as a two-way delivery vehicle. At the same time, it is important to note that the electronic service business is still young. As demand for such electronic services grows, the local phone systems will face much higher demand.

Under the AT&T divestiture, it is unclear whether local phone companies will be able to meet the need for more capacity fast enough. Without the traditional cross-subsidies from long distance revenues, local phone companies will be hard pressed to find new ways to finance improvements in their physical plants. Raising rates is one possible solution. In New York State, for example, phone rates went up more than 10% in just the first two months following the AT&T divestiture. Under conditions like these, cable may find some renewed opportunities.