

Two Sides to

Dave Says: Yesterdays' Technology Advances Make Our Lives Better Today



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A broadband industry pioneer, Dave has worked on residential broadband for nearly 20 years. In the 1990s he directed several of the earliest residential cable modem trials, and later helped MSOs plan and deploy broadband services. When Dave is not busy consulting for clients or co-writing the Report on the Broadband Home, he tests new broadband-related products and maintains the multiple Web sites he's created.

The year before the first Cable-Tec Expo took place, CBS began developing a plan for a consumer online service. CBS had just signed an agreement with AT&T to run a market test of a prototype service using technologies from AT&T and content from CBS — then leaders in those fields. In retrospect, those days were the start of the world as we now know it.

CBS's strategy officers had just been hired out of AT&T. Convinced that online services would be the next mass medium, they wanted to position CBS as the industry leader. During the summer and fall of 1982, I led an effort to show how online services could help providers such as retailers and airlines eliminate the costs of bricks and mortar by working directly with consumers and "removing the middleman." Making information and pricing visible would increase competition and bring consumer prices down. CBS would receive advertising and transaction revenue from providers, making it possible to offer the service to consumers at a low price — the same model magazines had used for years.

In early 1983 I joined the group working on the field trial. It was going well and CBS assumed it would form a joint venture with AT&T to develop and launch a commercial service. But it quickly became clear that under the terms of the 1982 consent decree (which broke up the Bell System late in 1983), AT&T could not engage in "electronic publishing." I was asked to lead an effort to formulate CBS's own technology plan.

The key architectural question was distribution of function. Should intelligence be centralized or decentralized? Should it be in the data center or in the network? What should the home terminal do? AT&T had assumed intelligence would be centralized. Since it owned the entire telephone network, it tended to view communications as practically free. Their home device would be a dumb terminal,

with intelligence used only to provide a graphical user interface.

Working with CBS Labs, I formulated a very different architecture. National communications and mainframe computers were very expensive (as were existing online services). We needed to bring the cost down to the point where consumers could afford to be online several hours a day. This required intelligence everywhere — in the data center, in the network and in the home. We would have to install a powerful system in the data center, deploy content servers in each city and — most importantly — leverage the intelligence of PCs in the home.

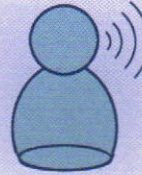
This PC-centric approach represented a major leap of faith; few people had home computers. We

thought a graphical user interface was critical for an advertising-supported service. But we were concerned since 300 bps was the standard speed for any home computers with modems. Analyzing past performance and cost trends for semiconductors encouraged us.

CBS started discussions with IBM and Sears that summer, and in early 1984 announced their joint venture, Trintex. When the announcement was made, many reporters and analysts said the venture would never succeed. *The New York Times* said it was very unrealistic to base the venture on home PCs, since less than 5% of homes had them.

Nearly all of what we take for granted today has its origins in that time. The cost of digital technologies is down to the point where most families can afford PCs and Internet access. The newest content distribution systems are based on the concepts formulated 25 years ago — moving the most frequently used content close to the end user. And what has that "unrealistic" number of 5% become? Over 75% of U.S. homes have a PCs (and multiple ones are very common).

Our lives have been transformed as a result. The visions we had 25 years ago are here today and, for me, there's no question that life is better as a result.



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