

Exhibit A

Predicting e-readers in 1981: A look back at the future



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By [Roger Fidler](#)

Newspapers in the Year 2000: "Videotex services will become mature businesses..."

(This report written was originally published by [APME](#) in 1981. Republished here with permission.)

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The appearance of newspapers at the beginning of the next century may be affected more by technology and economics than by the inspirations of editors and designers. That's not to say editors and designers won't play significant roles, they almost certainly will; however, the product itself may be radically altered by forces already being felt.

Through our imperfect eyes into the future, here are some of the developments that can be seen within the next two decades.

Videotex services will mature



1981 PROTOTYPE: The front page of a portable, flat-screen unit might include summary capsules of top stories. The design attempts to maintain the sense of immediacy typical of newspapers. By pressing a capsule such as the one in the lower right, the unit would instantly display the complete story shown on the right. The user could also page through the newspaper sequentially or utilize the news or ad indexes.

- Videotex services will become mature businesses providing subscribers with the most current news and advertising as well as general information, games, education and messaging. All of this plus the ability to pay bills and order products directly will undoubtedly alter our perceptions of what is current information. Until now, most readers have accepted the five to 30-hour lag for breaking stories in daily newspapers. Even though television news can respond more quickly, it has not significantly diminished that acceptance. In fact, studies show that television news with its microbursts of information tends to whet appetites for the more detailed information found in newspapers.

Videotex may change all of that. With these services, readers will have their appetites for detail in print satiated instantly; so by the time their newspapers finally arrive, the contents will be obviously dated and repetitious.

- The abundant sources of fresh water required for making newsprint will be drying up at a time when the

costs of labor and energy to cut, transport and process pulpwood may be inordinately expensive. So it is conceivable that by the end of the century, most newspapers may be unable to afford newsprint made from pulpwood. Whether newsprint made from other materials such as kenaf (a fiber plant) or plastic will be more affordable is difficult to project. Even if a cheaper newsprint is found, we may discover that a resource and environment-conscious public will reject newspapers in their present form because they could be seen as wasteful.

- The switch from daily home delivery to occasional single copy sales is likely to continue at an accelerated pace. Readers will give a host of reasons such as fear of crime (not wanting burglars to know when they're not at home), unreliable delivery, alternative sources of information, competition for time and money. Attempts to overcome these problems individually probably will have little effect, because the real reason for the switch is more basic. Newspapers printed on paper and delivered hours after the events have occurred may no longer fit our society's needs and lifestyles.

So does this mean newspapers will become an endangered media within 20 years? Are we all destined to be videotex editors and designers or...unemployed? Well, don't put away your pica rule and coffee mug yet. There is hope.



PROTOTYPE, SCREEN 2:

Pages of special interest to the user could be stored in a personal memory file or if a printed copy was required, a page could be output on a separate printer.

Differentiating newspapers from other media

Before projecting into the future, it is important to understand the characteristics that differentiate newspapers from other media and information services. The most significant characteristics are as follows.

1. Newspapers prioritize current information. They attempt to give some order to the apparent chaos of world events and the flow of new data.
2. Newspapers are an efficient browsing medium. They make it possible for readers to scan and select from

a multitude of diverse stories and advertisements in seconds. Because browsing can be done quickly and easily, readers frequently encounter and assimilate bits of information outside their normal realm of interests.

3. Newspapers are inexpensive. Even with the recent rate increases, they are still a bargain for readers and advertisers.
4. Newspapers are an effective medium for intrusive advertising. Advertisers are exposed to a large audience that is actively seeking information. Readers, on the other hand, are given the option of turning ads off instantly just by turning the pages.
5. Newspapers are portable. They can be read almost anywhere.
6. Newspapers can be read and reread at each individual's reading pace.
7. Newspapers can be saved and clipped. Sending clippings to friends and family, keeping scrapbooks and using coupons are activities ideally suited to newspapers.

If these characteristics accurately define newspaper, then videotex is not truly an electronic newspaper as it is so often called. It doesn't prioritize information, it can't be easily browsed, it won't be cheap, advertising is non-intrusive, it requires a constant hookup to an information outlet, and it can't be clipped and saved. Actually, videotex is something entirely new. It is probably best defined as an electronic information and ordering service.

Videotex unlikely to replace newspapers

Videotex will certainly impact newspapers, but if we can find a way around the time and cost of printing and distribution, it is unlikely to totally replace newspapers.

One solution for newspapers may be the development of portable, flat-screen displays. Large-scale integrated circuits are now being developed to supplement or replace video display tubes, but the resolution is still very coarse. However, given another 10 or 15 years, flat screens may have high-resolution displays and probably will be as ubiquitous as video tubes are today.

Assuming the costs of electronic hardware and memory will continue their steady decline, newspapers might be able to offer subscribers portable, flat-screen displays at a relatively low cost. If newspapers could eliminate the escalating high costs of printing and distributing their products, they could well afford to subsidize the units.

Instead of having a videotex-type link to a central database, these units would include a memory large enough to store several hundred pages. Users could then load the units via an information outlet in a few minutes and take them wherever they would normally read a newspaper.

Portable, flat-screen displays could have all of the characteristics previously given for newspapers and more. These would be truly electronic newspapers that could be continuously updated so that readers would no longer be tied to the fixed morning or evening delivery.

As an added enhancement, these units could have tactile controls. If they did, front pages for all sections could be summary capsules. When readers wanted to read the whole story, they would simply press the capsule or tease headline and the complete story would instantly appear on the screen.

Such units would significantly alter the way newspapers are designed and packaged, but the basic principles would probably remain the same.

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