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PROGRESS IN PUBLIC ACCESS INFORMATION SERVICE: A GLOBAL PERSPECTIVE

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ABSTRACT

The convergence of information technology and telecommunications has led to the development of public access information service on a global scale. Through the application of videotex technology, users are able to call up information and transaction services via a personal computer or terminal. In spite of the technological capabilities, the spread of various versions of this innovative service around the world has not fulfilled the optimistic growth forecast by proponents.

Three main factors have been given for the lack of public enthusiasm. First, high cost, limited usefulness and consumer reluctance to use complex technology. In many countries where public information services are available, in public found the cost using the service too costly, the information provided not useful, and the operation of the service difficult. With the consequent lack of a critical mass of users, the services could not attract sufficient numbers of information providers to supply a wide range of services, and the retention of the service and the accompanying equipment could not enjoy the benefits of large economies of scale. The exception was France, where the government developed an information network infrastructure before the launch of the information service, and combined this with the offer of free terminals which contributed to the creation of a mass market unparalleled in other countries.

The development of public access information service will have to be more responsive to the views and requirements of the general public. In this regard, it is important to focus on the creation of a wide range of useful and usable information and transaction services, accessible with minimal difficulties, and through reasonably priced terminals. In this way, the creation and cultivation of a critical mass of consumers will contribute to a less uncertain future.

INTRODUCTION

Global Press in public access information services has been aroused since the first videotex service, Prestel, was introduced in the United Kingdom. As a focus of innovations to emerge as a result of the convergence of information technology and telecommunications, there was much excitement and optimism expressed by proponents and supporters of this new found public information service. This paper will survey the progress of public access information service. The spread of this new innovation will be reviewed from a global perspective, the problems encountered will be examined and prospects for future discussed.

PUBLIC ACCESS INFORMATION SERVICE

Information technology (IT) has contributed to the increased production of new data and to their instant communication. The convergence of IT and telecommunications has led to the development of a broad range of information service which may be offered to the general public with direct access from homes and public areas.

Public access information services (hereafter referred to as PAIS) has emerged greatly in videotex technology. Access to an information database from home may be established by a personal computer or special purpose terminal linked to a central computer. The link between the source of the library service and the receiver may be made conveniently, over telephone lines. This process is known as videotex. Through the application of videotex technology, users may be able to retrieve information in the form of text, graphs and photos, high-quality images. Although there are many other avenues to call information to the home, such as conventional cable television, broadcast television, and broadcast teletext, videotex technology is different in the interactive nature. Interactive videotex permits two-way communication between user and the central computer database so that users can call up on demand, the images and information they wish to see. Subscribers to the service, by linking their personal computer via telephone lines to a central database, may access a wide variety of information services. This may contain news headlines, theatrical or travel schedules, classified advertisements, financial data, or electronic mail, to name a few of the available options.

EARLY DEVELOPMENTS

The first PAIS, developed with the videotex system, named Prestel, was demonstrated in the United Kingdom in 1975. Field trials in 1978 was followed by market launch in late 1979 (Scheideler et al. 1991). The early 1980s saw similar trials in Europe, North America, and Pacific countries. The eventual spread of such PAIS is well illustrated by the various information services now available around the globe as shown in Table 1.

<table>
<thead>
<tr>
<th>Country</th>
<th>Information Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>Prestel</td>
</tr>
<tr>
<td>France</td>
<td>Teletrontex</td>
</tr>
<tr>
<td>Germany/Austria</td>
<td>Bildschirmtext</td>
</tr>
<tr>
<td>Italy</td>
<td>Telekom</td>
</tr>
<tr>
<td>Sweden/Belgium</td>
<td>Videotele</td>
</tr>
<tr>
<td>Finland</td>
<td>Telekarn</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Videotex</td>
</tr>
<tr>
<td>Denmark/Norway</td>
<td>Teledata</td>
</tr>
<tr>
<td>United States</td>
<td>Viewtron/Computerv</td>
</tr>
<tr>
<td>Canada</td>
<td>Telidon/Alex</td>
</tr>
<tr>
<td>Brazil</td>
<td>Telequip</td>
</tr>
<tr>
<td>Japan</td>
<td>Captain</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Chinese Videotelex</td>
</tr>
<tr>
<td>Singapore</td>
<td>Teleview</td>
</tr>
<tr>
<td>Australia</td>
<td>Telatel</td>
</tr>
</tbody>
</table>

As a public information service, Prestel, was developed initially as an information retrieval service, as was the case with other services such as Teletel, and Telekom. In the process of development, there was an eventual shift from conceiving it merely as a medium for disseminating information to a medium for organizing transactions (Wilson 1986). Instead of creating a channel of packaged information, the application of the videotex capability enabled the creation of a virtual marketplace, within which numerous information service providers could sell their goods and services. This has contributed to the view that the successful marketing of PAIS is contingent upon the development of interactive transaction services and not just on their promotion as an information retrieval technology.

DEVELOPMENT PROBLEMS AND PROSPECTS

Public response to marketing efforts to launch the various versions of PAIS has fallen short of expectations all around the world, with the exception of France (Pouille 1988, Schneider et al. 1991). In a majority of the countries where PAIS were introduced, the level of public acceptance had been badly...
videoex technology are not easy to use, are slow and inflexible (Foerster 1986).
A survey of PAIS in the United States revealed serious difficulties with using
the various multimedia services offered through all the videoex systems (Jones
and Nelson 1990). Access to the information services available were difficult
because the data bases available were badly indexed and hard to use.

The design of a viable and effective PAIS has to give due consideration to the
needs and requirements of the people who are to use them. Such needs and
requirements have to be incorporated into the system at a very early stage of
development and continue to occupy a prominent place throughout the design,
construction and operation of the technology. Since the general public are
expected to use the system, it is they who have to operate the equipment which
have been developed and they who have to interact with the system to make
them function. Moreover, the public are called upon to adapt their habits to
the demands of IT systems and if they are reluctant to accept such changes, then
the demand for PAIS will not materialize (Blackler and Oborne 1987).

In summary, the appearance of PAIS around the world have not fulfilled
the predictions of growth usually associated with technological innovations.
Although advances in information technology may resolve the technical
difficulties, the key players in the IT industry have to co-ordinate their efforts
to render the service more affordable, to provide a broader range of services and
to improve on the design of the system so that it is easier to use.

CONCLUSION

The development of information services has not provided any strong
encouraging signs for the global prospects. Predictions of the inevitable growth
of PAIS has to be received with caution since the early stages of development
of PAIS provide adequate evidence of the need for those services to create and
cultivate a critical mass of consumers. The process of testing and developing
markets for these radically new interactive services is a relatively recent
phenomenon. The problem of imaginatively creating a market still remains
since a clear picture of the likely market and the appropriate services to offer
has taken time to emerge.

Although the initial development of PAIS has largely been in the hands of
specialized technicians, the need to be more responsive to users at the present
stage is compelling. The way in which the general public respond to the
introduction of new technology will impact on its future prospects. Due
consideration to the feelings and views of the ordinary users should be factored
in at the design and development stage, rather than wait until after the
technology has been installed, at which time, there may then be little opportunity
of going back to change or modify the system.

Despite the technological potentials and possibilities, there is clearly a need to
focus on several important areas. Not only must a wide range of useful and
usable information be available to broader areas of society, those information
must be accessible through terminals which are priced within the reach of
the ordinary users. When eager and willing users of PAIS are found, it is
impressive that they do not have to endure too many difficulties at the time of
interaction with the system. At the national level, an environment that supports
the development of the telecommunications infrastructure must be in place, and
combined with a strong commitment to further improve and develop the service
and future prospects.

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