TSA/T/18E/78

NETWORK ASPECTS OF THE VIDEOTEX SERVICE

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INTRODUCTION

The setting up of a public Videotex service allows a great number of users to get as many data as one can imagine. All these data will not be stored in a single computer and then, to access this distributed Videotex data base, the use of new data networks (either circuit or packet switched networks) is needed.

Moreover, for the general public, it is not wise accessing remote computers through the G S T N due to long distance charging rates. A local access, to the Videotex service, charged at local rate allows for the service tariff depending on the quantity of data transmitted and on the value of the information, independently from the location of the given computer from which information comes.

The Videotex users will dispose of a very simple data terminal equipment. Then the Videotex access procedure must be as simple as possible and the use of data networks must be hidden to users.

The purpose of this contribution is to present a possible Videotex service architecture.

VIDEOTEX SERVICE ARCHITECTURE

Host computers, in which are implemented the data bases, are connected to a public data network.

The Videotex users may access, via the switched telephone network, concentrators which are also linked to the data network.

A management center is in charge of surveying the activity of any equipment (host or concentrator) used by the Videotex service.

H   : Host
MC : Management Center
CT : Concentrator
◺   Videotex user
BVU: Broadcast Videotex Unit
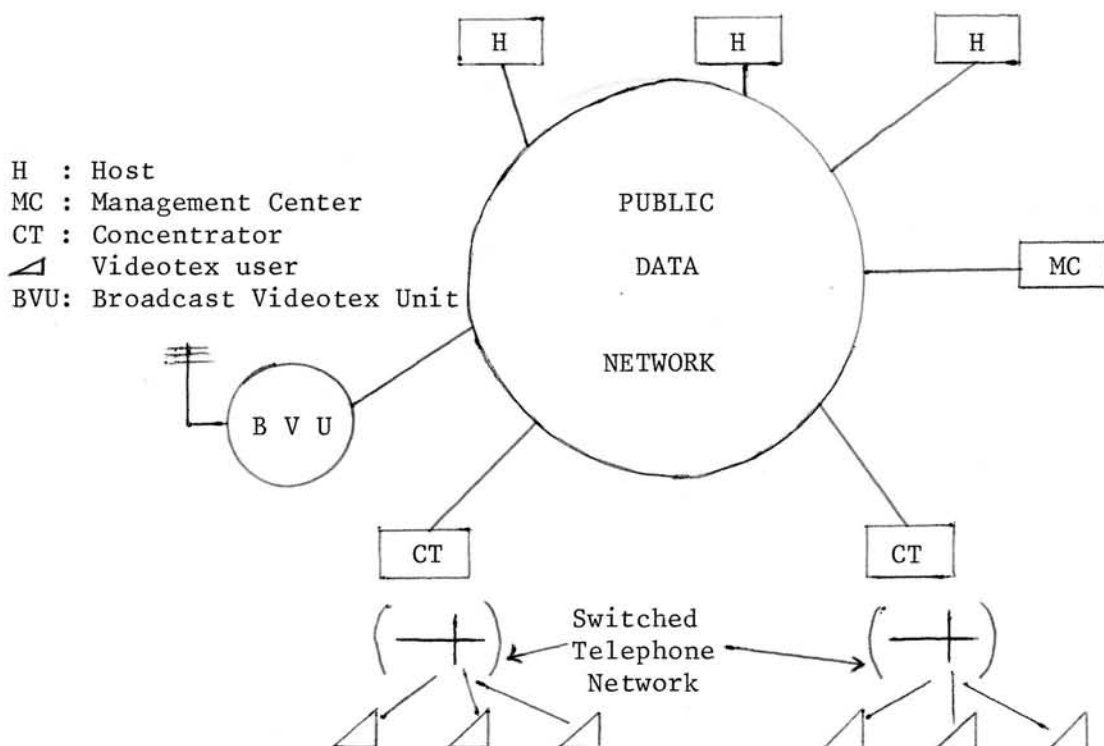
The concentrators are mainly in charge of

- phone lines handling
- checking user's identification
- procedure conversion and data network access
- getting at the right moment the right information from the right database.

Moreover, the concentrators may contain some kinds of informations such as summary, glossary... or offer some facilities such as test pages. When a new database become available, the management center sends to the concentrator a new summary.

Such an architecture allows a Videotex user to get, during the same Videotex session, several informations coming from different host computers.

In addition, the same structure allows to manage Broadcast Videotext facilities.

VIDEOTEX ACCESS PROTOCOL

In order to allow any computer to deliver informations to the Videotex users, a Videotex Access Protocol (V A P), must be defined.

This V A P may be split into

- a Videotex Service Access Protocol (V S A P) (or how to access the Videotex system ?) which defines the rules for a user to access a concentrator.

- a Videotex Information Access Protocol (V I A P) which defines the informations exchanged between the concentrators and the database.

Network
Access
Protocol
(X25...)

NETWORK

H

CT

V I A P

V S A P
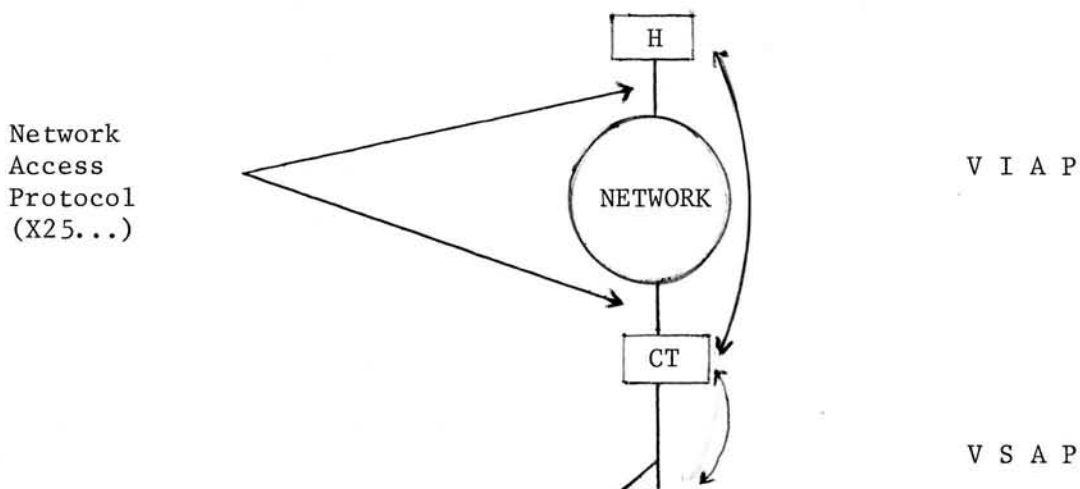
BROADCAST VIDEOTEX PROTOCOL

Broadcast Videotex units may receive pages of information from data bases. A protocol must be defined to set up this information into magazines and define the broadcast properties of pages (set up of row zero). This is done under the control of editor which is a specially authorised subscriber of the Videotex service.

H   : Host
BVU : Broadcast
      Videotex
      Unit
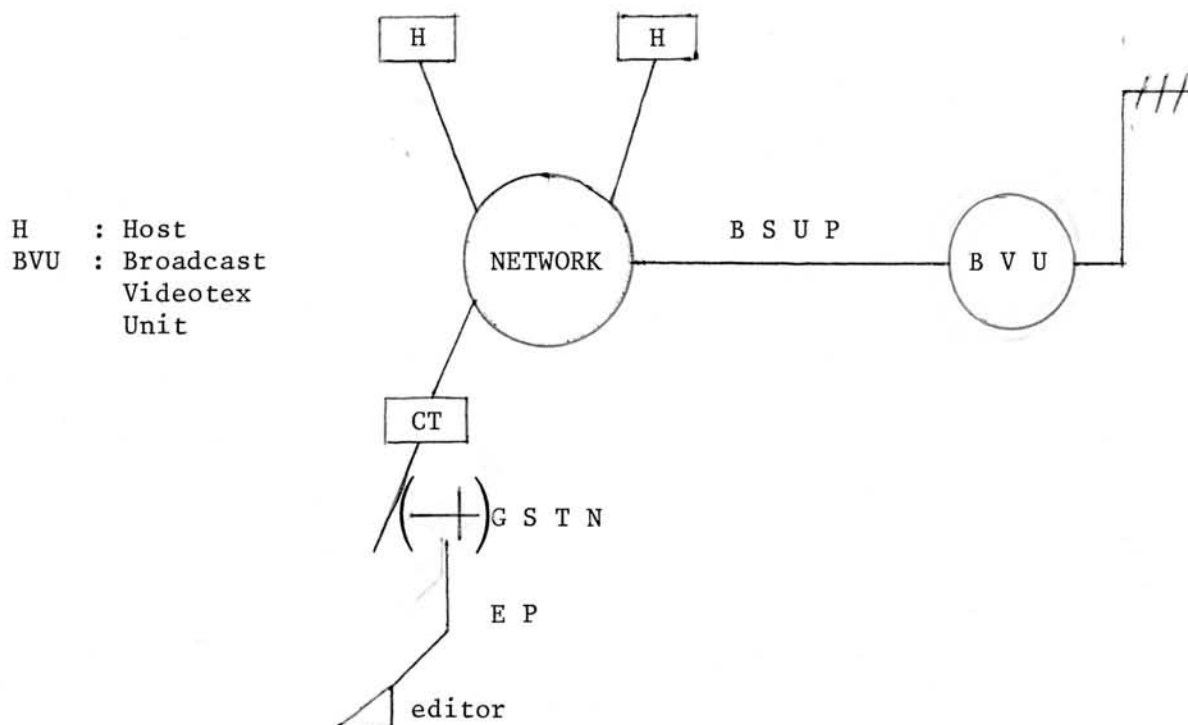
The Broadcast Set Up Protocol (B S U P) between the network and the Broadcast Videotex Unit translates the Editing Protocol (E P) which allows the editor to define the content and properties of the broadcast magazine he is in charge with. EP is an extension of V S A P and B S U P is a specific protocol to access the Broadcast Videotex Unit.

CONCLUSION

The Videotex service, designed for simple DTEs, will use the new public data networks. To allow the Videotex access protocol to remain as simple as possible an intelligent level must be placed between the users and the data network. This can be done by concentrators.

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