



TELEGUIDE

Large scale videotex in Sweden

First project phase

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Teleguide - large scale videotex in Sweden

Background

Videotex has been technically defined as a form of telecommunications that aims to be especially simple and easy to handle. This gives it a real chance to become a general contact medium for everybody.

Internationally, the videotex development was started around 1971 in Great Britain. Experiences from use of the English Prestel system has influenced the development in most other countries.

For quite some time videotex was dominated by professional applications. During the 1970-s, and especially from the start of the 1980-s, it showed to be of commercial interest for customers in financing, real estate, car industry, travel booking etc. The quantities of this use is hard to define, however, since it is difficult to measure separately from other formats.

As a complement to the professional forms, quite a number of home oriented videotex projects have been started during the 1980-s in different countries. These aim to investigate new home markets. Such applications for "non-expert users" are being studied in countries like USA, Canada, Japan, UK, Netherlands etc - and in Sweden. France is naturally especially interesting, being the pioneer for such large scale videotex.

Videotex in France

In 1978, the french telecommunications authorities took the decision to spread videotex widely in France. Partners in the system would be large numbers of french information industries and others, plus the PTT - now called France Telecom. It was developed a new terminal, the Minitel, and an adequate network was defined and built. At the same time, an intense information campaign was started, with the aim to spread understanding of Minitel in the french society.

The first successful application became the "Annuaire Electronique". This showed to be of great value in France, since the need for up-dated telephone directories was strong in several parts of the country. Large numbers of new applications have later been added, up to to-day's figure of around 7000 different services available, many of them using messaging.

By noting the increase in the number of Minitel terminals, at least the quantitative success for french videotex is apparent:

	<u>Jan 1986</u>	<u>Jan 1987</u>	<u>Jan 1988</u>	<u>Oct 1988</u>
Number of Minitels (millions)	1.3	2.3	3.4	4

This constitutes the world's largest decentralized data communication system. The use of these terminals has also increased steadily. This expansion can be measured through the turnover for Minitel service provider firms:

	<u>1985</u>	<u>1986</u>	<u>1987</u>
Average monthly use of each Minitel (minutes)	63	85	93
Turnover for Minitel service providers (million FF)	278	822	1264

A decrease of system use has been noted during 1988, however. This is due to increased price sensitiveness of the part of the users, plus ethically motivated limitations in marketing of certain types of messaging (personal communication of type "pages roses"). This usage development is not surprising. Limitations concerning "messagerie pages roses" has a price.

The overall french Minitel success has not been repeated elsewhere internationally. Quite on the contrary, commercial failures in other countries have become the result of a number of videotex trials that have been aiming at home markets.

Reasons for the french success

Why is it that the french have succeeded with their Minitel effort, while so many others have failed?

1. A massive education and information campaign was introduced by central

french authorities. This attracted large numbers of new users and new information and service providers.

2. It was realized that videotex for households is an exceptionally price sensitive activity. Therefore, the Minitel was technically defined as "lowest" possible technology, and it was offered free of rental charge. Most users still seem to see the terminal as without cost, while in reality it is being paid off successively (with a few centimes on each Franc of usage cost).
3. France Telecom realized that it would suffice for them to provide the network. They rejected proposals to offer information services of different sorts, with one important exception: the *Annuaire Electronique*.
4. The french videotex network was defined as a decentralized open network, with easiest possible user contact functions. All that was to be centralized was the usage payment administration.
5. It became commonly understood in the french society that Minitel has almost nothing in common with television, socially as well as technically and legally. Rather, the Minitel medium belongs to the telephone sphere.

These apparently simple understandings have laid a firm base for french videotex success. They have made it possible to avoid many of the problems that have made life difficult for other home oriented videotex projects in different countries.

Project Teleguide

The french success has served as leading light for the Swedish Teleguide project. Gathering of quantitative french experiences have constituted a base for this project.

Project Teleguide has been started by Göran Asplund. The general aim for this project is to create a system that distributes information, ordering and payment functions to households and small scale industry through the use of videotex. This is being performed through a number of activities:

- Analysis of the practical prerequisites for large scale Swedish videotex
- Definition of a relevant group of information-, ordering- and payment services
- Recruitment of initial information service providers

- Analysis of the availability of terminals
- Development of consulting services for service providers
- Implementing Teleguide panel development projects

The plans are to develop Teleguide in three phases:

1. Small scale trial activities in a first panel project where approx. 15 service providers take part, with 100 terminals.
2. Medium scale trial in a few geographical areas with 100 000 terminals.
3. Large scale activity with the aim to provide terminals for households in the whole of Sweden.

Implementation of Teleguide

During 1987 and the first half of 1988, the Teleguide activities have followed its existing plans. The following companies (several of them är large) are taking part:

APM, Cap Gemini, Ellos, Esselte, Expressen, IBM, ICA Hakon, Independent Finans, Samhall, S-E-Banken, Telebild, Trav och Galopp, Travel Management Group, Trygg Hansa, VLT.

In addition to this, the Swedish PTT, Televerket, is participating. There is also an affiliated group of hardware and software providers, who support different parts of the project.

A number of interest groups have been defined in the project. Each participating company have been invited to take part in the work in each of these groups. These groups are: The Steering Group, The Consumer Group, The Service Provider Group, The Network Group and The Terminal Group. These groups have held a number of meetings during 1988. Several open seminars have been carried through. A number of project participants also have travelled to France to exchange experiences.

Pilot project in the city of Västerås

The 1988 activities have focused on an empirical pilot project. It was considered necessary to get this practical experience from "ordinary" users.

In cooperation with SIFO, the Swedish Institute for Opinion Investiga-

tions, it was picked 100 pilot households in the city of Västerås in the middle of Sweden, at Lake Mälaren. The number was chosen to be small, because of organizational and financial restrictions - each family was given a terminal without cost, and a special usage fee was presented to each.

The city of Västerås was chosen for several reasons. Its population can be generally supposed to show interest in new types of communication and services, the city has a good telecommunications maturity, its technical network is adequate etc. There is also the fact that this city celebrates its 1000th anniversary in 1990.

In Västerås a geographical area called Vallby was chosen, where the participating households were picked at groupwise random. However, to all households in Vallby a general question was first asked: "Do you want to become a pioneer?". The thought behind this was that the households that later were to be picked as participants, were to have a real interest. The project did not want to see its terminals stuffed away in closets and on peoples' attics after a few weeks.

It was decided to split the participants in two groups. One of these would contain 75 families, and the other would consist of one school class of 30 pupils. One could presuppose that internal communication would be rather intense in a group such as a school class at medium education level.

The number of spontaneous positive answers showed that people really wanted to take part in the project. After this the family samples were decided, in three groups representing different types of housing. A number of information meetings were held, and the terminals were delivered. In the school, also a number of teachers were given terminals. They were introduced in possibilities to use videotex in the educational process.

Technology and network

The Västerås households are using two different types of terminals. Half of the group are using ordinary black-and-white Minitel terminals, while the other half is using color terminals from Nokia/Salora. The school class is using Minitel. Apart from this, a few intelligent videotex terminals of type Excelvision are being tried out.

The Teleguide pilot project uses the new videotex network that the Swedish PTT has introduced early in 1988. This is a version of the German Bildschirmtext system, built on IBM large-scale computers. The speed is 1200/75 baud. This network accepts both Prestel and CEPT terminal stan-

dards. Teleguide has used only the Prestel standard in its first project phase, but is open for standards discussions in the future expansion.

Each Teleguide test family has to pay ordinary PTT network rates for access to the project network during 1988. Each family, however, is given a startup fee for use during the first three months.

Apart from the families and the school class that have been mentioned, the Swedish Handicap Institute carries through a test with a number of handicapped users in Västerås. These are people with impaired sight or hearing, plus a few who have difficulty to move physically (who are users of wheel-chairs). The services are completely the same as for the rest of the project group.

Teleguide services

During 1988, the participating Teleguide service providers have been working intensely to develop and improve qualified services. The types of services that are being provided reflect a broad spectrum of interests:

<u>Company</u>	<u>Service type examples</u>
APM	Public information, local community services etc
Ellos	Mail order via videotex
Expressen	News, entertainment, small annonces etc
ICA	Goods for daily needs, consumer tests etc
Independent	Financing services
Samhall	Governmental information, employment etc
S-E-Banken	Home banking
Telebild	Economic information, lottiries etc
Televerket (PTT)	Electronic directory, electronic mail
ATG	Betting information concerning horse racing
TMG	Home travel services
Trygg Hansa	Information and booking of insurances
VLT	Local news, turistic information, entertainment
Åhléns	Ordering of goods of different sorts

While the amount of services in the Teleguide database is being successively expanded, it is stressed interactive services. Several of these are only available for project participants in Västerås. All other services in the public videotex network are naturally also available to these people.

Evaluation

Project Teleguide may have consequences in information and service consumption in a number of respects. This concerns the way in which households keep themselves informed to-day, how goods are ordered and paid etc. New forms of consumption may also have effects on the need for public transportation in society. To study such types of changes and chances for higher efficiency in different services, the analysis during 1988 is based on two sequential opinion investigations. These are made in spring and in autumn of 1988. They are carried through by Göran Crona at SIFO (the Swedish Institute for Opinion Investigations), and Tomas Ohlin at Institute IMIT at the Stockholm School of Economics.

Approx. 200 intervjues are being made at each occation. It is studied if changes in usage behaviour may be noted between these points in time. Questions of interest concern:

- Has the overall interest for the Teleguide services changed?
 - Have the users experienced practical problems in the use of the system?
 - What services are most popular?
 - How much information and education is needed about the system?
 - What effects do new home-oriented services have, financially, organizationally, and concerning distribution of goods?
 - Will there be changes in the need for physical transport means?
 - What types of services show the best chances for profit, for the service providers as well as for the users?
- etc.

Teleguide first phase results

It is important to keep in mind that these measurements are based on a sample of approx. 100 families only. Therefore one ought not to extrapolate from these data. However, the experiences are interesting from both organizational and financial points of view. One knows now better what is needed in the following project phases. With this carefulness in mind, at least some initial qualitative conclusions might be discussed:

- The practical organization of the Västerås pilot trial plus information and system education shows to need more effort than was expected
- The time of system use seems to follow the same U-shape curve that has been noted in the french early experiments: An optimistic start, followed by a negative "sobering up" time, followed by a slow but more stable increase in average usage time.
- Knowledge and experience of different services shows large differences.

The popularity list starts with:

- * The Telephone Number service (the Swedish "Annuaire electronique")
 - * Travel service
 - * Mail order services
 - * News and information
 - * Bank and insurance
 - etc.
- Average usage time per "session" is 10 min.
 - The average Västerås test family is willing to pay approx. US\$ 10 per month for access to the system.
 - Service quality is crucial for success.
 - Several Teleguide services seem to create rather than substitute financial and communicative activities.

The Teleguide future

Following these 1988 activities, an expanded organization is planned for the following project phases. New participants are invited. Different network structure alternatives are being investigated. The contents of new types of services are also analyzed, stressing the importance of messaging and interactivity.

New terminals are tested, with easier handling techniques, plus increased security facilities.

In December 1988, a business plan for expanded Teleguide activities is presented, concerning the activity from 1989 to 1994. The aim is to start the large scale phases of the project during 1989.

(Text by Tomas Ohlin)