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## Chapter 16

# Patterns of Communication in the Residential Sector

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There is a clear need to relate telecommunications development in the residential sector to its development in the business sector. Currently, it seems that these two are diverging as Figure 16.1 illustrates.

The distinction between analogue and digital voice is essential. Although basic telephony will be easily dominant in volume for a long time to come, digitalization of the telephone networks will have effects not only on data transmission etc., but also on voice services themselves. Once digitally coded, voice can be stored and processed like alphanumeric data. This opens up important new services both for the business and residential sectors. As one example, "heardata" will have a greater potential than viewdata; consider how well it fits available communication channels and the habits of users.

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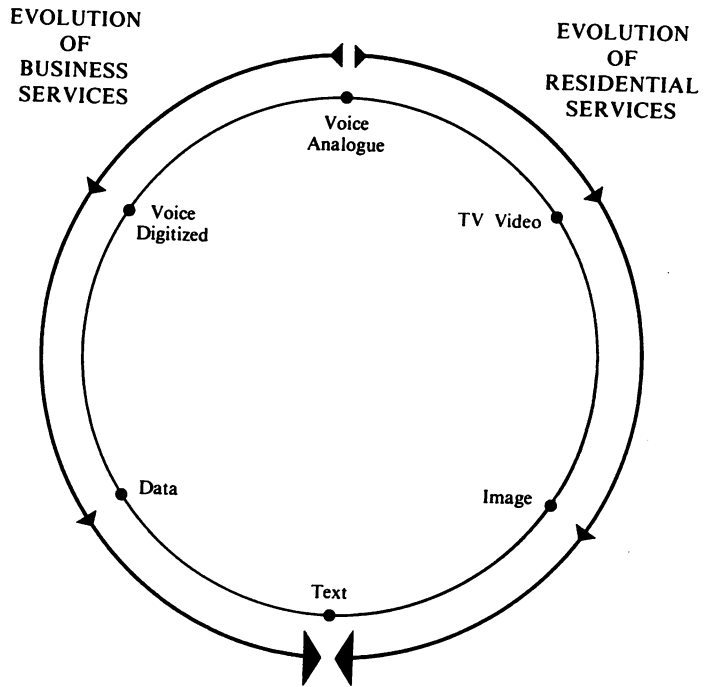


Figure 16.1. Evolution of business and residential services.

## DEVELOPMENTS IN THE RESIDENTIAL SECTOR

In the residential sector, the direction of change is from basic voice services, exploiting the potential of the telephone set, to new services, exploiting the abundance of TV sets for the provision of videotex, teletext, and other non-voice services directed towards large audiences. However, massive investment in content (programs) has to await massive investment in new or modified terminals, and vice versa. Experiments with electronic telephone directories may provide the bridge needed to overcome the inherent "chicken and egg" problem. A huge data base already in wide use, such as the content of the telephone book, may well prove to be the trigger needed to start a virtuous circle, where other data bases can be added and fully used. If options for two-way communication and possibilities for conducting transactions are included, the concept of the home terminal can be envisaged.

There is an alternative strategy, heading more directly towards full-fledged text and data communications and using terminals more similar to (or identical with) those available for business use. This may initially limit the market to business-related activities, but provide the springboard for later mass penetration of more fully fledged communication in the household sector. Data retrieval alone may also prove somewhat trivial for households; full two-way and multi-destination capabilities may be needed to make full and profitable use of residential terminals. Obviously, options available in the residential sector will be heavily dependent on earlier developments in the business sector.

## DEVELOPMENTS IN THE BUSINESS SECTOR

In the business sector, the starting points are different from those discussed for the household sector. The rapid digitalization of the public telephone network in many countries and the introduction of specialized networks, using satellites or optical fibers etc., will make data transmission capacity more widespread and cheaper, encouraging growth not only of conventional data traffic but also of advanced text and image communications. Ironically, early use of new systems (such as satellites) for business communication may well be dominated by digitized voice (telephony), to provide "the bread and butter" needed to fill satellites. However, the very availability of high capacity data links (64 KBIT/s and 2 MBIT/s or higher) will inevitably affect the usage and price levels of new services in the business sector--and later the residential sector. Obviously, synergy effects can be won not only by combining text and graphics, but also by using text and voice in a number of combinations.

I will not go further into these new potentials, fascinating as they are, but rather point to the need to view developments in the business and households sectors within a common framework.

## THE NEED FOR INTERACTION BETWEEN SECTORS

Some of the obvious relations between the business and residential sectors in the early build-up of new services have already been touched upon. The market success of new systems is quite heavily dependent on careful timing of

processes seemingly moving in opposite directions. Developments aimed for the residential sector may profit by leap-frogging into present developments in the business sector (and vice versa). Full interaction between business and households will also prove crucial in the long term, when developments in both sectors have reached more mature stages. A look at some mail statistics may demonstrate the point:

Table 16.1  
Business/Residential Mail Flow

	To Business	To Residences
From Business	40%	39%
From Residences	13%	8%

Source: KtK-Report, BRD.

Direct communication business to business, amounting to some 40% of the total mail flow, is the obvious target for more sophisticated text communication. High-volume links between major businesses can carry the investment needed in the start-up phase. However, there is also a business need to access the residential sector, and vice versa. Customers and potential customers are targets not only for advertisements and bills, but also for the two-way communication needed for enquiries, reservations etc. Seen from this perspective, most communication is business related; only a small fraction of telecommunication and mail services is between households. It may therefore be in the best interests of the business customer to forego the new systems

and cost reductions available for specialized business-to-business communication; they may be counter-productive by being isolated from other communications needs. Similarly, specialized systems catering for specific groups, for instance the handicapped, are running risks of being outside the mainstream of applications and consequently less likely to benefit from further developments and cost reductions.

Admittedly, most realistic development has to be piecemeal, and form only part of highly dynamic overall patterns, contradicting even the notion of any grand scheme. However, trying to make sure that any new element is not only compatible with, but has full potential for communication with later phases of development, could be a worthwhile investment for all parties concerned.