To make life easier

TRENDS AND PERSPECTIVES FOR COMMUNICATION TERMINALS

TO MAKE LIFE EASIER

The increasingly liberalized market for communication terminals is currently undergoing radical change the world over. Continuously increasing globalization, deregulation and digitalization are the driving forces here. Communication terminals are increasingly becoming consumer articles and open up new perspectives in personal communication.

For manufacturers the challenge also lies in integrating technologically innovative telecommunications systems and communication terminals to form new application possibilities for their customers – whether they are op-

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erators, service and content providers, service subscribers or final users – and in the process understanding the interests of each individual customer and deriving future trends from those interests.

The Siemens KE (Communication Terminals Division) Division is one of the world's leading manufacturers. We mainly supply from German production, where we manufacture cordless and cord-connected communication terminals for the world market at world market prices. Overall, Siemens has now advanced worldwide to the third largest producer of communication terminals, and in Europe we continue to be the undisputed number 1. According to our planning, the turnover of the KE Division will increase from a current DM 2.8 billion to around DM 5 billion in 2000, and our telephone production is to increase

from around 12 million units today to more than 27 million units in the year 2000.

Innovations are the factors for success

Innovation, volume and cost position are the factors for success in this business. Today we already generate 90 %

of our turnover with products less than two years old. Innovative technologies, for example in the ISDN, DECT, GSM/PCN, CDMA and UMTS sectors, can now only be developed and advanced on the global market in close cooperation with competent partners. Within the corporation, for example, cooperation with the Siemens semiconductor division makes the highly integrated chip sets of the GOLD series possible, which Siemens meanwhile also supplies to other well-known manufacturers of cellular phones. And the GAP-compatible DECT technology, which Siemens was first to introduce in all its cordless telephones, was developed together with various international companies.

Our product portfolio includes a large number of available technologies. Analog and digital, mobile and cordless communication terminals are offered in various model versions and 'sizes'. The trend is to even greater mobility, more comfort and faster transmission using digital standards. In particular the market for mobile and cordless phones is currently characterized by almost explosive growth.
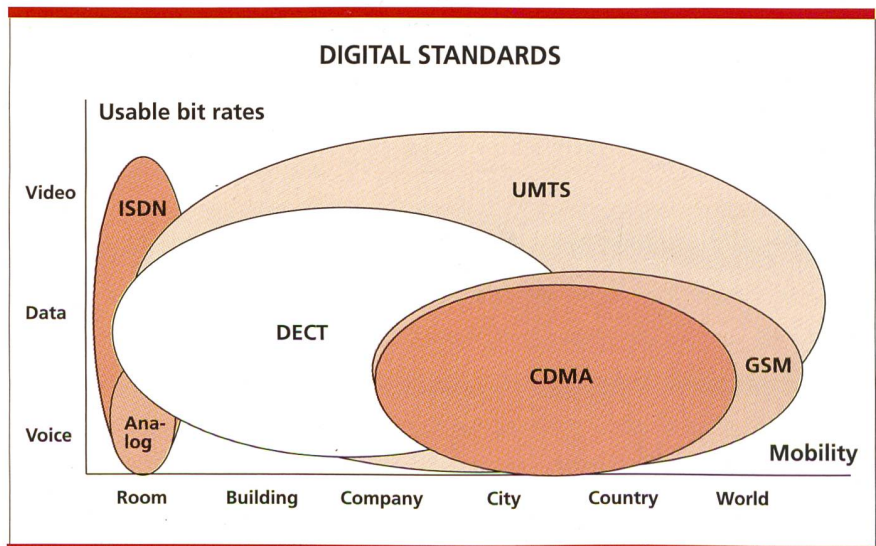

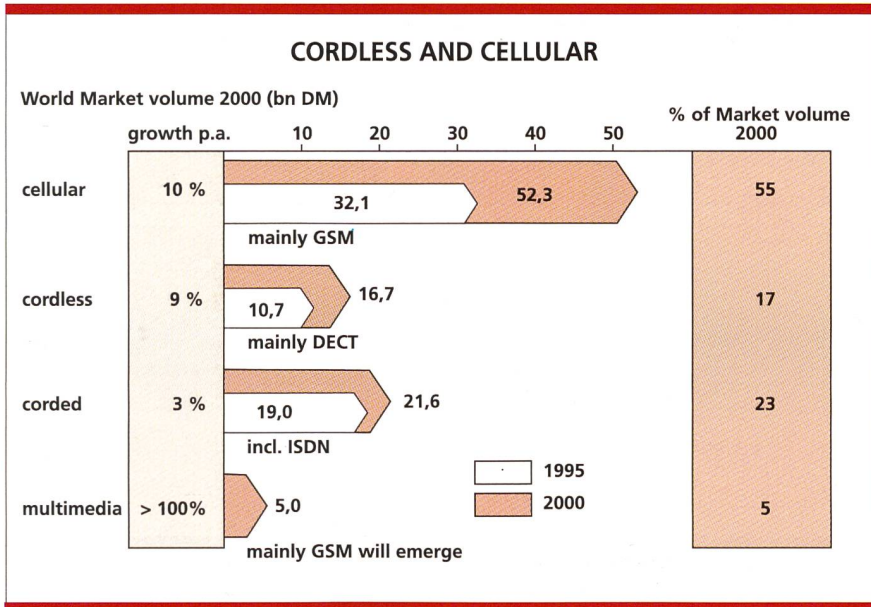Fig. 1. Digital standards for communication terminals.

CORDLESS AND CELLULAR

World Market volume 2000 (bn DM)

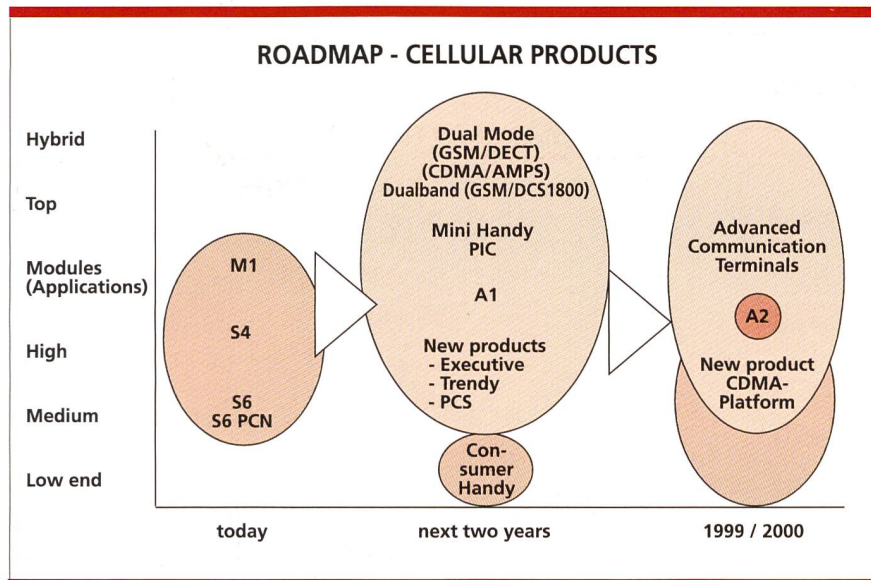|	growth p.a.		% of Market volume 2000
cellular	10 %	32,1 / 52,3 — mainly GSM	55
cordless	9 %	10,7 / 16,7 — mainly DECT	17
corded	3 %	19,0 / 21,6 — incl. ISDN	23
multimedia	> 100%	5,0 — mainly GSM will emerge	5

□ 1995   ▨ 2000

Fig. 2. Cordless and cellular terminals will dominate the market.

ROADMAP - CELLULAR PRODUCTS

Hybrid

Top

Modules (Applications)

High

Medium

Low end

M1
S4
S6
S6 PCN

Dual Mode (GSM/DECT) (CDMA/AMPS) Dualband (GSM/DCS1800)
Mini Handy PIC
A1
New products
- Executive
- Trendy
- PCS
Consumer Handy

Advanced Communication Terminals
A2
New product CDMA-Platform

today   next two years   1999 / 2000

Fig. 3. Road map cellular products.

ROADMAP - CORDLESS EVOLUTION

Data terminals

Wireless local loop

Small systems

Cordless comfort

Cordless standard

POTS (RNT1)
Gigaset 1054 (isdn)
Gigaset 1020 / 1030
Gigaset 1010 / 1015

Mobility RNT isdn
Interworking DECT-ISDN
Functional differentiation and ratio steps

Wideband systems (up to 768 kbps with DECT)
Functional differentiation and ratio steps

today   next two years   1999 / 2000
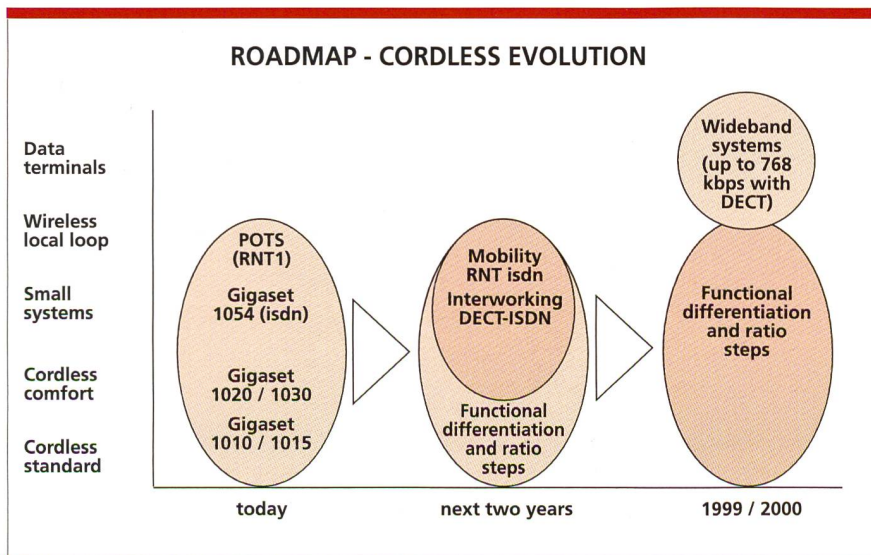
Fig. 4. Road map cordless evolution.

ISDN and multimedia are beginning to boom

The markets for ISDN devices and multimedia products are also beginning to boom. For example, our two new entry-level multimedia packages, which enable video conferencing and working together at PCs via the ISDN network, are also directed at the mass market – and that at a very aggressive price. As a result, we are expanding the classic functions of the PC and using the potential present at Siemens in the process.

That means the possibilities for combining devices with different technologies and features to create new multifunctional ISDN device types can be utilized comprehensively. The road map for ISDN terminals shows that the communication and information technologyies are increasingly becoming one and require a considerable commitment in research and development. The key words here are telephoning via Internet and multimedia communication.

Other promising examples are GSM mobile radio modules for stationary and mobile application fields, for example in measuring stations, in the field of transportation or in dual-mode units, i.e. a cordless and a mobile telephone in one device. A GSM car phone can also be part of a driver information and navigation system. This is currently being developed together with the Siemens Automotive Technology Division.

Video telephones and personal intelligent communicators are also in the works. Electronic wallets can, for example, be used in taxis or in ticket-vending machines for public transport and even at home. The future on-line access device via the Internet will combine intelligent network services, for example in the area of home shopping or telelearning, with innovative communications media of the Internet.

The language medium dominates the communications market

The digital standards available today for communication terminals will quickly advance and spread, driven by tougher competition. Depending on the given general economic setting, they will also supplement each other

with corresponding multimode-capable devices, thus increasing the personal benefits.

We are working intensively on the integration of narrow-band and wide-band communications and on the technological conditions for future communication terminals of a universal mobile telecommunication system, which will allow both mobility and language-accompanying data and video transmission worldwide.

Telecommunications and information technology as well as consumer electronics for many applications become increasingly interwoven. They generate innovative impulses for hybrid, so-called convergent products with multifunctional, multimedia characteristics. This technology will allow a plurality of different products, services and applications in the future. Communication terminals will be increasingly jointly defined by our partners such as network providers, service providers and content providers – and by a manufacturer and system integrator like Siemens.

By keeping the technically possible, the economically rational and, last but not least, the socially desirable in mind, we meet up to the customer's demand for more personal mobility, for more intelligent services and for his/her personal interest with inexpensive communication terminals and top quality that offer him/her convincing advantages, make his/her life easier, are easy to operate or are just plain fun. ☐16

(Quelle: PK Siemens)

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Chief Developer for Siemens
Communication Terminals
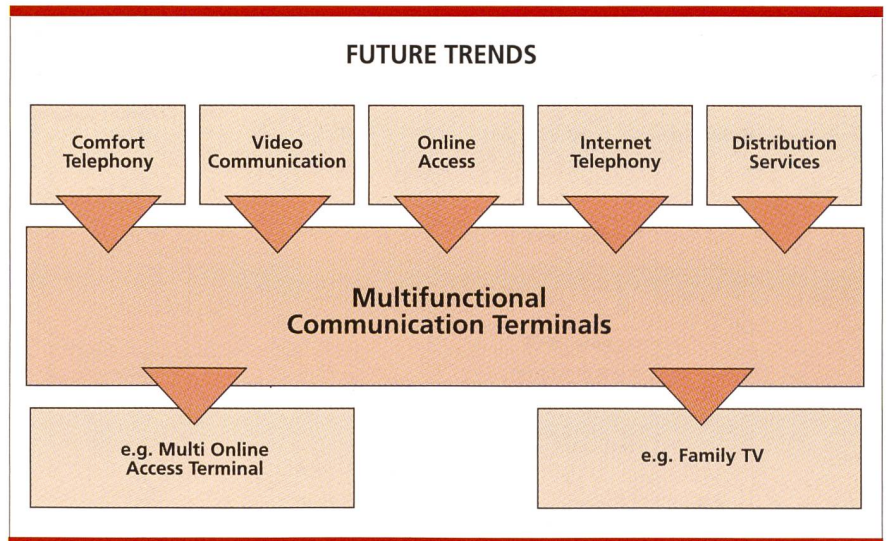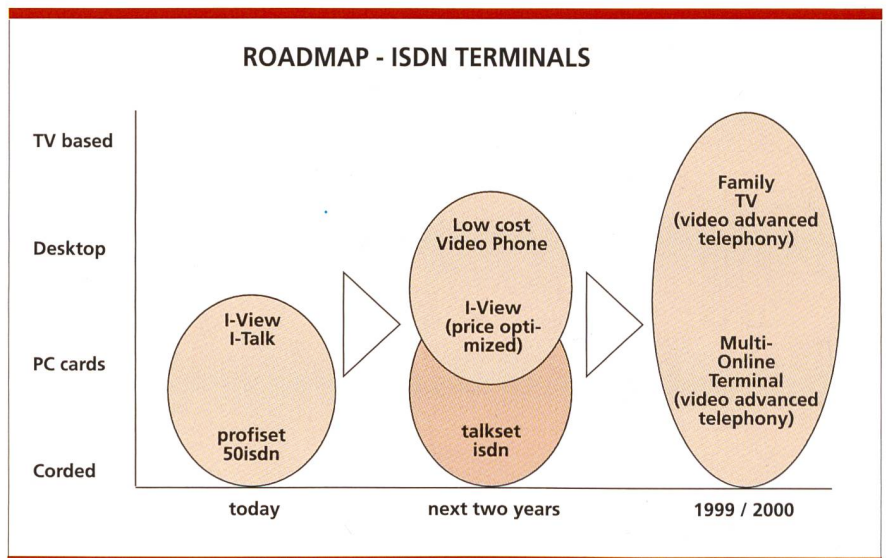Siemens Private Communication Systems

Fig. 5. Future trend ISDN communication terminals.

Fig. 6. Road map ISDN terminals.